"State Permit Surcharge Fees, aka the DCA Training Fee" revised as of May 15, 2019. Original article is invalid.

Construction Code Communicator

State of New Jersey
Philip D. Murphy, Governor

Department of Community Affairs
Lt. Governor Sheila Y. Oliver, Commissioner

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When Is A Rehab NOT A Rehab?

(Updated reprint -- originally published Spring 1999)

There have been several instances when design professionals have asked whether the Rehabilitation Subcode, N.J.A.C. 5:23-6, may be applied to a demolished building. In an attempt to provide clarity, here is a summary of demolished buildings and the Rehabilitation Subcode.

The Rehabilitation Subcode is comprised of categories of work. When a building has been demolished and another building is being rebuilt, it does not fit the rehabilitation categories: repair, renovation, alteration, reconstruction, change of use, or addition. Because a reconstruction project is comprised of work from the other categories, building on an existing foundation does not fit that category. The Rehabilitation Subcode is not intended to be applied to a site on which the building has been completely removed and a new building is being constructed. The foundation system may be reused, provided there are no additional loads being imposed. However, per N.J.A.C. 5:23-6.2(b)2i, new construction must comply with the requirements for new buildings. For a building that is partially removed, the part being rehabilitated must comply with the Rehabilitation Subcode. There is no specific percentage in the Rehabilitation Subcode as to when rebuilding a damaged or partially demolished building should be considered new. However, should it be obvious that the design professional or building owner is allowing a de minimis amount of the existing building to remain in order to circumvent the new building code, the local authority having jurisdiction has the right to require that the building be designed as new construction.

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

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Group Home - Use & Occupancy Classifications

All building designs start with a use "group" classification. Whether your project is new construction or a change of use, if you are unable to identify the group classification, you cannot determine what is required. One of the more challenging occupancy classifications to identify is a "group home." By definition, a group home must provide "custodial care." When an occupancy provides a type of care that is not included in the definition of "custodial care," it cannot be defined as a group home. These terms are defined in the New Jersey International Building Code/2015 (IBC/2015) as follows:

> "*GROUP HOME" A facility for social rehabilitation, substance abuse or mental health problems that contains a group housing arrangement that provides* ***custodial care*** *but does not provide medical care.*
>
> *"CUSTODIAL CARE." Assistance with day-to-day living tasks; such as assistance with cooking, taking medication, bathing, using toilet facilities and other tasks of daily living.*

Due to occupant load and occupant need, group homes can fall under four different use groups, so choosing the right one can be tricky. The table below provides a side-by-side comparison to help demonstrate the differences:

R-5 [a.]	**R-3**	**R-4** [b.]	**I-1** [b.]
5 or fewer occupants receiving custodial care.	5 or fewer occupants receiving custodial care.	6 to 16 occupants receiving custodial care (excluding staff).	More than 16 occupants receiving custodial care (excluding staff).
Occupants are primarily permanent.	Occupants are primarily permanent.	Occupants reside on a 24-hour basis in a supervised residential environment.	Occupants reside on a 24-hour basis in a supervised environment.
Self-evacuation less than 3 minutes.	Self-evacuation less than 3 minutes.	Slow Self-Evacuation: More than 3 but less than 13 minutes.	Slow Self-Evacuation: More than 3 but less than 13 minutes.
Sprinkler system required by Section 308.3.4. [c.]	Sprinkler system required by Section 308.3.4. [c.]	Sprinkler system required IBC/2015 Sections 903.2.8.2 or 903.2.8.3. [d.]	Sprinkler system required IBC/2015 Section 903.2.6. [e.]

a. Includes all detached one- and two-family dwellings not more than 3 stories in height with a separate means of egress for each dwelling and multiple single-family townhouses not more than 3 stories in height with a separate means of egress designed, all constructed in accordance with the International Residential Code (IRC/2015).

b. This occupancy includes condition 1, condition 2, or both:

Condition 1: This occupancy condition includes buildings in which all persons receiving custodial care are capable of responding to an emergency situation to complete building evacuation **without any assistance.**

Condition 2: This occupancy condition includes buildings in which there are any persons receiving custodial care who require **limited verbal or physical assistance** while responding to an emergency situation to complete building evacuation.

c. Must comply with Section 308.3.4, Five or Fewer Persons Receiving Custodial care, of the IBC/2015 by providing an automatic sprinkler system installed in accordance with NFPA 13D or Section P2904, Dwelling Unit Fire Sprinkler Systems, of the IRC/2015 (as referenced at Section 310.7 of the IBC/2015 per N.J.A.C. 5:23-3.14(b)3xvii). Either system is acceptable.

d. A NFPA 13D sprinkler system may be installed in Group R-4, Condition 1 group homes. A NFPA 13R sprinkler system is required to be installed in Group R-4, Condition 2 group homes, and attic protection is required pursuant to Section 903.2.8.3.1, Attics Used for Living Purposes, Storage, or Fuel-Fired Equipment, or 903.2.8.3.2, Attics not Used for Living Purposes, Storage, or Fuel-Fired Equipment, of the IBC/2015.

e. A NFPA 13R sprinkler system may be installed in a Group I-1, Condition 1 group homes, in lieu of a NFPA 13 sprinkler system. A NFPA 13 sprinkler system is required in a for Group I-1, Condition 2 group home.

Other types of facilities that provide "care" with five or fewer occupants and capable of self-evacuation in under three minutes may include, but are not limited to: Alcohol and drug centers, Assisted living facilities, Care facilities, Congregate living facilities, Halfway Houses, Lodging Houses, Residential board and care facilities, and Social rehabilitation. These facilities are not required to comply with the sprinkler requirements of Section 308.3.4 of the IBC/2015.

Source: Keith Makai & Michael Whalen
Code Assistance Unit, (609) 984-7609

Refunds

(Reprint – Originally Published Spring 1999)

N.J.A.C. 5:23-2.27 in the Uniform Construction Code explains the process whereby a permit holder can request and obtain a refund for a project where work has ceased. This section is quite clear in that plan review fees are nonrefundable and all out-standing penalties must be collected prior to a refund being processed. N.J.A.C 5:23-4.23 states that all fees paid to the department shall also be non-refundable. What is not clear is when a permit holder is not entitled to a refund. For instance, (I) can a permit holder request a refund three years after a project is abandoned? (2) What about a developer who obtains permits for 100 homes then never builds them, or commences construction on various lots then ceases construction for more than five months? (3) ... more than six months? The refund regulations cannot be applied without taking into consideration N.J.A.C. 5:23-2.16(b), Suspension of Permit.

In accordance with N.J.A.C. 5:23-2.16(b), a permit becomes invalid if the permitted work has not commenced within 12 months of issuance, or if the project is suspended or abandoned for a period of six months after the time of commencing the work. Therefore, if a permit becomes invalid for reasons of failure to commence work within 12 months, or if the work is abandoned or suspended for more than six months (question 3), then the permit holder is not entitled to a refund.

Now, let's answer the questions listed above utilizing both sections of the regulations. In scenario #1, the permit holder would not be entitled to a refund on permits which are three years old since the permits are invalid in accordance with N.J.A.C. 5:23-2.16(b). Also, in order to qualify for a refund, there must be a valid permit.

The next two examples above require different answers. The developer who requests a refund on the 100 permits which are still active (not older than one year) is entitled to a refund, while the developer who requests refunds on permits where work has ceased for more than six months is not entitled to a refund, since the permits have become invalid in accordance with N.J.A.C. 5:23-2.16(b).

In conclusion, a permit holder is only entitled to a refund on an active permit. A permit which has become invalid for failure to adhere to N.J.A.C. 5:23-2.16(b) no longer exists and, therefore, no refund is warranted.

Take note that N.J.A.C. 5:23-2.15(d) states that all issued permits shall remain the property of the owner, even if the application was made by a contractor or authorized agent. Should anyone other than the owner request a refund it would be prudent to request something in writing from the owner of the property that a refund may be given to the person requesting the refund.

Source: Chris Ferrara
Office of Regulatory Affairs
(609) 984-7672

2018 I-Codes, 2018 NSPC, and 2017 NEC Proposal

BIG NEWS…the 2018 I-Codes, 2018 National Standard Plumbing Code, and 2017 National Electrical Code were proposed March 4, 2019. On this date, a 60-day comment period started; the comment period ends May 3, 2019. During this comment period, additional, non-technical changes could be made upon adoption if the comment(s) is germane to the original proposal and requires modification(s). You can find the proposal and the adoption, which modifies the proposal, at http://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html and scrolling to the “Mar 4, 2019” row in the chart provided.

As always, there is a six-month grace period starting from the day of adoption during which applicants may submit a complete permit application, including all prior approvals, to be reviewed under the code in force immediately preceding the subcode revision. Provided that the application is complete, the construction official and applicable subcode officials should perform the plan review and issue construction permit(s) based on the code in force immediately prior to the operative date of the subcode revision. To provide an example, the 2015 I-Code adoption was September 21, 2015, which meant that the last day for application submission under the 2009 I-Codes and 2011 NEC was March 20, 2016; apply accordingly when the 2018 I-Codes, etc. are adopted.

Source: Code Assistance Unit
(609) 984-7609

Escape/Puzzle Rooms

As some of you may be aware, the members of the International Code Council (ICC) approved code change G48-18 which will modify the International Building Code (IBC) and International Fire Code (IRC) 2021 editions. This code change essentially groups escape/puzzle rooms in the same category as a special amusement area. Without getting into the discussion of whether the approved change is appropriate or not, the Code Assistance Unit felt that now would be a good time to get some written guidance out regarding this.

The reason for bringing this to your attention now is due to a tragic event that occurred in Poland where five young ladies 15 years of age where killed, apparently by smoke inhalation, when the building they were in caught fire. News reports have stated the main reason they lost their lives was due to the door knob being removed from the room that they were playing the game in. The Fire Department of New York (FDNY) has recently started inspecting some of the facilities in their jurisdiction and have come up with fire safety concerns.

These rooms are meant to be used as a team building activity, which are monitored by an attendant. In some cases, once the puzzle is solved, the attendant directs the participants to go through a door so that they may enter another room to solve another puzzle. In some cases, the participants just stay in the same room and the attendant gives them another activity.

Most of the escape room activities have a duration of an hour. In drafting this article, we have inquired with a number of people that have attended these events and none have said they were locked in the rooms.

The Department has been providing guidance on these rooms for over five years; the guidance remains as follows:

Fewer than 50 persons:

- The use classification is a Business occupancy (Group B) in accordance with the exception of Section 303.1 of the NJ International Building Code (IBC/2015).
    - Entry/exits doors are not locked and participants can move freely out of the room;
    - The exit door for the room must be in clear view;
    - The lighting must not be below one foot candle; and
    - Exit signs/emergency lighting are not required.

When factoring in typical occupant load, an automatic fire alarm system would never be required. Also, in no case can someone be locked (or restrained) in the rooms unless the special locking arrangements of Chapter 10 have been applied for, reviewed, and approved.

- IBC/2015, Sections 1010.1.9.8 (Sensor release of electrically locked egress doors or Section) and 1010.1.9.9 (Electromagnetically locked egress doors) may be applicable when someone wishes to lock a required egress door from the space.
    - Each of these sections have not less than six features that would need to be considered by the code official depending on the specific locking arrangement.
    - A fire alarm system is not required just because someone would like to install one of these locking systems
- Delayed egress locking provisions must never be used, the code specifically prohibits this type of locking in an assembly occupancy.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Rehab Subcode Rescue Openings

(Updated reprint -- originally published Spring 1999)

Based on the number of telephone calls that we are still receiving regarding the window/openings requirements of the Rehabilitation Subcode, it is apparent that there is some confusion. It is important to remember that the requirements in the Rehab Subcode differ from the requirements for new buildings. When a permit applicant proposes to change the size of a window opening in an existing bedroom or a new bedroom is created, necessitating an opening per N.J.A.C. 5:23-6.6(e)11ii, the Rehabilitation Subcode requires that one of the windows/openings be operable, have a sill height of 44 inches, a width of 20 inches, a height of 24 inches, and a TOTAL area of 5.7 square feet. All of the minimum dimensions specified in this requirement are to be **measured from head to sill and from side to side of the framed opening**. I hope this resolves some of the issues you folks have been having. (Note: The referenced section above does provide two exceptions to the opening requirements; two remote exits or a sprinkler system.)

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

BHI Technical Bulletins

The Bureau of Housing Inspection (BHI), administers the New Jersey Hotel and Multiple Dwelling Law, NJSA 55:13A-1 et seq. The Bureau is responsible for ensuring that hotels and multiple-family buildings of three or more dwelling units operating within the State of New Jersey are properly maintained and do not pose a threat to the health, safety and welfare of their residents, nor the community in general.

To achieve these objectives, the N.J.S.A. 55:13A requires that the Bureau conduct a five year cyclical inspection of these properties. BHI has thereby been given the authority to enforce the regulations for Maintenance of Hotels and Multiple Dwellings (N.J.A.C. 5:10) and, where applicable, Subchapters 3 and 4 of the New Jersey Uniform Fire Code (NJAC 5:70), by issuing citations for the violation of these requirements.

In some instances, the regulations have required interpretations to be issued in the form of a Technical Bulletin. These bulletins are to provide guidance in applying the regulations. They can be found at https://www.nj.gov/dca/divisions/codes/offices/housinginspection.html under the "Related Forms and Publications" heading and provide guidance for the following items:

- Rear Porch Enclosures;
- Door Closers;
- Exits That Do Not Discharge To A Public Way;
- Protection of Interior Exits; and
- Electrical Facilities in Bathrooms and Toilet Rooms.

If you have further questions regarding these bulletins, please contact Fayez Fanik at (609) 633-6216.

Source: Bureau of Housing Inspection
Division of Codes and Standards

Flood Plain Receptacle/Lighting Outlets

Well, some time has passed, and now is a great time to revisit the requirements that arose from Superstorm Sandy regarding electrical equipment below flood elevations.

First, let's review the sources, as required today:

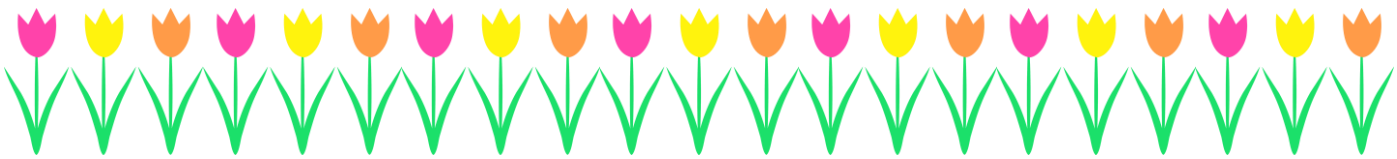
- 2014 National Electrical Code (NEC, aka NFPA 70), as adopted at N.J.A.C. 5:23-3.16;
- 2015 International Residential Code (IRC), as adopted at N.J.A.C. 5:23-3.21;
- 2014 American Society of Civil Engineers (ASCE) Standard 24, as referenced at R322 of the 2015 IRC; and
- Flood Insurance Rate Map (FIRM) for zones and elevations, as adopted by the municipality through a local floodplain ordinance in accordance with N.J.A.C. 7:13.

Our starting point with today's code is the 2015 IRC, with the following specific sections:

- The exception at Section R322.1.6, where it states that electrical equipment is allowed below design/base flood elevations provided the equipment is not in a Coastal A or V zone, equipment is water tight, wet location material(s) is used, and equipment is not mounted on breakaway walls.
- Section R322.3 applies to Coastal A and V zones and directs the IRC user to follow the ASCE 24.
- Section 7.2.5, Electrical Equipment BELOW Minimum Elevations, permits that this type of equipment when it is: (1) for Life Safety; (2) 120 volts or less; and (3) in accordance with 2014 NEC for wet Location.

Please note, the 2014 NEC is the used in both the ASCE 24 and IRC; most structures are classified as Type 2 for the interpretation of Table 7.2 from ASCE 24.

Source: Neil Nagy
Bureau of Construction Project Plan Review



Photovoltaic (PV) Line Taps

There have been questions regarding the wiring for photovoltaic systems. Specifically, the question has been the classification of the wiring that is tapped off the service conductors up to the point of the first overcurrent protection device for the photovoltaic system. The debate has been whether this wiring should be considered a feeder or whether it should be considered service conductor.

Article 705.12(A) of the National Electrical Code (NEC) allows the photovoltaic system to be connected on the supply side of the service disconnect for the building but does not designate whether the connection is a feeder or part of the service. Provided that the installation meets the requirements of article 230 part IV (service conductors) and part V (service equipment), and the bonding requirements of article 250 part V, the wiring is to be considered service conductor and can be installed in the service entrance conduit; this would not be in violation of article 230.7 or article 690.31(B).

Source: Michael Baier
Code Assistance Unit
(609) 984-7609

License Check

Recently, we at the Department of Community Affairs, Division of Codes and Standards, have contacted the "other DCA," as in Division of Consumer Affairs within the Department of Law and Public Safety, regarding their licensing laws for licensed trades and professions that are referenced within the Uniform Construction Code (UCC), N.J.A.C. 5:23.

Before I get into the questions, please remember as code officials, your job is to check that the design professional/contractor(s) used, or not used in some residential applications, is licensed/registered per the regulations of the licensing law. This is done within the scoping of the UCC and we take the permit applicant for what they have submitted, unless there is specific reason to doubt what they have presented in the permit application.

That being said, we posed the following questions to the Board of Examiners of Master Plumbers, Board of Examiners of Heating, Ventilating, Air Conditioning and Refrigeration (HVACR) Contractors and Board of Examiners of Electrical Contractors regarding homeowners doing work in their own home/dwelling and as to their status of residency in the home/dwelling.

1a. In a single-family detached home where they own and reside, we understand that can do both, plans and the work.
1b. In a single-family detached home where they own but do not reside, may they do plans and/or work?
2. In a two-family detached home, may they do plans and/or work? Does owning/residing there change this?
3. In an attached single-family townhouse, may they do plans and/or work? Does owning/residing there change this?
4. In a building of three or more dwellings and condos/apartments, may they do plans and/or work? Does owning/residing there change this?

Response from the Board of Examiners of Master Plumbers:

1a. Yes, per N.J.A.C. 13:32-1.4(f)1.
1b. No, per N.J.A.C. 13:32-1.4(f)1, "in his or her own dwelling."
2. No to both questions. N.J.A.C. 13:32-1.4(f)1 only allows for "single family."
3. Yes if the single family townhome has a single sewer system; No if the townhome has a common sewer system.
4. No, as the work would affect other owners.

Response from the Board of Examiners of HVACR Contractors:

1a. The Board determined that the owner can do both plans and work, however they cannot do work that involves the use of chlorofluorocarbons (CFCs) or hydro chlorofluorocarbons (HCFCs), N.J.A.C. 13:32A-1.1b(3).
1b. The Board determined that the home owner cannot perform the work.
2. The Board determined that the owner cannot perform the work.
3. The Board determined that the residing owner can perform the work.
4. The Board determined that the owner cannot perform the work.

Response from the Board of Examiners of Electrical Contractors (they did not reply in similar bulleted fashion and supplied the following):

(continued on next page)

(License Check)

The Board of Examiners of Electrical Contractors has reviewed your email requesting clarification as to whether or not electrical work can be performed by a homeowner on a single-family home; two-family home; townhouse; condo; or apartment.

Please be advised that the Board's statute clearly states that the person performing the electrical work must occupy the dwelling for himself or a member of his immediate family at the time the work is being performed. However, because the word "dwelling" is not defined in the Statue, the Board cannot make a distinction between single-family, two-family, etc.

Therefore, pursuant to N.J.S.A. 45:5A-18(n), work performed by a person on a dwelling that is occupied solely as a residence for himself or a member or member of his immediate family is considered exempt from licensure and does not require the securing of a business permit issued by the Board.

For those that are visual learners, below is a chart version:

		Plumbing		HVACR		Electrical	
		Plans	Work	Plans	Work	Plans	Work
1a. Single-family detached home; own and reside		Yes	Yes	Yes*	Yes*	Yes	Yes
1b. Single-family detached home; own BUT not reside		No	No	No	No	No	No
2a. Two-family detached home; own and reside		No	No	No	No	Yes	Yes
2b. Two-family detached home where they own BUT not reside		No	No	No	No	No	No
3a. Attached single-family townhouse; own and reside		Yes if single sewer system; No if a common sewer system.		Yes	Yes	Yes	Yes
3b. Attached single-family townhouse; own BUT not reside		No	No	No	No	No	No
4a. Unit in building of three or more dwellings; own and reside		No	No	No	No	Yes	Yes
4b. Unit in building of three or more dwellings; own BUT not reside		No	No	No	No	No	No
		* Cannot do work that involves the use of chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs)					

We felt that is was not necessary to contact the Board of Architects because they specifically state that only a single-family detached homeowner that resides (or intends to reside) in the home may draw the plans and do the work per N.J.A.C. 13:27-3.3.

As you can see, the rules and regulations regarding the licensed occupations/trades do not align per home/dwelling type. This does not make the UCC code official as the enforcer of these regulations. This means, you must ask the appropriate questions to see if they need to have the proper credentials to be exempt from the licensing. If they do not tell the truth, then they are reported to the appropriate Board at a later date.

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

Installation of a Voluntary (Non-Required) Fire Protection System: What Level of Protection is Needed?

The Rehabilitation Subcode (N.J.A.C. 5:23-6) is silent on the voluntary installation of a fire protections system; however, the scope of work is considered an alteration. N.J.A.C. 5:23-6.6(i) refers the code user to Materials & Methods, Section 6.8(b)4. Here, it requires compliance with Section 901.2 of the Fire Protection Subcode. Section 901.2 provides an exception that allows for the installation of a **partial or complete** protection system when the system is being installed voluntarily. The caveat to this exception is that it requires the non-required system, whether partial or complete protection is provided, to be installed to meet the requirements of the Fire Protection Subcode.

When someone opts to install one detection device in each corridor or hallway of the common area within a building, this would be considered a partial system, and only those devices need to meet the requirements of the Fire Protection Subcode, NFPA 70, and NFPA 72, nothing more.

When the scope of work is a complete occupant notification system, (i.e. to alert the occupants), the new equipment (notification appliances) being installed would need to meet the requirements of the Fire Protection Subcode, NFPA 70, and NFPA 72.

When the scope of work is to install an "Occupant notification system," the applicant would need to meet the requirements of Section 907.5 for sound pressure levels. Electronic monitoring of the system off-site would not be required per Section 907.6.6, but on-site monitoring of the components being installed would need to meet all the other requirements of Section 907.6. As for the reference to NFPA 70 and 72, this would be used for the physical mounting, wiring and prohibited locations for the devices being installed. Location of the devices such as height on the wall or location on the ceiling would need to comply with NFPA 72. Additional protection locations **cannot** be required per NFPA 72.

When the scope of work is just to install a horn or bell in the common area or a warehouse section of a building by the sprinkler riser, that horn or bell would need to meet the requirements of the code, NFPA 70 and 72, nothing more.

When someone opts to install *only* a horn or bell, the installation of that device must meet the requirements of NFPA 70 and 72. They do not have to install a full occupant notification system, and need only to comply with the Fire Protection Subcode and referenced standard sound pressure levels for that device.

So, how does one "meet the requirements of the Fire Protection Subcode, NFPA 70 and 72" when the code requires additional protection of certain system components? These components can range from a fire alarm control unit, notification appliance circuit power extenders, and supervising station transmitting equipment, when installed. When any of this equipment is installed, additional smoke detection is required per Section 907.4.1.

The code requires construction documents and proposed system shop drawings be submitted for review and approval.

The following are applicable requirements of the Rehabilitation Subcode and the New Jersey International Building Code:

N.J.A.C. 5:23-6.6 Alterations has the following requirements.

(b) All work shall be done in a workmanlike manner.

> **(i)** All materials and methods used shall comply with the requirements specified in N.J.A.C. 5:23-6.8, Materials and methods.

N.J.A.C. 5:23-6.8 Materials and methods

(b) Building and Fire Protection Materials and Methods: The following sections of the building subcode (N.J.A.C. 5:23-3.14) shall constitute the building and fire protection materials and methods requirements for this subchapter:

> **4.** All of Chapter 9 entitled "Fire Protection Systems" **except** Sections 902, 903.2, 904.2, 905.3, 906.1, 907.2, 908, 910.2, 911, 916.1;

NJ IBC 2015

901.2 Fire protection systems. *Fire protection systems* shall be installed, repaired, operated and maintained in accordance with this code and the *International Fire Code*.

Any *fire protection system* for which an exception or reduction to the provisions of this code has been granted shall be considered to be a required system.

> **Exception: Any *fire protection system* or portion** thereof **not required** by this code shall be permitted to be installed for **partial or complete protection** provided that such system **meets the requirements of this code**.

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

State Permit Surcharge Fees, aka the DCA Training fee

Most technical assistants and building officials know they must collect a surcharge fee based on construction activity. Every three months, they are required to send a check payable to the "Treasurer, State of New Jersey" and a "State training fee report" to the Department. The quarterly State training fee report shows the dollar amount of alterations and the cubic feet of construction from permits for new structures and additions to existing ones. As a reminder, demolition permits are exempt; the fee applies only to alterations, additions, and new construction.

Like the price of stamps, the surcharge rates change (this usually means they go up). More than one building department has sent in training fee reports with rates from previous years. Don't make this mistake. The rates are published in the UCC at N.J.A.C. 5:23-4.19(b). It is your responsibility to make sure your reporting software has the right rates. If you use software from a private vendor, call them up. Make sure you have the latest rates. More importantly, make sure you know how to update your software to change them when needed. It is the building department's obligation to pay the surcharge rate on time and for the right amount, even if reporting software is not up to date.

Currently, additions and new construction permits are assessed a DCA training fee of $0.00371 per cubic foot (or $3.71 per 1,000 cubic feet of volume).

The surcharge for alterations is $0.0019 per dollar of construction (or $1.90 dollar per $1,000).

What activities are exempt? These are specified at N.J.A.C. 5:23-4.19. No state training fee for:

- Demolitions;
- Commercial farm buildings;
- Lead or asbestos abatement;
- Work on deed-restricted, affordable housing (new, or existing);
- Work required because of natural disaster, but only if the local code enforcement agency waives fees, too.
- Public buildings, including public schools, pursuant to N.J.S.A. 52:27D-126c.

Churches are not exempt.

This section also specifies the minimum training fee shall be $1.00.

If you have any questions regarding surcharge fees, please do not hesitate to call the Division of Codes and Standards at (609) 292-7899.

Source: John Lago
Division of Codes and Standards

The TCO Issue

(Updated reprint – originally published Spring 1999)

Over the years, I think the biggest complaint that design professionals and building owners have with regard to inconsistent enforcement is the issuance or in some municipalities the lack of issuance, of a Temporary Certificate of Occupancy (TCO). Per N.J.A.C. 5:23-2.23(g), the Uniform Construction Code (UCC) is clear as to when a TCO is warranted. When the permit holder requests it and the structure (or portions of the structure) may be occupied safely without endangering life or public welfare, the construction official may issue a TCO. The problem with this code language is the word "may." Does the term "may" in this case mean the issuance of a TCO is at the whim of the construction official? I think not. If it can be determined that the structure can be safely occupied, the construction official has an obligation to issue a TCO at the permit holder's request. The intent of the UCC is to base the denial of a TCO on code issues, not on personal preference.

I know there will be arguments. Who is going to keep track of the buildings that have a TCO? How will the conditions of a TCO be enforced? What should be done if the permit applicant does not follow up to complete a project? These issues will exist whether or not a TCO is issued! How are all of the requirements of the UCC enforced? This issue is no different. There are rules in place to deal with this and every other issue in the UCC. The comment "We don't issue TCOs in this town" flies in the face of the term "Uniform" in the Uniform Construction Code. And for those that would like precise instances when a TCO shall be issued, please see Bulletin 01-2 at https://www.nj.gov/dca/divisions/codes/resources/bulletins.html.

If you have further questions regarding the issuance of a TCO, please contact me at the number below.

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

"State Permit Surcharge Fees, aka the DCA Training Fee" revised as of May 15, 2019. Original article is invalid.

Use of Sealed Wire Connectors

There has been some confusion regarding the use and installation of sealed wire connectors. These connectors are being used in a variety of installations. You may call them Kup-el-taps, Polaris or the like and most are color-coded for dry/wet locations. However, many are not being installed as per their manufacturers installation instructions and/or their UL guidelines. Also, most are not sunlight-resistant. Therefore, if these connectors are installed on the exterior of a building/structure, be sure that the appropriate connector is being used and installed as per any instructions provided to insure the connectors are permitted in wet-locations and are sunlight resistant.

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

Source: Neil Nagy
Bureau of Construction Project Plan Review

Wireless Smoke Detection Systems

The Department has been hearing that some code officials are still not allowing wireless smoke detection systems as the primary dwelling detection system or a commercial detection system. When the building subcode, NJ International Building Code (IBC/2015) and one- and two-family dwelling subcode, NJ International Residential Code (IRC/2015) were adopted, two new sections were added: Section 907.2.11.7, Smoke detection system, to the IBC/2015 and Section R314.7, Fire alarm systems, to the IRC/2015.

A smoke detection system complying with the National Fire Alarm and Signaling Code, National Fire Protection Association standard 72/2013 (NFPA 72), can be installed instead of a single- or multiple-station smoke alarm system in accordance with IRC/2015 Section R314.7, Fire alarm systems, and IBC/2015 Section 907.2.11.7, Smoke detection system.

Both the residential code and the building code permit NFPA 72 compliant wireless detection systems to be installed. When smoke alarms are required by the code and someone opts to install a wireless detection system, they must comply with the provisions of the code and NFPA 72. Residential systems need to comply with IRC/2015, Section R314.7.1, General, for **"**household fire warning equipment," and commercial residential properties must comply with NFPA 72, Section 29.6.2 "Household Fire Alarm Systems" number (5), Low-power wireless systems.

Other commercial occupancies may also install a NFPA 72 wireless smoke detection system in accordance with the IBC 2015 Section 907.6.1, Wiring. An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72, Section 23.16, Special Requirements for Low Power Radio (Wireless) Systems.

Because wireless system transmitters have a sole power supply, NFPA 72 Section 23.16.2, Power Supplies, requires the following;

1. Each transmitter must be identified at the fire alarm control unit and only serve one device.
2. The battery must last at least a year before the depletion alarm activates.
3. The battery depletion signal shall transmit 7 days before the battery goes dead. The signal must be different than all other required signals and if silenced sound once every four hours.
4. In the event of a catastrophic battery failure a trouble signal must sound and if silenced sound once every four hours.
5. Only one transmitter can be effected by a failure of the battery.

Three other sections of NFPA 72/2013 should also be reviewed and complied with.

- **Section 23.16.3, Alarm Signals. 23.16.3.1 - 23.16.3.5**
- **Section 23.16.4, Monitoring for Integrity. 23.16.4.1 - 23.16.4.6**
- **Section 23.16.5, Output Signals from Receiver/Control. Items 1 – 5.**

To demonstrate the interaction between the code and the referenced standard, the applicable sections have been provided below.

NJ IBC/2015

907.2 Where required—new buildings and structures. An *approved* fire alarm system installed in accordance with the provisions of this **code and NFPA 72** shall be provided in new buildings and structures in accordance with **Sections 907.2.1 through 907.2.23** and provide occupant notification in accordance with **Section 907.5**, unless other requirements are provided by another section of this code.

(continued on next page)

(Wireless Smoke Detection Systems)

907.2.11.7 Smoke detection system. Smoke detectors listed in accordance with UL 268 and provided as part of the building fire alarm system **shall be an acceptable alternative to single- and multiple-station smoke alarms** and shall comply with the following:

1. The fire alarm system shall comply with all applicable requirements in Section 907.

2. Activation of a smoke detector in a dwelling unit or sleeping unit shall initiate alarm notification in the dwelling unit or sleeping unit in accordance with **Section 907.5.2**.

3. **Activation of a smoke detector** in a **dwelling unit or sleeping** unit shall **not activate** alarm notification appliances **outside of the dwelling unit or sleeping unit**, provided that a **supervisory signal** is generated and **monitored** in accordance with Section 907.6.6.

907.5.2 Alarm notification appliances. Alarm notification appliances shall be provided and shall be *listed* for their purpose.

907.5.2.1 Audible alarms. Audible alarm notification appliances shall be provided and emit a distinctive sound that is not to be used for any purpose other than that of a fire alarm.

907.5.2.1.1 Average sound pressure. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of not less than 60 seconds, whichever is greater, in every occupiable space within the building.

907.5.2.1.2 Maximum sound pressure. The maximum sound pressure level for audible alarm notification appliances shall be 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 95 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.

907.6 Installation and monitoring. A fire alarm system shall be installed and monitored in accordance with Sections 907.6.1 through 907.6.6.2 and NFPA 72.

907.6.1 Wiring. Wiring shall comply with the requirements of NFPA 70 and NFPA 72. **Wireless protection systems utilizing radio-frequency transmitting devices shall comply with the special requirements for supervision of low-power wireless systems in NFPA 72**.

NJ IRC/2015

R314.7 Fire alarm systems. Fire alarm systems shall be permitted to be used in lieu of smoke alarms and shall comply with Sections R314.7.1 through R314.7.4.

R314.7.1 General. Fire alarm systems shall comply with the provisions of this **code and the household fire warning equipment provisions of NFPA 72**. Smoke detectors shall be listed in accordance with UL 268.

R314.7.2 Location. Smoke detectors shall be installed in the locations specified in Section R314.3

R314.7.3 Permanent fixture. Where a household fire alarm system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner.

R314.7.4 Combination detectors. Combination smoke and carbon monoxide detectors shall be permitted to be installed in fire alarm systems in lieu of smoke detectors, provided that they are *listed* in accordance with UL 268 and UL 2075.

R314.7.5 Monitoring. The system shall be **monitored by an approved supervising station and shall be maintained in accordance with NFPA 72**.

NFPA 72/2013

18.4.5 Sleeping Area Requirements.

18.4.5.1* Where audible appliances are installed to provide signals for sleeping areas, they shall have a sound level of at least 15 dB above the average ambient sound level or 5 dB above the maximum sound level having a duration of at least 60 seconds or a sound level of at least 75 dBA, whichever is greater, measured at the pillow level in the area required to be served by the system using the A-weighted scale (dBA).

18.4.5.2 If any barrier, such as a door, curtain, or retractable partition, is located between the notification appliance and the pillow, the sound pressure level shall be measured with the barrier placed between the appliance and the pillow.

18.4.5.3* Effective January 1, 2014, audible appliances provided for the sleeping areas to awaken occupants shall produce a low frequency alarm signal that complies with the following:

(1) The alarm signal shall be a square wave or provide equivalent awakening ability.

(2) The wave shall have a fundamental frequency of 520 Hz ± 10 percent.

Wireless systems must also comply with NFPA 72/2013 sections below.

(continued on next page)

(Wireless Smoke Detection Systems)

29.6.2 Household Fire Alarm Systems. Power for household fire alarm systems shall comply with the following requirements:
(5) Low-power wireless systems shall comply with the performance criteria of Section 23.16.

***Section 23.16**, **Special Requirements for Low Power Radio (Wireless) Systems.**

23.16.1* Listing Requirements. Compliance with Section 23.16 shall require the use of low-power radio equipment specifically listed for the purpose.

23.16.2 Power Supplies. A primary battery (dry cell) shall be permitted to be used as the sole power source of a low-power radio transmitter where all of the following conditions are met:

(1) Each transmitter shall serve only one device and shall be individually identified at the receiver/fire alarm control unit.

(2) The battery shall be capable of operating the low-power radio transmitter for not less than 1 year before the battery depletion threshold is reached.

(3) A battery depletion signal shall be transmitted before the battery has been depleted to a level below that required to support alarm transmission after 7 additional days of nonalarm operation. This signal shall be distinctive from alarm, supervisory, tamper, and trouble signals; shall visibly
identify the affected low-power radio transmitter; and, when silenced, shall automatically re-sound at least once every 4 hours.

(4) Catastrophic (open or short) battery failure shall cause a trouble signal identifying the affected low-power radio transmitter at its receiver/fire alarm control unit. When silenced, the trouble signal shall automatically re-sound at least once every 4 hours.

(5) Any mode of failure of a primary battery in a low-power radio transmitter shall not affect any other low-power radio transmitter.

29.7.8 Wireless Devices.
29.7.8.1 Wireless Systems. Household fire alarm systems utilizing low-power wireless transmission of signals within the protected dwelling unit shall comply with the requirements of
Section 23.16.

The activation of a detector in a dwelling must initiate an audible sound pressure level complying with IBC/2015 Section 907.5.2.1.1 Average sound pressure, and IBC/2015 Section 907.5.2.1.2, Maximum sound pressure, inside the dwelling unit. NFPA 72/2013 also requires that sleeping room areas to meet the requirements of Section 18.4.5, Sleeping Area Requirements. Sound pressure levels need to be measured at the pillow level height. Section 18.4.5.3 also requires a low frequency 520 Hz alarm signal.

The detectors still need to be located in accordance with Section 907.2.11.2, Groups R-2, R-3, R-4, and I-1 occupancies, and Section R314.3, Location.

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

Ordinary Maintenance and Minor Work changes – Impact on Historic Districts

On March 5, 2018, several changes to the New Jersey Uniform Construction Code (UCC) were adopted in the New Jersey Register. The New Jersey Historic Preservation Office has received numerous inquiries about these recent code changes and how they will affect the preservation and protection of historic resources at the local level. The primary concern is with the qualification of roof and siding replacement projects that no longer require a municipal building permit.

The recent changes to the UCC do not eliminate the review authority of the local Historic Preservation Commission (HPC). If the local historic preservation ordinance states that this type of work requires HPC review, it must still be reviewed by the HPC, regardless of the requirement for other permits.

Building code officials in municipalities that have historic preservation ordinances should advise contractors and home owners that all exterior projects must be submitted to the HPC for review prior to commencing work. Additionally, municipal staff should advise homeowners in historic districts that the HPC review process remains intact and unaltered by the recent change to building permit requirements. As a longer-term solution, the Historic Preservation Office recommends that municipalities with local historic districts look into amending their historic preservation ordinances to include stronger and clearer language about the permit requirements and the types of activities that are subject to HPC review. For further details, please see the "NJ HPO Guidance Document" at https://www.njht.org/dca/njht/resources/related/.

Source: New Jersey Historic Preservation Office, (609) 984-0176

Private Office Toilet/Bathing Room

All toilet and bathing rooms in buildings subject to the accessibility provisions of the Uniform Construction Code are required to be accessible. This is stated at Section 1109.2 of the International Building Code/2015 (IBC/2015). This section further states that at least one of each type of fixture, element, control, or dispenser in each accessible toilet room and bathing room shall be accessible.

So what happens when the president of the company says, "I want my own bathroom and I want it attached to my office"? This is where Exception 1 of Section 1109.2 comes into play. Here it states:
Toilet rooms or bathing rooms accessed only through a private office, not for common or public use and intended for use by a single occupant, shall be permitted to comply with the specific exceptions in ICC A117.1.

Because the exception just references you to the A117.1 (2009 edition, as referenced in Chapter 35 of the IBC/2015), I have provided you a Cheat Sheet for the allowances of the private accessible "lite" bathroom. Keep in mind, for this president's bathroom to be accessible "lite," it must be accessed only through his/her private office and not for common use or public use.

Door Swing Clearances
603.2.2 Door Swing.
Doors shall not swing into the clear floor space or clearance for any fixture.
EXCEPTION #1 - Doors to a toilet and bathing room for a single occupant, accessed only through a private office and not for common use or public use shall be permitted to swing into the clear floor space, provided the swing of the door can be reversed to meet Section 603.2.2.

Water Closet Height
604.4 Height.
The height of water closet seats shall be 17 inches minimum and 19 inches maximum above the floor, measured to the top of the seat. Seats shall not be sprung to return to a lifted position.
EXCEPTION: A water closet in a toilet room for a single occupant, accessed only through a private office and not for common use or public use, shall not be required to comply with Section 604.4.

Water Closet Grab Bars
604.5 Grab Bars.
Grab bars for water closets shall comply with Section 609 and shall be provided in accordance with Sections 604.5.1 and 604.5.2. Grab bars shall be provided on the rear wall and on the side wall closest to the water closet.
EXCEPTION #1: Grab bars are not required to be installed in a toilet room for a single occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 604.5.

Knee and Toe Clearance.
606.2 Clear Floor Space.
A clear floor space complying with Section 305.3, positioned for forward approach, shall be provided. Knee and toe clearance complying with Section 306 shall be provided. The dip of the overflow shall not be considered in determining knee and toe clearances.
EXCEPTION #2: The requirement for knee and toe clearance shall not apply to a lavatory in a toilet and bathing facility for a single occupant, accessed only through a private office and not for common use or public use.

Lavatory/Sink Height
606.3 Height.
The front of lavatories and sinks shall be 34 inches (865 mm) maximum above the floor, measured to the higher of the rim or counter surface.
EXCEPTION: A lavatory in a toilet and bathing facility for a single occupant, accessed only through a private office and not for common use or public use, shall not be required to comply with Section 606.3.

Bath Tub Grab Bars
607.4 Grab Bars.
Grab bars shall comply with Section 609 and shall be provided in accordance with Section 607.4.1 or 607.4.2.
EXCEPTION: Grab bars shall not be required to be installed in a bathing facility for a single occupant accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 607.4.

(Continued on next page)

(Private Office Toilet/Bathing Room)

Transfer-type Shower Seat

608.2.1.3 Seat.

A folding or non-folding seat complying with Section 610 shall be provided on the wall opposite the control wall.

EXCEPTION: A seat is not required to be installed in a shower for a single occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of a shower seat.

Standard Roll-in-type Shower

608.2.2.3 Seat.

A folding seat complying with Section 610 shall be provided on an end wall.

EXCEPTION: A seat is not required to be installed in a shower for a single occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of a shower seat.

Alternate Roll-in-type Shower

608.2.3.3 Seat.

A folding seat complying with Section 610 shall be provided on the back wall.

EXCEPTION: A seat is not required to be installed in a shower for a single occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of a shower seat.

Shower Grab Bars

608.3 Grab Bars.

Grab bars shall comply with Section 609 and shall be provided in accordance with Section 608.3. Where multiple grab bars are used, required horizontal grab bars shall be installed at the same height above the floor.

EXCEPTION: Grab bars are not required to be installed in a shower facility for a single occupant, accessed only through a private office and not for common use or public use, provided reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 608.3.

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

Residential Kitchen Exhaust Hood Makeup Air

Section M1503.4 of the one- and two-family dwelling subcode (International Residential Code/2015 – IRC/2015) requires approximately the equal amount of makeup air to be brought back into the dwelling when the kitchen exhaust system exceeds 400 cubic feet per minute. You may now be asking…How can this provision of the code be met? In short, the code allows for an active or passive (i.e. mechanical or natural) type system. When an electrically-operated damper is installed, it must automatically open when the exhaust system is activated, or a gravity damper may be installed. Either damper must be accessible for inspection, servicing, and repairs without removing permanent construction.

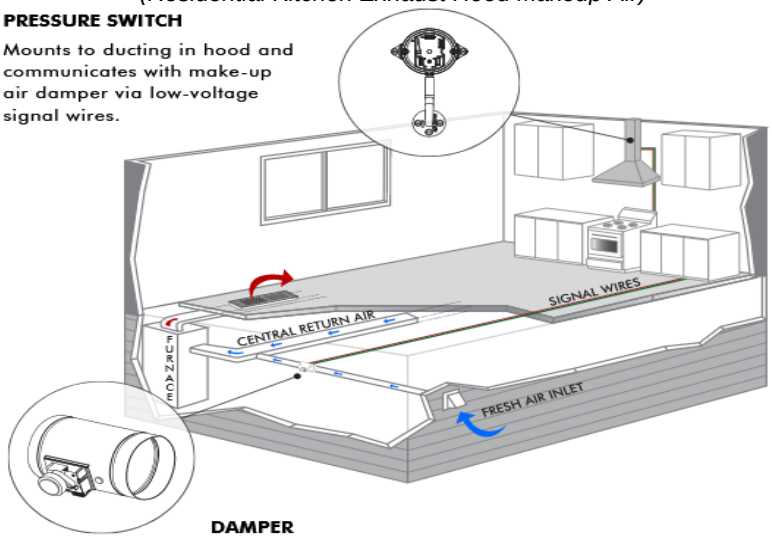
Subsection M1503.4.1 of the IRC/2015 permits three different methods of obtaining makeup air. First, the makeup air can be brought into the kitchen where the exhaust hood is located. Second, rooms that communicate freely with the kitchen with permanent openings that allow makeup air to flow into the kitchen are allowed. Third, a *duct system* that communicates freely with the kitchen through any component of the *duct system* is allowed. A duct system is defined at Section 202 of the IRC/2015 as "A continuous passageway for the transmission of air that, in addition to ducts, includes duct fittings, dampers, plenums, fans and accessory air-handling equipment and appliances." Combining the third option with this term applied means one could install a damper in the kitchen or the room or rooms adjacent to the kitchen as long as there are no doors which would block the flow path of the makeup air being supplied. The HVAC system for the home could supply the makeup air via a fresh air intake or a direct installation can be made to the hood with a wall or roof cap and damper.

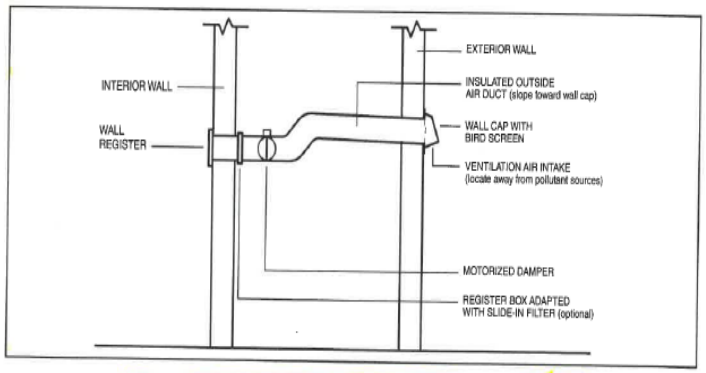
Caution should be taken when making a connection to the return duct of the HVAC. The appliance manufacturer's installation instructions must be reviewed. The introduction of outdoor air into the return duct may have a negative effect on the heat exchanger due to the different in temperature of the outdoor air. The manufacturer may have information about condensation forming which may lead to corrosion of the heat exchanger and failure could result.

M1307.1 General. Installation of appliances shall conform to the conditions of their listing and label and the manufacturer's instructions. The manufacturer's operating and installation instructions shall remain attached to the appliance.

(Continued on next page)

(Residential Kitchen Exhaust Hood Makeup Air)





(source: www.zephyronline.com)

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

Defining the Building Thermal Envelope – Basement Update

The original article published in the Spring 2018 edition is being updated to address the last statement: "In the case of newly installed or replaced ductwork in an unfinished basement with no insulation in the floor joists and no insulation on the basement walls, there is not a building thermal envelope (BTE) established per current code." This defaults to having the new/replaced ducts insulated (obviously, if the walls were insulated, the new/replaced ducts would be within the BTE and not required to be insulated).

Let's review the applicable definitions within the residential portion of the 2015 International Energy Conservation Code (IECC) and Chapter 11 of the International Residential Code: BTE and Conditioned Space

- BTE: The basement walls, exterior walls, floor, roof and any other building elements that enclose conditioned space or provide a boundary between conditioned space and exempt or unconditioned space.
- Conditioned Space: An area, room or space that is enclosed within the building thermal envelope and that is directly or indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate through openings with conditioned spaces, where they are separated from conditioned spaces by uninsulated walls, floors or ceilings, or where they contain uninsulated ducts, piping or other sources of heating or cooling.

In short, you cannot read the BTE definition without applying the Conditioned Space definition. For new construction, the Spring 2018 article explains this thoroughly and its application of the BTE being insulated in accordance with R402/N1102, entitled Building Thermal Envelope, with the emphasis on Section R402.2.8, Floors, and Section R402.2.9, Basement Walls.

For existing homes, reference N.J.A.C. 5:23-6.5(e)10 and 12 for Renovation N.J.A.C. 5:23-6.6(e)17 and 19 for Alteration. I'll break it down into basements that have:

(continued on next page)

(Defining the Building Thermal Envelope – Basement Update)

- Insulation installed in floor above basement: Replacement or newly installed ductwork to be in insulated per R403.3.1/N1103.3.1 as the ductwork placed outside the conditioned space boundary;
- Insulation installed on basement wall: Replacement or newly installed ductwork does not have to insulated as ductwork with within the conditioned space boundary; or
- No insulation in either location: At first glance of the definitions above, it would appear that replacement or newly installed ductwork would be within the BTE. This would be correct if one ignored the connection to Section R402/N1102 which assumes BTE boundary to be insulated. However, we cannot do this in light of today's code and this is why the Spring 2018 article stated, "This defaults to having the new/replaced ducts insulated." The ICC has issued an interpretation that per Section R503/N1109, sections part of the "Existing Buildings" chapters ***not*** adopted per N.J.A.C. 5:23-3.18 and 3.21, respectively, one may install the ductwork without insulation. That being said, I will acquiesce to the ICC as the Rehabilitation Subcode can be read either way.

In the case of an existing home that has no insulation installed in the floor above the basement and no insulation installed on the basement wall, one may proceed without having to insulate the ductwork.

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

Anchor Straps

(Updated reprint – originally published Spring 1999)

The Division has been seeing a number of problems with the incorrect installation of anchor straps. It appears that officials are not paying attention to this fundamental code issue. While it would seem that there is very little controversy with the code requirements for strapping, a comparison of the one- and two-family dwelling code (International Residential Code/2015 -- IRC/2015), building subcode (International Building Code/2015 -- IBC/2015) and the manufacturer's design criteria indicated that there are areas of controversy.

When plans call for conformance with the IRC/2015, the first issue is whether a home can be built with anchor straps installed in lieu of an anchor bolt?

Section R403.1.6 of the IRC/2015 specifies anchor bolts and permits anchor straps as an alternative regardless of whether IRC/2015 or Section 2308.3.1 of the IBC/2015 is being enforced. Bolts are to be spaced not more than 6 feet on center and there are to be not less than two bolts per piece with one bolt located not more than 12 inches or, IRC/2015 specific, less than seven bolt diameters from each end of the plate section or, IBC/2015 specific, less than 4 inches from each end of each plate section. As you can see, the only difference now, based on the 1999 article, is the bolt anchorage at the end of the plate section. Replace the word "bolt" with "strap that is spaced to provide equivalent anchorage to a ½" diameter bolt" above and you have your equivalency.

To put this in perspective, most builders are not special ordering 16-foot 2 by 4s for the sill plates (most are using 8 footers) and they essentially end up with the straps being located much closer than the allowable 8 feet.

Another issue of concern is how the manufacturer's design criteria affects the above-mentioned code requirements. Not all anchor straps are created equally. For example, one manufacturer has three different models, one of which is a direct replacement of an anchor bolt spaced 6 foot on center. A second model is also a direct replacement of an anchor bolt; however, this strap must be spaced 4-1/2 feet on center. Therefore, if this model is used, and spaced consistently with the code requirements stated above and not the design criteria, the anchor strap will have been installed in a manner which violates the design capabilities of the product in question. There is an assumption by IRC/2015 and IBC/2015 that the design limits will be consistent with the spacing requirements contained in the respective codes. If this is not the case, the product cannot be used unless one follows the manufacturer's installation requirements. Therefore, if an anchor strap has a spacing requirement of 4-1/2 feet and the code allows for a 6 or 8 foot on center spacing requirement, one must follow the manufacturer's requirement.

In conclusion, when inspecting anchor straps, make sure that the appropriate code is enforced and the anchor strap is appropriately designed for the intended installation.

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

Carbon Monoxide (CO) Detection Rules Adopted for New and Existing Buildings

(Updated reprint – originally published Summer 2017)

The new CO detection rules were adopted June 5, 2017. They address newly-constructed buildings, buildings undergoing a rehabilitation project and buildings regulated by Subchapter 4 of the Uniform Fire Code (UFC). Please see each section of the attached links for your specific scope of work or situation. The Uniform Construction Code enforcement effective date (end of the six-month grace period) is December 5, 2017. After that date, any applications for rehabilitation projects or new buildings must include CO alarms per the new rules. The effective date for enforcement in buildings regulated by Subchapter 4 of the UFC is September 3, 2017.

The proposal and notice of adoption can be found by clicking on Rule Proposals and Adoptions in the Rule Proposals and Notices of Adoption chart; go to the September 19, 2016 row within the chart at http://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html.

New Construction

The building subcode now requires CO alarms in all buildings that contain a fuel-burning appliance or fireplace or have attached garages with communicating openings into the building. Newly-installed CO alarms must receive their primary power from the building wiring and have a secondary battery backup source. Where there is no commercial power source in the building, battery CO alarms can be used. You can find corrected pages 238 and 239 (Section 915) of the 2015 New Jersey International Building Code (NJ IBC) under the BUILDING SUBCODE heading within the Adopted Codes and Standards chart; click on *Corrected pages (NJ errata) at http://www.nj.gov/dca/divisions/codes/codreg/.

Existing Buildings – Rehab Subcode

For existing buildings undergoing a rehabilitation project, the six-month grace period ends on December 5, 2017. For a building undergoing a rehabilitation project, battery-powered or plug-in type CO alarms are acceptable. "When alarms are installed in lieu of a detector, they shall be located such that the audible signal is not less than 15 dB above the average ambient sound level." You can find the updated pages under the REHABILITATION SUBCODE heading within the Adopted Codes and Standards chart, by clicking on NJUCC, Subchapter 6 at http://www.nj.gov/dca/divisions/codes/codreg/.

When a change in use occurs per N.J.A.C. 5:23-6.31 that involves Group I-1, I-2, I-4 or R or classrooms in Group E occupancies, systems complying with the building subcode Section 915 for new construction must be installed (battery-powered or plug-in type CO alarms are not acceptable).

Existing Buildings - UFC

The effective date for enforcement of the UFC requirements is September 3, 2017. (See N.J.A.C. 5:70-4.9 (d) for the new installation requirements.) For a building being inspected in accordance with UFC Subchapter 4, battery-powered or plug-in type CO alarms are acceptable. You can find the new requirements of N.J.A.C. 5:70-4.9 by clicking on Relationship to Uniform Construction Code after March 15, 2017 at http://www.nj.gov/dca/divisions/dfs/codes/.

In addition, see Division of Fire Safety, Bulletin 2017-1 for the retro-fit installation requirements.
https://www.nj.gov/dca/divisions/dfs/alerts/bulletins/bulletin_2017-1_carbon_monoxide.pdf

Detection Systems

It is important to note that detection systems are not required. As per the above, alarms are acceptable for meeting the requirements for carbon monoxide detection. When someone wishes to install a CO detection system, the system must comply with the installation requirements of these new rules and the balance of the system must comply with NFPA 720.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

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.

Installation of Chimney Liners in an Existing Structure

The Department has received numerous inquiries in regard to the installation of chimney liners in existing structures. The following is the Department's position:

Per N.J.A.C. 5:23-6.3, chimney liners are defined as a "System," and the replacement of the liner would be categorized as "Renovation Work." Under N.J.A.C. 5:23-2.17A(c)1ii and N.J.A.C. 5:23-2.17A(c)1iv, this is Minor Work; therefore, the inspection is limited to "what is visible at the time of inspection." The Certificate of Approval that is issued for this project must state this in accordance with N.J.A.C. 5:23-2.17A(d)2.

When the liner replacement is done at the same time a fuel-fired appliance is being replaced, the chimney verification form (UCC F-370) is required to be submitted at the time the application for minor work is made, pursuant to N.J.A.C. 5:23-2.20(d)1. This form is to be filled out in its entirety and signed by the contractor installing the fuel-fired equipment. This form has multiple verifications depending on the type of work being done. The only time the code official can require that the connector be disassembled is when the applicant does not verify the liner. If the homeowner is the applicant, he or she cannot do the verification.

Source: Bill Schmidt
Office of Regulatory Affairs
(609) 984-7672

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
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Volume 31, Number 2 **Summer 2019**

Stepped-Down Foundation Walls

(Updated reprint – published Fall 1995 and Summer/Fall 2003)

The practice of reducing the thickness of foundation walls once the wall is above grade is ever increasing.

The scope of this article is limited to the use of Tables 1807.1.6.2 and 1807.1.6.3(1) for plain concrete and plain masonry walls, respectively, and Tables 1807.1.6.3(2), 1807.1.6.3(3) and 1807.1.6.3(4) for reinforced masonry walls of the 2015 International Building Code, which specify the minimum thickness of foundation walls for various building materials when calculations are not provided.

The wall thickness specified in these tables is based on the height of unbalanced backfill which the foundation is required to support. The wall is required to be this thickness from support to support, in most cases from the top of the footing to the bottom of the sill plate. If the thickness of the wall is reduced at any point in between supports, the depth of unbalanced backfill is limited to the tabular depth based on the reduced wall thickness.

To demonstrate this point, envision the foundation wall on the horizontal plane. This wall is nothing more than a supported beam with the connections at the top of the foundation and the bottom of the plate being the end supports, and the unbalanced backfill being the distributed load. When viewing the wall in this plane, it is obvious that the thickness of the "beam" is required to be consistent from support to support. The same holds true for the vertical plane.

Should a design professional choose to use a design beyond the scope of tables referenced above, calculations should be submitted for the code official's review and release.

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

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The 38th Annual Building Safety Conference of New Jersey

The 38th Annual Building Safety Conference of New Jersey was held on May 1st through 3rd at Bally's Atlantic City. Our focus this year was on preparing our code enforcement officials for the pending updates to the model codes and their application upon adoption.

As always, our conference started with the "Crackerbarrel." This popular event gives our guests the opportunity to hear from a variety of presenters in a short format style with a focus on new items of particular interest to the code enforcement community. Topics ranged from emergency lighting requirements to an opportunity to meet with DCA staff for insight into recent code changes and guidance. We also held our first annual "Job Fair" this year, which was a success for the Associations and those seeking positions in code enforcement throughout the State. We are looking to expand the fair next year to include more prospective employers.

The centerpiece of the Building Safety Conference was the opportunity to recognize and honor those selected by their associations as Code Enforcement Professionals of the Year. We were honored to have Assistant Director Kevin Luckie and retired Directors Cynthia Wilk and William Connolly present for these awards. Each of the Presidents of their respective partner associations were also present to make the award presentations at the annual luncheon.

The following awards were presented:

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year – Louis J. Buonocore

Municipal Construction Officials of New Jersey
Construction Official of the Year – John W. Fiedler

New Jersey Association of Technical Assistants
Technical Assistant of the Year – Susan L. Mealey

New Jersey Building Officials Association
Building Inspector of the Year – Pat J. Naticchione

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year – Richard Vigliotti, Jr.

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year – Richard Silvia



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year – Louis J. Bunocore (with Assistant Director Kevin Luckie, NJPIA President Mark Bocchino, and John Delesandro, Supervisor, Licensing and Education Unit)

(The 38th Annual Building Safety Conference of New Jersey)



Municipal Construction Officials of New Jersey
Construction Official of the Year – John W. Fiedler (with John Delesandro, Supervisor, Licensing and Education Unit, Assistant Director Kevin Luckie, Retired Director William M. Connolly, and MUNCO Chairman Jerry Eger)



New Jersey Association of Technical Assistants
Technical Assistant of the Year – Susan L. Mealey (with John Delesandro, Supervisor, Licensing and Education Unit, Assistant Director Kevin Luckie, and Brenda Sirkis of West Windsor Township)

(The 38th Annual Building Safety Conference of New Jersey)



New Jersey Building Officials Association
Building Inspector of the Year – Pat J. Naticchione (with John Delesandro, Supervisor, Licensing and Education Unit, Assistant Director Kevin Luckie, and NJBOA President Jerry Eger)



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year – Richard Vigliotti, Jr. (with Assistant Director Kevin Luckie, NJMEIA President George Selah III, and John Delesandro, Supervisor, Licensing and Education Unit)

(The 38th Annual Building Safety Conference of New Jersey)



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year – Richard Silvia (with John Delesandro, Supervisor, Licensing and Education Unit, Assistant Director Kevin Luckie, and Kevin Batzel, President, Ocean County Fire Prevention and Protection Association)



(The award recipients and Association Presidents with retired Director William Connolly)

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

Looking ahead, the 2020 Building Safety Conference will be a very special event! We will be expanding the Conference to include a third day option to incorporate testing academies for preparation of both new and upgrading licensees for their exams. Of special note is a Building Inspector RCS academy that will incorporate a review of both the residential building and mechanical codes. We are still finalizing the details for the three-day Conference, including offering other two-day classes in combination with a third day of training, so stay tuned! We are also pleased to announce that we will be kicking off Building Safety Month 2020 during our annual awards luncheon with the International Code Council. It will be an event you won't want to miss!

(The 38th Annual Building Safety Conference of New Jersey)

We hope to see you all next year at Bally's Atlantic City, April 28 through May 1, 2020. Please save the date and "Like" us on Facebook for event updates, room locations and other important information!

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. However, if you have an idea to better the Conference, please pass that along through your association or email me at john.delesandro@dca.nj.gov.

Source: John Delesandro, Supervisor of Enforcement
Licensing and Education Unit

Single-Family Detached Home – FAQs

Owner-occupied single-family detached homes have more flexibility with the New Jersey building codes than any other residential or commercial building in the state. The Code Assistance Unit consistently receives a variety of inquiries on these structures, including: design; usage; permit requirements; and more. The following are some of the most Frequently Asked Questions:

Who can design and submit plans for a single-family detached home?

As per N.J.A.C. 5:23-2.15(f)1ix (and further explained in Bulletin # 96-2), residential structures must be designed by an architect; however, the bulletin also states that either an architect or an engineer can sign and seal plans for "engineering systems." In other words, an engineer can design any system in a house (for example – HVAC, plumbing, electric, etc.), but not the house itself. The architect must certify that the design of the engineered system(s) will be compatible with the building he or she has designed pursuant to N.J.A.C. 5:23-2.15(f)1xi(1). An exception exists; N.J.A.C. 5:23-2.15(f)1ix(1) allows a single-family detached home owner to prepare his or her own plans as long the structure is used or intended for use as his or her private residence. The owner must sign an affidavit.

Is there anything the owner of a single-family detached home cannot design?

Single-family detached homeowners cannot prepare their own plans for a home in a V Zone. N.J.A.C. 5:23-2.15(f)1ix(1) states that only registered architects and licensed engineers can prepare the plans for new homes or homes undergoing substantial improvement in a V Zone.

What kind of work can be performed by the owner of a single-family detached home?

Almost all work. This includes electrical, HVACR, lead abatement (pursuant to N.J.A.C. 5:23-2.23(p)3), plumbing, structural, etc. For more specific examples, see the Spring 2019 CCC article titled, "License Check" (https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/CCC_Spr_2019.pdf). This leads us to the next question.

What kind of work cannot be performed by the owner of a single-family detached home?

As per N.J.A.C. 7:14B (and further explained in Bulletin # 95-1B), removal/abandonment required for residential heating oil tanks. Underground residential heating oil tanks are regulated under the jurisdiction of the Department of Environmental Protection. Homeowners are not permitted to remove or abandon these tanks. Only DEP certified individuals and firms can perform services on underground residential heating oil tanks.

What if the home is renter occupied?

The owner no longer qualifies for the exception that allows them to submit drawings, and may not be able to perform some of the work. (For more information, see Spring 2019 CCC article titled, "License Check," https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/CCC_Spr_2019.pdf.)

Do I need a building permit to install a driveway, parking lot or sidewalk?

No. Driveway, parking lots and sidewalks in general are not regulated under the Uniform Construction Code (UCC). Owners should obtain zoning approval for any of these projects, but this is outside the scope of the UCC.

Do I need a building permit to install a patio made of pavestones?

No. Patio pavers installed at grade are not regulated by the UCC. Home owners should obtain zoning approval, but this is outside the scope of building codes.

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

Exit Access Travel Distance Measurement

A question that is asked of the Code Assistance Unit often is, what is the appropriate measurement of travel distance? For starters, one should visit the section of the building subcode (International Building Code/2015) that regulates this: Section 1017.3, Measurement. Here it states that exit access travel distance is to be measured form the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit.

So what does this mean? In a single-exit building, the answer is pretty simple. Start from the furthest point of the floor/story and measure until you reach the door of a rated stair (that takes you directly outside). In the event that building is permitted to have an open stair, the measurement would continue down the stair until outside the building. In a building with two or more exits, the measurement is calculated to the first/closest egress stair. The second (or third) stair is a "back up" in case the closest stair is no longer available and the measurement to the other egress stair(s) is not regulated.

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

Read Your Wire

This is something I have said for years now, and it still holds true: Read your wire or material, and you will surprised what you can find out!

Recently, I received an inquiry about Type TC cable that was "included" with the manufacturer's installation kit. Upon reading the installation kit, it was revealed that is was not Type TC Cable. It, in fact, was a Type CM-CL2 cable assembly. From what I can determine from one particular type (e.g. Honeywell Genesis Part #1214 and others), it is being used by several manufacturers for split A/C systems. Some Genesis-type cable may have THHN conductors.

The 2014 National Electric Code (NEC) is specific that outdoor installations and interiors of conduits that are approved for wet locations. [see NEC articles 300.9 and 310.10(B) and (C)].

Type CM-CL2 and THHN are not approved wet location conductors. If you find them installed in locations such as the outdoors, they are not in accordance with its testing by the appropriate Nationally Recognized Testing Laboratory (NRTL). Guide yourself accordingly.

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

Source: Neil Nagy
Bureau of Construction Plan Review

Automatic Wet Standpipe System Flow Tests, Sprinklered versus Non-Sprinklered Buildings

The installation of standpipe systems has been the same since the old BOCA Building Code days, and we continue to modify the standpipe section of the International Building Codes since 2003. Standpipe piping needs to be installed per the sizing requirements of Section 905.2.1, Piping design. The piping must be designed with a pressure of 150 psi being supplied at the fire department connection. The sizing of the piping should be hydraulic calculated to flow the required gallon per minute (gpm) per Sections 905.2.1.1, Riser sizing, and 905.2.1.2, System pipe sizing. The required flow rates vary based on building occupancies. Section 905.2.1.1 Riser sizing, requires the first risers flow rate must be sized to flow a minimum of 500 gpm. There are four exceptions to this requirement in the code text and they are listed below. Section 905.2.1.2, System pipe sizing, also requires that when additional risers are required, they need to be sized at 250 gpm for each riser not to exceed 1250 gpm. There are three exceptions to these requirements, also listed below. So the code requirements of Sections 905.2.1.1, Riser sizing, and 905.2.1.2, System pipe sizing, are pipe sizing requirements only to make sure the hydraulic calculation prove out when the FDC is being supplied with 150 psi of water from the fire department.

The automatic water supply requirements for standpipe systems is basically one of two methods: non-sprinklered buildings and sprinklered buildings. Non-sprinklered buildings must meet the required gpm flow rates of Section 905.2.1.1, Piping sizing, and 905.2.1.2, System pipe sizing, based on Section 905.2.2.1, Automatic water supply. Sprinkler buildings only need to meet the water supply required by NFPA 13 or 13R. This is where a little confusion starts to come into play, how much water needs to be flowed during the acceptance test.

(continued on next page)

(Automatic Wet Standpipe Systems Flow Tests, Sprinklered versus Non-Sprinklered Buildings)

When a non-sprinklered building has three standpipes, the first standpipe must flow 500 gpm and the standpipe used should be the most hydraulically remote hose connection and the other two risers would need to flow 250 gpm each. While flowing the required gpm the residual pressure must not go below 65psi. A duration of 30 minutes of available water must be automatically present on site, a public water supply can be used to accomplish this. Non-sprinklered or separately supplied standpipe buildings must be tested this way.

When buildings are sprinklered with either a NFPA 13 or NFPA 13R system, the gpm rate would not be a concern due to the exception in Section 905.2.2.1, Automatic water supply. As long as the buildings highest floor level is not more than 150 feet above the lowest level of fire department vehicle access, the automatic water supply is not required to exceed that required by NFPA 13. So the acceptance test for the automatic standpipe in a sprinklered building (combination system) would just be to just flow the most hydraulically remote standpipe and record the pressure reading. No minimum residual pressures or minimum gpms are required in a sprinklered building. The exception in 905.2.2.1 only requires the automatic water supply to be present for the automatic fire sprinkler system so the gpm may not be possible to achieve the flow rates required in a non-sprinklered building. In many cases the flow rate in gpm may meet the requirements for a single riser, but the 500 gpm flow rate is not required. Lower flow rates does not mean the test has failed. In some situation the most remote standpipe may not be able to be flowed so the NFPA 14 standard allows the code official to pick an appropriate location.

Some code officials require all the standpipes to be flushed during the acceptance test and this flushing is also not part of the code or NFPA 14 standard requirements. Flushing is only required for underground piping.

Relevant Code Sections of the International Building Code 2015

905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14. Fire department connections for standpipe systems shall be in accordance with Section 912.

905.2.1 Piping design. The riser piping, supply piping and the water service piping shall be sized to maintain a residual pressure of at least 65 psi (448 kPa) at the topmost outlet of each riser while flowing the minimum quantities of water specified in Sections 905.2.1.1 and 905.2.1.2. The pipe size shall be based on the capacity of the automatic water supply system or, where an automatic water supply is neither required nor provided to maintain the residual pressure of 65 psi (448 kPa), the pipe size shall be based on a pressure of 150 psi (1034 kPa) available at the fire department connection.

Exception: The residual pressure of 65 psi (448 kPa) is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with either Section 903.3.1.1 or 903.3.1.2 and also where the highest floor level is not more than 150 feet (45 720mm) above the lowest level of fire department vehicle access.

905.2.1.1 Riser sizing. The riser size shall be based on hydraulic calculations for a minimum flow of 500 gallons per minute (gpm) (1892 L/min.).

Exceptions:

1. Where only 1 1/2-inch valves are provided, the riser(s) shall be sized to provide a minimum flow of 100 gpm (378 L/min.).
2. In buildings where limited area sprinkler systems are supplied with water from a common standpipe riser, the riser shall be sized to satisfy total demand.
3. For occupancies in Group B, I, R-1 or R-2 in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, each riser shall be sized for a minimum flow of 250 gpm (945 L/min.).
4. Risers that are sized in accordance with the pipe schedule requirements of NFPA 14 listed in Chapter 35 are not subject to this requirement.

905.2.1.2 System pipe sizing. The system piping, including the horizontal or common feeder lines shall be sized for a minimum flow of 500 gpm (1892 L/min.). Where more than one standpipe riser is required or provided, all common system piping shall be sized for a minimum flow of 500 gpm (1892 L/min.) for the first riser plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 1,250 gpm (4731 L/min.).

Exceptions:

1. Where only 1 1/2-inch valves are provided, the supply piping shall be sized for a minimum flow of 100 gpm (378 L/min.) for each riser, and the total shall not be required to exceed 500 gpm (1892 L/min.).
2. In buildings where limited area sprinkler systems are supplied with water from a common standpipe riser, the supply piping shall be sized for a minimum flow of 500 gpm (1892 L/min.) plus the sprinkler demand for the first riser, plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 1,250 gpm (4731 L/min.).

(continued on next page)

(Automatic Wet Standpipe Systems Flow Tests, Sprinklered versus Non-Sprinklered Buildings)

3. For occupancies in Group B, I, R-1 or R-2 in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, all common supply piping shall be sized for a minimum flow of 250 gpm (945 L/min.) for the first riser plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 750 gpm (2838 L/min.).

905.2.2 Water supply. A water supply for fire department equipment shall be available to the building site. The water supply shall be capable of a minimum flow as required by Section 905.2.1.2 for a duration of 30 minutes.

905.2.2.1 Automatic water supply. An automatic water supply is required for all standpipe systems. The automatic water supply and supply piping shall be capable of delivering a flow of 500 gpm (1892 L/min.) at the residual pressure specified in Section 905.2.1 for a duration of 30 minutes.

Exceptions:

1. In buildings equipped throughout with an automatic sprinkler system installed in accordance
with either Section 903.3.1.1 or 903.3.1.2 and also where the highest floor is located not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access, the automatic water supply is not required to exceed the requirements of NFPA 13 listed in Chapter 35.

Source Michael Whalen
Code Assistance Unit
609-984-7609

Electrical Installations Related to HVACR, Well Driller and Pump Installers, and Telecommunications

Judging from the inquires I have been receiving as of late, it appears there might be some confusion related to the above topic.

Starting with the permit requirements of the Uniform Construction Code (UCC), N.J.A.C.-5:23-2.14 specifies that a permit ***is required*** for the installation of equipment, with very few exceptions. Please note that Heating, Ventilation, Air conditioning, and Refrigeration (HVACR) installations and well equipment installations, amongst others, are not exempt from the UCC permitting process, especially in relation to the associated inspection(s).

The following is a list of related activities that require a UCC permit and inspection but may not necessarily involve a licensed electrician.

- Per N.J.A.C. 13:31-4.1 (Telecommunications Exemption), any properly recognized contractor – as recognized by the New Jersey Board of Electrical Examiners – is permitted to install telecommunication wiring; this does not apply to low voltage wiring. I know we've all heard the term "low voltage wiring exception" but in actuality, there is none. All landscape lighting, low voltage wiring and lighting in excess of 10 volts, which is not telecommunication wiring, requires a New Jersey licensed electrical contractor; the exception to this would be a listed/labeled "do-it-yourself" kit that is provided with a factory supplied plug in transformer .
- Per N.J.A.C. 13:31-4.2, a well driller/pump installer is permitted to install those conductors from the *load side of the pressure switch, controller or disconnect on the interior of a building up to a maximum of ten (10) feet*; again, this does not exempt the installer from compliance with the UCC for permits/inspections.
- Per N.J.A.C. 13:32A-1.2 (see #10 in the Definitions), HVACR contractors are permitted to replace the connection of the wiring from a disconnect box of adequate size meeting the following conditions:
    - 25 tons or less;
    - 240 volts or less; and
    - Connection of the wiring complies with all provisions of the UCC.
- Per N.J.A.C. 13:32A-1.3 (Electrical work), HVACR contractors are not to perform any electrical work in excess of 10 volts except in the case of a Class 3 structure (defined at NJAC 5:23-4.3A), 30 volts.

The end results is: regardless of whether an electrical contractor is required for the electrical work, the need for permits and inspections still exists. In the event of the non-electrical contractor doing the work described above, one should fill out the permit(s) by using the "exempt contractor" box .

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

Source: Neil Nagy
Bureau of Construction Project Review

Accessibility versus Accessible Means of Egress

Recently, the Code Assistance Unit has had an influx of calls regarding Section 1009 of the building subcode (International Building Code/2015), Accessible Means of Egress, with the real issue regarding buildings that are not provided with (and are not required to have) an elevator to provide a vertical accessible route to the second floor per Section 1104/1107 of the building subcode. Please note, even though these sections seem similar, they are distinct and separate in application.

Section 1009.1 of the building subcode states that spaces required to be accessible [per Sections 1104/1107] must be provided with at least one accessible means of egress. This raises the following question: Is a second floor of a building that is not provided with an elevator (and not required to have one) required to have an accessible means of egress? The answer is no.

The purpose of an accessible means of egress is to provide a protected waiting space for a person with a disability in the case of an emergency. If the building is not provided with an elevator, the upper levels of the building are not required to be provided with the accessible means of egress. Individuals who occupy those floors have done so by using the stairs and they may do so in an emergency as well.

In short, any space that is not required by the code to be accessible in accordance with Chapter 11 is not required to be provided with accessible means of egress. This may include an entire story, a portion of a story, a mezzanine, or an individual room.

Some examples are provided below:

- Business building with a total gross enclosed floor area of less than 10,000 square feet of two or more stories.
    - An elevator is not required per Section 1104.4.1 (unless the “small building” is mandated to have one, like a State-owned facility), therefore no accessible spaces above the first floor and accessible means of egress is not required per Section 1009.1;
    - If elevator is electively installed, accessible spaces are now above the first floor and accessible means of egress is required per Section 1009.1.
- Business building with a total gross enclosed floor area of 10,000 square feet or more.
    - An elevator is required per Section 1104.4.2, therefore accessible spaces are above the first floor and accessible means of egress is required.
- Residential building with four or more dwelling units of 2 or more stories (Section 1107.6).
    - No elevator is proposed and ground level units are Type A. This is acceptable and any upper units are not required to be Type A and accessible means of egress is not required;
    - No elevator is proposed and there are no units at ground level. This is not acceptable and would require an elevator to be installed to at least the 1st level of residential units, these units would be Type A units at this level and accessible means of egress is required from this level.
    - Elevator is electively installed, all units must be Type A and accessible means of egress is required. Note that, if the building has five accessible floors, Section 1009.2.1 requires the building to be served by not less than one accessible means of egress utilizing an elevator complying with Section 1009.4 (in conjunction with at least one other accessible means of egress per Section 1009.1).

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

Splash Pads and the Like

The Division has received numerous questions regarding the appropriate bonding inspection requirements for splash pads and similar installations.

But before speaking to the bonding inspection requirements, here is some background: In short, a splash pad or spray pool is a recreation area for water play that has little or no standing water. There may be ground nozzles that spray water upwards and other water features such as a semicircular pipe shower and various other configurations.

Moving back to the code requirements, Article 680 of the electrical subcode (the 2014 edition of NFPA 70) contains bonding requirements for swimming pools that contain water on a permanent or semi-permanent basis. A splash pad would not meet this definition; thus, Article 680 would not apply. Also, N.J.A.C. 5:23-2.18B is specific in that the grounding and bonding certificate is issued to swimming pools, spas, and hot tubs on any property other than one- and two-family dwellings. Again, this would not apply to a splash pad.

Lastly, some would like to apply the International Swimming Pool and Spa Code’s (ISPSC) requirements to this installation. Because the adopted electrical subcode overrules the referenced standard regarding bonding, the electrical subcode prevails. Splash pads do not require bonding per Article 680 of the electrical subcode.

Source: Neil Nagy, Construction Official, Bureau of Construction Project Review

April 2019 Highlights of the *New Jersey Construction Reporter*

The following information is from the April 2019 Highlights. The New Jersey Construction Reporter is published on a monthly basis 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

- $1.251 billion of construction was authorized by building permits in April. Residential activity totaled $579.8 million (46.4 percent). Office, retail, and other nonresidential work amounted to $670.8 million (54.5 percent).
- 517 municipalities reported.
- Newark reported $61.9 million of construction authorized by building permits in April. Jersey City had $50.6 million.

Major Construction Indicators, New Jersey, January - April 2009 to 2019
NJ DCA, 6/7/2019

Period	Estimated cost of construction	Authorized housing units	Authorized office space (square feet)	Authorized retail space (square feet)
January - April 2019	$4,617,390,543	7,259	1,432,202	226,617
January - April 2018	4,455,430,800	6,908	1,473,343	764,409
January - April 2017	4,772,835,656	5,477	2,072,928	794,048
January - April 2016	5,734,978,178	9,149	1,617,303	810,587
January - April 2015	4,039,461,004	4,968	1,005,828	1,746,835
January - April 2014	3,876,038,930	6,230	1,601,420	628,231
January - April 2013	3,930,738,582	5,737	1,921,562	695,444
January - April 2012	3,390,078,746	4,208	2,415,800	646,398
January - April 2011	3,444,393,038	3,786	1,978,255	781,690
January - April 2010	2,869,962,723	3,474	1,487,311	431,806
2018-19	$161,959,743	351	-41,141	-537,792
percent change	3.5%	4.8%	-2.9%	-237.3%
2017-18	-$317,404,856	1,431	-599,585	-29,639
percent change	-6.7%	26.1%	-28.9%	-3.7%
2016-17	-$962,142,522	-3,672	455,625	-16,539
percent change	-16.8%	-40.1%	28.2%	-2.0%

- The dollar amount of work authorized between January and April 2019 totals $4.617 billion. This is 3.5 percent higher than last year at this time.
- The number of new houses authorized by permits in the first four months of 2019 was 7,259. This is 351 more than last year at this time.

(continued on next page)

(April 2019 Highlights)

Dollar Amount of Authorized Construction, top municipalities, January - April 2019

NJ DCA, 6/7/2019

Municipality	County	Estimated cost of construction	Authorized housing units	Authorized office space (square feet)	Authorized retail space (square feet)
Jersey City	Hudson	$167,173,729	959	132,205	0
Cherry Hill	Camden	130,116,412	2	0	51,220
Newark	Essex	122,307,413	7	58,159	1
Piscataway	Middlesex	118,162,035	2	0	0
Camden City	Camden	111,995,202	2	16,751	7,610
Lawrence	Mercer	110,145,298	19	1	0
Hackensack	Bergen	99,722,200	88	1	1
Toms River	Ocean	64,466,133	129	1	11,470
Raritan borough	Somerset	60,483,725	1	5,300	0
Harrington Park	Bergen	60,160,014	85	0	0
Top municipalities		1,044,732,161	1,294	212,418	70,302
New Jersey		**$4,617,390,543**	**7,259**	**1,432,202**	**226,617**
top munis as % of NJ		22.6%	17.8%	14.8%	31.0%

Big permits, 2019

Construction Reporter, 6/7/2019

municpality	county	permit no.	dollar amt of construction	descripton
Jersey City	Hudson	20184390+G	206,000,000	615 Pavonia Av, Journal Sq, 704 apt units broke ground 11/18
Cherry Hill	Camden	20190017	95,265,809	JFK Memorial Hospital addition
Jersey City	Hudson	20191843	62,364,637	20 Theordore Conrad Dr; Sysco Food Svcs warehouse
Harrington Park	Bergen	2019/046	59,566,000	Allegro Senior Living includes 85 independent apts
Eatontonw	Monmouth	19-0293	58,906,000	Artis Senior Living; 147 Grant Av; assited living
Camden City	Camden	000020190177	41,507,456	Resinpak recycling factory, NE Federal & 17th St; no fee--in transit zone
Raritan Borough	Somerset	18-349+F	39,732,600	office fit out, Ortho McNeil Pharmaceutical, 1000 US Rte 202, update 11/18
Newark	Essex	19CP000796	38,254,500	47-63 Green St, Newark Parking Authority; mixed use; parking & retail
Millville	Cumberland	18-60029+E	38,080,360	high school renovation, SDA
Montclair	Essex	19-0937	37,442,448	Willow St & Bloomfield Av, mixed-use blg; 200 apts, retail, parking;
Hackensack	Bergen	000020190029	35,950,000	Hackensack Univ Med Ctr; central utility plant; 2nd & Atlantic Sts
Sayreville	Middlesex	00020170175U	32,337,000	pump station renovation, Middlesex Co Utility Authority, 56 Canal St
Piscataway	Middlesex	20190210	31,880,300	community cultural arts center; 5241 Stockton St
Jersey City	Hudson	20192070	31,817,541	Water St development; 145 apts
Lawren ce	Mercer	00020180513U	30,555,521	permit update, Bristol Myers Squibb, blgs M & N; broke ground 4/18
West Caldwell	Essex	19-222	28,940,000	620 Passaic Av; Essex Co voc school
South Brunswick	Middlesex	000020190628	28,220,100	Harbor Chase asst lvg; 4331 US Rte 1
Branchburg	Somerset	19-00192	25,762,636	Allergen Pharmaceutical, 4 Millennium Way
Camden City	Camden	19-60004	23,431,324	public high school; Park and Baird Blvds
Millburn	Essex	19-0106	23,037,521	150 JFK Pkwy, 200 apartments
Jersey City	Hudson	20183960+B	22,650,000	update, 159 rentals, 172 2nd St; broke ground 10/18
Cranbury	Middlesex	19-145	22,208,000	341 Half Acre Rd, Wayfair warehouse
Westwood	Bergen	000020190114	21,670,000	Westwood middle sch addition
Dover Town	Morris	00020180012U	20,275,000	permit update, Meridia Transit Plaza; mixed use, 214 apts, broke ground 1/18
East Brunswick	Middlesex	18CP001698	20,198,366	Care One assisted living; 666 Cranbury Rd
Bayonne	Hudson	19-03-021	20,000,000	180 rental units; 101 E 23rd St
Park Ridge	Bergen	19-083	20,000,000	downtown redevelopment; mixed-use; bldg 1; 120 apts
Long Branch	Monmouth	17-0550+I	18,035,000	permit update, 57 condos broke ground 9/17; 310 Ocean Av
Hanover	Morris	000020190109	17,800,000	Barclays investment bank; 200-500 Jefferson Park, Whippany
Bloomfield	Essex	19-0228+A	17,211,692	30-4 Farrand St; Metro Real Estate; hi-rise , 176 rental units with parking deck
Washington Twp	Morris	00020180735U	17,000,000	assisted living, Heath Village, 430 Schoolys Mtn Rd
Woodbridge	Middlesex	000020190160	16,366,601	conversion, mixed use, office, retail, & 113 apts; 1 Woodbridge Ctr Dr
Mount Laurel	Burlington	000020190716	16,179,593	1200 Knox Way; 31 apts
Hoboken	Hudson	19-90074	16,078,341	Foot of Hudson Pl, NJ Transit
Passaic City	Passaic	18-60055+C	15,881,594	permit update for new public school, Dayton Av
Hackensack	Bergen	00020190029U	15,600,000	permit update, utilility plant for medical center
East Rutherford	Bergen	19-10039	15,505,000	NJ Sports & Exposition Authority; American Dream
Camden City	Camden	000020190178	14,666,523	Action Pack packing, assembly, & shipping; River Rd & East State St
West Orange	Essex	00020190086U	14,300,000	parking deck for zoo; Northfield Av; Essex County
Moorestown	Morris	P2019-0204	14,020,000	water treatment plant addition; 1248 N Church St
Piscataway	Middlesex	20190331	13,778,000	warehouse fit out, 199 Ridge Rd, fka River Rd
Piscataway	Middlesex	20181576+B	13,467,000	warehouse, 199 River Rd, shell, bldg 5
West Orange	Essex	000020190741	13,133,751	748 Nothfield Av; nursing home renovation, Daughters of Isreal
Clifton	Passaic	190087	12,862,000	new office & retail bldg, 1153 Bloomfield Av
Wayne	Passaic	000020190005	12,522,103	movie theater, Willowbrook Mall
Morristown	Morris	20180391+B	12,450,000	update, AHS Hospital Corp, 48 Madison Av
Wayne	Morris	000020190856	12,165,734	350 Rte 46; Home2suties; new hotel; Jack
Hackensack	Bergen	00020151379U	12,000,000	fit up of residential bldg; 150 Main St

Smoke Alarms 10-Year Sealed Battery Type

Recently the Division has been getting numerous calls from dwelling owners, realtors, electricians, fire alarm installers, and code officials regarding when 10 year sealed battery units need to be installed.

The New Jersey Uniform Fire Code (NJ UFC) was amended July 1, 2018 with an effective date of January 1, 2019. The NJ UFC now requires 10-year sealed battery single station smoke alarms to be installed where single station smoke alarms with a removable battery are installed or when no smoke alarms are present. The NJ UFC rules require all single station smoke alarms with a removable battery to be replaced regardless of whether they were just installed last year or if they are older.

When a dwelling is constructed in accordance with the Uniform Construction Code (UCC), since 1977, the dwelling would have required some type of AC-hardwired 120 volt smoke alarm. In some cases, a homeowner may have chosen to install a Low Voltage Household Fire Alarm System in accordance with the One- and Two-Family Dwelling Subcode (IRC/NJ) and National Fire Protection Association (NFPA) 72. The new NJ UFC rules have nothing to do with UCC-compliant smoke alarms or low voltage household fire alarm systems. When the systems are installed in accordance with the UCC, they may have only been required to install 120 volt AC smoke alarms or 120 volt AC smoke alarms with a removal battery backup. <u>But none of these alarms are required to be replaced because the backup battery can be removed.</u>

Smoke alarms installed before August 6, 1984 were not required to be interconnected, and no battery backup was required. After that date, until September 4, 1991, smoke alarms needed to be interconnected on each floor level of the dwelling. After that date, through the present, smoke alarms need to be on each floor and in each bedroom of the dwelling. Smoke alarms are also required in the vicinity of the bedrooms, this has always been a topic of discussion. When smoke alarms are interconnected they may be up to 21 feet away from bedrooms, if the alarm is a single station they must be within 10 feet. Finally, since September 7, 2010, Low-Voltage Household Fire Alarm Systems can be installed, so the inspector should be aware of what they are looking at.

Some inspectors have advised homeowners and their agents that UCC smoke alarms have to be removed from service and AC-sealed unit smoke alarms have to be installed. Some have advised realtors that UCC household fire alarm system low voltage system detectors needed to be removed and 10-year sealed battery smoke alarms have to be installed. Some have sent the owner to the construction department to apply for a permit to install battery operated smoke alarms. Some have even told owners that the carbon monoxide (CO) alarms need to be 10-year sealed battery units. **NONE of these examples are covered by the new NJ UFC rules.**

Furthermore, 10-year sealed battery smoke alarms can be installed under ordinary maintenance, and no permit is required. CO alarms are permitted to be “normal” battery operated units, plug-in type; if someone wishes, they may opt to have a hardwired unit installed. When a hard wired CO alarm is installed, a permit would be required. Battery or plug-in type CO alarms are also covered under ordinary maintenance, and no permits are required.

UCC systems, line voltage or low voltage, must be maintained as required at the time of installation. When an inspector suspects there might be a UCC installation issue or a system has had a required smoke alarm removed and a battery smoke alarm installed in its place, they need to inform the construction official so the fire subcode official can issue a CO notice of violation.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

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.

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Volume 31, Number 3 **Fall 2019**

This edition…

2018 I-Codes Adoption,

2018 National Standard Plumbing Code Adoption,

2017 National Electrical Code Adoption,

and more!



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Grace Period for Model Codes

As you may be aware, the 2018 I-Codes, along with the 2018 National Standard Plumbing Code (NSPC) and 2017 National Electrical Code (NEC), were adopted on September 3, 2019. With this adoption comes a six-month grace period for the previous model codes. This means starting that from this date, applicants may submit a complete permit application, including all prior approvals, to be reviewed under the code in force immediately preceding the subcode revision. Provided that the application is complete, the construction official and applicable subcode officials should perform the plan review and issue construction permit(s) based on the code in force immediately prior to the operative date of the subcode revision. The last day for application submission under the 2015 I-Codes, 2015 NSPC, and 2014 NEC is March 2, 2020.

Therefore, if a complete permit application was submitted on or between the dates of September 3, 2019 and March 2, 2020, the project would be permitted to be reviewed under the old codes (2015/2014). The application should explicitly state which codes were used for the design. In the event the code edition is not explicitly stated, officials should ask what edition was used for the design of the project.

For completeness, the application would include items mentioned at NJAC 5:23-2.15, Construction permits—application, https://www.nj.gov/dca/divisions/codes/codreg/ucc.html. Section 2.15(a) is an absolute. However, Section 2.15(b) states, "In addition [to (a) above], the following information shall be required on any application for a construction permit when such information is available, but not later than the commencement of work." Therefore, items listed in 2.15(b), such as the name of a sprinkler contractor to be used, would not be required at this time.
Note: Prototype plan releases based on the 2015 I-Codes, etc. remain valid until the end of the grace period. Therefore, March 2, 2020 would be the last day to apply for a permit with the released prototype.

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

Educational Occupancy Changes in the 2018 NJ IBC

An additional threshold was added in Section 903.2.3, Group E, of the 2018 International Building Code (2018/IBC). The new condition now requires the installation of an automatic fire sprinkler system when a school has a fire area that has an occupancy of 300 or greater.

In addition, a new section was added in Section 1010.1.4, Special doors, of the 2018/IBC. The specific subsection is 1010.1.4.4, Locking Arrangements in Educational Occupancies. This new section has an allowance for locking egress doors from classrooms, offices, and other occupied rooms for enhanced security measures. Group E (K-12) and Group B educational occupancies (example: tutoring centers) can provide additional locking requirements to keep intruders out and still continue to comply with the applicable means of egress requirements. The following conditions must be met:

1. The door must be able to be unlocked from the outside of the room with a key or other approved method;
2. A key, special knowledge or effort must not be needed to unlock the door from inside the room; and
3. Listed panic hardware, fire door hardware, or door closer devices must not be modified.

The final new part of this rule allows a door which complies with this section to be locked remotely and unlocked.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609



IBC/IRC 2018 NJ Editions Errata

Let me start out by saying, we are imperfect beings and mistakes happen. As much as we tried to make the NJ editions of the International Building Code (IBC)/2018 and the International Residential Code (IRC)/2018 perfect, we goofed. I would love to say that the following items will be the only mistakes, but I'm also a realist. So, without further ado:

- IBC/2018, NJ ed, Section 907.2.1.2, Group A-2 nightclubs.
  - At the end of the section text, just before the exception, Section 1006.2 should read Section 1008.2.
- IBC/2018, NJ ed, Table 1006.2.1, Spaces with one exit or exit access doorway.
  - Footnote references of "a" and "g" should be deleted at the "125" within the Group R-3 row.
- IRC/2018, NJ ed, Table R301.2(1), Climatic and Geographic Design Criteria
  - Under the heading of Frost line depth, 2'8" should be 2'6" for SNJ.

If you have purchased a NJ edition, please visit https://www.nj.gov/dca/divisions/codes/codreg/ and click on "Corrected pages (NJ errata)" under both the Building Subcode and One- and Two-Family Dwelling Subcode headings. The displayed pages may be printed to update your NJ edition; the errata will be displayed in RED.

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

Attic Protection in Group R Occupancies

When fire sprinkler systems are installed in Group R-1 through R-4 occupancies per Section 903.3.1.2, NFPA 13R sprinkler systems, the attic space needs to comply with new Section 903.3.1.2.3, Attics, of the 2018 International Building Code (IBC). This was added into the code by the International Codes Council members to address the hazards associated with large multifamily residential occupancies with common attic spaces.

The new thresholds in this section that would require an attic to have additional protection are as follows:

First, when the roof assembly is located more than 55 feet above the lowest level of required fire department vehicle access in Type III, Type IV, and Type V construction, additional protection must be provided. The designer could pick from one of the 4 following methods to provide the additional protections; 1. provide an automatic sprinkler system; 2. construct the attic using noncombustible materials; 3. construct the attic using fire-retardant treated wood; or 4. filling the attic with noncombustible insulation.

Second, when fuel fired equipment is installed in the attic, at least one sprinkler head needs to be installed above the equipment.

Third, when the attic is being used for storage, it must be sprinklered.

This will impact all buildings, including "pedestal buildings," when the eave of the highest roof exceeds 55 feet above the lowest required fire vehicle access road. All heights are measured adjacent to the building to the eave as follows: 1. of the highest pitched roof; 2. the intersection of the highest roof to the exterior wall; or 3. the top of the highest parapet. These measurements are made from the required fire vehicle access roads necessary for compliance with Section 503, Fire Apparatus Access Roads, of the International Fire Code.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Energy Subcode Compliance as of September 3, 2019

As has been the case for at least 15 years now, the Department has issued an Energy Subcode compliance Bulletin with the adoption of a new model code. Because the 2018 International Energy Conservation Code (IECC) was adopted September 3, 2019, Bulletin 19-2 was issued along with it (see https://www.nj.gov/dca/divisions/codes/resources/bulletins.html). The following is an abridged version and some extra information.

Per N.J.A.C. 5:23-2.15(f)vi, the Uniform Construction Code (UCC) requires applicants to show compliance with the Energy Subcode as part of the permit application process for a newly-constructed building or an addition. Buildings undergoing a repair, renovation, alteration, reconstruction, or change of use must only meet the requirements provided for at N.J.A.C. 5:23-6, the Rehabilitation Subcode.

(continued on next page)

(Energy Subcode Compliance as of September 3, 2019)

Note: "Low-energy" buildings, or portions thereof (thermal separation required), do not have to meet the Thermal Envelope portion of the Energy Subcode. This includes the following buildings:

1. *Those with a peak design rate of energy usage less than 3.4 Btu/h*ft^2 or 1.0 watt/ft^2 of floor area for space conditioning purposes; or*
2. *Those that do not contain conditioned space.*

Compliance methods vary dependent on climate zone and building type. The Energy Subcode separates the State into two climates zones as follows:

Zone 4A – Atlantic, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Middlesex, Monmouth, Ocean, Salem and Union counties;
Zone 5A – Bergen, Hunterdon, Mercer, Morris, Passaic, Somerset, Sussex and Warren counties.

The Energy Subcode divides buildings into two categories: low-rise residential and commercial, which includes all buildings that are not low-rise residential.

The following is a description of the alternatives for documenting energy subcode compliance at the time of permit application.

Low-rise residential buildings are defined as one- and two-family dwellings or multiple-family buildings three stories or less in height. Compliance must be in accordance with the Energy Subcode and the residential portion of the 2018 International Energy Conservation Code (IECC-R), which parallels Chapter 11 of the 2018 International Residential Code (IRC-N). For purposes of this bulletin, IECC-R references will be made. Compliance for low-rise residential buildings may be demonstrated in one of four ways:

1. Compliance with traditional calculations - hand calculations in accordance with the American Society of Heating, Refrigerating, and Air-conditioning Engineers, Inc. (ASHRAE) handbook of fundamentals.
2. Compliance with REScheck software - software program calculations, http://www.energycodes.gov, that pass the 2018 IECC-R.
3. Compliance with clean energy program for residential new construction (formerly NJ EnergyStar homes): (program sponsored by the New Jersey Board of Public Utilities through its clean energy program (see http://www.njcleanenergy.com/residential).
4. Compliance with prescriptive package (see below)

INSULATION & FENESTRATION REQUIREMENTS BY COMPONENT[a]

Climate Zone	Fenestration U-Factor[b]	Skylight U-Factor[b]	Glazed Fenestration SHGC[b]	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value[i]	Floor R-Value	Basement Wall R-Value[c]	Slab R-Value[d] & Depth	Crawl Space Wall R-Value[c]
4A	0.32	0.55	0.40	49	20 or 13+5[h]	8/13	19	10/13	10, 2 ft	10/13
5A	0.30	0.55	NR	49	20 or 13+5[h]	13/17	30[g]	15/19	10, 2 ft	15/19

a. R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.

b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c. "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulated sheathing on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.

d. R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge R-value for slabs. The slab edge insulation for heated slabs shall not be required to extend below the slab.

g. Alternatively, insulation sufficient to fill the framing cavity providing not less than an R-value of R-19.

h. The first value is cavity insulation, the second value is continuous insulation. Therefore, "13+5" means R-13 cavity insulation plus R-5 continuous insulation.

i. Mass walls shall be in accordance with Section R402.2.5. The second R-value applies when more than half the of insulation is on the interior of the mass wall.

Commercial buildings are defined as all buildings other than low-rise residential buildings. Compliance must be in accordance with the Energy Subcode and the 2016 ASHRAE Standard 90.1; do not use the commercial portion of the International Energy Conservation Code (IECC-C), because it is deleted per N.J.A.C. 5:23-3.18. Compliance for commercial buildings may be demonstrated in one of two ways:

(continued on next page)

(Energy Subcode Compliance as of September 3, 2019)

1. COMPLIANCE WITH traditional CALCULATIONS *(*very much like the calculations for low-rise residential buildings mentioned above. However, the applicant must also provide information on the type of lighting installed and its usage.
2. COMPLIANCE WITH COMCHECK SOFTWARE: software program calculations, http://www.energycodes.gov, that pass the 2016 ASHARE 90.1

Tip for 1 and 2 above: For building thermal envelope, use Tables 5.5-4 and 5.5-5, as applicable, for a starting point in your calculations (see below).

Table 5.5-4 Building Envelope Requirements for Climate Zone 4A

Opaque Elements	*Nonresidential*		*Residential*		*Semi-heated*[a]	
	Assembly Max	*Insulation Min*	*Assembly Max*	*Insulation Min*	*Assembly Max*	*Insulation Min*
ROOFS						
Insulation entirely above deck	U-0.032	R-30 ci	U-0.032	R-30 ci	U-0.093	R-10 ci
Metal building[b]	U-0.037	R-19 + R-11 Ls or R-25 + R-8 Ls	U-0.037	R-19+R-11 Ls or R-25 + R-8 Ls	U-0.082	R-19
Attic and other	U-0.021	R-49	U-0.021	R-49	U-0.034	R-30
WALLS, above grade						
Mass	U-0.104	R-9.5 ci	U-0.090	R-11.4 ci	U-0.580	NR
Metal building	U-0.060	R-0 + R-15.8 ci	U-0.050	R-0 + R-19 ci	U-0.162	R-13
Steel-framed	U-0.064	R-13 + R-7.5 ci	U-0.064	R-13 + R-7.5 ci	U-0.124	R-13
Wood-framed and other	U-0.064	R-13 + R-3.8 ci or R-20	U-0.064	R-13 + R-3.8 ci or R-20	U-0.089	R-13
WALLS, below grade						
Below-grade wall	C-0.119	R-7.5 ci	C-0.092	R-10 ci	C-1.140	NR
FLOORS						
Mass	U-0.057	R-14.6 ci	U-0.051	R-16.7 ci	U-0.107	R-6.3 ci
Steel joist	U-0.038	R-30	U-0.038	R-30	U-0.052	R-19
Wood-framed and other	U-0.033	R-30	U-0.033	R-30	U-0.051	R-19
SLAB-ON-GRADE floors						
Unheated	F-0.520	R-15 for 24 in	F-0.520	R-15 for 24 in	F-0.730	NR
Heated	F-0.843	R-20 for 24 in	F-0.688	R-20 for 48 in	F-0.900	R-10 for 24 in
OPAQUE DOORS						
Swinging	U-0.370		U-0.370		U-0.370	
Non-swinging	U-0.310		U-0.310		U-0.360	

Fenestration	*Assembly Max U*	*Assembly Max SHGC*	*Assembly Min VT/SHGC*	*Assembly Max U*	*Assembly Max SHGC*	*Assembly Min VT/SHGC*	*Assembly Max U*	*Assembly Max SHGC*	*Assembly Min VT/SHGC*
Vertical, 0% to 40% of wall		(for all frame types)			(for all frame types)			(for all frame types)	
Nonmetal framing, all	0.31	0.36	1.10	0.31	0.36	1.10	0.51	NR	NR
Metal framing, fixed	0.38			0.38			0.73		
Metal framing, operable	0.46			0.46			0.81		
Metal framing, entrance door	0.68			0.68			0.77		
Skylight, 0% to 3% of roof									
All types	0.50	0.40	NR	0.50	0.40	NR	1.15	NR	NR

* The following definitions apply: ci = continuous insulation (see Section 3.2), FC = filled cavity (see Section A2.3.2.5), Ls= liner system (see Section A2.3.2.4), NR = no (insulation) requirement.
a. Output capacity greater than or equal to 3.4 Btu/h*ft2 of floor area but is not a heated greater than 10 Btu/h*ft2 (see Table 3.2).
b. When using the R-value compliance method for metal building roofs, a thermal spacer block is required (see Section A2.3.2).



(continued on next page)

(Energy Subcode Compliance as of September 3, 2019)

Table 5.5-5 Building Envelope Requirements for Climate Zone 5A

Opaque Elements	*Nonresidential*		*Residential*		*Semi-heated*[a]	
	Assembly Max	*Insulation Min*	*Assembly Max*	*Insulation Min*	*Assembly Max*	*Insulation Min*
ROOFS						
Insulation entirely above deck	U-0.032	R-30 ci	U-0.032	R-30 ci	U-0.063	R-15 ci
Metal building[b]	U-0.037	R-19 + R-11 Ls or R-25 + R-8 Ls	U-0.037	R-19+R-11 Ls or R-25 + R-8 Ls	U-0.082	R-19
Attic and other	U-0.021	R-49	U-0.021	R-49	U-0.034	R-30
WALLS, above grade						
Mass	U-0.090	R-11.4 ci	U-0.080	R-13.3 ci	U-0.151[c]	R-5.7 ci[c]
Metal building	U-0.050	R-0 + R-19 ci	U-0.050	R-0 + R-19 ci	U-0.094	R-0 + R-9.8 ci
Steel-framed	U-0.055	R-13 + R-10 ci	U-0.055	R-13 + R-10 ci	U-0.084	R-13 + R-3.8 ci
Wood-framed and other	U-0.051	R-13 + R-7.5 ci or R-19 + R-5 ci	U-0.051	R-13 + R-7.5 ci or R-19 + R-5 ci	U-0.089	R-13
WALLS, below grade						
Below-grade wall	C-0.119	R-7.5 ci	C-0.092	R-10 ci	C-1.140	NR
FLOORS						
Mass	U-0.057	R-14.6 ci	U-0.051	R-16.7 ci	U-0.107	R-6.3 ci
Steel joist	U-0.038	R-30	U-0.038	R-30	U-0.052	R-19
Wood-framed and other	U-0.033	R-30	U-0.033	R-30	U-0.051	R-19
SLAB-ON-GRADE floors						
Unheated	F-0.520	R-15 for 24 in	F-0.510	R-20 for 24 in	F-0.730	NR
Heated	F-0.688	R-20 for 48 in	F-0.688	R-20 for 48 in	F-0.900	R-10 for 24 in
OPAQUE DOORS						
Swinging	U-0.370		U-0.370		U-0.370	
Non-swinging	U-0.310		U-0.310		U-0.360	

Fenestration	*Assembly Max U*	*Assembly Max SHGC*	*Assembly Min VT/SHGC*	*Assembly Max U*	*Assembly Max SHGC*	*Assembly Min VT/SHGC*	*Assembly Max U*	*Assembly Max SHGC*	*Assembly Min VT/SHGC*
Vertical, 0% to 40% of wall		(for all frame types)			(for all frame types)			(for all frame types)	
Nonmetal framing, all	0.31	0.38	1.10	0.31	0.38	1.10	0.45	NR	NR
Metal framing, fixed	0.38			0.38			0.62		
Metal framing, operable	0.46			0.46			0.70		
Metal framing, entrance door	0.68			0.68			0.77		
Skylight, 0% to 3% of roof									
All types	0.50	0.40	NR	0.50	0.40	NR	0.98	NR	NR

* The following definitions apply: ci = continuous insulation (see Section 3.2), FC = filled cavity (see Section A2.3.2.5), Ls= liner system (see Section A2.3.2.4), NR = no (insulation) requirement.

a. Output capacity greater than or equal to 3.4 Btu/h*ft^2 of floor area but is not a heated greater than 12 Btu/h*ft^2 (see Table 3.2).

b. When using the R-value compliance method for metal building roofs, a thermal spacer block is required (see Section A2.3.2).

c. Exception to Section 5.5.3.2 applies to mass walls above grade.

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

Mass Notification Systems

Section 917.1, College and university campuses, was added to the 2018 International Building Code. The new section now requires, prior to construction, new buildings at college or university campuses which require a fire alarm system with an accumulative building occupant load of 1,000 or more, to conduct a mass notification risk analysis in accordance with NFPA 72. When the risk analysis determines a need for mass notification, an *approved* mass notification system must be provided in accordance with the findings of the risk analysis. Many, if not all, campuses throughout the State already have mass notification systems so this should not be a big lift for college and universities looking to add buildings.

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

Laundry Areas

With the September 3, 2019 adoption of the 2017 National Electrical Code, the Department has retained the requirements in the code for AFCI/GFCI protection in laundry areas. In the 2014 adoption the Department elected not to adopt the requirement for protection in "laundry areas" because it felt that the term laundry area was not well defined and could cause confusion and lead to enforcement that is not uniform.

In an effort to give guidance that should lead to more uniform enforcement, the Department offers the following description of a laundry area. Where laundry equipment is located in a room or space (closet) that is dedicated to the laundry equipment only, the room or space becomes the laundry area; the area does not extend outside of the space. Where laundry equipment is located in a space that serves additional functions like a basement, the laundry area is defined as any area within 6 feet of the outer edge of any laundry equipment or laundry plumbing fixture. Where the equipment has not been placed, but the laundry plumbing box has been placed, the laundry area is defined as any area within 10 feet of the plumbing box.

Source: Code Assistance Unit
(609) 984-7609

Fire Watch During Construction

A new section was added in Chapter 33, Safeguards During Construction, of the 2018 International Building Code (2018/IBC). Section 3314.1, Fire watch during combustible construction, Type III, IV, and V. This new provision authorizes the fire official to require a fire watch during nonworking hours when construction exceeds 40 feet in height above lowest adjacent grade. The purpose of the fire watch is to ensure that there is surveillance to identify and control fire hazards during construction while the structure is not occupied after hours. The Uniform Fire Code currently requires a fire prevention superintendent be provided on all construction sites. Part of their job is to develop a plan that will mitigate potential fires to avoid protentional conflagrations.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

New Jersey Code Adoptions – Elevator Safety Subcode

The following chart gives the adoption dates and the editions of the codes and standards used in connection with the Elevator Safety Subcode. The International Building Code/2018 has been adopted as of September 3, 2019 and the newest elevator, dumbwaiter, and conveyor standards may be used as shown in the table below. As with any code adoption, a six-month grace period starts the day of the adoption allowing the old codes to be used as long as a complete permit application is submitted before the grace period ends (i.e. March 2, 2020 is the last day for submittal under the old codes).

Note: The grace period is covered at N.J.A.C. 5:23-1.6(a).

1) Consult construction files to determine under which elevator or building code the permit was issued;

2) The following provides guidance on how to determine the applicable ASME A17.1 or ASME A90.1 codes (editions/supplements) when this information is not available for existing elevator devices. When performing cyclical inspections, if the permit — or installation — date precedes or is within the grace period, apply the code edition immediately preceding the adoption of the new subcode.

Example: A permit was issued on May 15, 1987. If the construction file does not have the information about the edition of the standard used, then ANSI A17.1 - 1984 is enforced. If the permit was issued on November 16, 1987, ANSI A17.1 - 1984 with the 1985 supplement applies.

(continued on next page)

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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.

(New Jersey Code Adoptions – Elevator Safety Subcode)

Edition Date for Building Subcode	Effective Date for Model Codes	BOCA/IBC Number for Elevators, Dumbwaiters, and Conveyor Equipment	ANSI A17 Safety Standard for Elevators and Escalators	ANSI A90.1 Safety Standard for Belt Manlifts	ASME A18.1 and A18.1a Safety Standard for Platform Lifts and Stairway Chairlifts
1975	01/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973	A90.1-1969	
1976/S	12/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1978	10/01/78	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1981	05/07/81	21	A17.1 - 1978	A90.1 - 1976	
1983/AS	02/22/83*	21	A17.1 - 1981	A90.1 - 1976	
1984	08/06/84	21	A17.1 - 1981; A17.1a - 1982	A90.1 - 1976	
1985/S	04/01/85	21	A17.1 - 1984	A90.1 - 1976	
1986/AS	09/22/86	21	A17.1 - 1984	A90.1 - 1976	
1987	04/01/87	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1988/S	06/20/88	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1989/AS	11/01/89	26	A17.1 - 1987	A90.1 - 1985	
1990	07/01/90	26	A17.1 - 1987	A90.1 - 1985	
1991/S	03/04/91	26	A17.1 - 1987		
1993	05/01/93	Chapter 30	A17.1 - 1990	A90.1 - 1985	
1996	07/06/98	Chapter 30	A17.1 - 1993 and 1994, 1995 Supplements	A90.1 - 1992	
IBC-2000 NJ Edition	05/05/03	Chapter 30	A17.1 - 1996 and 1997, 1998 Supplements	A90.1 - 1997	A18.1 - 1999 and A18.1a - 2001
IBC-2006 NJ Edition	02/20/07	Chapter 30	A17.1-(2004-2005), including A17.1.S-2005	A90.1-2003	A18.1-2003
IBC-2009 NJ Edition	09/07/10	Chapter 30	A17.1-2007	A90.1-2003	A18.1-2005
IBC-2015 NJ Edition	09/21/15	Chapter 30	A17.1-2013	A90.1-2009	A18.1-2008
IBC-2018 NJ Edition	09/03/19	Chapter 30	A17.1-2016	A90.1-2015	A18.1-2014

S = Supplement AS = Accumulative Supplement * = Operative date

Source: Elevator Safety Unit, (609) 984-7833

Bureau of Housing Inspections Update

Please be advised that as of September 1, 2019, the Bureau of Housing Inspection within the New Jersey Division of Codes and Standards will implement a change to one of their standard practices. This is in response to Public Law 2019, Chapter 202, which amended Public Law 1967, Chapter 76 (C.55:13A-20).

The Bureau of Housing Inspection will no longer issue notices, orders, rules, and/or decisions via certified mail. All notices, orders, rules, and/or decisions will be mailed ordinary mail, and enforcement action may commence without a signed receipt of delivery. Please remind applicants of UCC permits for hotels and multiple dwellings within your jurisdiction to ensure the Bureau of Housing Inspections has their current ownership information. Owners can verify this information online https://www.nj.gov/dca/divisions/codes/RIMS_online.html or by contacting the Bureau of Housing Inspection.

Source: Bureau of Housing Inspection, (609) 633-6219

Section R324, Solar Energy System Pathways, Roof Access, and Setback Requirements

New Subsection R324.6, Roof access and pathways, was added to the 2018 International Residential Code (2018/IRC). Similar to the International Fire Code (IFC), photovoltaic array requirements, pathways, roof access, and setback requirements must be provided in accordance with Sections R324.6.1 through R324.6.2.1. The new rules provide pathways to specific areas of the roof, for smoke ventilation areas, and egress from emergency escape and rescue openings (EERO's) from the roof. These requirements were brought over from the IFC, Section 605.11, to provide minimum spacing and emergency access to the roof.

The following are exceptions to the new rules.

1. Detached, nonhabitable structures, such as detached garages, parking shade structures, carports, solar trellises and similar structures, are not required to provide roof access.
2. When the fire protection subcode official determines that rooftop operations will not be used on a set structure, roof access, pathways and setbacks may not be required.
3. Roofs with a slope of two units vertical in 12 units horizontal (17-percent slope) or less need not comply with these new rules.

There must be no fewer than two pathways on separate roof planes, not less than 36 inches wide, and extended from the lowest roof edge to the ridge. At least one pathway must be on the street or driveway side. Where more than one roof plane is present, additional 36-inch pathways need to be provided. Other considerations to be aware of are obstructions such as vent pipes and conduit and mechanical equipment, as well as the capability of the roof to support firefighter accessing the roof.

Setbacks at the ridge for photovoltaic arrays covering **not** more than 33% of the plan view total roof area must have at least 18 inches setback on both sides of the ridge. When areas are covered by more than 33% the setback must be 36 inches setback on both sides of the ridge. When an automatic fire sprinkler system is installed in accordance with NFPA 13D or Section P2904 the total coverage goes from 33% to 66% and the same setbacks would be applied.

Finally, panels and modules must not be placed below EERO's. The pathway must be 36 inches wide leading from an EEROs.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Pressure Reducing Valve (PRV) Replacements

On March 5, 2018, amendments to N.J.A.C. 5:23-2.7, Ordinary maintenance, and N.J.A.C. 5:23-2.17A, Minor work, were adopted. One of the items that has caused some confusion is "any valve replacement," which under ordinary maintenance does not require a permit.

The question is whether the replacement of a PRV falls under ordinary maintenance or if a minor work or full permit is required.

A pressure reducing valve (PRV) would be considered a valve and would be considered "ordinary maintenance." Therefore, a permit would not be required to replace it.

The installation of a new PRV where there was none installed previously would require a permit.

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

Electrical Utility Point of Service

The Division has been working with the Board of Public Utilities to solve an issue that has caused some questions among electrical installers, inspectors, and building owners: Where is the electrical utility point of service? After several discussions, all parties came to a similar consensus as stated below:

(continued on next page)

(Electrical Utility Point of Service)

For certain voltages and larger commercial installations, the utility will require the customer to install a *disconnect* prior to the metering, that is to say, on the line-side of the meter. The **metering** *disconnect*, which may also serve as the customer's *service* disconnect, is owned, operated, and maintained by the customer. However, the utility will require unimpeded access to the *disconnect* to perform necessary work and maintenance. When multiple meters are involved at a site, with voltages greater than 250 volts nominal, a separate *disconnect* will be required to be installed for each meter or set of current transformers. The utility will not specify the type of interruptible device, the bonding, or grounding of the device as those decisions would fall under the jurisdiction of the local enforcing agency, after consultation with all parties concerned. Any equipment, conduits or conductors, owned, operated and maintained by the customer is subject to the requirements of the **Electrical Subcode**. Any conduits and/or conductors that the utility will be responsible for, remains their jurisdiction. However, bear in mind, that the point of service is now the utility side of any overcurrent protective **(OCP)** device, and the OCP device is to be provided and maintained by the customer after mutual consultation with utility supplying the a**mpere interrupting capacity** (AIC) ratings.

Additionally, pole-top *disconnect* devices are owned, operated, and maintained by the utility, and are designed according to National Electrical Safety Code (NESC) Standards. The presence of a pole-top disconnect does not eliminate the need for a customer installed *disconnect*.

If you have further questions, please contact the Code Assistance Unit.

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

Accessible and Type A Dwelling Units – 2018

How many Type A dwellings units are required in a building with four or more dwelling units? What features may be adaptable within the Type A dwelling unit? These questions continue to be asked of the Code Assistance Unit. Let me take this opportunity to straighten out the requirements for accessible and Type A dwelling units.

New code, same (or nearly the same) code references

With the adoption of the 2018 International Building Code (IBC), Chapter 11 became the Barrier Free Subcode. The previous requirements at N.J.A.C. 5:23-7.1 through 7.14 were incorporated into N.J.A.C. 5:23-3.14 to integrate New Jersey's accessibility requirements into Chapter 11 of the 2018 IBC (minus the recreation portions remaining in NJAC 5:23-7.16 through 7.32). This remains the same for the 2018 IBC, and even the ICC/ANSI A117.1 stays the same, the 2009 edition (ANSI/2009).

What is the difference between accessible and Type A?

A Type A dwelling unit is a dwelling unit that meets Section 1003 of the ANSI/2009, as amended by Chapter 11 of the 2018 IBC at NJAC 5:23-3.14(b)10. This is a dwelling unit with an accessible entrance, accessible clear floor space, accessible route into and through the dwelling unit, and adaptable features in the kitchen and bathroom. Chapter 11 of the 2018 IBC and the ANSI/2009 specify that a Type A dwelling unit must have (1) an accessible entrance, (2) an accessible interior route throughout the dwelling unit, (3) one full adaptable bath on an accessible route, (4) maneuvering space at all doors, and (5) adaptable features in the kitchen and bathroom.

An accessible dwelling unit is a dwelling unit that meets Section 1002 of ANSI/2009. As with a Type A dwelling unit, an accessible dwelling unit must have an accessible entrance and an accessible route into and throughout the dwelling unit. In an accessible dwelling unit, however, the toilet and bathing facilities must comply with general requirements for toilet room and bathing facilities that are in ANSI/2009, Section 603 through Section 610 inclusive. Similarly, kitchens are required to comply with the general requirements in ANSI/2009 at Section 804, Kitchens and kitchenettes, and must also provide one 30-inch long work surface that meets the requirements of Section 902, Dining surfaces and work surfaces, regarding clear floor space and height. Finally, storage facilities must also meet the general requirements in ANSI/2009, which are at Section 905 for clear floor space, height, and operable controls.

Which dwelling units are required to be Type A?

1a. In a building with four or more dwelling units, if the building has an elevator, all (100 percent) of the dwelling units must be Type A (2018 IBC, Sections 1107.6.2, 3 and 4).

1b. In a building with four or more dwelling units, if there is no elevator, all (100 percent) of the ground-floor dwelling units must be Type A (2018 IBC, Sections 1107.6.2, 3 and 4).

1c. Ground-floor dwelling units: In a building with dwelling units, the first floor containing dwelling units must be accessible and must contain Type A dwelling units, regardless of whether that floor is at grade (2018 IBC, Sections 1107.6.2, 3 and 4). Keep in mind, a building may have more than one ground floor due to sloping grade.

** *When applying the three items above to a typical condo/apartment building, Group R-2, please see the end of the article for its specific application.*

(continued on next page)

(Accessible and Type A Dwelling Units)

2. Generally speaking, townhouses are exempt from Chapter 11 of 2018 IBC. There is one exception: Townhouses for which credit as a low- or moderate-income unit (COAH credit) is awarded are required to comply and are discussed below. A townhouse is a single dwelling unit with two or more stories of dwelling space, exclusive of basement or attic, where each dwelling unit extends from foundation to roof. This dwelling unit is to have an independent entrance that serves one dwelling unit only and that is at or near grade; most or all of the sleeping rooms are on one story; and most or all of the remaining habitable space, such as kitchen, living, and dining areas, are on another story (2018 IBC, Sections 1103.2.3.1 and 1107.6.5).
3. What level of accessibility is required for a townhouse that has "COAH credit?" When a townhouse or a multistory dwelling with fewer than four dwelling units in a single structure is being constructed with credit as low or moderate income housing, the dwelling unit must comply with the Chapter 11 of 2018 IBC. There are two unique requirements that apply to these buildings: each dwelling unit must have a room that could be used as a bedroom on the entry level and they may have either an accessible or an adaptable entrance. If an adaptable entrance is provided, the plans for making the adaptation to an accessible dwelling unit must be submitted and released through the standard plan review process. The funds to effect the adaptation of 10% of the entrances that are not accessible must be escrowed with the municipality. *Note: COAH is part of the Fair Housing Act Administration within the Office of Local Planning and can be reached by visiting* https://www.nj.gov/dca/divisions/lps/*, phone at (609) 292-3000, or email at LPSmail@dca.nj.gov .*

What features in the kitchen may be adaptable in a Type A dwelling unit?

1. Adaptable work surface: There must be a 30-inch length of counter that is either set at 34 inches or that can be adjusted to an accessible height. The base cabinets in this section must be removable and the floor must be finished all the way to the wall. The 30-inch section of the counter does not have to be precut; it can be "replaceable as a unit." This means that it must be able to be cut and either lowered or replaced (ANSI/2009, Sections 1003.12.3.1 and 1003.12.3.2, as amended at 2018 IBC, Section 1101.2, items 17 & 18).
2. Kitchen cabinets: Exempt as per the exception at ANSI/2009, Section 1003.14.
3. Kitchen sink: This is almost a combination of the above two. The cabinets below the sink must be removable, and the floor must be finished all the way to the wall. Also, the sink and the counter are required to be adjustable or replaceable as a unit to an accessible height; rough-in plumbing that allows connections of supply and drain piping for sinks mounted at heights of 29-inches must be provided (ANSI/2009, Sections 1003.12.4.1 and 1003.12.4.2, as amended at 2018 IBC, Section 1101.2, items 19 & 20).

What features in the bathroom may be adaptable in a Type A dwelling unit?

1. At least one bathroom on the accessible route is to comply with ANSI/2009, Section 1003.11.2. In all bathrooms, grab bars do not have to be installed, but the wall must be reinforced to permit their later installation as per ANSI/2009, Section 1003.11.1; this applies to shower seat reinforcement as well.
2. The threshold in a transfer shower may be adaptable as long as the adaptation can be made easily without undertaking a construction project (ANSI/2009, Sections 1003.11.2.5.2, as amended at 2018 IBC, Section 1102.1, item 16.2).
3. The mirror may be installed at a standard height as long as it is attached in such a way that it can be lowered without damaging the wall. Since the words "accessible lavatory" are used, the 40" maximum is not required until the lavatory is made accessible (ANSI/2009, Section 1003.11.2.3).
4. A vanity may be installed underneath the lavatory as long as it can be removed without requiring the removal or replacement of the lavatory (ANSI/2009, Section 1003.11.2.2).

Maneuvering Space at Doors.

There have been some projects that have been brought to the Department of Community Affairs' attention in which no maneuvering space has been provided at doors. Maneuvering space is critical to the usability of the dwelling unit. The requirements can be found in Section 1003.5, which requires compliance with Section 404, minus six exceptions.

In short, only those features that are provided with adaptive options may be adapted.

Lastly, please note that there is no reference to Type B dwelling units within this article. This is because the allowance of this type of dwelling unit is *not permitted* by N.J.A.C. 5:23.

*** Example of application to a typical Condo/Apartment building*

When applying the three items above to a typical condo/apartment building, Group R-2, Section 1107.6.2.2 is the "starting point" within the 2018 IBC, and more specifically Subsection 1107.6.2.2.1. Note that this subsection does not reference Table 1107.6.1.1 and states that a building containing 4 or more condo/apartments with:

- *No elevator; units at ground level – all units at ground level must be Type A;*
- *No elevator; units not at ground level – vertical accessibility must be provided to at least the 1st level of residential units and be Type A units at this level;*
- *Elevator; all units must be Type A.*

Code references updated 08/30/2022

(continued on next page)

(Accessible and Type A Dwelling Units)

The table referenced would apply to such places like an extended-stay hotel/motel that exceeds the transient limitation set forth in the 2018 IBC, and what might seem like a Group R-1 is now a Group R-2, which would require a specific number or a percentage of rooms to be accessible.

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

Decommission of PermitsNJ Software

Letter to Code Officials, August 1, 2019

The Department has made the decision to decommission the PermitsNJ software effective June 30, 2020.

In 2017, Governor Christie signed Executive Order 225. This Executive Order decentralized software development and maintenance from the State's Office of Information Technology out to the individual State agencies. The software development resources were distributed to the state agencies with the largest software development needs, and the Department of Community Affairs did not acquire any of those software development resources. As a result, the Department can no longer enhance or maintain the PermitsNJ software; it has become outdated and has fallen out of pace with advancing technology.

A cost benefit analysis on the development or purchase of a replacement permitting software, to be offered to municipalities "free of charge," was conducted. Because there are so few local municipalities using the PermitsNJ software, it was found that it would be inefficient to develop or acquire new permitting software.

It is the Department's understanding that many municipalities using PermitsNJ have implemented municipal software elsewhere in the municipality. Most municipal government software suites include a permitting component. It is recommended that municipalities using PermitsNJ contact their municipal administrator as soon as possible to discuss replacing PermitsNJ with another permitting software.

Please note that, unlike UCCARS, municipalities will not be able to continue using PermitsNJ after June 30, 2020. If your office is still using the much older UCCARS software, be advised that this software has been out of support for many years and will not function on 64-bit versions of Windows 7 or higher. If your office issues fewer than 200 permits per year, you have the option of submitting monthly permit activity using the Municipal Monthly Activity Reports (UCC forms R811 and R812).

The Department will assist municipalities in any way possible to ensure a smooth transition to other permitting software. Should you have any questions or concerns, please email permitsnj@dca.nj.gov.

Source: PermitsNJ

Water Heater Replacements and The Mechanical Technical Section 

The mechanical inspection technical section form can only be used for work in existing R-3 and R-5 dwelling units.

Replacement water heaters are listed on this form. The Code Assistance Unit has heard statements made that a mechanical contractor is permitted to replace a domestic water heater in R-3 and R-5 dwelling units without a New Jersey Master Plumbers license.

Just because water heaters are listed on the mechanical form does not permit a mechanical contractor to remove and replace a water heater. Water heaters can only be removed and installed by a New Jersey Licensed Master Plumber or the homeowner. The Master Plumber must sign and seal the mechanical form for a water heater replacement. The homeowner may also sign the form if they are doing the replacement themselves.

Should a New Jersey Licensed Master Plumbing Contractor submit the plumbing technical form for a water heater replacement in an R-3 or R-5 dwelling, the municipality should accept this form and advise the plumbing contractor that any future applications for a water heater replacement must be submitted on the mechanical technical form.

Also, as a reminder, the mechanical technical form **cannot** be used for any commercial projects or any **NEW** or **ADDITIONS TO** R-3 or R-5 dwelling units.

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

GFCI Receptacle Location for Dishwashers

There seems to be some confusion and debate regarding Article 210.8(D) of National Electrical Code (NEC)/2017 (formerly 2014 – applies just the same) and the usage of the term "readily accessible." In short, a ground-fault, circuit-interrupter (GFCI) receptacle under the sink for a cord-connected dishwasher is permitted. Sadly, we have received calls regarding officials not passing installations like this due to what a homeowner may be storing in that space. This installation would be no different than a GFCI receptacle behind the microwave or toaster oven; do we fail the counter top? No! Personally, I'd rather move a dishpan and/or soap detergent than move a microwave. In the event of a GFCI that needs to be reset but will not, then viola…the dishpan and soap are already out of the way so the dishes can be done by hand in the sink! All silliness aside, the dishpan and/or soap detergent stored in front of the GFCI receptacle are not an "obstacle" to be removed per the definition of "readily accessible."

Source: Neil Nagy
Bureau of Construction Project Review

Manufactured (HUD) Homes - UCC Role

On August 5, 2019, the Uniform Construction Code (UCC) was modified regarding its role in manufactured (HUD) homes. The short version: initial installations of a HUD home are no longer regulated by the UCC. Now, for the long version…

N.J.A.C. 5:23-4B (Manufactured Homes and Manufactured Home Add-On Units) and NJAC 5:23-4C (Enforcement of Federal Manufactured Home Standards) have been deleted, and N.J.A.C. 5:23-2.22(b) has been modified to state, "*The appropriate subcode officials shall inspect the installation of any premanufactured unit or assembly **other than the initial installation** of manufactured homes to determine compliance with the regulations and the approved plans. Installation includes all utility connections and all work installed or completed on site."*

The modifications to the UCC means the Federal government is responsible for oversight of the installation of manufactured homes in the State of New Jersey. Installation contractors are required to be licensed by HUD and are required to attend continuing education classes as required by HUD. Installations are inspected by third-party inspectors approved by HUD. Installations include, but are not limited to, any necessary site work for the installation of the HUD unit, permanent foundations, underground piping, electric, sewer, water, utility connections, etc. A certification that the installation meets the requirements of the Federal installation standards is required to be completed.

In addition, inquiries and any complaints regarding the installation of a manufactured home are to be referred to HUD for resolution.

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1085 Raymond Boulevard
13th Floor
Newark, NJ 07102-5260
Phone: (973) 776-7200
Email: NJ_Webmanager@hud.gov
Fax: (973) 645-2323
TTY: (973) 645-3298

In review, as of August 5, 2019, the Department no longer has any jurisdiction over the initial installation of manufactured (HUD) homes, including the utility connections. This means that local enforcing agencies will no longer perform plan review, issue permits or issue cut-in-cards for any utility connections. Owners will be required to obtain zoning approval and comply with HUD regulations. Utility companies are advised to contact HUD regarding cut-in-card procedures.

After completion of the initial installation, any relocation of a HUD home falls under the jurisdiction of the UCC, which will require all site work and connections to be reviewed and inspected by the local construction office. In addition, any modification to a HUD home falls under the jurisdiction of the UCC per the Rehabilitation Subcode; see NJAC 5:23-6.8 for the materials and methods.

Note: Permit applications received on or after August 5, 2019 for new installation are not under the jurisdiction of the UCC. Permit applications received prior to this date are to be followed out under the previous regulations of the UCC.

Source: Keith Makai, Code Assistance Unit
609-984-7609

Carnival and Amusement Rides: Permitting Update

Effective for the 2020 season, the Department will no longer be issuing carnival and amusement ride owners paper permit stickers to be affixed to the ride because we have upgraded to an electronic process. This article is intended to provide information in order to avoid and eliminate possible issues or mistakes in regard to identifying whether an amusement ride is permitted for use and has passed inspection.

To all local and State fire officials, electrical subcode officials, or concerned regulatory parties that may be at an amusement park, carnival, street fair, etc.: What you should look for this coming year to know if a ride is legal and permitted to operate is a green sticker affixed to each ride, including inflatables (still in pouch), that says 2020, has the state seal, and says passed inspection. The sticker will be filled out by the DCA inspector and will include the date ride passed inspection, the inspector number which identifies who did inspection, the ride's New Jersey serial number, and its electronically issued permit number. Without this green sticker, the ride cannot operate.

If there are questions, or if any jurisdiction thinks there may be an unpermitted ride in use, please contact the Carnival and Amusement Ride Safety Unit at (609) 292-2097 to speak with one of the Department's ride supervisors. If it is after hours, on a weekend, or needs immediate response, call the amusement ride hotline at (609) 292-2099.

Source: Daniel Troy, Supervisor, Carnival and Amusement Ride Inspections, Northern Region

Ordinary Maintenance/Minor Work, Continued…

(Deck portion updated from Summer 2018 edition)

The following are specific questions that the Code Assistance Unit has been receiving from code officials and the general public regarding the need for a permit.

Re-Roofing – No permit is required for existing detached one- or two-family dwellings for the roof covering materials. This include all buildings such as garages, sheds, pool houses, and the like that are accessory to a detached one- or two-family home (Group R-5). Stripping the roof down to existing sheathing or putting on a second layer of roof covering does NOT require a permit. Townhouses and condos will require roof permits. Replacing sheathing will always require a permit.

Re-Siding – No permit is required for existing one- or two-family dwellings (Groups R-3 and R-5) for siding materials; this includes appurtenances such as garages, sheds, pool houses and the like that are accessory to the dwelling. Siding materials that do not require a permit are wood, vinyl, aluminum, etc. and replacing one for another would also be allowed without permit. However, the installation of any amount of polypropylene siding will require a permit, because it is tested to a different ASTM standard than vinyl. Although, stucco, stone, cultured stone, brick, etc. are exterior wall coverings per Section R703 of the 2015 International Residential Code (IRC), they are not specific siding materials listed as ordinary maintenance, and permits ARE required for their replacement or installation. Lastly, in the case where one would like to cover over old asbestos-type siding materials with siding materials listed in Section R703/IRC, this would not require a permit.

Interior finishes – No permit is required for replacing less than 25% of interior finishes on one- or two-family dwellings (Groups R-3 and R-5); this includes both walls and ceilings. Other than the additional square footage of the entire home versus the old per room, this is business as usual.

Decks – In all occupancies, no permit is required for the replacement of any part of a deck, porch or stoop that does not provide support to a building or structure. Contrary to the publication date of this original article, the application of "any part" from N.J.A.C. 5:23-2.7(c)1xiii is modified by the preceding text at N.J.A.C. 5:23-2.7(b)2, in that any work affecting structural or fire safety is not to be considered ordinary maintenance. So, it would be safe to say that replacement of the structural portions of a deck, such as support posts or columns, headers or girders, floor joists, stair stingers, etc. would indeed require a permit. However, replacement of the decking, railings, stair treads/risers, etc. would not require a permit.

A total replacement, from the existing foundation or footing on up, will require a full permit. A total replacement, expansion of an existing deck, or the new installation of a deck will require a full permit, not a minor work permit.

Insulation – No permit is required for the installation of insulation in any portion of an existing structure, with the exception of foam plastics. Even if someone would like to install new insulation over old insulation, this would be permitted without permit also. One should look at the insulation in the same way as any other ordinary maintenance item such as doors, windows, flooring, etc.-- No permit, no inspection. The owner/contractor is responsible for complying with the rehabilitation subcode thermal envelope requirements (i.e. fill the void if exposed) in the same manner as any other ordinary maintenance item that has code requirements connected to them.

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

Pool Construction and Equipotential Bonding

When it comes to bonded parts of a pool, there has been some confusion in terms of structural reinforcing steel (SRS) in a conductive pool shell and what it really is.

First, let's define conductive and non-conductive. Poured concrete, pneumatically applied or sprayed concrete, and concrete block with painted or plastered coatings are considered conductive materials; vinyl liners and fiberglass composite shells are non-conductive materials. In other words, this article does not apply to the non-conductive material pool shells. Now, onto SRS in a conductive pool shell…

For an inground pool, it's pretty easy to say that SRS is the rebar or woven-wire mesh that provides the shape and structure of the pool. The problem is, when one tries to apply the requirements of SRS to an above-ground pool. Does it apply to the metal supports? The short answer is no. The metal supports may be structural in the sense of providing shape and stability to the above-ground pool, but they are not reinforcing and have no relation to SRS.

So what does this mean in terms of Article 680.26(B) for the equipotential of the bonded parts of a pool? Pool shells for inground pools that utilize SRS not encapsulated in a nonconductive material are to be bonded at the perimeter at least four (4) times per Article 680.26(B)(2). Because pool shells for above-ground pools (non-portable) do not typically utilize SRS, and there are only structural metal supports for the non-conductive pool shell (again, not SRS), they may bonded once at the perimeter per Article 680.26(B)(3), provided the supports are electrically continuous by metal to metal contact (i.e. bolted, screwed, etc.).

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

Source: Neil Nagy, Bureau of Construction Project Plan Review

When to use the Mechanical Technical Section

The Division has received numerous phone calls regarding when a mechanical technical section is required. There is a misconception that the mechanical technical section is for when HVAC and duct work are installed in any use group; this is incorrect. N.J.A.C. 5:23-3.4(d) states that the mechanical technical section is to be used for existing R-3 and R-5 structures when mechanical equipment and other related apparatuses are being installed. So now the question is: What type of work is being done? Based on questions that have been asked most frequently, the Division has put together the following matrix as a guide. Remember, this is NOT an all-inclusive list, but it should provide officials with a starting point for when to require mechanical technical sections.

Source: William B. Schmidt, Office of Regulatory Affairs
(609) 984-7672

Work Category – Mechanical

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Furnace - Central			**B**	**E**	**F**	**M**	**P**	
Furnace - Central All Fuels	New Construction/ Addition	Tech Sheet:	X	X	X		X	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
		Plan Review:	X	X	X		X	
		Inspection:	X	X	X		X	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:		X		X		All responsibilities are as per N.J.A.C. 5:23-3.4(d)/ Form F-370 required
		Plan Review:		X		X		
		Inspection:		X		X		
		Work type:	**Minor Work**					
		Inspection type:	**Final Only**					

(continued on next page)

(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Boiler - Central			**B**	**E**	**F**	**M**	**P**	* Building may be required depending on type of chimney installed
Boiler – Central All Fuels	New Construction/ Addition	Tech Sheet:	*	X	X		X	
		Plan Review:	*	X	X		X	
		Inspection:	*	X	X		X	
		Work type:	**Full permit**					
		Inspection type:	**Rough & Final**					
			B	**E**	**F**	**M**	**P**	Responsibilities are as per N.J.A.C. 5:23-3.4(d)/ Form F-370 required. * Plumbing required if new backflow preventer installed and mechanical inspector is not a plumbing subcode official.
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:		X		X	*	
		Plan Review:		X		X	*	
		Inspection:		X		X	*	
		Work type:	**Minor Work**					
		Inspection type:	**Final Only**					

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Gas Piping			**B**	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
Gas Piping	New Construction/ Addition	Tech Sheet:					X	
		Plan Review:					X	
		Inspection:					X	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
	Direct Replacement/New installation, existing dwelling	Tech Sheet:				X		
		Plan Review:				X		
		Inspection:				X		
		Work type:	**Full permit**					
		Inspection type:	**Rough & Final**					

(continued on next page)

(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Condensing Unit			**B**	**E**	**F**	**M**	**P**	
Condensing Unit	New Construction/ Addition	Tech Sheet:		X			X	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
		Plan Review:		X			X	
		Inspection:		X			X	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:		X		X		All responsibilities are as per N.J.A.C. 5:23-3.4(d)
		Plan Review:		X		X		
		Inspection:		X		X		
		Work type:	**Minor Work**					
		Inspection type:	**Final Only**					

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Water heater - Gas			**B**	**E**	**F**	**M**	**P**	
Water Heater - Gas	New Construction/ Addition	Tech Sheet:	*	*	X		X	All responsibilities are as per N.J.A.C. 5:23-3.4(a) * Building & Electric, as applicable
		Plan Review:	*	*	X		X	
		Inspection:	*	*	X		X	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:		*		X		All responsibilities are as per N.J.A.C. 5:23-3.4(d)/ Form F-370 required * Electric if replacement is power vent exhaust
		Plan Review:		*		X		
		Inspection:		*		X		
		Work type:	**Minor Work**					
		Inspection type:	**Final Only**					

(continued on next page)

(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Water heater - Electric			**B**	**E**	**F**	**M**	**P**	
Water Heater - Electric	New Construction/ Addition	Tech Sheet:		X			X	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
		Plan Review:		X			X	
		Inspection:		X			X	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:		X			X	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
		Plan Review:		X			X	
		Inspection:		X			X	
		Work type:	**Minor Work**					
		Inspection type:	**Final Only**					

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Oil Piping			**B**	**E**	**F**	**M**	**P**	
Oil Piping	New Construction/ Addition	Tech Sheet:					X	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
		Plan Review:					X	
		Inspection:					X	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:				X		All responsibilities are as per N.J.A.C. 5:23-3.4(d)
		Plan Review:				X		
		Inspection:				X		
		Work type:	**Full permit**					
		Inspection type:	**Rough & Final**					

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(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Oil Tank - Install/Removal			**B**	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(a) * In addition to Fire, Building and Plumbing if underground tank
Oil Tank - Install/Removal	New Construction/ Addition	Tech Sheet:	*		X		*	
		Plan Review:	*		X		*	
		Inspection:	*		X		*	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(a) / Applies to above & underground tanks
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:			X			
		Plan Review:			X			
		Inspection:			X			
		Work type:	**Minor Work**					
		Inspection type:	**Final only**					

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Heating Venting System			**B**	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
Heating Venting System	New Construction/ Addition	Tech Sheet:			X		X	
		Plan Review:			X		X	
		Inspection:			X		X	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:				X		
		Plan Review:				X		
		Inspection:				X		
		Work type:	**Minor Work**					
		Inspection type:	**Final Only**					

(continued on next page)

(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Duct System			**B**	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
Duct System	New Construction/ Addition	Tech Sheet:	X					
		Plan Review:	X					
		Inspection:	X					
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	Per N.J.A.C. 5:23-2.7(c)5iii, this is Ordinary Maintenance
	Direct Replacement, existing dwelling	Tech Sheet:						
		Plan Review:						
		Inspection:						
		Work type:	**NO PERMIT**					
		Inspection type:						
	New Installation, existing dwelling		**B**	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
		Tech Sheet:				X		
		Plan Review:				X		
		Inspection:				X		
		Work type:	**Minor Work**					
		Inspection type:	**Final Only**					

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Fire Place Logs			**B**	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
Fire Place logs	New Construction/ Addition	Tech Sheet:					X	
		Plan Review:					X	
		Inspection:					X	
		Work type:	**Full permit**					
		Inspection type:	**Rough and Final**					
			B	**E**	**F**	**M**	**P**	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:				X		
		Plan Review:				X		
		Inspection:				X		
		Work type:	**Minor Work**					
		Inspection type:	**Final Only**					

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(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5							Notes
Generator			**B**	**E**	**F**	**M**	**P**		
Generator	New Construction/ Addition	Tech Sheet:		X	X		X		All responsibilities are as per N.J.A.C. 5:23-3.4(a)
		Plan Review:		X	X		X		
		Inspection:		X	X		X		
		Work type:	**Full permit**						
		Inspection type:	**Rough and Final**						
			B	**E**	**F**	**M**	**P**		
	Direct Replacement/New installation, existing dwelling	Tech Sheet:		X		X			All responsibilities are as per N.J.A.C. 5:23-3.4(d)
		Plan Review:		X		X			
		Inspection:		X		X			
		Work type:	**Minor Work**						
		Inspection type:	**Final Only**						



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Division of Codes and Standards
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Volume 31, Number 4 **Winter 2019**

The Winter Communicator: A Reminder

The final (Winter) issue of the *Construction Code Communicator* each year now consists of a collection of Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year. This year, we are including articles that were printed in earlier editions of the *Construction Code Communicator* on topics that continue to generate questions. Once this edition of the *Construction Code Communicator* has been posted, these individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from those sections of the Division's website. There is one exception: the materials related to Superstorm Sandy will remain in place. ***Generally, there are no new articles in this issue. However, there are times when a short, new article finds its way into the Winter issue.***

Please note that, although the documents will be removed from the Alerts and Hot Topics, they will still be accessible through the Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

Also, the indices for all issues of the *Construction Code Communicator* 2019 are included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain new articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year with previously printed articles where the topic continues to generate questions.

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at marie.daniels@dca.nj.gov.

Source: Marie Daniels
Division of Codes and Standards

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Save the Date – Building Safety Conference Exciting and Important News!



The Building Safety Conference (BSC) Committee is partnering with the International Code Council (ICC) for a major change to the 2020 Conference!

For 2020, the Conference will include an option for three full days of training from April 28 through May 1. There will be a focus on certification academies encompassing three days of training to provide attendees with an intensive review intended to boost their knowledge needed to successfully complete ICC certification exams. The Department is also including "tokens" to complete the certification exams at their own pace, with the completion of the academies.

This year, we will continue to honor our NJ Inspectors and Technical Assistants of the Year during our annual luncheon, but this year's ceremonies will also highlight the national kick off of Building Safety Month 2020! In keeping with the theme for this year's Building Safety Month of "Safer Buildings, Safer Communities, Safer World," our focus for this year, as it always is, will be on building and strengthening the code enforcement community to ensure our buildings and communities are, indeed, safe.

A little more on our planned training and the Conference schedule: we will be offering a three-day Fire/Life Safety Institute for those wanting a comprehensive look at the codes as well as many other one- and two-day classes to round out all three days. Of course, we are also continuing to offer our "traditional" Conference registration with two days of training. Both the three-day, or "full" Conference registration and the "traditional" registration include the famous Crackerbarrel session on Wednesday April 29th.

Of particular note to those planning to achieve the NJ Building Inspector RCS license or those seeking combination inspector certification with the ICC: the ICC has developed a certification academy specifically designed for NJ building inspector RCS candidates that review both the B1 and M1 ICC exams, which are required in addition to the educational program for the NJ Building Inspector RCS license, giving those attending one more review to aid in achieving licensure or certification. Tokens for both exams will be included in the registration.

Given all the excitement, we are beginning registration much earlier than normal, so keep an eye out for email blasts and the mailed brochure very soon with all registration and hotel reservation details.

See you in Atlantic City!

Source: John Delesandro, Operating Committee Chair
Supervisor, Licensing and Education Unit
(609) 292-7899

Summary of Rule Changes in 2019

(Amendments not listed update and insert cross references and/or section titles.)

August 5, 2019, *New Jersey Register*

N.J.A.C. 5:23-1.1, 2.2, 2.22, 3.21, and 6.8 – Manufactured Homes – The modifications to the above sections, along with the repeals of N.J.A.C. 5:23-3.19, 4B, and 4C, mean the Federal government is responsible for oversight of the initial installation of manufactured (HUD) homes in the State of New Jersey. Installation contractors are required to be licensed by HUD and are required to attend continuing education classes as required by HUD. Installations are inspected by third-party inspectors approved by HUD. Installations include, but are not limited to, any necessary site work for the installation of the HUD unit, permanent foundations, underground piping, electric, sewer, and water utility connections, etc. A certification that the installation meets the requirements of the Federal installation standards is required to be completed.

(continued on next page)

(Summary of Rule Changes in 2019)

September 3, 2019, *New Jersey Register*
N.J.A.C. 5:23-3.14, 3.15, 3.16, 3.17, 3.18, 3.20, 3.12, and 3.22 – Building, Plumbing, Electrical, Fire Protection, Energy, Mechanical, One- and Two-Family Dwelling, and Fuel Gas Subcodes – The 2018 I-Codes, the 2018 National Standard Plumbing Code, and the 2017 National Electrical Code are adopted. The changes were minimal on the national level from the previous code edition. For reference, the updates for the building subcode and one- and two-family dwelling subcode can be viewed at:

- https://www.iccsafe.org/wp-content/uploads/2018-IBC-UPDATE-Handout-9-1-17.pdf
- http://www.iccsafe.org/wp-content/uploads/2018-IRC-UPDATE-Handout-9-1-17.pdf

For all other subcodes, refer to the "March 04, 2019" row at the proposal/adoption webpage at: https://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html.

Bulletins and Formal Technical Opinions (FTOs) – Reformatted

All Bulletins and FTOs have been reformatted. One should continue to visit the Division's website for "Code Reference Updates," https://www.nj.gov/dca/divisions/codes. Below, please find the Revised and Withdrawn bulletins. The majority of the revisions were due to the adoption of the 2018 I-Codes, 2018 NSPC and 2017 NEC.

New/Revised		
No. 19-3	Issued, Sept. 2019 (Supersedes Bulletin No. 15-2)	Adopted Codes, Standards and Recommended Practices Referenced Under Informational Notes of the National Electrical Code 2017
No. 19-2	Issued, Sept. 2019 (Supersedes Bulletin No. 15-4)	Energy Subcode Compliance *(includes Form 392)*
No. 19-1	Issued, Sept. 2019 (Supersedes Bulletin Nos. 94-8, 03-4 and 05-2)	Design Loads for Ground Snow, Wind and Seismic
No. 07-1	Revised, Aug. 2019	Premanufactured Construction
No. 04-2	Revised Dec. 2019 (Supersedes Bulletin No. 95-3)	Oxford House
No. 03-5	Revised, Sept. 2019	Special Inspections
No. 99-3	Revised, Sept. 2019	Carbon Monoxide Alarms
No. 98-3	Revised, Sept. 2019	Health Care Facilities Plan Review
No. 80-5	Revised, Sept. 2019	Proper Utilization of Temporary Power Taps
No. 79-7	Revised, Sept. 2019	Septic Systems
Withdrawn		
No. 15-4	Issued, Dec. 2015 (Supersedes Bulletin No. 11-1) *Withdrawn as of 03/2020*	Energy Subcode Compliance (*includes Form 392*)
No. 15-2	Issued, Sept. 2015 (Supersedes Bulletin No. 12-1) *Withdrawn as of 03/2020*	Adopted Codes, Standards and Recommended Practices Referenced Under Informational Notes of the National Electrical Code 2014
No. 05-2	Revised, Dec. 2015 *Withdrawn as of 03/2020*	Seismic Hazard Maps
No. 03-4	Revised, Dec. 2015 *Withdrawn as of 03/2020*	Wind Speed Map
No. 94-8	Revised, Dec. 2015 (Supersedes Bulletin No. 81-9) *Withdrawn as of 03/2020*	Ground Snow Loads
No. 80-6	Code Ref. Update, Jan. 2016 *Withdrawn as of 08/2019*	Manufactured Homes (*see "note" in Bulletin No. 07-1*)
No. 88-2	Revised, Dec. 1994 *Withdrawn as of 08/2019*	Manufactured Housing (*see "note" in Bulletin No. 07-1*)

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

Cost Estimates

(Reprint from Volume 24, Fall 2012)

The presidents of the construction officials' and subcode officials' associations have asked the Division to provide clarification on whether local enforcing agencies may ask for additional documentation when it is obvious that the cost estimate provided is extremely low.

The State's fee schedule provides a mechanism to deal with such a situation. N.J.A.C. 5:23-4.20(c)2i(2) allows the State to request additional documentation for cost per thousand projects in the form of a design professional's estimate, ***if available***, estimating form, or by the contractor of record. The Department does not object to local enforcement agencies utilizing this section of the regulations ***for good cause***. But the Department cautions that it may not be used as a policy for every project submitted to a municipality, and should not be applied when homeowners are doing their own work and there is no contractor. In this situation, the Department recommends that the homeowner be notified about the provisions of N.J.A.C. 5:23-2.15(a)4, which require that any labor or materials provided at no cost shall be estimated at its normal or usual costs. Most homeowners have no idea that their labor and/or free materials must be accounted for. The Uniform Construction Code (UCC) does not, and code enforcement officials should not, require a homeowner to hire a cost estimator or a design professional for this purpose. It's an unnecessary expense for the consumer and it is a bad business practice that will only lead to complaints being submitted to your administration and/or my office. In these tough times, we should not add impediments to the construction code enforcement process.

If the homeowner has a contractor and you believe that the estimate is unreasonably low, you may ask for a copy of the contract; however, this should not be standard practice. Bear in mind that Bulletin No. 94-3, Permit Documentation, states that items for which no permit is required must be excluded from the total cost of the calculations for the permit fee.

Under no circumstances is any code enforcement official to change an estimated cost and charge a permit fee that you believe is appropriate. One code official did this and was arrested for falsifying public records. Reject the application. Ask for additional documentation.

We expect you to use common sense and good judgment and only use this tool when there appears to be an obvious issue.

Source: Office of Regulatory Affairs, (609) 984-7672

PermitsNJ Software to be Decommissioned Effective June 30, 2020

(Letter to Code Officials, August 1, 2019)

The Department has made the decision to decommission the PermitsNJ software effective June 30, 2020.

In 2017, Governor Christie signed Executive Order 225. This Executive Order decentralized software development and maintenance from the State's Office of Information Technology out to the individual State agencies. The software development resources were distributed to the state agencies with the largest software development needs, and the Department of Community Affairs did not acquire any of those software development resources. As a result, the Department can no longer enhance or maintain the PermitsNJ software; it has become outdated and has fallen out of pace with advancing technology.

A cost benefit analysis on the development or purchase of a replacement permitting software, to be offered to municipalities "free of charge," was conducted. Because there are so few local municipalities using the PermitsNJ software, it was found that it would be inefficient to develop or acquire new permitting software.

It is the Department's understanding that many municipalities using PermitsNJ have implemented municipal software elsewhere in the municipality. Most municipal government software suites include a permitting component. It is recommended that municipalities using PermitsNJ contact their municipal administrator as soon as possible to discuss replacing PermitsNJ with another permitting software.

Please note that, unlike UCCARS, municipalities will not be able to continue using PermitsNJ after June 30, 2020. If your office is still using the much older UCCARS software, be advised that this software has been out of support for many years and will not function on 64-bit versions of Windows 7 or higher. If your office issues fewer than 200 permits per year, you have the option of submitting monthly permit activity using the Municipal Monthly Activity Reports (UCC forms R811 and R812).

The Department will assist municipalities in any way possible to ensure a smooth transition to other permitting software. Should you have any questions or concerns, please email permitsnj@dca.nj.gov.

Source: PermitsNJ, (609) 292-7899

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Source: Code Assistance Unit

Swimming Pools & Spas - Plan Review & Inspections

(Updated reprint of Memorandum to Construction Officials – July 11, 2016)

This memorandum is intended to focus enforcement effort with regard to swimming pools and spas and to establish priorities.

With the adoption of the 2018 International Codes, the 2018 International Swimming Pool and Spa Code (ISPSC) is adopted by reference as part of the Uniform Construction Code. This was the same for the 2015 codes when this memo was initially issued. It should be noted that the provisions of the ISPSC are not new. These provisions were previously contained in referenced standards or in appendices (NSPI/APSP or Appx G).

As always, attention should be given to the requirements that go to safety, including:
• Entrapment hazards (APSP/ICC 7)
• Pool barriers (Section 305/ISPSC)
• Bonding and grounding (Art 680/NEC).

For plan review purposes, a general note indicating that the pool or spa will conform to the 2018 ISPSC should be accepted. It is not necessary to require plans that show every detail of the pool or spa to be installed. The pressure testing of piping, which has been required since adoption of the 2009 codes, should be included as part of the inspection as this is not easily addressed after concrete has been poured. And again, the inspection should focus on safety: entrapment hazards (plumbing,) pool barriers (building) and bonding and grounding (electrical.)

All of us are trying to get the job done with scarce resources. Focusing on the requirements of the ISPSC that go to safety, rather than giving equal import to every detail, will enable local code enforcement agencies to fulfill their responsibility to the public they serve without devoting a disproportionate amount of time to ISPSC enforcement.

Should you have any questions, please feel free to contact the Code Assistance Unit at codeassist@dca.nj.gov or 609-984-7609.

Source: Edward M. Smith
Director, Division of Codes and Standards

Bureau of Housing Inspection Responsibilities for UCC Officials

(Reprint from Volume 28, Summer 2016)

If you are appointed as a Uniform Construction Code (UCC) Construction Official, did you know you are also an agent of the Department of Community Affairs, Bureau of Housing Inspection? Yes, N.J.A.C. 5:23-2.18(g) gives you or your subcode officials the responsibility to ensure newly-constructed and altered hotels/multiple dwellings comply with the provisions of the regulations for the maintenance of hotels and multiple dwellings (N.J.A.C. 5:10).

The Construction Official has a responsibility to ensure that certain properties are properly registered with the Bureau of Housing Inspection prior to issuance of a UCC Certificate of Occupancy. There are also technical provisions for which the Construction Official is responsible; see UCC Bulletin 79-6 http://www.nj.gov/dca/divisions/codes/resources/bulletins.html.

N.J.A.C. 5:10-1.11 requires the owner of each hotel or multiple dwelling to file with the Bureau of Housing Inspection for a Certificate of Registration. Prior to issuance of a Certificate of Occupancy, N.J.A.C. 5:23-2.24(e) requires a photocopy of a Bureau of Housing Inspection, Certificate of Registration be submitted to the UCC Construction Official. However, the UCC Construction Official may utilize UCC Bulletin No. 01-2 which states that a Temporary Certificate of Occupancy may be issued without a Hotel and Multiple Dwelling Certificate of Registration.

Sometimes, there is confusion as to what constitutes a multiple dwelling. A multiple dwelling is defined as a building or structure in which three or more dwelling units that are occupied or intended to be occupied, any group of ten or more buildings on a single/contiguous parcel(s) of land each with two dwelling units occupied or intended to be occupied, all condominiums, co-ops, non-owner occupied mutual housing corporations, townhouse communities and retirement communities.

NJ Hotel and Multiple Dwelling Law, N.J.S.A. 55:13A(k)2, exempts certain condominiums, co-ops and non-owner occupied mutual housing corporations from the multiple dwelling definition. These properties must still register with the Bureau of Housing Inspection and apply for exemption from the Bureau's inspection process.

Townhouse communities may not have to register with the Bureau however, they must apply for exemption from the registration process through the Bureau's Code Administration Unit.

If you have any questions related to the registration requirements/status of a property, please feel free to contact the Bureau of Housing Inspection's Code Administration Unit at (609) 633-6219.

Source: Carmine Giangeruso, Supervisor of Enforcement, Code Administration Unit, Bureau of Housing Inspection

2019 Proposals/Adoptions

The following is a list of the 2019 proposals/adoptions. This list, with previous years included, can be found at http://www.nj.gov/dca/divisions/codes/codreg/ by scrolling to "Rule Proposals and Adoptions."

Posted in NJ Register	Subject	Submit Comments by:	Adoption Date*
Dec 02, 2019	Carnival-Amusement Rides & Uniform Construction Code Electrical Systems for Carnivals and Fairs Proposed Amendments: N.J.A.C. 5:14A-9.2 and 9.7; and 5:23-2.14 and 2.20 Proposed New Rule: N.J.A.C. 5:23-2.18D	Jan 31, 2020	
Nov 04, 2019	Notice of Action on Petition for Rulemaking Uniform Construction Code - Ordinary Maintenance and Minor Work NJAC 5:23-2.7 and 2.17A *(see related at Aug 05, 2019 below)*	N/A	N/A
Aug 05, 2019	Public Notice - Receipt of Petition for Rulemaking Uniform Construction Code - Ordinary Maintenance and Minor Work N.J.A.C. 5:23-2.7 and 2.17A	N/A	N/A
Aug 05, 2019	Uniform Construction Code - Heating, Ventilation, Air Conditioning, and Refrigeration Contractors Proposed Amendments: N.J.A.C. 5:23-2.15 and 2.15A	Oct 04, 2019	
June 03, 2019	Planned Real Estate Development Full Disclosure Act Regulations Proposed Amendments: N.J.A.C. 5:26-1.3, 8.1, 8.2, and 8.4 Proposed New Rules: N.J.A.C. 5:26-8.8 through 8.14 Proposed Repeals: N.J.A.C. 5:20 and 5:26-8.3	Aug 02, 2019	
May 20, 2019	Liquefied Petroleum Gas - Adoption of NFPA 58–2017; Filling Fleet Vehicles; Department Reorganization Proposed Amendments: N.J.A.C. 5:18-1.1, 1.2, 1.3, 1.4, 1.5, 1.7, 2.1, 3.1, 3.3, 3.6, 3.7, 4.1, 4.3, 5.1, 6.1, 6.2, 6.3, 6.4, 8.2, 9.1, 9.2, 9.4, 10.1, 10.2, 10.4, 10.5, 11.1, 11.6, and 5:18 Appendix A	July 19, 2019	
Mar 04, 2019	Uniform Construction Code - Building, Plumbing, Electrical, Fire Protection, Energy, Mechanical, One- and Two-family and Fuel Gas Subcodes Proposed Amendments: N.J.A.C. 5:23-3.14, 3.15, 3.16, 3.17, 3.18, 3.20, 3.21 and 3.22	May 03, 2019	Sept 03, 2019 NSC
Jan 07, 2019	Uniform Construction Code - Manufactured Homes Proposed Amendments: N.J.A.C. 5:23-1.1, 2.2, 2.22, 3.21, and 6.8 Proposed Repeals: N.J.A.C. 5:23-3.19, 4B, and 4C	Mar 08, 2019	Aug 05, 2019 NSC

May I Do a Plan Review Without All the Prior Approvals?

(Updated reprint from Volume 10, Fall 1998)

Members of the Code Assistance Unit have been asked whether a construction office may review a set of plans prior to the issuance of all the prior approvals. The quick answer to this question is, Yes.** In fact, the Department encourages code officials to review plans and specifications in these cases.

** The exception to the Yes above can be found at NJAC 5:23-2.15(f)4ii(1)(A). Here it states that permit applicants applying for plan review of individual owner-occupied one- or two-family home addition or alteration projects must have zoning approval in place before plan review shall proceed.

Some projects are "fast tracked," so that construction documents are completed at the same time as the prior approval process. If the permit applicant wants to take the risk associated with this process, code officials should provide the service of reviewing the plans. The original purpose of the non-refundable fee for plan review was to allow the applicant to go through the plan review process and the prior approval process at the same time. The code enforcement agency does not lose anything by doing this. The permit applicant must pay the plan review fee, therefore, even if the building is not built, the code enforcement agency is paid for its review.

One advantage of reviewing plans during the prior approval process is that there is more time for the review of complex projects. Because the time limit for the code enforcement agency to take action on the application begins when the application is complete, the plan review "clock" starts on these projects when all prior approvals have been granted. In some cases, this is reason enough to provide this service.

This does not affect the issuance of the permits. Permits may not be issued until all the prior approvals have been granted.

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

2018 I-Code Flood Hazard Construction – DEP Revisions

(Updated reprint from Volume 29, Fall 2017)

The 2018 edition of the International Building Code and Residential Code (IBC and IRC, respectively) were adopted by New Jersey on September 3, 2019. In regard to the title of this article, previous editions of the IBC and IRC differed in flood resistant standards regarding Coastal A flood zones. With the adoption of the 2015 edition of these codes (September 21, 2015), the Coastal A flood zone became one and the same regardless of whether the project is under the IBC or the IRC. The 2015 IRC aligned its Coastal A flood zone requirements with the V flood zone requirements (this was already the case in previous editions of the IBC before it). In short, this meant whether using the 2015 IBC or IRC, a foundation in a Coastal A flood zone is required to meet the same requirements as a V zone. This remains the same for the 2018 codes, along with their reference the ASCE 24, the 2014 edition.

The rule applies to new construction and those property owners whose properties were "substantially damaged/improved." A structure is considered substantially damaged if the cost of restoration equals or exceeds 50 percent of the market value of the structure prior to the damage; this determination is made by the local floodplain administrator. Substantially improved means improvement(s) of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement.

Keeping in mind that DEP's existing rules already contain a mandatory 1-foot freeboard*, which is maintained within NJAC 7:13, and applies to the lowest floor of the home or building, the question remains, how does this interface with the Uniform Construction Code (UCC), NJAC 5:23? The quick answer is to see your local floodplain administrator as he or she will let you know the elevation and the flood zone applicable to the home or building in question. Under the UCC, this is handled through the prior approval process. Previously, the DEP rules only used "lowest floor" and the UCC, by means of referenced model codes and standards, used this term and "lowest supporting horizontal structural member". This has been remedied with DEP's July 17, 2017 adoption of revisions to the Flood Hazard Area Control Act rules. "Lowest floor" now includes a reference to lowest horizontal structural member (see NJAC 7:13-1.2 at http://www.nj.gov/dep/rules/rules/njac7_13.pdf for definition of Lowest Floor). In short, the revisions harmonize NJAC 7:13 and the Uniform Construction Code, NJAC 5:23, regarding this issue and should minimize confusion when applying the two sets of rules. Provided below is the boiled-down version of the interaction between the rules.

* Note – Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. (http://www.fema.gov/freeboard)

Combining DEP's newly-revised rules and the UCC's existing requirements allows for the determination of the Design Flood Elevation (DFE). The breakdown of the elevation requirements in a flood zone per the 2018 IBC and IRC is as below.

		IRC[a]	IBC[b]			
			Cat 1	Cat 2	Cat 3	Cat 4
A zone	Elevation of the lowest floor[c]	BFE +1 ft	BFE +1 ft	BFE +1 ft	BFE +1 ft	BFE +2 ft
Coastal A zone and V zone	Elevation of the bottom of lowest supporting horizontal structural member of lowest floor[c]	BFE +1 ft	BFE +1 ft	BFE +1 ft	BFE +2 ft	BFE +2 ft

a – Per Sections R309.3/IRC and R322.2.2/IRC and Section 1.5.2/ASCE 24, attached and detached enclosed areas used solely for parking of vehicles, building access or storage may be below the BFE.
b – Category classifications are from Table 1-1 of the ASCE 24-14 (see attached).
c – Minimum elevations are based on the model codes adopted by NJAC 5:23, in combination with NJAC 7:13; municipalities may adopt local ordinances for greater freeboard which increases the DFE.

There actually are three entities involved in the enforcement of requirements for elevation of structures in identified flood hazard areas:

- The local floodplain administrator is responsible for the enforcement of the municipal flood ordinance. These ordinances are adopted as a condition of the municipality's participation in the National Flood Insurance Program. (It should be noted that municipalities may choose to adopt requirements for higher elevations.) DEP provides a model flood ordinance at: http://www.nj.gov/dep/floodcontrol/modelord.htm.
- DEP is responsible for enforcement of the State's Flood Hazard Area Control Act rules, NJAC 7:13. Under NJAC 7:13, if a home or building is being raised or reconstructed in the original footprint, DEP's "permit by rule" allows construction to proceed without a separate review or approval from DEP. This same rule allows for an increase in the footprint of up to 300 square feet under the permit by rule provisions, which is helpful in terms of additional steps or ramps necessary to access elevated buildings. Other construction in a flood hazard area requires approval from DEP.
- The local construction official is responsible for enforcement of the UCC, including the elevation requirements described above

(Continued on next page)

(2018 I-Code Flood Hazard Construction – DEP Revisions)

ASCE 24-14 Table 1-1, Flood Design Class of Buildings and Structures	
Category	Use or Occupancy of Buildings and Structures
1	Buildings and structures that normally are unoccupied and pose minimal risk to the public or minimal disruption to the community should they be damaged or fail due to flooding. Flood Design Class 1 includes: (1) temporary structures that are in place for less than 180 days; (2) accessory storage buildings and minor storage facilities (does not include commercial storage facilities); (3) small structures used for parking of vehicles; and (4) certain agricultural structures. [Note (a)]
2	Buildings and structures that pose a moderate risk to the public or moderate disruption to the community should they be damaged or fail due to flooding, except those listed as Flood Design Classes 1, 3, and 4. Flood Design Class 2 includes the vast majority of buildings and structures that are not specifically assigned another Flood Design Class, including most residential, commercial, and industrial buildings
3	Buildings and structures that pose a high risk to the public or significant disruption to the community should they be damaged, be unable to perform their intended functions after flooding, or fail due to flooding. Flood Design Class 3 includes: (1) buildings and structures in which a large number of persons may assemble in one place, such as theaters, lecture halls, concert halls, and religious institutions with large areas used for worship; (2) museums; (3) community centers and other recreational facilities; (4) athletic facilities with seating for spectators; (5) elementary schools, secondary schools, and buildings with college or adult education classrooms; (6) jails, correctional facilities, and detention facilities; (7) healthcare facilities not having surgery or emergency treatment capabilities; (8) care facilities where residents have limited mobility or ability, including nursing homes but not including care facilities for five or fewer persons; (9) preschool and child care facilities not located in one- and two-family dwellings; (10) buildings and structures associated with power generating stations, water and sewage treatment plants, telecommunication facilities, and other utilities which, if their operations were interrupted by a flood, would cause significant disruption in day-to-day life or significant economic losses in a community; and (11) buildings and other structures not included in Flood Design Class 4 (including but not limited to facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, hazardous waste, or explosives) containing toxic or explosive substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released. [Note (b)]
4	Buildings and structures that contain essential facilities and services necessary for emergency response and recovery, or that pose a substantial risk to the community at large in the event of failure, disruption of function, or damage by flooding. Flood Design Class 4 includes: (1) hospitals and health care facilities having surgery or emergency treatment facilities; (2) fire, rescue, ambulance, and police stations and emergency vehicle garages; (3) designated emergency shelters; (4) designated emergency preparedness, communication, and operation centers and other facilities required for emergency response; (5) power generating stations and other public utility facilities required in emergencies; (6) critical aviation facilities such as control towers, air traffic control centers, and hangars for aircraft used in emergency response; (7) ancillary structures such as communication towers, electrical substations, fuel or water storage tanks, or other structures necessary to allow continued functioning of a Flood Design Class 4 facility during and after an emergency; and (8) buildings and other structures (including, but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, or hazardous waste) containing sufficient quantities of highly toxic substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released. [Note (b)]
Note (a) - Certain agricultural structures may be exempt from some of the provisions of this standard; see ASCE 24-14 Section C1.4.3. Note (b) - Buildings and other structures containing toxic, highly toxic, or explosive substances shall be eligible for assignment to a lower Flood Design Class if it can be demonstrated to the satisfaction of the authority having jurisdiction by a hazard assessment as described in ASCE 7-10 Section 1.5.3 of Minimum Design Loads for Buildings and Other Structures that a release of the substances is commensurate with the risk associated with that Flood Design Class.	

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.

Shop Drawings -- Do You Really Need Them?

(Updated reprint from Volume 6, Winter 1994)

How many times have you had a discussion with a design professional about the need for shop drawings? Do these documents need to be submitted? Do they need to be signed and sealed? Where in the UCC does it say I can require them?

These are some of the questions that have been posed to the Code Assistance Unit. Let us see if we can clear up this issue a little.

As per N.J.A.C. 5:23-2.15(f)1, the Construction Official or the appropriate Subcode Official may require adequate details on a plan submittal to determine Code compliance. This code citation does not specify the form in which the information must be submitted, be it in the form of design drawings or shop drawings. It just states that the Official can require whatever is necessary to verify that the design meets the minimum standards of the Code. If the design professional provides sufficient detail in the original design drawings such that it can be determined that the design is Code complying, it is not necessary for shop drawings to be submitted. If however the design professional does not provide adequate details, the Official may require additional information be submitted. This additional information may be provided by means of a design drawing modification or by means of a shop drawing. If there is a need for shop drawings to be submitted due to the fact that they are an integral part of the design document, then they should be signed and sealed by a design professional. In some cases, it is the preference of the original designer to have shop drawings submitted by the contractors' design professional for the specialty item in question.

A Brief Example:
An owner submits signed and sealed documents which utilize pre-stressed concrete planks. The design drawings provide sufficient information including calculations and details such that Code compliance can be verified. It is not necessary for shop drawings to be submitted.

The same owner submits the same plans only this time "Pre-stressed concrete planks by others" appears on the design documents. You, as the Official, should require additional information to determine if the design meets the minimum requirements of the Code. These documents may be in the form of shop drawings or design drawings, of course signed and sealed by a design profes-sional.

This applies to all phases of plan review where shop drawings are regularly submitted.

Source: Code Assistance Unit
(609) 984-7609

September 2019 Highlights of the *New Jersey Construction Reporter*

The following information is from the September 2019 Highlights. The New Jersey Construction Reporter is published on a monthly basis 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

September 2019

- $1.594 billion of construction was authorized by building permits in September.
- New houses and home renovations accounted for $949.8 million, or 59.6 percent of authorized work.
- Office, retail, and other nonresidential work totaled $644.5 million (40.4 percent).
- Jersey City, Wayne, and Hackensack had the most construction in September.

Year to Date

- Between January and September 2019, $12.612 billion of construction was authorized by building permits. This was a billion dollars more than last year at this time.
- The number of new houses authorized by building permits between January and September 2019 totaled 21,997. This was 3,023 more than the same nine-month period last year.

(continued on next page)

(September 2019 Highlights of the New Jersey Construction Reporter)

Dollar Amount of Construction Authorized by Building Permits by Use Group, January - September 2019
Source: New Jersey Department of Community Affairs, 11/7/19

	September			Year-to-Date		
Use Group	Permits	Estimated Construction Costs	Square Feet	Permits	Estimated Construction Costs	Square Feet
RESIDENTIAL	25,170	$949,777,649	6,357,365	234,753	$6,267,551,723	41,910,986
1 & 2 Family	23,413	433,586,075	2,665,038	218,967	3,828,792,551	24,213,263
Multifamily	1,757	516,191,574	3,692,327	15,786	2,438,759,172	17,697,723
NONRESIDENTIAL	5,056	644,516,515	4,211,215	50,033	6,344,128,620	30,915,140
Hotels, motels, guest houses	69	22,496,343	165,010	1,095	101,105,475	1,038,425
Assembly	357	48,146,306	188,617	3,814	471,698,703	1,583,720
Business / Office	1,825	187,051,383	883,200	18,535	2,322,083,725	4,859,705
Education	125	51,319,917	495,641	1,947	669,369,598	1,341,938
Hazardous uses	6	286,824	0	65	15,184,023	38,333
Industrial	47	26,399,845	29,410	498	325,831,000	1,690,137
Institutional	63	71,529,174	265,980	896	569,149,705	1,987,616
Retail	403	71,552,665	265,090	2,482	469,885,525	1,008,090
Storage	153	94,867,934	1,663,195	1,537	900,339,349	15,724,739
Signs, fences, miscellaneous	2,008	70,866,124	255,072	19,164	499,481,517	1,642,437
New Jersey	**30,226**	**$1,594,294,164**	**10,568,580**	**284,786**	**$12,611,680,343**	**72,826,126**
Sept 2018	30,053	1,231,879,415	8,847,278	300,067	11,607,759,213	68,318,914

New Jersey Department of Community Affairs
Division of Codes and Standards
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Construction Code Communicator

State of New Jersey
Philip D. Murphy, Governor

Department of Community Affairs
Lt. Governor Sheila Y. Oliver, Commissioner

Volume 30, Number 1 Spring 2018

Ordinary Maintenance and Minor Work

Ordinary maintenance, N.J.A.C. 5:23-2.7, and minor work, N.J.A.C. 5:23-2.17A, require less oversight than do construction projects that require a full permit application and inspection. The rule changes adopted on March 5, 2018 redesignate some work that was formerly categorized as minor work as ordinary maintenance, and some work that formerly required a full permit as minor work.

The major changes to ordinary maintenance and minor work follow.

1. Prior approvals: The definition of minor work no longer includes "prior approval." This means that homeowners may begin work without a permit even when a prior approval is required. In response to public comment, the Department made changes upon adoption to minimize the impact of this change. Specifically, the proposed recategorization of deck replacement or construction (discussed below) was not adopted because the Department was persuaded that local land use ordinances regarding setbacks could result in a homeowner undertaking a deck project without knowing that it did not meet the local requirements. The Department believes that the other items that are categorized as minor work are unlikely to conflict with local zoning ordinances. Each municipality may identify a way of informing its residents of local requirements that were formerly enforced as prior approvals.
2. Decks: The construction or total replacement of a deck. As adopted, the repair or replacement of a part of a deck that does not provide structural support is designated as ordinary maintenance; the construction or complete replacement of a deck requires a full permit. This reflects no change from the previous requirements.
3. Partitions: The Department was persuaded by commenters who expressed concern that allowing partitions to be replaced conflicted with the Rehabilitation Subcode and so did not adopt the proposed amendment allowing for the installation of partitions without a plan review or an inspection when such work would reconfigure the space.
4. Notice: The notice of minor work may be submitted to the enforcement agency in oral and written form, including through electronic mail.
5. Inspections: The inspection timeframe for minor work projects has been changed from within 30 days to within three business days after completion of the work, recognizing the concern for safety that the inspection requirement implies.

All other changes can be found at the Division's "Alerts and Issues" webpage, http://www.nj.gov/dca/divisions/codes/alerts. Please select the "Permit Requirements – Updated 3/5/18" link to view the changes grouped by building type. For those who would like to see these items grouped by subcode, please read the corresponding articles within this edition of the *Construction Code Communicator*.

Source: Jose Paulino, Code Development Unit, (609) 984-7609

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Building Projects of Ordinary Maintenance and Minor Work

Ordinary building maintenance projects, at N.J.A.C. 5:23-2.7(c)1, do not require a permit application to be filed with the local enforcing agency and therefore, no inspection is required. Even though there is no permit issued, it is expected that the following projects will still meet minimum requirements of the Uniform Construction Code. Building projects not listed below would require, at a minimum, a minor work permit or full permit:

- Painting (interior and exterior) ANY building;
- Interior finishes (installation, repair, or replacement) of less than 25 percent of the total wall area or ceiling of ONE- or TWO-FAMILY DWELLINGS. This includes plastering and drywall installation. It also includes vinyl wall or ceiling covering of any amount. This does NOT include paneling;
- Wall papering at ANY location;
- Glass (replacement) in ANY window or door, being of a type and quality that complies with code;
- ANY window or door (replacement), including storm windows, storm windows and garage doors, in the same opening without altering the dimensions or framing of the original opening. More specifically, means of egress doors and emergency escape openings may be made in the same opening without altering the dimensions or framing of the original opening, as long as there is no reduction in the required height, width, or net clear opening of the previous window or door assembly;
- ANY non-structural component (repair or replacement), such as a partition railing in one- and two-family dwellings;
- ANY non-structural elements, such as cabinets;
- ANY interior or exterior trim, decoration, or moldings;
- ANY flooring material with a new material;
- Roof covering (repair or replacement) on **DETACHED** ONE- and TWO-FAMILY DWELLINGS;
- Siding (repair or replacement) of like material on ONE- and TWO-FAMILY DWELLINGS. Siding (repair or replacement) of like material on all OTHER buildings is limited to 25% of the total building area. In ALL cases, the repair or replacement of polypropylene siding shall not be ordinary maintenance;
- ANY **PART** of a deck, porch, or stoop (repair or replacement) that does not provide structural support for any roof or portion of a building (see minor work, below, for TOTAL replacement);
- Screens on ANY building;
- ANY insulation, except foam plastic insulation, when installed adjacent to or not more than one and a half inches from an interior finish;
- ANY exterior gutters and leaders; and
- ANY storable spa or hot tub that is provided with a lockable safety cover that complies with ASTM F1346.

Building projects that fall between ordinary maintenance and full-blown projects would be described as “minor work” at N.J.A.C. 5:23-2.17A(c). These types of projects include:

- ANY porch or stoop (construction or **TOTAL** replacement) that does not provide structural support for any roof or portion of a building;
- Renovation or alteration work in an existing ONE- or TWO-FAMILY DWELLING, provided that no primary structural members are altered in any way, and further provided that the work does not constitute reconstruction; and
- Non-structural components (repair or replacement with no reconfiguration of space) such as a partition in structures OTHER THAN ONE- and TWO-FAMILY DWELLINGS;
- Installation of a radon mitigation system provided no new electrical work is required; and
- Repair and/or renovation work in a Group B, Group F, Group M, or Group S occupancy.

Source: Code Assistance Unit and Code Development Unit
(609) 984-7609

Plumbing Projects of Ordinary Maintenance and Minor Work

Ordinary plumbing maintenance projects, at N.J.A.C. 5:23-2.7(c)2, do not require a permit application to be filed with the local enforcing agency and therefore, no inspection is required. Even though there is no permit issued, it is expected that the following projects will still meet minimum requirements of the Uniform Construction Code. Plumbing projects not listed below would require, at a minimum, a minor work permit or full permit:

(continued on next page)

(Plumbing Projects of Ordinary Maintenance and Minor Work)

- ANY hose bib valve replacement as long as they are provided with an approved atmospheric vacuum breaker;
- ANY existing fixture refinishing. This does not include relining of fixtures (which would not be considered to be ordinary maintenance);
- ANY ball cock replacement as long as they are an approved anti-siphon type;
- ANY repair of leaks involving the replacement of piping;
- ANY clearance of stoppages;
- ANY faucet replacement or working parts of faucets;
- ANY valve replacement, including shower or combination bath/shower valves;
- ANY replacement of working parts of valves, including, but not limited to, shower or combination bath/shower valves;
- ANY trap replacement;
- Any fixture replacement as long as it is similar fixture and there is no change in the piping arrangement; and
- ANY domestic clothes washer and domestic dishwasher replacement.

In addition to the above, plumbing subcode officials should review the heating, ventilation and air conditioning maintenance projects at N.J.A.C. 5:23-2.7(c)5, which is also covered on Page 5 within this edition of the Construction Code Communicator.

Plumbing projects that fall between ordinary maintenance and full-blown projects would be described as "minor work" at N.J.A.C. 5:23-2.17A(c). These types of projects include:

- Replacement of ANY existing plumbing piping work with new and approved material of like capacity
- The installation of ANY drinking fountain and condensate drain in existing structures;
- Replacement of ANY existing water heaters with new ones of like capacity;
- Replacement of ANY existing boilers, warm air furnaces, air conditioning units, and air conditioning condensing units with new appliances of like capacity;
- New electrical work incidental to the installation of air conditioning, equipment, clothes dryers, and ranges or ovens in ONE- and TWO-FAMILY DWELLINGS; and
- Installation of fixtures in existing space of DWELLINGS where the new installation of additional fixtures can be accommodated with no increase in the size of the water distribution system, water service, or house drain; and
- Repair and/or renovation work in a Group B, Group F, Group M, or Group S occupancy.

Source: Code Assistance Unit and Code Development Unit
(609) 984-7609

Electrical Projects of Ordinary Maintenance and Minor Work

Ordinary electrical maintenance projects at N.J.A.C. 5:23-2.7(c)3 do not require a permit application to be filed with the local enforcing agency and therefore, no inspection is required. Even though there is no permit issued, it is expected that the following projects will still meet minimum requirements of the Uniform Construction Code. Electrical projects not listed below would require, at a minimum, a minor work permit or full permit:

- Replacement of ANY receptacle, switch, or lighting fixture, or part thereof, not containing emergency battery packs with a like or similar item. Receptacles in locations where ground-fault circuit interrupter protection, damp/wet, or tamper-resistant are required shall comply with Section 406.4(D) of the electrical subcode;
- Repairs to ANY installed electrically operated equipment such as doorbells, communication systems, and any motor operated device. Provided, however, that if fire protection systems are interrupted for repairs the fire official shall be notified in accordance with the building subcode;
- Installation of communications wiring (wiring methods of Chapter 8 and data circuits between IT equipment per Article 725 of the electrical subcode) in ANY Class 3 structure, provided that the rearrangement does not involve penetration of a fire-rated assembly and is not in a hazardous location as defined in Chapter 5 of the electrical subcode;
- Replacement of ANY domestic dishwasher;
- Replacement of kitchen range hoods in DWELLING UNITS, provided that the replacement hood exhaust rate does not exceed the exhaust rate of the existing hood or the exhaust rate of the replacement hood does not exceed 400 cubic feet per minute (cfm);
- Installation of a burglar alarm, security system, or doorbell in ONE- and TWO-FAMILY DWELLINGS; and
- Installation of a plug-in landscape irrigation unit under 30 volts at ONE- and TWO-FAMILY DWELLINGS.

(continued on next page)

Revised as of 4/13/18; original post on 4/6/18 is invalid.

(Electrical Projects of Ordinary Maintenance and Minor Work)

Electrical projects that fall between ordinary maintenance and full-blown projects would be described as "minor work" at N.J.A.C. 5:23-2.17A(c). These types of projects include:

- New electrical work incidental to the installation of air conditioning, equipment, clothes dryers, and ranges or ovens in ONE- and TWO-FAMILY DWELLINGS;
- Installation of five or fewer outlets where existing circuits and/or available space for circuits and service are adequate to support the load in ONE- and TWO-FAMILY DWELLINGS (fishing is considered minor work regardless of the number of fixtures/receptacles);
- Replacement of existing wiring with new wiring of the same capacity in ONE- and TWO-FAMILY DWELLINGS provided that the new wiring shall be of a type approved for the use by the code.
- Installation of a burglar alarm, security system, or doorbell in structures OTHER THAN one- and two-family dwellings. The exception to this (full permit) is controlled, delayed, or sensor released egress doors;
- ANY change of an existing transmission means from a digital alarm communicator transmitter to a fire alarm supervising station. ("Transmission" means the existing phone line(s) that transmit fire alarm signals from a digital alarm communicator transmitter to the supervising station.) Note that a certified fire alarm service company, licensed fire alarm company or licensed electrical contractor is required to submit Form F-391 signed by the contractor to provide a verification statement in writing to the fire subcode official within 24 hours that all required signals remain operational after the new transmission means is installed; and
- Repair and/or renovation work in a Group B, Group F, Group M, or Group S occupancy.

Source: Code Assistance Unit and Code Development Unit
(609) 984-7609

Fire Protection Projects of Ordinary Maintenance and Minor Work

Ordinary fire protection maintenance projects at N.J.A.C. 5:23-2.7(c)4 do not require a permit application to be filed with the local enforcing agency and therefore, no inspection is required. Even though there is no permit issued, it is expected that the following projects will still meet minimum requirements of the Uniform Construction Code. Fire protection projects not listed below would require, at a minimum, a minor work permit or full permit:

- Replacement of ANY sprinkler or smoke alarm, smoke detector, or heat detector head with a like device;
- Repair or replacement of ANY component of a fire alarm or smoke and heat detection equipment (other than the replacement of a fire alarm control panel);
- Installation of ANY battery-powered smoke alarm; and
- Installation of ANY battery-powered or plug-in type carbon monoxide alarm.

Fire protection projects that fall between ordinary maintenance and full-blown projects would be described as "minor work" at N.J.A.C. 5:23-2.17A(c). These types of projects include:

- Installation of any fire detection or suppression device in any ONE- or TWO-FAMILY DWELLING;
- Installation of a burglar alarm, security system, or doorbell in structures OTHER THAN one- and two-family dwellings. The exception to this (full permit) is controlled, delayed, or sensor released egress doors;
- ANY change of an existing transmission means from a digital alarm communicator transmitter to a fire alarm supervising station. ("Transmission" means the existing phone line(s) that transmit fire alarm signals from a digital alarm communicator transmitter to the supervising station.) Note that a certified fire alarm service company, licensed fire alarm company or licensed electrical contractor is required to submit Form F-391 signed by the contractor to provide a verification statement in writing to the fire subcode official within 24 hours that all required signals remain operational after the new transmission means is installed; and
- Repair and/or renovation work in a Group B, Group F, Group M, or Group S occupancy.

Source: Code Assistance Unit and Code Development Unit
(609) 984-7609

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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.

HVAC Projects of Ordinary Maintenance and Minor Work

Ordinary heating, ventilation and air conditioning maintenance projects at N.J.A.C. 5:23-2.7(c)5 do not require a permit application to be filed with the local enforcing agency and therefore, no inspection is required. Even though there is no permit issued, it is expected that the following projects will still meet minimum requirements of the Uniform Construction Code. Heating, ventilation and air conditioning maintenance projects not listed below would require, at a minimum, a minor work permit or full permit:

- Replacement of ANY motor, pump and fan of the same capacity;
- Repair and replacement of ANY heating, supply and return piping and radiation elements, which does not require rearrangement of the piping system;
- Repair and replacement of ANY duct work;
- Repair of ANY air conditioning equipment and system;
- Repair or replacement of ANY control device for heating and air conditioning equipment;
- Replacement of kitchen range hoods in DWELLING UNITS, provided that the replacement hood exhaust rate does not exceed the exhaust rate of the existing hood or the exhaust rate of the replacement hood does not exceed 400 cfm;
- Replacement of domestic clothes dryers serving, and located within, DWELLING UNITS, provided that no change in fuel type, pipe size, or location or electrical characteristics is required;
- Replacement of domestic stoves and domestic ovens in DWELING UNITS, provided no change in fuel type, pipe size, or location or electrical characteristics is required;
- Replacement of bathroom exhaust fans in DWELLING UNITS; and
- Applying liquid lining material inside ANY existing chimney.

In addition to the above, mechanical inspectors should familiarize themselves with plumbing maintenance projects at N.J.A.C. 5:23-2.7(c)2, which is also covered on Page 3 within this edition of a Construction Code Communicator.

Heating, ventilation and air conditioning maintenance projects that fall between ordinary maintenance and full-blown projects would be described as “minor work” at N.J.A.C. 5:23-2.17A(c). These types of projects include:

- Replacement of ANY existing boiler, warm air furnace, air conditioning unit, and air conditioning condensing unit with new appliances of like capacity.
- New electrical work incidental to the installation of air conditioning, equipment, clothes dryers, and ranges or ovens in ONE- and TWO-FAMILY DWELLINGS; and
- Repair and/or renovation work in a Group B, Group F, Group M, or Group S occupancy.

Source: Code Assistance Unit and Code Development Unit
(609) 984-7609

Emergency Escape and Single-Exit Buildings

Section 1030.1, the “General” section for the emergency escape and rescue openings (EERO) requirements of the International Building Code/2015, has created some confusion. Here it states, “In addition to the means of egress required by this chapter, provisions shall be made for emergency escape and rescue openings in Group R-2 occupancies in accordance with Tables 1006.3.2(1) and 1006.3.2(2) and Group R-3 occupancies.”

All Group R-3 occupancies, and certain Group R-2 occupancies, are permitted to have one means of egress. The above code, which references requirements for EEROs, is applicable only to those R-2 and R-3 occupancies with one means of egress.

For example, a 3-story Group R-2 with no more than 4 dwelling units per story is permitted to have one means of egress as long as common travel distances are maintained to 125 feet (see Table 1006.3.2(1)). If the designer choses to use this option, then the building is required to have EEROs installed in sleeping areas. Note that I do not reference Table 1006.3.2(2); this is because, as per Note C, this table is used for R-2 occupancies consisting of sleeping units, and I specifically state dwelling units in my example.

In all cases, if there are two means of egress provided, then EEROs are not required.

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

Revised as of 4/13/18; original post on 4/6/18 is invalid.

Consumer Fireworks Sale and Storage

Questions have been coming in lately regarding whether consumer fireworks can be offered for sale and the quantity that can be stored inside of buildings before the Group Classification of the building must change. The simple answer is that they can be sold and stored in any amount, in any business, per P.L. 2017, c. 92. This Law took effect June 28, 2017.

Some code officials have asked if the Group Classification of the occupancy would need to change if the maximum allowable quantity of consumer fireworks listed in Table 307.1(1) of the 2015 International Building Code (IBC) was exceeded. The answer is NO. When Senate Bill S3034 was signed last year (P.L. 2017, c. 92) it superseded this requirement. We will be modifying the 2018 NJ IBC to reflect these changes.

Any firework not defined as a dangerous firework is allowed to be stored, displayed, and sold under this Law change.

The following excerpt is taken directly from the definitions in P.L. 2017, c. 92. The full text of this law can be found online at: http://www.njleg.state.nj.us/2016/Bills/PL17/92_.HTM

"Sparkling devices and novelties mean:

a. Wood sticks or wire sparklers of not more than 100 grams of pyrotechnic mixture per item;

b. Hand held or ground based sparkling devices which are non-explosive and non-aerial, which may produce a crackling or whistling effect, and contain 75 grams or less of pyrotechnic composition per tube or a total of 500 grams or less for multiple tubes; and

c. Snakes and glow worms, smoke devices, and trick noisemakers, which include party poppers, snappers, and drop pops, each consisting of 25/100 grains or less of explosive mixture."

As you can see from the above, sparklers with not more than 100 grams of pyrotechnic mixture per item, hand held or ground based sparkling devices non-explosive and non-aerial type that contain 75 grams or less of pyrotechnic composition per tube or a total of 500 grams or less for multiple tubes, and snakes and glow worms, smoke devices, and trick noisemakers each consisting of 25/100 grains or less of explosive mixture are now legal.

The law further allows the following types of devices to be sold, stored, possessed, or used, as provided below.

"(1) A toy pistol, toy cane, toy gun, or other device in which paper or plastic caps containing .25 grain or less of explosive compound per cap are used, providing they are so constructed that the hand cannot come in contact with the cap when in place for use, and toy pistol paper or plastic caps which contain less than .20 grains of explosive mixture per cap;

(2) Sparkling devices and novelties as defined in R.S.21:2-2 if the person is 16 years of age or older. Sparkling devices and novelties, including their sale or use, shall not be subject to further regulation by a municipality pursuant to R.S.40:48-1, except that the storage and sale of items listed in this paragraph shall be consistent with the standards set forth in NFPA 1124 National Fire Protection Association Code for the Manufacture, Transportation, Storage and Retail Sales of Fireworks and Pyrotechnic Articles, 2006 edition; and

(3) Any item or device as otherwise provided in this chapter."

The following is the definition of dangerous fireworks.

21:2-3. "Dangerous fireworks" mean the following:

Toy torpedoes containing more than 5 grains of an explosive composition.

Paper caps containing more than .35 grain of explosive composition.

Firecrackers or salutes exceeding 5 inches in length or 3/4 inch in diameter.

Cannons, canes, pistols or other devices designed for use otherwise than with paper caps.

Any fireworks containing a compound or mixture of yellow or white phosphorous or mercury.

Any fireworks that contain a detonator or blasting cap.

Fireworks compositions that ignite spontaneously or undergo marked decomposition when subjected for 48 consecutive hours to a temperature of 167 degrees Fahrenheit.

Fireworks that can be exploded en masse by a blasting cap placed in one of the units or by impact of a rifle bullet or otherwise.

Fireworks, such as fuses, containing a match tip, or head, or similar igniting point or surface, unless each individual tip, head or igniting point or surface is thoroughly covered and securely protected from accidental contact or friction with any other surface.

Fireworks containing an ammonium salt and a chlorate."

P.L. 2017, c. 92 allows a 16 year old individual to purchase, possess, and use sparkling devices or novelties and prohibits municipalities from establishing more restrictive requirements. It also prohibits the sale of dangerous fireworks, which are fireworks that contain more than 25 grams of explosive compound per cap. The storage and sale must be maintained in accordance with the 2006 edition of NFPA 1124.

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

Revised as of 4/13/18; original post on 4/6/18 is invalid.

Construction Trailers

One of the questions that frequently comes up is whether construction trailers need an Industrialized Building Commission (IBC) label. Construction trailers are not defined in the code, but for the purposes of this article, the term construction trailer is any premanufactured construction on a chassis that is used for the storage of materials or for the use of construction personnel on a construction project. A construction trailer is not a sales trailer, nor is it a trailer that serves a function not connected with the building construction.

It has long been the Department's position that these trailers are part of the construction project and do not require a separate permit. These structures should be regulated under Chapter 33 in the Building Subcode, "Safeguards During Construction" and N.J.A.C. 5:23-2.34, "Protection of Adjoining Properties and Public Rights of Way." Therefore, proper safeguards should be required such as making sure the unit is tied down and making sure the utility connections (if any) to the trailer are proper.

Because the trailer is not subject to a separate building permit, it does not need an IBC label.

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

Cantilever Confusion

For those of you confused by Section R507.5, Deck Joist Spans for Common Lumber, of the International Residential Code/2015, you are not alone. This section contains the requirements for the maximum allowable spans for wood deck joists. When it comes to a cantilever situation, this section states that deck joists are permitted to cantilever no more than ¼ of the actual, adjacent joist span. This means that if one did not go to the maximum span permitted, they can only use the actual span, multiply this by 0.25, and the result would be the cantilever. In other words:

- If the max span is 10', then 2.5' is the cantilever.
- If the span is 10' but the design would permit a larger span, the cantilever is still only permitted 2.5'.

And please don't let "Note F" add to the confusion; it is merely a reminder that the cantilever spans are based on the approximate or rough-cut dimensions, and you may be able to eke out a little more cantilever span if you use the actual dimensions (as we all know, a 2x4 is actually smaller).

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

Landscape Irrigation Systems: Permit and Inspection Update

The changes to Ordinary Maintenance and ordinary repairs will have some impact on permit applications for landscape irrigation systems. Systems that are of the plug in type are now considered electrical ordinary maintenance provided that the system uses an existing receptacle. However, there are some related code issues that still require that a permit be issued.

The first, and more obvious reason that a permit is required is the installation of a backflow preventer. Therefore, a plumbing technical section is required. The second, less obvious reason that a permit is still required for an irrigation system is the rain sensor. By Statute, when an irrigation system is installed, an inspection for the presence of a rain sensor is required under the Uniform Construction Code. Because of this statutory requirement, an item was added to the electrical subcode technical section, to verify that the rain sensor was installed. The changes to the ordinary maintenance and minor work provisions have, in most cases, taken the electrical subcode official out of the game. However, the plumbing subcode official is still in the game.

Therefore, we will be amending the plumbing technical section to include rain sensors as an inspection item and will provide a place for the signature and license number of the landscape irrigation contractor. When a permit application is made for an irrigation system of the plug in type, where there is no electrical work associated with providing a new receptacle, only a plumbing technical section is required. It is permissible to have both the plumbing contractor and irrigation contractor sign and seal the same technical section provided that the description of work clearly indicated which contractor is responsible for which portion of the work.

Until the standard forms are changed, the plumbing tech section should be used. The fee should be listed as other, and the inspection of the rain sensor should be recorded using the blank line at the bottom of the inspection box. Both the licensed plumbing contractor and the licensed irrigation contractor should sign and seal the technical section.

Source: Michael Baier, Code Assistance Unit, (609) 292-7899

Revised as of 4/13/18; original post on 4/6/18 is invalid.

Manual J Software

Let me start off by saying, I am ***NOT*** promoting a product. As I come across usable and user-friendly software, I like to inform people of its existence. Therefore, I am ***merely*** providing a link to usable software regarding Manual J calculations. The software I speak of is Cool Calc, www.coolcalc.com (soon to include Manual S software also). In short, create a user name and password and begin your Manual J calculations. You can even access it from a tablet or smart phone.

Per their website:
"Cool Calc Manual J allows a contractor to remotely perform an ACCA approved manual J load calculation in a matter of minutes by leveraging Google maps, local building code databases, and thousands of unique algorithms.

Cool Calc revolutionizes the Manual J process by completely automating the surface area measurement and building material gathering processes required to perform a load calculation.

Our proprietary software allows the user to trace a home from Google Maps and then uses complex algorithms to determine the surface area and orientation of all walls, ceilings, floors, and windows.

Next, the software accesses public property tax data to determine the age of the house, and then cross-references that data against the building code for that year and region to determine the most likely construction materials used.

From there the software generates a detailed ACCA approved Manual J Report complete with and Adequate Exposure Diversity (AED) chart that can be used to identify when zoning or variable speed equipment is recommended."

Feel free to check it out. Again, the website address is www.coolcalc.com.

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

Update on Emergency Responder Radio Coverage System Requirements

Included in the Spring 2015 edition of the *Construction Code Communicator*, I wrote an article to provide basic information on when Emergency Responder Radio Coverage Systems would be required. Recently, I have been advised that during final inspections, code officials have been failing the final fire protection inspection due to radio coverage systems not being installed. I am also hearing that the certificates of occupancy are not being issued. This should ***not*** be happening at a final inspection. The Code Assistance Unit suggests that a Temporary Certificate of Occupancy (TCO) be issued if all other fire protection systems are compliant and a plan to install an Emergency Responder Radio Coverage System or a plan to modify an existing system to meet required signal strength is submitted with a time table for completion.

Locally, code officials need to know about radio coverage issues inside building around the towns they work in. When code officials are aware that the fire department is having radio issues in existing buildings, they should be asking for design plans during the plan review process of similar type building designs; this is not an issue to bring up at the final inspection. This way provides a mechanism so that the system will be in place, and if there are minor issues at the final inspection, they should be much easier to address/fix. Bringing up this issue on final inspection may require destruction of ceiling and wall finishes to run wire for these systems.

Most of the examples brought to my attention are in basements or buildings of concrete and steel construction. Some areas are not meeting the minimum signal strength required by the International Fire Code (IFC). Please contact the emergency responders and the radio technicians to identify the coverage problem areas within buildings in your municipality. This will give you a better understanding of when you need to ask for these systems. Below is a link to the original article: http://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/ccc_2015_spring.pdf

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Revised as of 4/13/18; original post on 4/6/18 is invalid.

Basis for Occupant Load Calculations

Since I have been getting an increasing amount of phone calls regarding this, I'm hoping an article will help. When looking at Section 1004, Occupant Load of the International Building Code/2015 and applying Table 1004.1.2 (Maximum Floor Area Allowances Per Occupant), remember to check your definitions in Section 202. This table uses two terms that are extremely important in how to calculate:

- FLOOR AREA, GROSS. The floor area within the inside perimeter of the exterior walls of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, ramps, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts.
- FLOOR AREA, NET. The actual occupied area not including unoccupied accessory areas such as corridors, stairways, ramps, toilet rooms, mechanical rooms and closets.

For example, office space (business areas per the table) states 100 gross. This essentially means you are counting everything from the interior side of the exterior walls except for shaft and courts. Another example is a restaurant (assembly without fixed seats; unconcentrated; table and chairs) at 15 net. This permits you to exclude such things as corridors, toilet rooms, etc. Also note that I am not referring to use Group Classifications per Chapter 3; even though it's related, they are not the same thing, and one should apply the actual use of the space per Table 1004.1.2 regardless of the classification in Chapter 3.

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

AC Power Disconnect/Reconnect, Who can do it?

It has come to the attention of the Department that there is some confusion among Electrical Subcode Officials and Inspectors. Some officials are not allowing licensed Fire Alarm Contractors to disconnect and reconnect the AC power to existing fire alarm equipment or burglar alarm systems when they are replacing equipment. When an existing branch circuit was previously installed by an electrical contractor, a licensed Fire/Burglar Alarm Contractor may disconnect and reconnect the AC power. A licensed Electrical Contractor is NOT required to perform this work so long as it involves disconnection and reconnecting the line voltage power without the need to alter, extend, rewire, or modify the branch circuit.

Replacement of the fire alarm panel requires permits for both fire and electrical subcode technical sections since both fire protection subcode (devices/appliances) and electrical subcode (wiring) work are involved. The licensed alarm company simply checks the box in the upper right hand corner "[ ] EXEMPT APPLICANT" on the electrical subcode technical section and includes their Consumer Affairs license number on both technical sections.

The following rule was adopted on April 3, 2017:

N.J.A.C. 13:31A-1.15 PROHIBITED PRACTICES

a) A licensee shall be deemed to have engaged in professional misconduct and shall be subject to the penalties set forth in N.J.S.A. 45:1-21 et seq., for engaging in any of the activities set forth in N.J.S.A. 45:1-21 and any of the following prohibited acts or practices:

6. Installing, servicing or maintaining branch circuit wiring. For purposes of this section, "branch circuit" means the circuit conductors between the final overcurrent device protecting the circuit and the outlet(s).

i. Nothing in this subsection shall be construed to preclude a licensee from connecting to or disconnecting from a branch circuit that was previously installed by an electrical contractor licensed by the Board pursuant to N.J.S.A. 45:5A-1 et seq.

If you have any questions, please feel free to contact me at the number below.

Source: Michael E. Whalen
Code Assistance Unit
(609) 984-7609

Revised as of 4/13/18; original post on 4/6/18 is invalid.

Defining the Building Thermal Envelope

The Code Assistance Unit has been receiving questions related to how a building thermal envelope (BTE) is defined. For starters, let's look at the definitions.

The residential portion of the 2015 International Energy Conservation Code (IECC) and Chapter 11 of the International Residential Code define BTE: The basement walls, exterior walls, floor, roof and any other building elements that enclose conditioned space or provide a boundary between conditioned space and exempt or unconditioned space.

Note that this definition uses the term Conditioned Space, which is defined as:
An area, room or space that is enclosed within the building thermal envelope and that is directly or indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate through openings with conditioned spaces, where they are separated from conditioned spaces by uninsulated walls, floors or ceilings, or where they contain uninsulated ducts, piping or other sources of heating or cooling.

In short, you cannot read the BTE definition without applying the Conditioned Space definition, and it's best to show its application through an example. Say there is a basement space with ducts running under the floor joists of the first floor, and the designer/homeowner does NOT want to insulate the ductwork (maybe for an industrial look, who knows). This would meet the definition of Conditioned Space by indirectly heating the space and the walls of this basement would be required to be insulated (and to the contrary, the floor joists above the basement would NOT be insulated); this would also apply if they chose to directly heat the space or if no insulation was provided in the floor joists above. If the designer/homeowner would rather not insulate the basements walls, then the BTE is to be "cut off" at the floor joists with insulation; ductwork and piping below this insulation would also be insulated.

You will note that I answered these scenarios without using Chapter 4. For those that want a direct code reference, Section R402.2.9, Basement Walls, of the IECC supports the example above.

You may ask: if the above applies to new construction, what about existing homes? Well, that depends on the scope of work. If a project is scoped at a minimum of Renovation, N.J.A.C. 5:23-6.5(e)10 and 12 answer this question. If one choses to finish a basement by furring out the walls with no insulation in the floor joists, the walls are to be insulated to whichever level the designer/homeowner choses based on the thickness established by the studs chosen (the exception at Section 6.5(e)10i permits this). In the case of newly installed or replaced ductwork in an unfinished basement with no insulation in the floor joists and no insulation on the basement walls, there is not a BTE established per current code. This defaults to having the new/replaced ducts insulated (obviously, if the walls were insulated, the new/replaced ducts would be within the BTE and not required to be insulated).

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

Building Permits: Seeing the Leaves in the Forest

Has anyone ever asked for a list of permits at a site? Maybe they want to know how many swimming pools were built. They can request this information under New Jersey's Open Public Records Act (OPRA). Construction officials and technical assistants get these questions because they deal with a rare commodity: building permits. Permits are one of the few sources of information available every month for every municipality. They say a lot about a key sector of the economy, the construction industry, and settlement patterns, where houses, offices, shops, schools, hospitals, warehouses, and other structures are built, refurbished, or torn down.

Here are things to consider when asked about buildings permits.

Not all information is reportable: Some people want the names of permit applicants, contractors, or a detailed description of work. While permits have lots of information, not all of it is reportable. The reporting software building departments use was designed to schedule inspections, calculate fees, and track work; they focus on economic and demographic indicators, not how many sheds, pools, solar panels, decks, and the like are built.

We can help: The New Jersey Department of Community Affairs (DCA) publishes monthly and yearly data for every municipality in the State. These summary indicators include:

- Authorized housing, the number of new dwellings authorized by building permits;
- The dollar amount of construction; and
- The square feet (total floor area) authorized by permits issued for new buildings or additions to existing ones.

(continued on next page)

(Building Permits: Seeing the Leaves in the Forest)

These data are in the New Jersey *Construction Reporter* on the DCA website at http://www.nj.gov/dca/divisions/codes/reporter/. They appear every month, for every municipality, back to 1996.

More detail: Some people want information on individual permits. In 2015, DCA began to publish "big permits," a monthly file listing permits with a dollar amount of work equal to or more than $250,000. This is a running inventory. The December file has big permits for the year. Major data fields are:

- Permit number
- Permit date
- Permit type (new, addition, alteration, demolition)
- Building uses in broad categories (business, storage, mercantile, etc.)
- Block and lot
- Dwelling units gained and lost
- Square feet
- Dollar amount of work

What's NOT available: There is no information about who applied for the permit. Contractor information, street addresses, and phone numbers are not available. While these items are on permits, they are not reportable.

Individual permits show only part of the picture: Not every municipality sends permit-level data; most do. As of 2018, only fifteen municipalities send paper reports that summarize individual permits. Ten years ago, many more did so. Anyone who looks only at individual permits gets an incomplete picture of construction in New Jersey. While this gap has gotten smaller with time, it is still only part of all the work authorized in the State.

Permit records are archived: The permit-level database DCA maintains is large and unwieldy. Depending on economic conditions, New Jersey municipalities issue between 350,000 and 450,000 permits every year; that's a lot of records, even for big, mainframe computers. To efficiently manage them, DCA must archive old permits 18 months after they get certificates of approval or occupancy. This limits direct access to only about 2 million records at any point in time, making the permit-level database a poor choice for historical information.

CDs available: For several years, DCA has captured on CD all the individual permits directly accessible on the mainframe computer. This provides an historical record, but only for the municipalities that sent data this way. The 2017 edition will be available June 2018, after DCA completes its audit and publication processes. The price is $100. To order it, contact Division of Codes and Standards at (609) 292-7898.

Source: John Lago
Division of Codes and Standards
(609) 292-7898

Changes in the Uniform Construction Code (UCC) Amendments Adopted January 16, 2018

In February of 2017, the Department proposed various amendments to the UCC. These proposals were then adopted January 16, 2018 with three changes to note, as follows:

- Corrections were made at N.J.A.C. 5:23-3.4(d), 3.4(d)1, and 5.3(a) to delete Group R-4 as it does not have the same type of occupants same as a one- or two-family dwelling.
- Corrections were made at N.J.A.C. 5:23-3.14(b) to avoid duplicate numbering for the accessibility chapter of the building subcode. The new section number is 1107.5.2.3, and related sections are renumbered accordingly.
- Proposed changes to N.J.A.C. 5:23-2.15(b) and 2.15A(b)4 were **NOT** adopted. These proposed changes (again, **NOT** adopted) incorporated the requirement for HVACR contractors to be licensed into the UCC by requiring proof of licensure from the Division of Consumer Affairs as a condition for obtaining a construction permit for work covered by the scope of the license.

This means that a permit applicant with a Home Improvement Contractor (HIC) registration may still be used to issue a permit for heating, ventilation, air conditioning, and refrigeration (HVACR) work. The permit applicant is not required to hold or present an HVACR license in order to *obtain* a permit for work in residential structures until such time that the HVACR license is adopted into the UCC.

Source: Code Development Unit
(609) 984-7609

Revised as of 4/13/18; original post on 4/6/18 is invalid.

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Division of Codes and Standards
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Calculating Substantial Damage/Improvement

Let me begin with two words: prior approval. Calculating the value for substantial damage/improvement is not the construction code official's responsibility. This is done through the prior approval process, so the code official is looking for something in writing from the local floodplain administrator (LFA) stating whether the property is substantially damaged and/or improved. How the LFA made the determination is not our concern.

However, it is useful for code officials to have some information on this topic in order to assist permit applicants who may come to them with questions. The following is a helpful excerpt from a FEMA Fact Sheet entitled, "NFIP Substantial Damage – What Does It Mean?" released September 14, 2017 (release # FS008):

> *The decision about a structure being "substantially damaged" is made at a local government level, generally by a ~~building official or~~ floodplain manager.*
>
> *Substantial damage applies to a structure in a Special Flood Hazard Area (SFHA) – or 1-percent-annual-chance floodplain – for which the total cost of repairs is 50 percent or more of the structure's market value before the disaster occurred, regardless of the cause of damage. This percentage could vary among jurisdictions, but must not be below NFIP standards.*
>
> *For example, if a structure's market value before the damage was $200,000 and repairs are estimated to cost $120,000, that structure is substantially damaged.* ***Land value is excluded from the determination.***

The land value portion regarding a substantial damage project is highlighted because the code assistance unit has received multiple questions regarding this. This Fact Sheet contains much more information than what is provided above; the full Fact Sheet can be viewed at https://www.fema.gov/news-release/2017/09/14/fact-sheet-nfip-substantial-damage-what-does-it-mean. If permit applicants are questioning the LFA's price for a project, feel free to direct them to this article and advise them to follow up the contacts listed in the Fact Sheet.

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

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The 37th Annual Building Safety Conference of New Jersey

The 37th Annual Building Safety Conference of New Jersey was held on May 2nd through 4th at Bally's Atlantic City. Our continued focus was on preparing the next generation of code enforcement officials and bringing together all of our partners in building safety. The International Code Council (ICC) continued to be a large part of our event this year, providing both continuing education seminars and certification academies for special inspectors and permit technicians, as well as staffing a bookstore for our attendees to pick up codes and reference standards. We were honored to have in attendance ICC Board of Directors President, Jay Elbettar, as well as Directors Cindy Davis, Kris Bridges, and Mike Boso.

The "Crackerbarrel" began our Conference, as it always does. This very popular event gives our guests the opportunity to hear from a variety of presenters in a short format style with a focus on new items of particular interest to the code enforcement community. Topics ranged from the emergency lighting requirements to an opportunity to meet with DCA staff to gain insight into recent code changes and guidance.

The centerpiece of the Building Safety Conference was the opportunity to recognize and honor those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year. This year we also honored the first Construction Official of the Year at the Conference. The Municipal Construction Officials of New Jersey association is now a partner organization with the Building Safety Conference of New Jersey. We were honored to have Director Edward Smith, and retired Directors Cynthia Wilk and William Connolly present for this first award. Each of the Presidents of the respective partner associations made the award presentations at the annual luncheon.

The following awards were presented:

Municipal Construction Officials of New Jersey
Construction Official of the Year- Jeffrey R. Heiss

New Jersey Association of Technical Assistants
Technical Assistant of the Year- Lisa Love

New Jersey Building Officials Association
Building Inspector of the Year- Jay Dilworth

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year- George W. Selah, III

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year- Richard A. Vigliotti

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year- Peter T. Simchera



Municipal Construction Officials of New Jersey
Construction Official of the Year – Jeffrey R. Heiss (with retired Director William Connolly)



New Jersey Association of Technical Assistants
Technical Assistant of the Year – Lisa Love (with Deborah Simone, President, South Jersey Technical Assistants' Association)



New Jersey Building Officials Association
Building Inspector of the Year – Jay Dilworth (with Pat Naticchione, President, NJ Building Officials Association)



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year – George W. Selah, III (with George Selah, Jr., NJ Municipal Electrical Inspectors Association)



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year – Richard A. Vigliotti (with Richard Silvia, President, NJ Fire Prevention and Protection Association and William Johnson, Middlesex County Fire Prevention and Protection Association)



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year – Peter T. Simchera (with Ronald Barbarulo, President, NJ Plumbing Inspectors Association)



The award recipients and Association Presidents with retired Director William Connolly

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

The Building Safety Conference is a unique opportunity to broaden your knowledge of cutting-edge code enforcement and building construction techniques while also providing an opportunity to meet with your peers throughout the State to share ideas and promote camaraderie and collegiality among the code enforcement community. We are proud to say that the Conference continues to grow and the Committee 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 me at john.delesandro@dca.nj.gov.

We hope to see you all next year at Bally's Atlantic City May 1st through 3rd, 2019. Please save the date and "like" us on Facebook for event updates, room locations, and any other important information!

Source: John Delesandro, Supervisor, Education and Licensing Unit
(609) 292-7899

Gazebos, Sheds, and Pergolas: Are Permits Required?

As summertime approaches, homeowners are preparing their backyards for summertime fun. As construction officials, we need to be clear on what types of structures would require permits for proper anchorage. The most common types of residential accessory structures are freestanding gazebos, sheds, and pergolas.

Gazebos are a roofed structure that offer an open view of the surrounding area which are typically used for relaxation or entertainment. Because the occupancy of gazebos is not constant, there is a potential danger of these structures becoming a hazard during higher wind events. For this reason, homeowners need a Uniform Construction Code (UCC) permit from their local construction code official to ensure that gazebos are properly secured to the ground.

Sheds (garden-type utility & similar structures) are simple roofed structures, typically made of wood or metal, used as a storage space, a shelter for animals, etc. In addition to its stored contents weighing it down, the walls enclosing it deflect the wind making this structure more secure. For this reason, homeowners can install sheds without a UCC permit (regardless of floodplain) as long as they meet the following criteria: 200 square feet or less in area; less than 10 feet in mean height; accessory to R-2, R-3, R-4, or R-5; and containing no utilities.

Unlike the above items that have a true roof, pergolas have open joists that act as the "roof," but clearly allow sunlight to come through. Because wind uplift on these structures is minimal, one should apply the permit allowance for sheds above. Arbors, essentially being a smaller version of a pergola, would also be permitted to follow the above guidance for sheds.

Regardless of UCC permit requirements, homeowners should always check with their local zoning official for the allowance of any of these structures to be placed on their property.

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

Electrical Boxes and Air Barriers

Whether the building thermal envelope air leakage is being verified via Section N1102.4.1.1/R402.4.1.1, Installation; Section N1102.4.1.2/R402.4.1.2, Testing; or a combination of the two (see Bulletin 15-4), one portion of Table N1102.4.1.1/R402.4.1.1, Air Barrier and Insulation Installation, contains an item that raises many questions here in the Code Assistance Unit. Section numbers are from the International Residential Code/2015 and Residential portion of the International Energy Conservation Code/2015, respectively.

- The item – The "Electrical/phone box on exterior walls" row with an air barrier criterion of "being installed behind electrical or communication boxes or air-sealed boxes shall be installed," along with its usage in Form 392 (Air Barrier and Insulation Checklist);
- The question – How does one accomplish this?

In short, typical penetrations in exterior wall, demising wall and ceiling drywall assemblies include electric penetrations, such as electrical boxes and recessed fixtures. Focusing on the electrical boxes, they can be made air tight in accordance with the above by caulking or sealing all openings in the box (including around wire penetrations) and by sealing the face of the box to the drywall. Another option is to use specially designed airtight electrical boxes with flexible boot seals at wire penetrations and a gasketed flange at the face to provide air barrier continuity.

For further information regarding this, please review the following

- https://basc.pnnl.gov/printpdf/1006
- https://buildingscience.com/documents/information-sheets/sealing-air-barrier-penetrations

The first source is from Pacific Northwest National Laboratories (the software developers of REScheck and COMcheck), a USDOE subcontractor. The second is from Building Science, which is not necessarily vetted in the official process like the first option, but is a good source.

If you choose to review the links, you will see that both give options to still use typical electrical boxes without having to get specialty air-sealed boxes (yes, pictures are included). And for reference, Bulletin 15-4 and Form 392 can be found at http://www.nj.gov/dca/divisions/codes/publications/pdf_bulletins/b.15_4.pdf.

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

DCA Project Numbers on Permit Applications and Certificates

The next time you receive a permit application or issue a certificate, please consider adding the DCA-assigned project number on the paperwork. In Health Care Plan Review (HCPR) at DCA, additional paperwork is needed even after the certificate has been issued by the local official to complete the plan review process. The applicant for a plan review processed by HCPR is asked to send a copy of the certificate issued by the local authority having jurisdiction (AHJ), which confirms the project has been approved. Then, HCPR issues a letter to the applicant, closing out the project for DCA, and allowing the applicant to contact the NJ Department of Health (DOH) for their inspection. DOH will not perform their inspection of a licensed health care facility without the DCA letter.

Long story short, sometimes DCA has to contact the local AHJ to determine whether a project is still continuing or if it has been completed. If the DCA-assigned project number is added to the permit application and the certificate, a lot of confusion can be avoided. Permit or control numbers used by local officials are not yet available when applicants file for plan review with DCA because plan review is too early in the process. However, since the DCA-assigned project number is always shown on released documents (the DCA release stamp), it's readily available at permit filing time. Additionally, the brief descriptions placed on permit applications do not always perfectly match the project descriptions that the DCA receives for the same projects. That can make it difficult for officials performing both plan review and inspections during the course of a project, where coordinating information is vital.

The overall goal is to ensure that the whole code compliance process is proceeding properly. Simply adding the DCA-assigned project number on permit applications and certificates will help to connect DCA project numbers with the associated permits that have been filed, which will help to eliminate much confusion for both local officials and DCA.

Please contact the author if you have any questions.

Source: John Paluchowski
Health Care Plan Review
(609) 633-8151

The Constructions Official's Responsibility: Hotels and Multiple Dwellings

One responsibility of the Construction Official, regarding newly constructed or rehabilitated hotels and multifamily buildings, is to ensure that these buildings are properly registered with the Bureau of Housing Inspection, Division of Codes and Standards at the Department of Community Affairs. This includes multiple single family dwelling structures as defined in the Hotel and Multiple Dwelling Law (N.J.S.A. 13A-1 et seq.).

N.J.A.C. 5:23-2.24(e) stipulates that the Construction Official shall not issue a Certificate of Occupancy until the owner has provided a copy of the Certificate of Registration issued by the Bureau of Housing Inspection. Also, N.J.A.C. 5:23-2.18(g) authorizes the Construction Official to serve as an agent of the Bureau of Housing Inspection of the Department of Community Affairs for the purpose of inspecting newly constructed and altered hotels and multiple dwellings in order to enforce the provisions of the regulations for the maintenance of hotels and multiple dwellings (N.J.A.C. 5:10-1 et. seq.). See "Hotel and Multiple Dwellings, Building Security, and the UCC," article below for the provisions.

Source: Edwin Tomkiewicz
Chief, Bureau of Housing Inspection
(609) 633-6216

Hotel and Multiple Dwellings, Building Security, and the UCC

There are many items that are building-related but are not necessarily part of the Uniform Construction Code (UCC), N.J.A.C. 5:23. When it comes to building security in hotels and multiple dwellings, Bulletin 79-6 addresses such items.

For those of you who may not know, Bulletin 79-6 was updated March 2014 for code reference purposes only (e.g. lockset reference updated). The Department only reissues a bulletin if it was revised, so if you need a copy, please visit: http://www.nj.gov/dca/divisions/codes/resources/bulletins.html. In review of the bulletin, you will note it references N.J.A.C. 5:23-2.18(g), which states, "The construction official shall serve as an agent of the Bureau of Housing Inspection (BHI) of the Department of Community Affairs for the purpose of inspecting newly constructed and altered hotels and multiple dwellings in order to enforce the provisions of the regulations for the maintenance of hotels and multiple dwellings (N.J.A.C. 5:10). Responsibility for inspection may be delegated to the appropriate sub-code official(s)."

To demonstrate such responsibilities, please see the chart on the following page for the building security requirements enforced by the Bureau of Housing Inspection.

(continued on next page)

(Hotel and Multiple Dwellings, Building Security, and the UCC)

		Primary Entrance Doors Leading into Common Area w/ 2 or More Units	Leading into Enclosed Common Area	Leading Directly to the Exterior
Hotel Room Entry Door	Self-Closing	-	Required	Not Required
	Chain Guard	-	Required[a]	Required[a]
	Viewing Device	-	Required[a]	Required[a]
	Door Latch & Lockset	-	Required[b]	Required[b]
Primary Entrance Multiple Dwellings	Self-Closing	Required	-	-
	Self-Locking	Required[d]	-	-
	Viewing Device	Required	-	-
Multiple Dwellings Unit Entry Doors	Self-Closing		Required	Not Required
	Chain Guard	-	Required	Required
	Viewing Device	-	Required	Required
	Door Latch & Lockset	-	Required[b]	Required[b]
Common Area Basements, Cellars & Storage Areas	Self-Closing	-	Required	Required[c]
	Lockable	-	Required	Required[c]

(a) Only one device required. Either a chain guard or viewer device is acceptable; however, chain door guards shall not be installed as an alternative to viewing devices in dormitories.
(b) Entrance doors to each dwelling unit shall be equipped with a medium duty dead latching lockset (series160, FF-H-106c, minimum, with a minimum 11/16" by 1/2" minimum throw latch bolt with automatic dead-locking plunger) or with a deadbolt separate from the latch set. "Double keyed" deadbolts are not acceptable.
(c) Multiple Dwellings only.
(d) Every building entrance door or other exterior door permitting access to two or more units of dwelling space shall be equipped with heavy duty dead latching locksets (series 161, FF-H-106c, minimum, with a minimum 7/8" by 5/8" with 1/2" minimum throw latch bolt with automatic dead-locking plunger). Outside cylinders of main entrance door locks shall be operated by the tenant's key, which shall not be keyed to also open the tenant's dwelling unit entrance door.

Since buildings regulated by BHI will not receive their first cyclical inspection until five (5) years after the certificate of occupancy is issued, it is important as a local enforcing agency to be looking for items such as above.

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

Ordinary Maintenance/Minor Work, Continued…

The following are specific questions that the Code Assistance Unit has been receiving from code officials and the general public regarding the need for a permit.

Re-Roofing – No permit is required for existing *detached* one- or two-family dwellings for the roof covering materials. This include all buildings such as garages, sheds, pool houses, and the like that are accessory to a detached one- or two-family home (Group R-5). Stripping the roof down to existing sheathing or putting on a second layer of roof covering does NOT require a permit. Townhouses and condos will require roof permits. Replacing sheathing will always require a permit.

Re-Siding – No permit is required for existing one- or two-family dwellings (Groups R-3 and R-5) for siding materials; this includes appurtenances such as garages, sheds, pool houses and the like that are accessory to the dwelling. Siding materials that do not require a permit are wood, vinyl, aluminum, etc. and replacing one for another would also be allowed without permit. However, the installation of any amount of polypropylene siding will require a permit, because it is tested to a different ASTM standard than vinyl. Although, stucco, stone, cultured stone, brick, etc. are exterior wall **coverings** per Section R703 of the 2015 International Residential Code (IRC), they are not specific *siding materials* listed as ordinary maintenance, and permits ARE required for their replacement or installation. Lastly, in the case where one would like to cover over old asbestos-type siding materials with siding materials listed in Section R703/IRC, this would not require a permit.

Interior finishes – No permit is required for replacing less than 25% of interior finishes on one- or two-family dwellings (Groups R-3 and R-5); this includes both walls and ceilings. Other than the additional square footage of the entire home versus the old per room, this is business as usual.

(continued on next page)

(Ordinary Maintenance/Minor Work, Continued…)

Decks – In all occupancies, ***no*** permit is required for the replacement of any part of a deck, porch or stoop that does not provide support to a building or structure. Any part includes the deck support posts or columns, headers or girders, floor joists, decking, railing, stairs, etc. Replacement of any of these parts will NOT require a permit. A total replacement, from the existing foundation or footing on up, will require a full permit. A total replacement, expansion of an existing deck, or the new installation of a deck will require a full permit, not a minor work permit.

Insulation – No permit is required for the installation of insulation in any portion of an existing structure, with the exception of foam plastics. Even if someone would like to install new insulation over old insulation, this would be permitted without permit also. One should look at the insulation in the same way as any other ordinary maintenance item such as doors, windows, flooring, etc.-- No permit, no inspection. The owner/contractor is responsible for complying with the rehabilitation subcode thermal envelope requirements (i.e. fill the void if exposed) in the same manner as any other ordinary maintenance item that has code requirements connected to them.

Source: Code Assistance Unit
(609) 984-7609

Cooperative Sober Living Residence – A New Class of Rooming House

The Department of Community Affairs proposed amendments to the Regulations Governing Rooming and Boarding Houses, N.J.A.C. 5:27, and the Uniform Construction Code (UCC), N.J.A.C. 5:23, to create a "Class F" rooming house license expressly for a Cooperative Sober Living Residence (CSLR). This proposed amendment was adopted on December 20, 2017 and became effective on January 16, 2018. From that date, the Department of Community Affairs (Department), Bureau of Rooming and Boarding House Standards began accepting applications from individuals and entities seeking to obtain a License to Own/Operate a CSLR.

The intent of a CSLR is to provide a home where up to ten (10) individuals – exclusive of the owner, licensed operator and bona fide employees – recovering from drug or alcohol addiction can live together and support each other during their recovery.

DCA is the regulatory agency appointed to enforce the Rooming and Boarding House Act of 1979 (N.J.S.A. 55:13B-1 et seq.) and the corresponding Regulations regarding the licensure and inspection requirements for rooming/boarding houses. The Act statutorily requires that **any** person or entity apply for and obtain a License to Own/Operate a rooming/boarding house issued by the Bureau before owning/operating a rooming/boarding house in the State.

Because a CSLR is a change in the character of use of a single family home, there is no requirement to obtain a new Certificate of Occupancy. The amendment to the Uniform Construction Code (UCC) designate a CSLR as a R-5 Use Group occupancy and specifies that a CSLR must be located in one or two family dwelling and is to be constructed under the International Residential Code. Pursuant to N.J.A.C. 5:23-3.11(k) of the UCC, the Department is the sole enforcing agency for a CSLR. Once a License is issued for the CSLR, the Owner in Fee must submit an application to the appropriate regional Office of Local Code Inspections when undertaking work that would require a UCC permit.

Upon deeming an application complete, the Bureau of Rooming and Boarding House Standards will refer the property to the Office of Regulatory Affairs (ORA). Since the Department is now the sole enforcing agency for a CSLR, the ORA will retrieve the municipal property file from the Construction Office. In addition, the Bureau will provide the Owner in Fee with a Building Technical Section which will be submitted by the Owner in Fee to either the Northern or Southern Office of Local Code Inspections (OLCI). The OLCI will schedule an inspection of the premises with the Owner in Fee to confirm compliance with the Uniform Construction Code (N.J.A.C. 5:23-6.31(q)) which states:

> **Subchapter 6. Rehabilitation Subcode**
> *5:23-6.31 Change in Use*
> ***(q) A change in the character of use of a single-family home to a cooperative sober living residence shall comply with this subchapter except as modified below,***
>
> ***1.Single-family dwelling of Group R-3 or R-5 that are being converted to a cooperative sober living residence shall meet the requirements of this section,***
>
> ***i. There shall not be more than 10 occupants, excluding staff; each occupant, including staff, shall be capable of prompt self-evacuation;***

(continued on next page)

(Cooperative Sober Living Residence – A New Class of Rooming House)

ii. Each home shall have smoke alarms that comply with the Uniform Fire Code (NJAC 5:70-4.19). Fire alarm systems installed in accordance with the One-and Two-Family Dwelling Sub-Code shall also be deemed to comply. Smoke alarms shall be located in each sleeping room, in the area outside separate sleeping rooms, and on each additional story of the dwelling, including basements and habitable attics;

iii. In the vicinity of each sleeping area, each home with a fuel burning appliance or with an attached garage shall have carbon-monoxide alarms that comply with the Uniform Fire Code (NJAC 5:70-4.19) or with NJAC 5:27-14.1; and

iv. Each bedroom shall have an operable egress window that complies with the Uniform Construction Code (NJAC 5:23).

Upon verification that the building complies with the UCC, the OLCI will issue a Certificate of Approval (CA) to the Owner in Fee. After the Bureau receives a copy of the CA from the Owner in Fee, the Bureau will issue a License to Own/Operate to the parties.

The Bureau of Rooming and Boarding House Standards will conduct evaluations at a CSLR to confirm compliance with the habitability and occupancy code standards in the Regulations Governing Rooming and Boarding Houses at least annually, as well as unannounced spot checks, from this point on. The License to Own/Operate must be renewed annually.

Since there is now a path to licensure for "sober living homes," which have been operating under the radar for some time, when you as the Code Official discover a facility claiming to be a sober living home, and not an unlicensed rooming house, you can now refer the operator to DCA.

If you or your staff have any question or concerns, please feel free to contact the Bureau at: NJ Department of Community Affairs, Bureau of Rooming and Boarding House Standards, 101 S. Broad Street, P.O. Box 804, Trenton, New Jersey 08625-0804 or by telephone at (609) 633-6251.

Source: Jay Raywood
Chief, Bureau of Rooming and Boarding House Standards
(609) 633-6251

What is a Common Wall?

As you may know, Section R302.2 of the International Residential Code (IRC)/2015 speaks to common walls separating townhouses by means of two ways:
1. Where a fire sprinkler system is provided, the common wall is to be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119 or UL 263.
2. Where a fire sprinkler system is not provided, the common wall is to be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119 or UL 263.

The question: Is the common wall mentioned above allowed to be constructed with plumbing or mechanical equipment (and associated ducts or vents) in the cavity of the wall?

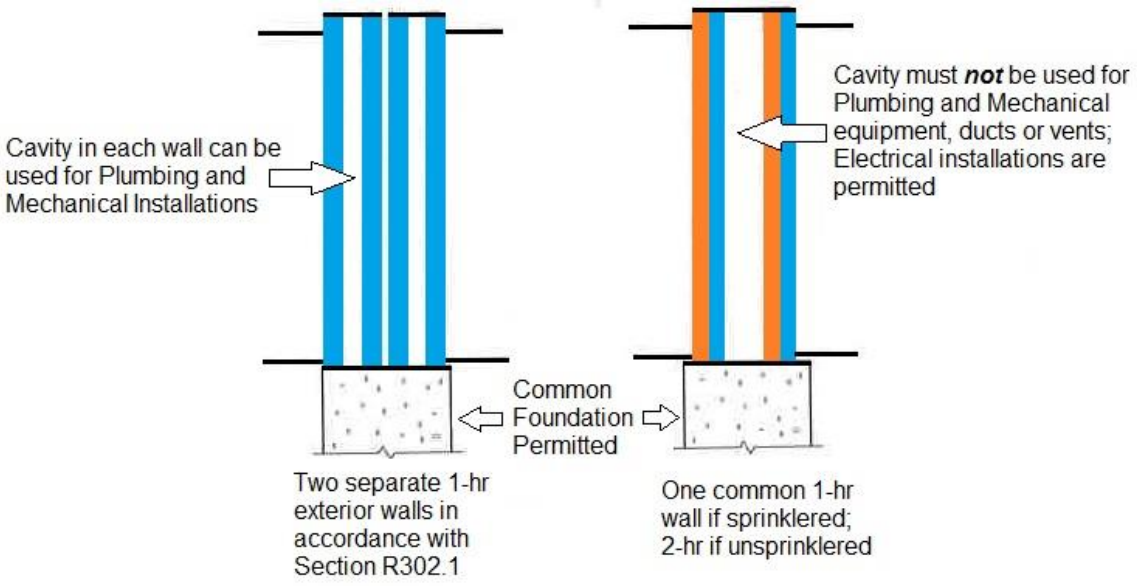
Well, it all depends on the "commonness" of the wall.

If you have consulted the IRC Commentary, you will find a diagram (Figure R302.2) that shows two options; one permitting plumbing/mechanical and one that doesn't. The one that permits the plumbing/mechanical is a common wall that shares a foundation with two exterior walls butted-up against each other and the walls above the common foundation do not share cavities. The one that does not permit the plumbing/mechanical is one that is truly common, because not only is the foundation shared, but the cavities of the wall are also shared.

So where does this leave a core wall? It does not share any cavities, as the core is solid in the middle. Unlike the truly-common wall mentioned above, this type of wall (core) should not have the potential to create an interconnection between the adjacent dwellings. In other words, this type of wall is a hybrid of the above; it may share some components, but it does not share cavities from either side. So, in this case, plumbing/mechanical equipment may be installed in the stud cavity of the walls that abut the core, provided they do not penetrate the core. The penetrations of the outer membranes of the stud walls would be dictated by the limitations on the rated assembly.

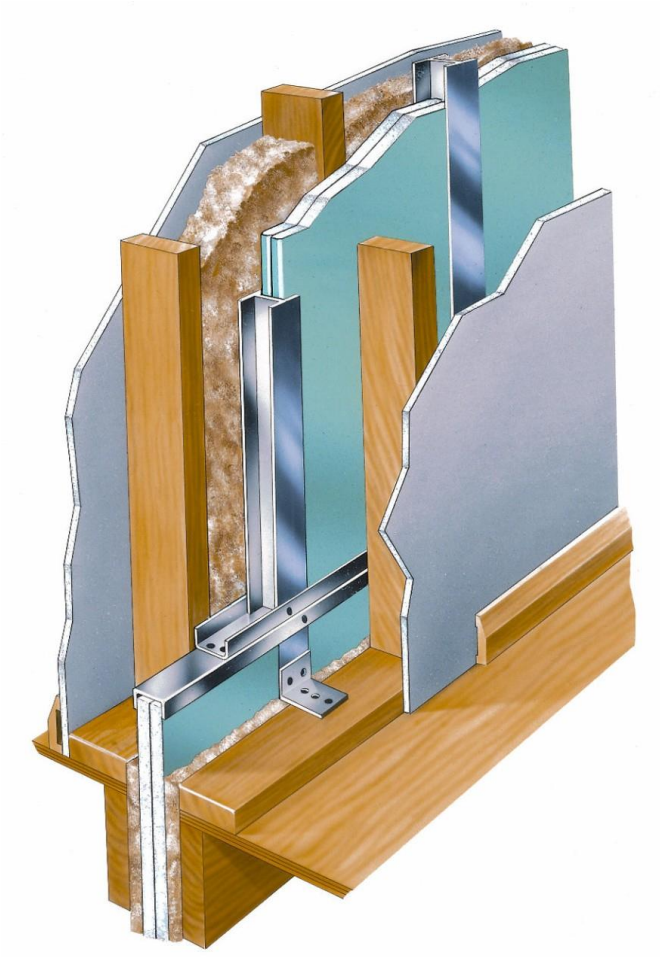
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(What is a Common Wall?)



MS Paint version of Figure R302.2
Dwelling Unit Separation for Townhouses

--



AREA SEPARATION "CORE" WALL
Courtesy of USG Corp

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

State and Federal Laws Regarding Accessibility

Accessibility for people with disabilities is required by several laws. The Americans with Disabilities Act is a Federal civil rights law that prohibits discrimination against people with disabilities in employment; government programs, services, and activities; and public accommodations and commercial facilities. The Americans with Disabilities Act applies to new construction and also requires that building owners improve the accessibility of their existing buildings, but no specific building improvements are required. The Americans with Disabilities Act exempts private clubs and religious entities from compliance. The enforcement of the Americans with Disabilities Act is through a civil law suit filed with the United States Department of Justice (DOJ) alleging discrimination.

The Federal Fair Housing Amendments Act is a Federal civil rights law that prohibits discrimination against people with disabilities in housing. The Federal Fair Housing Amendments Act applies to buildings with four or more dwelling units in a single structure that were constructed after March 1991. The Federal Fair Housing Amendments Act does not apply to buildings that were occupied for the first time prior to March 1991. The Federal Fair Housing Amendments Act is enforced by a complaint to the Department of Housing and Urban Development alleging discrimination. The FFHAA references the ANSI A117.1 standard for accessible design as a safe harbor, so compliance with the ICC/ANSI A117.1 technical standard referenced in Chapter 11 should result in compliance with the FFHAA.

Both these Federal laws include technical standards that provide direction on how to create an accessible building and building site. Failure to comply with the technical standards could result in a determination of discrimination.

New Jersey has a state civil rights law, the Law Against Discrimination. The Law Against Discrimination does not contain technical standards, but instead references the New Jersey Uniform Construction Code (UCC), specifically the Barrier Free Subcode (BFSC) as its standard of compliance. The Law Against Discrimination is enforced by a complaint filed with the New Jersey Division on Civil Rights.

The Barrier Free Subcode (Chapter 11, IBC) of the UCC sets the requirements for accessibility in new construction; the Rehabilitation Subcode (Subchapter 6 of the UCC) sets the requirements for accessibility in construction projects in existing buildings. It is important to note that the UCC does not require a building owner to undertake a construction project, but whenever a project is undertaken, there are specific standards of accessibility that must be met.

The interaction of these laws means that a project that is undertaken with the intention of complying with the Americans with Disabilities Act will be required by the local code enforcement office to meet the standards of the Barrier Free Subcode. The technical standards adopted as part of the Americans with Disabilities Act are much the same as those adopted as part of the BFSC. The Department reviews the Federal standards before proposing an updated model code to ensure that the dimensional requirements of the BFSC meet those of the ADAAG. The Department also reviews guidance issued by the US DOJ to ensure that any changes in the scoping of projects are also included.

It is also important to note that although the Americans with Disabilities Act exempts some buildings (those that are owned and operated as private clubs and those that are owned and operated by religious entities), private clubs and religious entities are subject to the Uniform Construction Code. So, when a private club or a religious entity undertakes a construction project, the Uniform Construction Code, including the Barrier Free Subcode, applies.

An example might be helpful: A building owner could decide to install a ramp to make a building entrance accessible. If the building is a commercial building, the building owner could be doing this to improve accessibility, as is required by the Americans with Disabilities Act. The construction plans for the ramp would be submitted to the local code enforcement office and reviewed for compliance with the Barrier Free Subcode. If an exempt entity decides to install a ramp, that decision would be made not for compliance with the Americans with Disabilities Act, but simply to improve accessibility. The construction documents for that ramp would also be submitted to the local code enforcement agency and reviewed for compliance with the Barrier Free Subcode. The standards for a ramp are the same in both the Americans with Disabilities Act and the Barrier Free Subcode.

There are three general areas of possible conflict between the scoping of the ADAAG and the BFSC or the dimensional requirements of ADAAG and the BFSC. These are: areas where ADAAG is more stringent; areas where the NJ IBC is more stringent; and, finally, areas where there is a difference, such as a dimensional difference that does not impact usability, where both dimensions cannot be met. The actions to take are:

- Where the scoping requirements of the ADAAG or FFHAA are more stringent than the BFSC, allow compliance with the ADAAG or FHAA.
- Where the BFSC is more stringent than ADAAG or FFHAA, enforce the provisions of the BFSC.
- Where there is a difference, such as a dimensional difference, that does not clearly impact usability or safety, allow compliance with the ADAAG and require a variation. The variation will provide a legal record of the deviation from the UCC requirements.

Source: Emily W. Templeton, Code Development Unit, (609) 984-7609

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS
101 SOUTH BROAD STREET
PO BOX 802
TRENTON, NJ 08625-0802

PHILIP D. MURPHY
Governor

LT. GOVERNOR SHEILA Y. OLIVER
Commissioner

MEMORANDUM

TO: Construction Officials
in Sandy-Impacted Counties

FROM: Edward M. Smith
Director
Division of Codes and Standards

DATE: May 15, 2018

SUBJECT: Homes with a Substantial Damage Determination
Required to elevate extended to 2021

On November 27, 2017, I informed you that under the National Flood Insurance Program (NFIP), homes determined by the floodplain administrator to be substantially damaged were allowed six years from the date of the event to comply with the requirement to elevate. On April 11, 2018, that deadline was again extended by FEMA to nine years from the date of the event or October 29, 2021 (see attached).

Those municipalities that have issued Temporary Certificates of Occupancy or Certificates of Occupancy with conditions to allow homeowners to return to their homes in advance of completing the required elevation of the home, please continue to monitor their progress.

As mentioned in the November 27, 2017 memorandum, we will be contacting Sandy-impacted communities prior to the FEMA established completion date for the number and addresses of the homes in your municipality that were categorized as substantially damaged, are currently occupied and have not yet been elevated.

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(Homes with a Substantial Damage Determination Required to Elevate Extended to 2021)

U.S. Department of Homeland Security
Washington, D.C. 20472

FEMA

W-18010

April 11, 2018

MEMORANDUM FOR: Write Your Own (WYO) Company Principal Coordinators and the National Flood Insurance Program (NFIP) Direct Servicing Agent

FROM: David I. Maurstad
Assistant Administrator for Federal Insurance
Federal Insurance and Mitigation Administration

SUBJECT: Three-Year Extension of Deadline for Completing ICC Claims Resulting from Superstorm Sandy

I. Background

The Standard Flood Insurance Policy (SFIP) provides Increased Cost of Compliance (ICC) coverage to pay up to $30,000 towards the cost of floodproofing (non-residential only), relocating, elevating, or demolishing an insured building required to become compliant with state or local floodplain management laws or ordinances following a flood loss.[1] In general, policyholders claiming ICC must complete eligible work within six years from the date of loss.[2]

II. Extension of ICC Deadline

Most policyholders required to bring their properties into compliance with their communities' floodplain management laws following Superstorm Sandy have completed the required work and received appropriate compensation under their SFIP's ICC coverage. However, a small number of policyholders has not completed the required compliance work due to external factors beyond their control, such as participation in the Sandy Claims Review, various recovery grant programs, or delayed substantial damage declarations in some communities.

To provide these policyholders with a reasonable opportunity to complete their ICC claims, I am extending the deadline for completing ICC claims from Superstorm Sandy by an additional three years. Policyholders affected by Superstorm Sandy may now complete their ICC claims no later than the nine-year period following the date of loss.

This extension also includes ICC claim assignments to communities for the non-federal cost-share match in conjunction with a FEMA-funded mitigation grant project related to Sandy.

[1] See *Standard Flood Insurance Policy*, 44 CFR Part 61, Appendix A(1)-(3), Article III.D.
[2] See SFIP Art. III.D.5.e.(2) (requiring completion of ICC work within two years of date of loss); WYO Bulletin W-15038 (Aug. 10, 2015) (extending deadline for completing ICC work to six years from date of loss for all losses occurring on or after January 1, 2011).

(Continued on next page)

(Homes with a Substantial Damage Determination Required to Elevate Extended to 2021)

Three-Year Extension of Deadline for Completing ICC Claims
Resulting from Superstorm Sandy
April 11, 2018
Page 2

III. Applicability

This extension applies only to ICC claims associated with the following FICO numbers related to Superstorm Sandy:

FICO Number	State	Dates of Loss
300	North Carolina	October 27, 2012 - October 31, 2012
301	Virginia	October 27, 2012 - October 31, 2012
302	District of Columbia	October 28, 2012 - October 31, 2012
303	Maryland	October 28, 2012 - November 6, 2012
304	Delaware	October 28, 2012 - November 6, 2012
305	New Jersey	October 28, 2012 - November 6, 2012
306	New York	October 28, 2012 - November 6, 2012
307	Pennsylvania	October 28, 2012 - November 6, 2012
308	Connecticut	October 28, 2012 - November 6, 2012
309	Rhode Island	October 28, 2012 - November 6, 2012
310	Massachusetts	October 28, 2012 - November 6, 2012
311	New Hampshire	October 28, 2012 - November 6, 2012
312	Vermont	October 28, 2012 - November 6, 2012
313	Maine	October 28, 2012 - November 6, 2012

IV. Authority

This waiver is made pursuant to 44 CFR 61.13(d) and SFIP Dwelling Form, Article VII.D; SFIP General Property Form, Article VII.D; SFIP Residential Condominium Building Association Policy Form, Article VIII.D.

Please direct any questions regarding this bulletin to FIMA Claims at FEMA-FIDClaimsMailbox@fema.dhs.gov.

cc: IBHS, FIPNC, Government Technical Representative

Required Routing: Accounting, Claims, Underwriting

OPRA Requests – Access to Building Plans

Have you ever received a request to view a government record from the public? Then you are not alone. The State and municipalities receive many requests to view records.

The OPRA Act (the "Act") is intended to do the following:

- Expand the public's right of access to government records;
- Create an administrative appeals process if access is denied; and
- Define what records are and are not "government records."

While the Act gives the public the right to access government records, not all records produced or maintained by the government are public records.

The Open Public Records Act (N.J.S.A. 47:1A-1) defines a public record and, in the definition, exempts some records. Included among records that are not public are "emergency or security information or procedures for any buildings or facility which, if disclosed, would jeopardize security of the building or facility or persons therein."

Because the statutory reference to "security…procedures" is broad, the Department promulgated a rule that further clarifies this provision. At N.J.A.C. 5:3-2.2, the regulations state that in addition to the limitations set by the Act, "building plans submitted in conjunction with any permit application" are exempt and may not be accessed through a standard OPRA request. This does not mean that the public may never gain access to building plans.

The public may request access to building plans under the common law right of access. The OPRA Act makes this clear, stating "nothing…shall be construed as limiting the common law right of access to a government record" (N.J.S.A. 47:1A-8).

In order to make a common law right of access request, the individual requesting the record must submit in writing the reason for obtaining or viewing the record. If the explanation is reasonable, access to the record is granted.

For local code enforcement officials, when there is a question as to whether the explanation is reasonable, the municipal attorney may be consulted for advice.

Source: Emily W. Templeton
Code Development Unit
(609) 984-7609

License Check - Prior Approval

It has come to the Department's attention that there have been some construction projects, unbeknownst to the construction official, that have allowed persons that are non-licensed/registered to perform work. Please remember that as per NJAC 5:23-2.15(b), the construction official and his/her staff should be checking that licenses and/or registrations are valid through the appropriate regulatory authority. Since the "other DCA," as in the Division of Consumer Affairs, within the Department of Law and Public Safety, contains the majority of licensed/registered professionals, I have included a screenshot of the "Boards & Committees" portion of their website at http://www.njconsumeraffairs.gov/. Along with the Boards/Committees, the Office of Consumer Protection (under the Division Units tab) contains Home Improvement Contractor and Home Elevation Contractors. In all cases, one can see if a license/registration is valid at http://www.njconsumeraffairs.gov/Pages/verification.aspx.

(Continued on next page)

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

(License Check – Prior Approval)



This is only a partial listing, as there are other regulatory authorities that license/register/certify professionals. For example, NJ Department of Environmental Protection has Certified Radon Mitigation Businesses and Licensed Site Remediation Professionals (think underground storage tanks). Please visit https://www13.state.nj.us/DataMiner/ and select Radon or Site Remediation category, as applicable, to ensure that the Radon Business is certified or the Site Remediation Professional is licensed. The general websites for the above are:

- http://www.state.nj.us/dep/rpp/radon/index.htm; and
- http://www.nj.gov/dep/srp/unregulatedtanks/.

Other examples would fall under NJ Department of Labor for licensed crane operators and licensed boiler operators. You can find more information on their licensing at:

- http://nj.gov/labor/lsse/employee/Licensing_of_Crane_Operators.html; and
- http://www.nj.gov/labor/lsse/content/bbpvc.html.

Lastly, landscape irrigation contractors, under this Division, can be verified by visiting https://www.nj.gov/dca/divisions/codes/advisory/Landscp_Irr_Cont.html and selecting "NJ Certified Landscape Irrigation Contractors."

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

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
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Volume 30, Number 3 Fall 2018

20 Years of the Rehabilitation Subcode

The adoption of the Rehabilitation Subcode (N.J.A.C. 5:23-6) was published in the New Jersey Register on January 5, 1998. It was the first comprehensive set of code requirements for existing buildings. It remains a stand-alone subchapter, and it contains all of the technical requirements that apply to a rehabilitation project.

Prior to the adoption of the Rehabilitation Subcode, the process in the Uniform Construction Code for dealing with rehabilitation in New Jersey was the 25/50% rule. The 25 and 50 percentages referred to the cost of the alterations in relation to the value of the building. There were three relevant ratios or thresholds in the 25/50 percent rule: (1) under 25% of the building's value, (2) 25–50% of the building's value, and (3) over 50% of the building's value.

The Rehabilitation Subcode, https://www.nj.gov/dca/divisions/codes/codreg/ucc.html, is a technical part of the Uniform Construction Code and therefore has no provisions governing permits. This does not mean that permits are not required. In fact, the provisions for permits and other administrative procedures are where they have always been: in subchapter 2 of the Uniform Construction Code. Work that required a permit before the adoption of the Rehab Subcode may still require a permit.

(continued on next page)

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(20 Years of the Rehabilitation Subcode)

This subcode is divided into parts that are quite different from the new construction subcodes. These parts must be understood if the Rehabilitation Subcode is to be applied correctly.

- There are three types of projects: Rehabilitation; Change of Use; and Additions.
- There are four Categories of Rehabilitation: repair; renovation; alteration; and reconstruction. They relate to the extent of the work undertaken.
- There are five Sets of Requirements: products and practices; materials and methods; new building elements; basic requirements; and supplemental requirements that apply to the categories of work.

The best way to see how the categories and sets of requirements work together is to review the matrix within UCC Bulletin 98-1, https://www.nj.gov/dca/divisions/codes/resources/bulletins.html.

Along with parts described above, it is important to recognize certain terms and concepts used in the Rehabilitation Subcode which are central to understanding the Rehab Subcode as a whole: Work Area; De minimis; Tenancy; Primary Function Space; Path of Travel; Technically Infeasible; and Hazard Index. The definition of the terms listed can be found at N.J.A.C. 5:23-6.3. Further explanation of the concepts listed can be found at https://www.nj.gov/dca/divisions/codes/offices/rehabbackground.html.

There is plenty more to know about the Rehabilitation Subcode (and I know some people have tried to avoid it, even after 20 years). Please visit https://www.nj.gov/dca/divisions/codes/offices/rehab.html to refresh yourself on why we have this subcode and to best understand its project-based application.

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

Prototype Amendments vs. Prototype Deviations

I recently took a call from a developer who wanted to amend the plans for a prototype such that all of the units being constructed based on this prototype would be based on this revised plan. At first glance at the regulation, my instinct was to say "NO WAY," because deviations from prototypes are prohibited. Had I responded this way, I would have been wrong. There is a difference between an *amendment* or *revision* to a prototype application and a *deviation* from the prototype.

Let's look at *deviations* from the prototype first. A deviation from a prototype is typically a developer proposing to change a prototype design for one particular lot, or for all of the remaining units left to be constructed. For example, if the developer wanted to add a sunroom and fireplace to an existing approved prototype for a particular lot, it would be considered a deviation from the prototype. As per N.J.A.C. 5:23-2.15(f)2iii, plans that contain deviations that were not released as part of the prototype shall not be considered a prototype and shall require the submission of new permit applications and application fees for that project to the appropriate plan review agency. In this case, the proposed deviation from the prototype would cause this application to no longer be a prototype, and a plan review and appropriate fee would be required.

Amendments to the application are different. For example, a developer has an approved prototype, and during the construction process, they have identified a flaw in the design. As a result, the design professional submits a revised set of documents to the prototype application. ALL prospective and existing units to be constructed as part of this prototype will be built using this revised design. In this case, it would be appropriate to consider this an amendment to the prototype. If permits had been issued based on this prototype that would be affected by this amendment, then a permit update should be filed.

If you have any questions regarding this, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry, Assistant Director
Division of Codes and Standards

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

New Home Warranty Program: Online Certificate of Participation Application Now Available

Pursuant to N.J.A.C. 5:25, Regulations Governing New Home Warranties and Builders' Registration, newly constructed homes must possess a limited/new home warranty to cover construction defects over a 10 year period.

The Bureau of Homeowner Protection has established an online fillable PDF form for enrollment in the State administered New Home Warranty Security Fund. The new Certificate of Participation form is available on the Bureau's website at https://www.nj.gov/dca/divisions/codes/offices/nhw_for_builders.html and shall be an acceptable document for a warranty enrollment validation under the State administered New Home Warranty Program.

The new form is not meant to be a replacement for the current carbonless copy paper Certificate of Participation form; it is an alternative for builders. For the foreseeable future, the current carbonless copy paper Certificate of Participation form will continue to be a viable option for warranty enrollment. Either the validated online form or the validated carbonless copy form is acceptable in order to issue the Certificate of Occupancy to the builder.

Source: Keith Jones, Acting Chief
Bureau of Homeowner Protection
(609) 984-7908

New Home Warranty Program: Submission Date Guidelines for Enrollment in the New Home Warranty Security Fund

Pursuant to N.J.A.C. 5:25, Regulations Governing New Home Warranties and Builders' Registration, newly constructed homes must possess a limited/new home warranty to cover construction defects over a 10 year period.

Processing Time Requirement:

Under the State administered New Home Warranty Program, applications for Certificate of Participation (COP) for new homes must allow **20 business days** prior to the commencement date listed on the COP for processing time. The commencement date should be either the settlement date or the first occupancy date, whichever occurs first. Keep in mind that business days do not include weekends or holidays.

Maximum Filing Time For COP:

The COP application should be submitted **no earlier than 10 weeks** prior to commencement date shown on the COP application. The 10 week advance filing date encompasses the 20 business days processing time requirement as referenced above. This 10 week advance submission of the commencement date requirement is necessary and intended to insure the Program's ability to equitably and fairly service all builders enrolled in the state warranty plan with timely processing of COP applications and issuance of final COPs.

Applications that are received more than 10 weeks prior to the commencement date listed on the COP will be returned to the builder unprocessed.

Example: **September 28th commencement date listed on COP:**

- The COP application should be submitted **no later than August 30th** to allow for the 20 business day processing time requirement. **Note:** If the COP application is received after this date, the commencement date will be changed, if needed, to the date of validation in the event the date of validation is later than the original commencement date listed on the COP application.
- The COP application should be submitted **no earlier than July 20th**. **Note:** if the COP application is received prior to this date, it will be returned to the builder unprocessed.

Returned Unprocessed COP Applications:

COP Applications which are returned to the applicant for deficiency corrections do not retain the original date of receipt by the DCA for calculating the 20 business day processing time period. The date of receipt by the New Home Warranty Program of the corrected COP Application will be the start date for a new 20 business day processing period.

Source: Keith Jones, Acting Chief
Bureau of Homeowner Protection
(609) 984-7908

Balconies, Decks, Porches, and Exterior Stairways Fire Resistance Rating?

Recently, the Code Assistance Unit has been receiving inquiries about the construction of balconies and similar projections, specifically regarding the fire resistance rating requirements. When buildings are subject to the building subcode (International Building Code/2015), Section 1406.3, Balconies and Similar Projections, should be reviewed. This section states: *"Balconies and similar projections of combustible construction other than fire-retardant-treated wood shall be fire-resistance rated where required by Table 601 for floor construction or shall be of Type IV construction in accordance with Section 602.4. The aggregate length of the projections shall not exceed 50 percent of the building's perimeter on each floor."*

For starters, when the building is of Type VB construction, there is no issue of fire resistance rating, because referenced Table 601, Fire Resistance Requirements for Building Elements (Hours), states "0-hour" rating. Moving on to Type VA buildings, if the balcony or similar projection is constructed of fire-retardant-treated wood or heavy timber (Type IV), no other protection is necessary; if it is constructed of "regular" wood, Table 601 is to be consulted for "floors," and a one hour fire resistance rating is required. When constructing a dwelling per Section R300.4, Buildings of Other Types of Construction, of the one- and two-family dwellings subcode (International Residential Code/2015) of Type VA construction, balconies, decks, or porches that constructed need to have a fire resistance rating of at least one hour based on Table 601 of the IBC/2015. This table requires a one hour fire resistance rating on **all** structural members except nonbearing interior walls and partitions.

For buildings subject to the IBC, designers must document that they are meeting the requirements of Section 1406.3, Balconies and Similar Projections, when combustible balconies or similar projections are being installed on buildings. Along with the exceptions for fire-retardant-treated wood and heavy timber construction built into the text of this section, four others exceptions follow.

The first exception applies to balconies, porches, decks and exterior stairways not being used as part of a required exit installed on Type I or II buildings of three or fewer stories.

The second exception allows untreated wood guards with a height limitation of 42 inches.

The third exception allows Type V material on Type III, IV and V construction when fire sprinkler protection is extended to these projections.

The fourth exception, which is truly from the charging text, allows for an unlimited aggregate length balcony on each floor when fire sprinklers are installed. In all others cases, the aggregate length of the projections shall not exceed 50 percent of the building's perimeter on each floor.

There may be other treatments or materials that may be used, however, these would require additional documentation. For buildings of Type VA construction which are subject to the IRC, the designer may apply for a variation to apply Section 1406.3, Balconies and Similar Protections, of the IBC/2015.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Roofing and Tiling: Ordinary Maintenance Items

The spirit of the ordinary maintenance rule is that smaller projects that are performed to maintain the building and which do not have substantial life safety impacts can be done without permits.

While in the March 5, 2018 adoption, the replacement of roof covering in other than detached one- and two-family dwellings is unaddressed, replacement of a limited portion of a roof in any use is within the spirit of ordinary maintenance. People can use the previous allowance of up to 25% of roof covering on any use within a 12-month time period as a guideline for the upper limit of a "limited portion."

Currently, N.J.A.C. 5:23-2.7(c)1ii allows for the replacement of interior finishes up to 25% of the entire wall and ceiling area within a one- or two-family dwelling without filing for a permit with the local enforcing agency. When it comes to tiling, this is more like a trim and the "first" finish is behind the tile. This becomes important, not so much for one- and two-family dwellings, but for other dwelling units such as a condominium or apartment. Since there is no ordinary maintenance exception for finishes in these type of dwelling units, it is important to distinguish between the two so unnecessary inspections are not performed. If someone is redoing the tiling in a condo or apartment and manages to maintain the backerboard finish or applying tile over existing drywall, there would be no permit or inspection necessary

Source: Code Assistance Unit
(609) 984-7609

Walk Through Ride or Building?

In May of 1984, New Jersey learned valuable but costly lessons about the special challenges associated with fire safety in "dark rides." Eight teenagers died in a haunted house at Six Flags Great Adventure in Jackson, New Jersey. One of the major findings of the investigation was a "complete failure of the regulatory system."

The regulatory system failure occurred because of questions about jurisdiction. A building permit was not issued because the haunted house was assembled from trailers, and the local building Department regarded it as temporary. A ride permit was not issued because the Department of Labor (which had jurisdiction over amusement rides at the time) did not consider it an amusement ride.

In order to ensure that such a jurisdictional gap would never occur again, walk through attractions such as mirror mazes and haunted houses have been considered "gravity or passenger propelled" amusement rides since that time. Because of a quirk in the definition of an amusement ride, this means that sometimes these structures are regulated as amusement rides, and sometimes they are not.

Under the statutory definition of an amusement ride, passenger or gravity propelled rides are only regulated when they are located with traditional (mechanical) amusement rides or when they include mechanical features. Any haunted house located within an amusement park or that is set up as part of a carnival is regulated as an amusement ride. Additionally, any haunted house that has mechanical features, such as moving floors or revolving drums, etc. is regulated as an amusement ride. A haunted house that has no mechanical features and is not located within an amusement park is not regulated as an amusement ride.

In either case, amusement rides, which are defined as structures under the Uniform Construction Code, require building permits irrespective of whether they are regulated as amusement rides. While we generally strive to avoid that type of duplication of effort, in this case, the duplication was intentional. Because there were questions about who was responsible back in 1984, in the time since then, the regulations have been crafted to make everyone responsible within the limits of their enabling legislation.

If you have questions regarding this, please contact John Terry at (609) 984-7850

Source: Michael Baier
Code Assistance Unit

Smoke Alarm Locations

Where are smoke alarms required to be installed? Section R314.1, General, of the International Residential Code/2015 (IRC/2015) and Section 907.2.11, Single- and Multiple-Station Smoke Alarms, of the International Building Code/2015 (IBC), copied below, along with the specific smoke alarm location regulations seem to be causing some confusion among officials. Because the New Jersey editions of the IRC/2015 and the IBC/2015 have specific requirements for the location of smoke alarms, these locations are what need to be complied with, as opposed to the extra locations in the 2013 edition of NFPA 72 at Section 29.5.1, Required Detection. Some officials are seeing the reference to NFPA 72 in the general code sections as a pointer to go directly to NFPA 72 for the additional smoke alarm locations. Some of the extra alarms being required include divided basements, on ceilings spaced not more than 30 feet apart or, coverage areas greater than 1000 ft^2. If the IRC/2015 and IBC/2015 were silent on the required locations, this section would apply. However, because the locations are specifically mentioned in the codes, the reference standard locations do not apply.

NFPA 72 Sections 29.8, Installation, and 29.8.3.4, Specific Location Requirements, must be used for smoke alarm installation criteria so that alarms operate correctly and don't cause nuisance alarms. Some examples of specific location requirements in these sections include, but are not limited to: within 12 inches of the ceiling, on the wall, different ceiling locations, or within 21 feet of the sleeping areas due to the smoke alarms being interconnected (not within 10 feet), as well as items not covered by the code, such as: within 36 inches of ceiling fan blades or HVAC supply registers.

In the past code cycle, the members of the International Codes Council (ICC) actually added to the locations in both codes to help clear up some confusion code officials were having. These new sections are R314.3 item 4 and R314.3.1, Installation Near Cooking Appliances, from the IRC/2015 and 907.2.11.3, Installation Near Cooking Appliances, and 907.2.11.4, Installation Near Bathrooms, of the IBC/2015, which are provided and underlined below.

(continued on next page)

(Smoke Alarm Locations)

One- and Two-Family Dwelling Subcode (NJ IRC/2015)

R314.1 General. Smoke alarms shall comply with NFPA 72 and Section R314.

R314.3 Location. Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional *story* of the *dwelling*, including *basements* and *habitable attics* and not including crawl spaces and uninhabitable *attics*. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.
4. Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3.

R314.3.1 Installation near cooking appliances. Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section R314.3.

1. Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking *appliance*.
2. Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking *appliance*.
3. Photoelectric smoke alarms shall not be installed less than 6 feet (1828 mm) horizontally from a permanently installed cooking *appliance*.

Building Subcode (NJ IBC/2015)

907.2.11 Single- and multiple-station smoke alarms.

Listed single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with Sections 907.2.11.1 through 907.2.11.6 and NFPA 72.

907.2.11.1 Group R-1. Single- or multiple-station smoke alarms shall be installed in all of the following locations in Group R-1:

1. In sleeping areas.
2. In every room in the path of the *means of egress* from the sleeping area to the door leading from the *sleeping unit*.
3. In each *story* within the *sleeping unit*, including basements. For *sleeping units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.

907.2.11.2 Groups R-2, R-3, R-4 and I-1. Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4 and I-1 regardless of *occupant load* at all of the following locations:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
2. In each room used for sleeping purposes.
3. In each *story* within a *dwelling unit*, including basements but not including crawl spaces and uninhabitable *attics*. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.

907.2.11.3 Installation near cooking appliances.

Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section 907.2.11.1 or 907.2.11.2:

1. Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking appliance.
2. Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking appliance.
3. Photoelectric smoke alarms shall not be installed less than 6 feet (1829 mm) horizontally from a permanently installed cooking appliance.

907.2.11.4 Installation near bathrooms. Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section 907.2.11.1 or 907.2.11.2.

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

Push Button Flush Controls

The question has arisen as to whether push button flush controls, especially when located on top of the tank, meet the requirements of the ICC/ANSI A117.1-2009 for a Type A dwelling unit. The answer is: "Yes but…"

The Commentary for this code addresses the issue very well. Section 1003.11.2.4.6, Flush Controls, requires the control to be hand-operated or automatic, comply with Section 309, Operable Parts, and if hand-operated, to be located on the open side of the water closet. This is where the commentary helps:

> "The requirements for the control to be located on the open side is not intended to prohibit a top-of-tank flush control as long as the control is within reach ranges. In theory, any control located from the centerline of the water closet towards the open side can meet the open side requirement."

So yes, top-of-tank flush controls are permitted as long as they are within reach ranges (found at Section 308, Reach Ranges, as referenced by Section 309); placing the controls at the centerline towards the open side should meet this requirement.

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

When is Monitoring of Fire Service Water Supply Underground Gate Valves Required?

When is a curb box underground valve exempt from monitoring? See subsection 903.4.1, Monitoring, exception #1, of the International Building Code/2015 (IBC/2015), to find this answer. Section 903.4, Sprinkler System Supervision and Alarms, requires that all valves that control water to automatic sprinkler systems, pumps, and tanks be electrically supervised by a listed fire alarm control unit. Subsection 903.4.1, Monitoring, requires that alarm, supervisory, and trouble signals be automatically transmitted to an approved supervising station or a constantly attended location when approved by the fire protection subcode official.

Per Section 903.4.1, Monitoring, exception #1, the only control valves that are exempt from monitoring are the underground key or hub valves in roadway boxes that are provided by the municipality or public utility. When an additional underground valve is required on the property owners side of the municipal or public utility underground valve, that valve must be monitored and a curb box can't be used. Any additional control valves would need to be of the post indicating valve (PIV) type per NFPA 13.

Some designers and code officials looked at NFPA 13 Section 8.16.1.1.2.3 which seems to give a blanket exception for all underground valves. Because there is a specific rule in the New Jersey IBC/2015 that exempts only the municipal or public utility underground valve from being monitored, this provision of NFPA 13 is irrelevant. NFPA does allow for exceptions to the onsite PIV when certain conditions exist. The Annex, below, has some examples.

Provided below copies of the applicable New Jersey IBC/2015 and NFPA code sections dealing with this issue.

NJ IBC/2015

"903.4 Sprinkler system supervision and alarms. Valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures
and waterflow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit." There are 7 exceptions which do not pertain to underground valves.

> **903.4.1 Monitoring.** Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, where approved by the fire protection subcode official, shall sound an audible signal at a constantly attended location.
> **Exceptions:**
> 1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.

(continued on next page)

(When is Monitoring of Fire Service Water Supply Underground Gate Valves Required?)

NFPA 13/2013

3.3.7* Control Valve. A valve controlling flow to water-based fire protection systems.

6.7.1.3 Listed Indicating Valves. Unless the requirements of 6.7.1.3.1, 6.7.1.3.2, or 6.7.1.3.3 are met, all valves controlling connections to water supplies and to supply pipes to sprinklers shall be listed indicating valves.

6.7.1.3.1 A listed underground gate valve equipped with a listed indicator post shall be permitted.
6.7.1.3.2 A listed water control valve assembly with a reliable position indication connected to a remote supervisory station shall be permitted.
6.7.1.3.3 A non-indicating valve, such as an underground gate valve with approved roadway box, complete with T-wrench, and where accepted by the authority having jurisdiction, shall be permitted. **(Note: This provision can't be used due to IBC 903.4.1 Exception 1)**

8.16.1.1* Control Valves.
8.16.1.1.1* General.
8.16.1.1.1.1 Each sprinkler system shall be provided with a listed indicating valve in an accessible location, so located as to control all automatic sources of water supply.
8.16.1.1.1.2 At least one listed indicating valve shall be installed in each source of water supply.
8.16.1.1.1.3 The requirements of 8.16.1.1.1.2 shall not apply to the fire department connection, and there shall be no shutoff valve in the fire department connection.
8.16.1.1.2* Supervision.
8.16.1.1.2.1 Valves on connections to water supplies, sectional control and isolation valves, and other valves in supply pipes to sprinklers and other fixed water-based fire suppression systems shall be supervised by one of the following methods:
(1) Central station, proprietary, or remote station signaling service
(2) Local signaling service that will cause the sounding of an audible signal at a constantly attended point
~~(3) Valves locked in the correct position~~
~~(4) Valves located within fenced enclosures under the control of the owner, sealed in the open position, and inspected weekly as part of an approved procedure~~
8.16.1.1.2.3 The requirements of 8.16.1.1.2.1 shall not apply to underground gate valves with roadway boxes.
(Note: because electronic monitoring is required by NJ IBC Section 903.4.1, only methods 1 and 2 can be used)

The following is the explanatory Annex material for control valves (*Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only.)*

A.8.16.1.1.1 A water supply connection should not extend into a building or through a building wall unless such connection is under the control of an outside listed indicating valve or an inside listed indicating valve located near the outside wall of the building.
All valves controlling water supplies for sprinkler systems or portions thereof, including floor control valves, should be accessible to authorized persons during emergencies.

Permanent ladders, clamped treads on risers, chain-operated hand wheels, or other accepted means should be provided where necessary.

Outside control valves are suggested in the following order of preference:
(1) Listed indicating valves at each connection into the building at least 40 ft (12.2 m) from buildings if space permits
(2) Control valves installed in a cutoff stair tower or valve room accessible from outside
(3) Valves located in risers with indicating posts arranged for outside operation
(4) Key-operated valves in each connection into the building

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

UL Warns of Counterfeit UL Marks on Ground Fault Circuit Interrupters (GFCI)

PUBLIC NOTICE

Michelle Press
Communications Director
UL LLC
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Release No. 18PN-14

UL Warns of Counterfeit UL Marks on Ground Fault Circuit Interrupters (GFCI)
(Release 18PN-14)

NORTHBROOK, Ill., May 31, 2018 — The following is a notification from UL that the ground fault circuit interrupter, identified below, bears a counterfeit UL Mark for the United States and Canada. These GFCIs have not been evaluated by UL to the appropriate Standards for Safety and it is unknown if they comply with any safety requirements.

Although these counterfeit GFCIs are marked with model designation TGMT20 and have the UL label, the GFCIs were not manufactured by Zhejiang Trimone Co. Ltd.

Name of Product:
Ground Fault Circuit Interrupter (GFCI) Model TGMT20

Identification on the Product:
The product is marked with a counterfeit UL Listing Mark and the following:

E229322

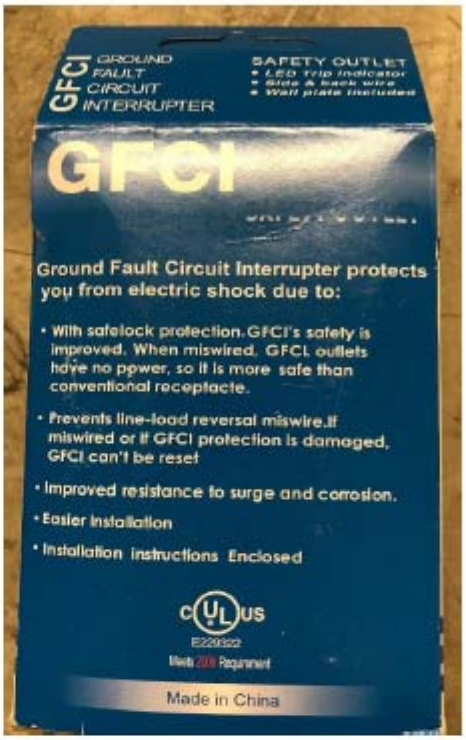
LISTED
GROUND FAULT CIRCUIT
INTERRUPTER
ISSUE NO. XX-YYYYYY (where the X's may be one or two letters and the Y's are numbers)

Packaging:

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(UL Warns of Counterfeit UL Marks on Ground Fault Circuit Interrupters (GFCI))





Product:





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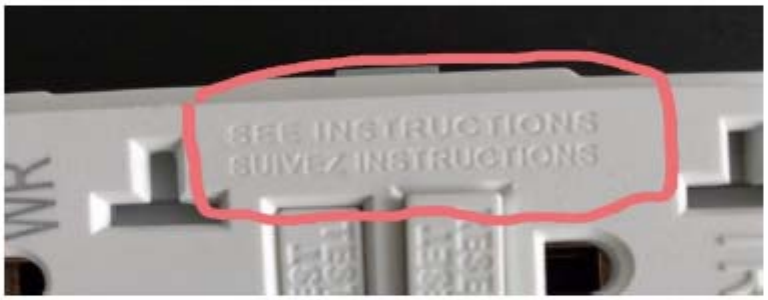
(UL Warns of Counterfeit UL Marks on Ground Fault Circuit Interrupters (GFCI))

Label on product:



Difference between the GFCI authorized to bear the UL Mark and the counterfeit GFCI:

Authorized GFCI – the words "INSTRUCTIONS" appear twice on the front of the GFCI. The last "S" in both words line up.



Counterfeit GFCI – the last "S" in the words, "INSTRUCTIONS", do not line up.



Known to be distributed by: Multiple ecommerce sites.

About UL

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Applying the Habitable Attic Provision in the IRC

The habitable attic provisions of the 2015 International Residential Code (IRC), as adopted at N.J.A.C. 5:23-3.21, can be found at Section R300, Height and Area Limitations. The term habitable attic is defined at Section R202, Definitions. These provisions date back to the adoption of the 2000 I-Codes, in which the IRC was scoped without New Jersey amendments to allow for a three-story home. Back then, no sprinkler was required. In the interim, sprinkler systems have been added. Being as it may, our provisions, a mish-mash of 1995 CABO One- and Two-Family Dwelling Code and 1996 BOCA National Building Code, are still a quality compromise. Section R300, Height and Area Limitations, of the IRC, any NJ edition, states that: Without the addition of sprinkler protection or modification to the construction type, the home is limited to two stories, 4,800 s/f per story and 35 feet in height; a habitable attic is permitted to be included within a two-story home if it meets the definition in Section 202 or the IRC.

The habitable attic provision may not be applied to a three-story home. This is because N.J.A.C. 5:23-3.21(b) scopes the IRC at three stories or less and does not provide for the inclusion of a habitable attic above. In other words, three stories is a HARD stop, and if a "habitable attic" is still desired, it must be treated as a fourth (4th) story, and the International Building Code applies.

To provide a little more background information, the response to a comment upon adoption on November 3, 2003 states, "a third level of living space will be allowed if it meets the habitable attic provisions of the existing one- and two-family dwelling subcode, if the construction is upgraded from VB, or if sprinklers are installed."

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

Relocation Assistance Program

Introduction

The Relocation Assistance Law of 1967 (N.J.S.A. 52:31B-1 et seq.) and the Relocation Assistance Act of 1971 (N.J.S.A. 20:3-1 et seq.) were enacted by the New Jersey State Legislature to ensure the equitable treatment of individuals, families, businesses (including non-profit organizations), and farm operations displaced by government action. Under the rules for relocation assistance, "government action" is defined as programs of building, housing, or health code enforcement, voluntary programs of rehabilitation, or the acquisition of land for a public use. The amended Eviction Law (N.J.S.A. 2A:18-61.1 et seq.) also requires relocation assistance pursuant to its "g" provisions.

The Relocation Assistance Program works as a partnership between the municipality and the State. There are times when a municipality causes a tenant, resident, business owner, or farm operation to leave their dwelling or place of business. This can be because the dwelling is unsafe or because the municipality is undertaking a development or redevelopment project.

When a municipality decides that a tenant, resident, business owner, or farm operation must leave their dwelling or place of business, the municipality must send a plan, called a Workable Relocation Assistance Plan (WRAP), to the Department of Community Affairs for review. The WRAP must show that the municipality knows the number of people, businesses, or farm operations impacted by the relocation plan and then must demonstrate that there are enough comparable replacement housing units or business sites in the area for the people to find new homes, apartments, or business locations. Each municipality should designate the individual who will carry out the obligation established by law. In the cases of displacement and relocation due to planned redevelopment, Departmental approval of WRAPs is required before relocation activities may commence.

In the event that displacement has not been planned and cannot be delayed, as may be the case with displacement due to an unsafe living condition, the municipality may undertake the displacement and then file an Expedited WRAP to inform the Department of the steps that have been taken to provide Relocation Assistance to the displaced tenants.

Once the WRAP has been approved, the municipality informs the tenants, residents, business owners, or farms that they are being moved; the municipality must also tell the tenants, residents, business owners, or farms that the municipality will help them find another place to live or conduct business and that they have the right to appeal the municipality's actions. The obligation to provide assistance belongs to the municipality; the State does not become involved in the identification of replacement housing or business sites. The program is not set up to help individuals who decide that they would like to move.

Eligibility and Assistance for Individuals, Families, and Businesses

Once the eligibility of displacees for relocation assistance has been established, the displacing agency must send written notices to the displacees explaining the eligibility requirements for services and payments. The notice must include the reason for displacement.

(continued on next page)

(Relocation Assistance Program)

The displacing agency is required to offer assistance to the displacees to expedite relocation and to ensure fulfillment of the requirements of the Relocation Assistance Program. The following are some examples of the types of assistance that should be made available to individuals and families who are being displaced:

1. Assistance with finding comparable replacement housing and with obtaining priority for subsidized housing units. Replacement housing must be decent, safe and sanitary, adequate in size, affordable, and convenient to work.
2. Assistance with negotiating with a landlord to expedite the move. The displacing agency is required to provide payments, including emergency payments, in a timely manner to avoid placing additional hardships on displacees.
3. Assistance for prospective homeowners, where applicable, with obtaining mortgage financing, such as help with the preparation and submission of purchase offers, obtaining credit reports, and making arrangements with lending institutions. The Relocation Officer, or a representative of the displacing agency, must be present at the closing with the displacing agency's payment to the claimant. Payment shall not be made unless the displacing agency has received assurances that the transaction has been completed.
4. Referrals to complementary social service agencies. Displacees may be eligible for counseling, financing, training, health, or employment services.
5. Inspection of a replacement housing unit to ensure that it meets the displacee's needs and complies with the applicable housing codes.
6. If a replacement unit is outside a displacing agency's jurisdiction and precludes inspection by local housing officers, the displacing agency should make every effort to have the dwelling inspected by an appropriate official in the municipality to which claimant is relocated.
7. In cases of acquisition or rehabilitation, advisory assistance and services should be offered to individuals occupying properties adjacent to the project area who will be affected by the acquisition or rehabilitation activities.

With regard to businesses that are being relocated, the following types of assistance should be made available:

1. Provide information on assistance or services offered by the Small Business Administration.
2. Provide information to business owners regarding property values, local zoning ordinances and restrictions, growth potentials in various areas, and general economic data.
3. Advise business owners of benefits, which include payments for searching for replacement commercial sites, payment for professional fees, and payments in lieu of moving.
4. Maintain advisory assistance until business has relocated or liquidated its assets.
5. Expedite payments to ensure successful relocation without serious interruption of business activities.

Appeals

Any person, business, non-profit organization, or farm operation that disagrees with a displacing agency's decision as to their eligibility for relocation payments or assistance may appeal the decision to the Department of Community Affairs, which will refer the matter to the Office of Administrative Law (OAL). The OAL will then schedule a hearing. Attorneys are not required for these proceedings.

Appeals may be filed by sending a letter to:

Department of Community Affairs
Division of Codes and Standards
Relocation Assistance Program
Post Office Box 802
Trenton, New Jersey 08625

The displacing agency has fulfilled its obligation to displacees once they have been permanently relocated and all monetary claims have been satisfied. The Department requires that displacing agencies retain records on relocation activities for at least three years after final payment has been made.

If there are questions about Relocation Assistance, please feel free to contact Emily Templeton at (609) 984-7609 or at Emily.Templeton@dca.nj.gov.

Source: Emily Templeton
Code Development Unit
(609) 984-7609

Kitchen Sinks and the ICC/ANSI A117.1-2009 Update

The Fall 2016 edition of the Construction Code Communicator provided information regarding electrical outlets in a Type A kitchen, https://www.nj.gov/dca/divisions/codes/publications/ccc.html. As of August 20, 2018, the old exception, which was codified at N.J.A.C. 5:23-7.2(b)21, is back.

Here, we provided an exception to kitchen/kitchenette requirements at Section 804.4 of the ICC/ANSI A117.1-2003 standard by stating that a conventional height of 36 inches is permitted when there is no cooktop, and that a parallel approach must be provided. This exception partially existed with the adoption of the ANSI/2009 at Section 804.4, and its reference to Section 606, Clear Floor Space, at [lavatories and sinks]. The exception provided in the cross reference allows for a parallel approach provided there is no conventional range, but a height of 34 inches was required.

With the August 20, 2018 adoption, N.J.A.C. 5:23-3.14(b)10ii was modified to include item 13:

> In Section 1003.9, Operable parts (Type A dwelling units), Exception 2 shall be deleted and the following shall be inserted: "Receptacle outlets provided in a kitchen above a length of countertop shall not be required to comply with Section 309."

Many designers got creative by "packing out" the outlets within backsplashes, but with the Type A dwelling unit modification at Section 1003.9, Operable Parts, receptacle outlets above a kitchen countertop (which are required at a sink within a specified distance per the National Electrical Code) are exempt from Section 309, Operable Parts, which in turn references Section 308 for reach ranges.

For those of you who have a New Jersey edition of the International Building Code/2015, you can find updated pages reflecting this and other changes that fit neatly into your book at https://www.nj.gov/dca/divisions/codes/codreg/ (see "Corrected pages" under the Building Subcode heading).

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

Permits are Not Required for Basement Drains

There have been questions regarding whether a permit is required when work is being performed in existing basements to remedy moisture problems. A common technique is to remove the perimeter of the basement slab and install a perforated pipe embedded in crushed stone directed to a sump to facilitate the collection of groundwater. While this is often referred to as a "French Drain," it should be noted that a French Drain has a very specific definition in the Uniform Construction Code per the Radon Hazard Subcode (N.J.A.C. 5:23-10). The UCC defines a French Drain as:

> A "***French drain***" *or "channel drain" is a pathway used to assist with water drainage which is installed in basements. This pathway consists of a gap (typically, one-half to one and one-half inch in width) between the basement block wall and the concrete floor slab around the entire inside perimeter of the basement.*

The work above might be better referred to as an "interior perimeter drain" rather than a "French" drain. Unlike exterior perimeter drains, there are no code requirements for the installation of a perimeter drain that is installed inside of the basement wall This does not mean that it is prohibited as a construction technique in an existing building. However, because there are no code requirements for the installation of a perimeter drain on the inside of the foundation wall, there is no need to issue a building permit. Even if a set of plans could be required, this work does not require any inspections during the progress of work; there would not be much, if anything, to verify at the time of final inspection. Thus, there is no need to require a permit.

The only exception to the above would be for homes that contain an existing passive/active radon system (think: Tier One). A permit is required because the installation of a French/channel drain or any other work (i.e. interior perimeter drains) that disturbs the integrity of the slab could hinder the existing radon system. In these limited cases, permit would be required in accordance with N.J.A.C. 5:23-2.17A, Minor Work, to make sure the system was still sealed properly.

Lastly, the installation of a sump-pump and discharge piping where there previously was none will always require a permit and is required to be installed by either a master plumber or the home owner. Replacement pumps would not require a permit.

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

Excerpt From Construction Reporter: August 2018 Highlights

The following information is from the August 2018 Highlights. The New Jersey Construction Reporter is published on a monthly basis 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

AUGUST 2018 HIGHLIGHTS

- $1.367 billion of construction was authorized by building permits in August.
- Residential work amounted to $771.1 million (52 percent). New houses accounted for 27.9 percent of all activity. 2,268 new houses were authorized in August.
- Office, retail, and other nonresidential work totaled $656.4 million (48 percent).
- New buildings accounted for 43.5 percent of all authorized work.
- The top municipality was Jersey City. Lyndhurst and Little Egg Harbor also were among the top localities for the month. School construction accounted for most of the activity in both communities.

Estimated cost of construction authorized by building permits, August 2018
top municipalities
Source: New Jersey Department of Community Affairs, 10/9/18

rank	municipality	county	Total	Residential	Nonesidential
1	Jersey City	Hudson	$123,824,731	$109,357,733	$14,466,998
2	Lyndhurst Township	Bergen	58,215,067	615,832	57,599,235
3	Little Egg Harbor Township	Ocean	38,604,430	1,160,855	37,443,575
4	Hackensack City	Bergen	27,200,442	1,142,120	26,058,322
5	Newark City	Essex	26,415,229	14,484,383	11,930,846
6	Roxbury Township	Morris	26,374,939	25,412,504	962,435
7	Bayonne City	Hudson	24,040,109	22,711,180	1,328,929
8	West Orange Township	Essex	23,162,983	22,235,879	927,104
9	Toms River Township	Ocean	22,593,850	13,734,460	8,859,390
10	Washington Township	Morris	18,622,105	946,126	17,675,979
11	Montclair Township	Essex	17,222,302	6,123,306	11,098,996
12	Kearny Town	Hudson	17,100,000	0	17,100,000
13	North Brunswick Township	Middlesex	15,661,828	3,639,064	12,022,764
14	Paramus Borough	Bergen	15,074,571	3,607,911	11,466,660
15	Jackson Township	Ocean	14,171,599	2,844,703	11,326,896
16	Fort Lee Borough	Bergen	12,767,869	2,539,358	10,228,511
17	Piscataway Township	Middlesex	12,708,656	1,347,115	11,361,541
18	Wayne Township	Passaic	11,863,041	1,826,849	10,036,192
19	Rutherford Borough	Bergen	11,817,835	1,020,286	10,797,549
20	New Milford Borough	Bergen	11,102,324	900,829	10,201,495
	Top municipalities		517,441,586	235,650,493	292,893,417
	New Jersey		$1,367,450,543	$711,095,400	$656,355,143
	Top as a % of New Jersey		37.8%	33.1%	44.6%

(continued on next page)

(Excerpt from Construction Reporter: August 2018 Highlights)

Dollar Amount of Construction Authorized by Building Permits by Use Group, August 2018
Source: New Jersey Department of Community Affairs, 10/9/18

	August			Year-to-Date		
Use Group	Permits	Estimated Construction Costs	Square Feet	Permits	Estimated Construction Costs	Square Feet
RESIDENTIAL	29,336	$711,095,400	6,526,652	221,837	$5,366,475,592	38,302,990
1 & 2 Family	27,442	463,215,135	2,920,785	207,128	3,546,484,574	22,925,451
Multifamily	1,894	247,880,265	3,605,867	14,709	1,819,991,018	15,377,539
NONRESIDENTIAL	6,368	656,355,143	3,159,077	46,846	4,981,521,080	20,979,205
Hotels, motels, guest houses	136	11,933,726	3,287	1,317	114,577,821	478,279
Assembly	435	56,243,950	219,883	3,696	482,872,112	1,479,834
Business / Office	2,337	195,452,838	572,758	17,315	1,765,770,855	3,016,429
Education	333	156,513,102	313,127	1,812	784,173,224	1,500,974
Hazardous uses	15	6,790,999	9,831	75	26,771,273	56,962
Industrial	62	40,597,258	52,382	472	142,763,745	803,635
Institutional	92	32,921,117	21,896	693	352,234,853	477,035
Retail	313	65,802,077	162,838	2,258	341,843,058	1,281,439
Storage	169	38,297,737	1,649,219	1,289	592,867,694	10,245,590
Signs, fences, miscellaneous	2,476	51,802,339	153,856	17,919	377,646,445	1,639,028
New Jersey	**35,704**	**$1,367,450,543**	**9,685,729**	**268,683**	**$10,347,996,672**	**59,282,195**
August 2017	43,134	1,682,853,404	11,252,067	304,828	11,023,515,466	63,092,570

New Jersey Department of Community Affairs
Division of Codes and Standards
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P.O. Box 802
Trenton, NJ 08625-0802

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Volume 30, Number 4 Winter 2018

The Winter Communicator: A Reminder

The final (Winter) issue of the *Construction Code Communicator* each year now consists of a collection of Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year. This year, we are including articles that were printed in earlier editions of the *Construction Code Communicator* on topics that continue to generate questions. Once this edition of the *Construction Code Communicator* has been posted, these individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from those sections of the Division's website. There is one exception: the materials related to Superstorm Sandy will remain in place. ***Generally, there are no new articles in this issue. However, there are times when a short, new article finds its way into the Winter issue.***

Please note that, although the documents will be removed from the Alerts and Hot Topics, they will still be accessible through the Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

Also, the indices for all issues of the *Construction Code Communicator* 2018 are included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain new articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year with previously printed articles where the topic continues to generate questions.

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at Emily.Templeton@dca.nj.gov.

Source: Emily W. Templeton
Division of Codes and Standards

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Permit Requirements – Ordinary Maintenance and Minor Work Updated

(Posted to the Alerts & Issues page of the Division's website on March 5, 2018)

Pursuant to adoption in the March 5, 2018 New Jersey Register, the requirements for minor work and ordinary maintenance have changed. This document is meant to be an aid to local officials as an easy reference on the types of work that are ordinary maintenance and minor work beginning on March 5, 2018. The Document is divided into two parts. The first part lists the types of work that are ordinary maintenance, the second part lists types of work that are minor work. The items that are new or different have been bolded so that the changes may more easily be identified.

ORDINARY MAINTENANCE

The following items are types of work that may be performed without a permit pursuant to the Uniform Construction Code. The classification of work as ordinary maintenance is not a waiver from code compliance; all work is required to meet code requirements. However, no permit is required and there are no inspections of the work. The list has been arranged by the building type and discipline for ease of use.

For other than dwellings, the following has been designated as ordinary maintenance:

BUILDING

- Finishes – Painting (interior/exterior), wall papering, trim/molding (interior/exterior) and flooring material repair, replacement or installation.
- Siding – For other than polypropylene siding, existing siding may be repaired or replacement with like material not exceeding 25 percent of the total building exterior wall. **The installation of any amount of polypropylene siding requires a permit.**
- Windows/Doors
    - Glass may be replaced in any window or door. The replacement glass must be of a type and quality that complies with the code;
    - Windows and doors (including garage doors) may be replaced in the same rough opening without altering the dimensions or framing; this includes means of egress elements (such as emergency escape openings) when dimensions and framing are not altered, and the height, width or net clear opening is maintained.
    - Screens may be **repaired**, replaced, or installed.
- Cabinets – Non-structural elements such as a cabinet may be repaired, replaced or installed.
- Decks – Any part of a deck, porch or stoop that does not provide structural support for any roof or portion of a building may be repaired or replaced.
- Insulation – The installation of insulation when installed adjacent to or not more than one and a half inches from an interior finish, **except that the installation of foam plastic insulation requires a permit *(Note: ordinary maintenance used to be limited to roll or batt insulation, now any insulation other than foam plastic is allowed as ordinary maintenance).***
- Gutters – Exterior gutters and leaders may be **repaired**, replaced, or installed.
- Spas/Hot Tubs – Storable spas and hot tubs may be installed when provided with a lockable safety cover that complies with ASTM F1346.

PLUMBING

- Fixtures and fixture parts – **Fixtures may be replaced with a similar fixture provided that there no change in the piping arrangement (Note: the replacement of fixtures was previously limited to single family dwellings, now fixtures may be replaced in all uses as ordinary maintenance);** faucets and working parts of faucets may be replaced; existing fixtures may be refinished (relining fixtures is not ordinary maintenance).
- Valves – **Hose bib valves may be replaced provided that an approved atmospheric vacuum breaker is provided *(Note: the replacement of hose bibs used to be limited to single family dwellings, now they may be replaced in all uses as ordinary maintenance)***; valves and work parts of valves may be replaced **including shower or combination bath/shower valves *(Note: the replacement of shower valves used to be limited to single family dwellings now they may be replaced in all uses as ordinary maintenance).***
- Ball Cocks – Ball cocks may be replaced provided that an approved anti-siphon type is used.

(Continued on next page)

(Permit Requirements – Ordinary Maintenance and Minor Work Updated)

- Piping repair/replacement – **Piping may be replaced to repair a leak *(Note: the repair of leaks used to be limited to replacement of piping between any two adjacent joints, that is no longer the case).***
- Appliance Replacements – Domestic clothes washers and domestic dishwashers may be replaced.
- Traps – Traps including traps on culinary sinks may be replaced.
- Drain cleaning – Stoppages may be removed.

ELECTRICAL

- Receptacles, switches and outlets – Receptacles, switches, or lighting **fixtures that do not contain emergency battery packs** may be replaced with a similar item. However, receptacles in locations where ground-fault circuit interrupter protection, damp/wet, or tamper-resistant must comply with Section 406.4(D) of the electrical subcode ***(Note: The limitation on 20 amps or less has been removed)***.
- Equipment – Repairing any installed electrically operated equipment such as doorbells, communication systems, and any motor-operated device (In the event of a fire protection system being interrupted for repairs, the fire official is to be notified in accordance with the building subcode).
- Communications Wiring – Communications wiring may be installed (i.e. Ch. 8 and data circuits between computers/information technology equipment from Article 725 of the electrical subcode) in a Class 3 structure (see N.J.A.C. 5:23-4.3A), provided that the rearrangement does not involve penetration of a fire rated assembly and is not in a hazardous location (see Ch. 5 of the electrical subcode).
- Appliances – Domestic dishwashers may be replaced.

FIRE

- The replacement of sprinkler or smoke detector, **smoke alarm,** or heat detector heads with a like device.
- The repair or replacement of any component of a fire alarm or smoke and heat detection equipment (other than the replacement of a fire alarm control panel) may be repaired or replaced.
- The installation of battery-powered smoke alarms and the installation of battery-powered or plug in carbon monoxide alarms.

MECHANICAL

- Motors, pumps and fans – Motors pumps and fans of the same capacity may be replaced.
- Heating, supply and return piping and radiation elements – The repair or replacement of heating supply and return piping and radiation elements where there is no rearrangement of the piping system.
- Duct work – Duct work may be repaired or replaced.
- Air Conditioning Equipment – Repair of air conditioning equipment and systems along with the repair or replacement of control devices for heating and air conditioning equipment.
- **Liquid applied chimney lining – The application of liquid applied lining material inside an existing chimney.**

<u>Ordinary maintenance: For all dwellings, any work listed above is applicable to residential uses plus the following:</u>

ELECTRICAL/MECHANICAL

- **Kitchen range hoods – Kitchen range hoods may be replaced provided that the replacement hood exhaust rate does not exceed the exhaust rate of the existing hood or the exhaust rate of the replacement hood does not exceed 400 cfm.**
- Replacement of domestic appliances –
    - **Domestic** clothes dryers may be replaced provided that no change in fuel type, pipe size, or location or electrical characteristics is required.
    - **Domestic** stoves and domestic ovens may be replaced provided no change in fuel type, pipe size, or location or electrical characteristics is required.
- Exhaust fans – Bathroom exhaust fans may be replaced.

(Continued on next page)

(Permit Requirements – Ordinary Maintenance and Minor Work Updated)

Ordinary maintenance in one- and two-family dwellings: Any work listed in the two categories above applicable to residential uses plus the following:

BUILDING

- Finishes – **Installation, repair or replacement of interior finishes of less than 25 percent of the wall area of the dwelling.** This shall include plastering and drywall installation. (1) Vinyl wall covering of any amount is ordinary maintenance; (2) Paneling is not ordinary maintenance.
- Non-structural components – The repair or replacement of any non-structural component, such as a partition.
- Roofing – **The repair or replacement (including total replacement) of any amount of existing roof covering on detached one- or two-family dwellings.**
- **Siding – The repair or replacement of any amount of existing siding. Exception: The repair or replacement of polypropylene siding is not ordinary maintenance.**

ELECTRICAL

- **Alarm systems – The installation of a burglar alarm, security system.**
- **Doorbells – Doorbells may be installed, repaired or replaced.**
- **Landscape irrigation systems – Plug-in landscape irrigation unit under 30 volts may be installed.**

MINOR WORK

Like ordinary maintenance, minor work is a category of work that requires less oversight than do construction projects that require plan review, a full permit, and inspections. Minor work requires a construction permit, but allows work to begin before the permit has been issued once notice of the work has been given to the local code enforcement agency. **The notice may be oral, written, or email.**

It is important to note that with the March 5 changes, minor work permits may be issued regardless of whether there are prior approvals. Those prior approvals do not need to be checked by the code official prior to issuing the permit. The applicant is responsible for ensuring that the prior approvals are satisfied. Also, minor work permits no longer operate with a final inspection within 30 calendar days; when requested, up to three business days are allotted to perform the inspection.

For other than dwellings, the following has been designated as minor work:

BUILDING

- Porches – The construction or total replacement of any porch or stoop that does not provide structural support for any roof or portion of a building.
- Repair and/or renovation work – Repair and/or renovation work in a Group B, Group F, Group M, or Group S occupancy performed in accordance with N.J.A.C. 5:23-6, not including work categorized as ordinary maintenance pursuant to N.J.A.C. 5:23-2.7.
- Radon – The installation of a radon mitigation system provided no new electrical work is required. *(Note: this used to be limited to one- and two-family dwellings. Now the installation of radon mitigation systems is minor work in all buildings, provided no new electrical work is required).*
- Elevators – Minor work on elevator devices shall also mean and include work as outlined in N.J.A.C. 5:23-12.8(b) and not involving any structural modification to a building.
- Partitions – Repair or replacement with no reconfiguration of space or of any non-structural component such as a partition in structures other than one- and two-family dwellings (see ordinary maintenance one- and two-family dwellings).

PLUMBING

- Piping – Replacement of existing plumbing piping with new and approved material of like capacity.
- Drinking fountains – The installation of drinking fountains and condensate drains in existing structures.

(Continued on next page)

(Permit Requirements – Ordinary Maintenance and Minor Work Updated)

- Water Heaters – The replacement of existing water heaters with new ones of like capacity.
- HVAC Equipment – The replacement of existing boilers, warm air furnaces, air conditioning units and air conditioning condensing units with new appliances of like capacity.

ELECTRICAL

- Communication wiring – The installation of communications wiring in any Class 1 or Class 2 structure or any Class 3 structure involving the penetration of a fire-resistance rated assembly. Note: Communications wiring is any wiring covered by Chapter 8 of the electrical subcode, "including data circuits between computers/information technology equipment, which may be classified as communications circuits in accordance with Article 725 of the electrical subcode."
- Alarm systems – The installation of a burglar alarm, security system, or doorbell in structures other than one- and two-family dwellings (see ordinary maintenance for one- and two-family dwellings). Exception: controlled, delayed, or sensor released egress doors.

FIRE

- Alarm Systems – Any change of an existing transmission means from a digital alarm communicator transmitter to a fire alarm supervising station. (1) For the purposes of applying this provision, transmission means shall mean the existing phone line(s) that transmit fire alarm signals from a digital alarm communicator transmitter to the supervising station. A certified fire alarm service company, licensed fire alarm company or licensed electrical contractor shall submit Form F-391 signed by the contractor to provide a verification statement in writing to the fire subcode official within 24 hours that all required signals remain operational after the new transmission means is installed.

Minor work in all dwellings: Any of the work above applicable to residential uses plus the following:

PLUMBING

- Fixture installation – The new installation of fixtures in an existing space where the new installation of additional fixtures may be accommodated with no increase in the size of the water distribution system, water service, or house drain ***(Note: this used to be limited to one- and two-family dwellings, now the installation of additional fixtures in existing space is minor work in all dwellings).***

Minor work in one- and two-family dwellings: All the work in the two categories above applicable to residential uses plus the following:

BUILDING

- Renovations or Alterations – Renovation or alteration work provided that no primary structural members are altered in any way, and further provided that the work does not constitute reconstruction.

ELECTRICAL

- Appliances – Minor work shall also mean and include new electrical work incidental to the installation of air conditioning, equipment, clothes dryers, and ranges or oven.
- Outlets – The installation of five or fewer outlets where existing circuits and/or available space for circuits and service are adequate to support the load. **Fishing is considered minor work regardless of the number of fixtures / receptacles. *(Note: the limitation that the devices/outlets are limited to 125 or 250 volt has been eliminated; fishing was previously limited to 5 receptacles).***
- Rewiring – The replacement of existing wiring with new wiring of the same capacity provided that the new wiring shall be of a type approved for the use by the code.

FIRE

- Detection/Suppression – The installation of a fire detection or suppression device.

Finally, though not ordinary maintenance or minor work, the permitting requirements for garden type utility sheds also changed. No permit is required for a garden type utility shed that is 200 square feet or under provided it does not have electric, water, gas, oil or sewer connections.

Source: Code Assistance Unit
(609) 984-7609

Permits are Not Required for Basement Drains – Update

(Originally published Fall 2018)

In response to inquiries regarding the installation of **new sump pumps** in existing single-family detached homes, it should be clarified who can perform the installation of these systems.

N.J.A.C. 5:23-2.15(b)2i. states, *"Plumbing and electrical work shall not be undertaken except by persons licensed to perform such work pursuant to law, except in the case of a single family homeowner on his own dwelling."* In other words, if the new sump pump being installed is connected to the dwelling's existing plumbing drainage system, then only a master plumber or a homeowner working on his or her own single-family dwelling can perform the work. As per NJAC 5:23-2.17A(c)2, the person performing the work must apply for a Uniform Construction Code (UCC) permit as Minor Work (permit jacket and plumbing technical section). This would also apply to new electrical installations (e.g., new outlets) to accommodate for the operation of the new sump pump. This could be filed under the same UCC Permit as Minor Work (electrical technical section) as per NJAC 5:23-2.17A(c)4.

In addition to the above, if the sump pump discharge line is installed in a manner that does not require connection to the building's existing plumbing system, a NJ master plumber is not required. At a minimum, as per NJAC 5:23-2.17A(c)2, this will require a UCC permit as minor work. Regarding electrical work, plugging a sump pump into a preexisting outlet does not require a permit.

Source: Code Assistance Unit
609-984-7609

Solar Panels and Guards – Update

(Originally published Spring 2010)

This is an update to the "Solar Panels and Guards" article that appeared in the Spring 2010 edition of the Construction Code Communicator.

The Department is still receiving the question: "Are guards required for servicing of the solar panels?" The answer is still "No, guards are not required."

Section 304.11, Guards, of the International Mechanical Code (IMC)/2015 states, "Guards shall be provided where various components that require service and roof hatch openings are located within 10 feet of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches above the floor, roof or grade below."

Typically, solar panels installed on a roof require cleaning, but not servicing. Therefore, this section of the IMC/2015 does not require solar panels to have guards.

Please note that the language in the IMC/2018 is identical to that of the IMC/2015 and will be applied the same way once the 2018 national model codes have been adopted.

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

Elevation of Homes with a Substantial Damage Determination

(Memorandum to Construction Officials in Sandy Impacted Counties, May 15, 2018)

On November 27, 2017, I informed you that under the National Flood Insurance Program (NFIP), homes determined by the floodplain administrator to be substantially damaged were allowed six years from the date of the event to comply with the requirement to elevate. On April 11, 2018, that deadline was again extended by FEMA to nine years from the date of the event or October 29, 2021 (see below).

Those municipalities that have issued Temporary Certificates of Occupancy or Certificates of Occupancy with conditions to allow homeowners to return to their homes in advance of completing the required elevation of the home, please continue to monitor their progress.

As mentioned in the November 27, 2017 memorandum, we will be contacting Sandy-impacted communities prior to the FEMA established completion date for the number and addresses of the homes in your municipality that were categorized as substantially damaged, are currently occupied and have not yet been elevated.

Source: Edward M. Smith, Director
Division of Codes and Standards

(Continued on next page)

(Elevation of Homes with a Substantial Damage Determination)

U.S. Department of Homeland Security
Washington, D.C. 20472

FEMA

W-18010

April 11, 2018

MEMORANDUM FOR: Write Your Own (WYO) Company Principal Coordinators and the National Flood Insurance Program (NFIP) Direct Servicing Agent

FROM: David I. Maurstad
Assistant Administrator for Federal Insurance
Federal Insurance and Mitigation Administration

SUBJECT: Three-Year Extension of Deadline for Completing ICC Claims Resulting from Superstorm Sandy

I. Background

The Standard Flood Insurance Policy (SFIP) provides Increased Cost of Compliance (ICC) coverage to pay up to $30,000 towards the cost of floodproofing (non-residential only), relocating, elevating, or demolishing an insured building required to become compliant with state or local floodplain management laws or ordinances following a flood loss.[1] In general, policyholders claiming ICC must complete eligible work within six years from the date of loss.[2]

II. Extension of ICC Deadline

Most policyholders required to bring their properties into compliance with their communities' floodplain management laws following Superstorm Sandy have completed the required work and received appropriate compensation under their SFIP's ICC coverage. However, a small number of policyholders has not completed the required compliance work due to external factors beyond their control, such as participation in the Sandy Claims Review, various recovery grant programs, or delayed substantial damage declarations in some communities.

To provide these policyholders with a reasonable opportunity to complete their ICC claims, I am extending the deadline for completing ICC claims from Superstorm Sandy by an additional three years. Policyholders affected by Superstorm Sandy may now complete their ICC claims no later than the nine-year period following the date of loss.

This extension also includes ICC claim assignments to communities for the non-federal cost-share match in conjunction with a FEMA-funded mitigation grant project related to Sandy.

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[1] See *Standard Flood Insurance Policy*, 44 CFR Part 61, Appendix A(1)-(3), Article III.D.
[2] See SFIP Art. III.D.5.e.(2) (requiring completion of ICC work within two years of date of loss); WYO Bulletin W-15038 (Aug. 10, 2015) (extending deadline for completing ICC work to six years from date of loss for all losses occurring on or after January 1, 2011).

(Continued on next page)

(Elevation of Homes with a Substantial Damage Determination)

Three-Year Extension of Deadline for Completing ICC Claims
Resulting from Superstorm Sandy
April 11, 2018
Page 2

III. Applicability

This extension applies only to ICC claims associated with the following FICO numbers related to Superstorm Sandy:

FICO Number	State	Dates of Loss
300	North Carolina	October 27, 2012 - October 31, 2012
301	Virginia	October 27, 2012 - October 31, 2012
302	District of Columbia	October 28, 2012 - October 31, 2012
303	Maryland	October 28, 2012 - November 6, 2012
304	Delaware	October 28, 2012 - November 6, 2012
305	New Jersey	October 28, 2012 - November 6, 2012
306	New York	October 28, 2012 - November 6, 2012
307	Pennsylvania	October 28, 2012 - November 6, 2012
308	Connecticut	October 28, 2012 - November 6, 2012
309	Rhode Island	October 28, 2012 - November 6, 2012
310	Massachusetts	October 28, 2012 - November 6, 2012
311	New Hampshire	October 28, 2012 - November 6, 2012
312	Vermont	October 28, 2012 - November 6, 2012
313	Maine	October 28, 2012 - November 6, 2012

IV. Authority

This waiver is made pursuant to 44 CFR 61.13(d) and SFIP Dwelling Form, Article VII.D; SFIP General Property Form, Article VII.D; SFIP Residential Condominium Building Association Policy Form, Article VIII.D.

Please direct any questions regarding this bulletin to FIMA Claims at FEMA-FIDClaimsMailbox@fema.dhs.gov.

cc: IBHS, FIPNC, Government Technical Representative

Required Routing: Accounting, Claims, Underwriting

2018 Proposals/Adoptions

The following is a list of the 2018 proposals/adoptions. This list, with previous years included, can be found at http://www.nj.gov/dca/divisions/codes/codreg/ by scrolling to "Rule Proposals and Adoptions."

Posted in NJ Register	Subject	Submit Comments by:	Adoption Date
Dec 17, 2018	Uniform Construction Code - Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) Contractors Proposed Amendments: N.J.A.C. 5:23-2.15 and 2.15A	Feb 15, 2019	
Nov 19, 2018	Notice of Administrative Correction Rehabilitation Subcocde, N.J.A.C. 5:23-6.31	N/A	Nov 19, 2018
Aug 06, 2018	Notice of Administrative Correction Liquefied Petroleum Gas-Public Comments, N.J.A.C. 5:18-1.6	N/A	Aug 06, 2018
Aug 06, 2018	Notice of Administrative Correction Uniform Construction Code-State Enforcing Agencies, N.J.A.C. 5:23-4.9	N/A	Aug 06, 2018
Aug 06, 2018	Notice of Readoption - Regulations Governing New Home Warranties and Builders' Registration Readoption: N.J.A.C. 5:25	N/A	Aug 06, 2018
May 07, 2018	Notice of Readoption - Planned Real Estate Development Full Disclosure Act Regulations Readoption: N.J.A.C. 5:26	N/A	May 07, 2018
Jan 02, 2018	Notice of Readoption - Landlord Tenant Relations Readoption: N.J.A.C. 5:29	N/A	Jan 02, 2018
Aug 21, 2017	Maintenance of Hotels and Multiple Dwellings - Human Trafficking Proposed Amendments: N.J.A.C. 5:10-1.12 and 28.1 Proposed New Rule: N.J.A.C. 5:10-29	Oct 20, 2017	Jan 16, 2018 NSC
Aug 07, 2017	Carnival-Amusement Rides Proposed Amendments: N.J.A.C. 5:14A-1.2, 1.3, 2.4, 2.5, 2.6, 2.7, 2.10, 2.11, 2.14, 2.15, 4.13, 5.5, 7.1, 7.7, 7.8, 9.11, 10.7, 10.8, 13.3, 13.8, 13.9, 14.5	Oct 06, 2017	Jan 16, 2018 NSC
Aug 07, 2017	Liquefied Petroleum Gas Proposed Amendment: N.J.A.C. 5:18-1.6	Oct 06, 2017	Jan 16, 2018 NSC
Aug 07, 2017	Uniform Construction Code Proposed Amendments: N.J.A.C. 5:23-2.15, 2.20, 3.2, 3.4, 3.14, 4.4, 4.5, 4.12, 4.13, 4.14, 4.18, 4D, 6.2, and 7.1	Oct 06, 2017	Aug 20, 2018 NSC
Aug 07, 2017	Uniform Construction Code - Minor Work & Ordinary Maintenance Proposed Amendments: N.J.A.C. 5:23-1.4, 2.7, 2.14, and 2.17A ***(Notice of Public Hearing November 29, 2017 for above Proposed Amendments)***	Oct 06, 2017	Mar 05, 2018 WC
June 05, 2017	Uniform Construction Code / Rooming and Boarding Houses - Sober Living Res Proposed Amendments: N.J.A.C. 5:23-3.11, 3.14, 6.31; and 5:27-1.4, 1.5, 1.6, 1.9, 2.1, 3.2 through 3.6, 3.8, 3.9, 3.12, 4.1 through 4.9, 6.1, 6.2, 6.3, 7.1 through 7.4, 8.1 through 8.4, 9.1, 10.1, 11.1, 12.1, 13.1, and 14.1	Aug 04, 2017	Jan 16, 2018 NSC
Feb 21, 2017	Uniform Construction Code Proposed Amendments: N.J.A.C. 5:23-2.2, 2.6, 2.7, 2.14, 2.15, 2.15A, 2.20, 2.23, 2.35, 2.37, 3.2, 3.4, 3.8, 3.14, 3.15, 3.22, 4.26, 5.3 and 12.8	Apr 22, 2017	Jan 16, 2018 NSC

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

Special Inspections and EIFS

New Article, Winter 2018

If you haven't noticed, Section 1408 of the International Building Code/2015 (IBC/2015), regarding Exterior Insulation And Finish Systems (EIFS) is not very large. This is because EIFS installations follow the manufacturer's installation instructions. That being said, it is important that you do not overlook the remaining requirements in Section 1408.

One question that arises is for inspections. In all cases, the local construction office performs its inspections per N.J.A.C. 5:23-2.18 as normal. In the case of a Class 1 building (see NJAC 5:23-4.3A(d)), there is an additional Special Inspection per Section 1705.16, Exterior Insulation and Finish Systems (EIFS), of the IBC/2015.

I make note of the above as, at first glance, Section 1408.6, Special Inspections, of the IBC/2015 appears to require a special inspection for EIFS installations. Make sure you take a second glance to notice that this section further clarifies that the special inspection applies to conditions listed at Section 1704.2, Special Inspections and Tests, of the IBC/2015. When you put these two sections together, it becomes clear that the special inspection for EIFS applies only to Class 1 buildings.

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

Change of Use in Farm Buildings

(Letter to Code Officials – May 11, 2018)

The Division of Fire Safety will be contacting local fire officials and advising them of the need to inspect farms for compliance with the Uniform Fire Code. The Division is taking this action because they are concerned that in many cases farm buildings that were intended for other purposes, usually storage, are being used to house farm labor. If the building was built after 1977 and has a certificate of occupancy as an "S" use group, this constitutes a change in use group under the Uniform Construction Code. In cases where there is a change in use group under the Uniform Construction Code, the Fire Official will refer the case in writing to the Construction Official for appropriate follow up.

A notice of violation must be issued where there has been an illegal change of use group. Because this action will likely be occurring during the growing season, the Department is recommending that Construction Officials obtain compliance in stages. The first stage would be to require essential safeguards and limits on occupancy that would allow the buildings to continue to be occupied until after the growing season. The second stage would be compliance with the change of use provisions of the rehabilitation subcode, which would have to be completed before the beginning of the next growing season, or for farms where the labor resides year-round, such reasonable period of time that will allow them to comply. As an alternative, the farmer can elect to discontinue the residential use of the structure.

For first stage compliance, the Department recommends the following features and limitations be required:

- Housing must only occupy the ground level.
- Occupant load limit of 50 people. The occupant load can be increased to not more than 100 people where egress doors are spaced not more than 75 feet around the perimeter of the building.
- Maximum travel distance of 75 feet.
- Hard wired smoke alarms (installed in accordance with the manufacturer installation instructions).
- No cooking operations within the housing building unless they are protected with an approved type 1 hood.
- Not less than two means of egress (remote from each other).
- A fire extinguisher (2-A:20-B:C) located within 50 feet of any point within the building.
- Bathroom facilities (temporary or permanent) within 200 feet.
- Hard wired CO alarm installed when a fuel burning appliance is within the building or there are garage facilities attached to the building.

It should be understood that the above conditions are general guidance and do not preclude the local enforcing agency having jurisdiction from making other determinations based on specific conditions. In order for the building to continue to be occupied as housing, a certificate of occupancy will have to be issued for the residential use group (R-2). The Department recommends that the CO be issued for temporary construction with an expiration of 180 days from the date of issuance. At the conclusion of the 180 days the farmer will have to remove the building or make the building compliant with the intended use group. Any alterations to meet first stage compliance, requires the issuance of Uniform Construction Code permits.

For second stage compliance, assuming the farmer will not elect to remove the building, the requirements of N.J.A.C. 5:23 – 6.31 should be applied, if the intended use is to continue as R-2. It may be necessary to issue variations for some requirements, where hardships exist such as pinelands restrictions, etc.

If you have questions, please contact the Code Assistance Unit at (609) 292-7898.

Source: Edward M. Smith, Director, Division of Codes and Standards

Summary of Rule Changes in 2018

Amendments not listed update and insert cross references and/or section titles.

MARCH 5, 2018 TRANSMITTAL

December 18, 2017, *New Jersey Register*

- **N.J.A.C. 5:23-2.34** – New rules address safety concerns related to the usage of crane equipment.

January 16, 2018, *New Jersey Register*

- **N.J.A.C. 5:23-2.2** – The amendments state that equipment, process, or operations that involve dust explosion hazards should not be considered manufacturing, production, or process equipment, and are therefore regulated by the UCC.
- **N.J.A.C. 5:23-2.6 and 2.23** – These sections are amended for consistency to incorporate language which addresses the need for a new certificate of occupancy to change back to a previous occupancy in both sections.
- **N.J.A.C. 5:23-2.15(a)6 and 2.20(b)** – The amendments clarify the requirement for a special inspection for smoke control systems.
- **N.J.A.C. 5:23-2.15(b)3** – The amendments require that contractors list their certification number when applying for a permit that involves liquefied petroleum gas (LPG) service work.
- **N.J.A.C. 5:23-2.37** – The amendments create an exception to the requirement for documentation from the utility for a disconnect prior to elevation.
- **N.J.A.C. 5:23-3.4** – The inspection responsibility for backflow preventers on dedicated fire service supply lines was designated to the fire inspector/subcode official. The list of work to be inspected by the mechanical inspector was updated to match the work to be inspected by the plumbing subcode; this is also updated at **N.J.A.C. 5:23-5.3(a)1**.
- **N.J.A.C. 5:23-3.11, 3.14, and 6.31** – Amendments provide a definition for Cooperative Sober Living Residences (CSLRs), establish that the Department is the sole enforcing agency for CSLRs, and address the issue of a change in the character of use of a single-family dwelling of group R-3 or R-5 to a CSLR.

March 5, 2018, *New Jersey Register*

- **N.J.A.C. 5:23-1.4** – "Prior approvals" are removed as a restriction from considering a project as minor work.
- **N.J.A.C. 5:23-2.7(c)1** – Ordinary building maintenance has been expanded in various ways including interior and exterior finishes; roofing; flooring; insulation; screens; storable spas or hot tubs; and gutters and leaders.
- **N.J.A.C. 5:23-2.7(c)2** – Ordinary plumbing maintenance has been expanded to account for the replacement of hose bib valves in all structures; the repair of leaks involving pipes; the replacement of valves; the replacement of traps related to culinary sinks; and the replacement of domestic dishwashers.
- **N.J.A.C. 5:23-2.7(c)3** – Ordinary electrical maintenance has been expanded to account for the replacement of receptacles, switches, or lighting fixtures; the replacement of kitchen range hoods; the installation of burglar alarms, security systems, and door bells; and plug in irrigation landscape units.
- **N.J.A.C. 5:23-2.7(c)5v** – Ordinary heating, ventilation, and air conditioning maintenance has been expanded to include the replacement of domestic clothes dryers, stoves, and ovens in dwelling units; and the application of liquid applied lining material inside an existing chimney.
- **N.J.A.C. 5:23-2.14** – The size of garden-type utility sheds and similar structures for which a construction permit is not required is increased from 100 to 200 square feet.
- **N.J.A.C. 5:23-2.17A(b)1 and 2** – The amendments update how to provide notice to the local enforcing agency that a minor work project has begun to reflect more recent technology.
- **N.J.A.C. 5:23-2.17A(c)3** – The amendments allow for the replacement of boilers within the jurisdiction of the UCC; limit the replacement of existing wiring; classify all fishing as minor work; allow for the installation of radon mitigation systems in all uses as long as there is no new electrical work; and add doorbells to the list of items that may be installed as minor work in structures other than one- and two-family dwellings.
- **N.J.A.C. 5:23-2.17A (d)1** – Reflecting the concern for safety inherent in the inspection requirements, the inspection timeframe would be changed from within 30 days to within three business days after completion of the work.

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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.

(Summary of Rule Changes in 2018)

AUGUST 20, 2018 TRANSMITTAL

August 6, 2018, *New Jersey Register*

- **N.J.A.C. 5:23-4.9** – An administrative correction revised a typographical error.

August 20, 2018, *New Jersey Register*

- **N.J.A.C. 5:23-2.20(d)** – The amendments clarify the intention of the code with respect to the ability of a contractor to submit a Chimney Verification form.
- **N.J.A.C. 5:23-3.2(d)12vi and 14** – The amendments remove the requirement for commercial farm buildings to have lightening protection. The amendments further provide two exceptions to commercial farm buildings with regard to the requirement to have plumbing fixtures.
- **N.J.A.C. 5:23-3.4** – The amendments establish plan review and inspection responsibilities for the referenced standards of the IBC, International Residential Code (IRC), and International Swimming Pool and Spa Code (ISPSC).
- **N.J.A.C. 5:23-3.14(b)10ii, vi, xxxvi, and xlviii** – The accessibility requirements of the International Building Code/2015 (IBC) were corrected to retain provisions that existed in the previously adopted Barrier Free Subcode. The amendments also ensure that a limited use/limited application elevator (LU/LA) could be used to provide a vertical accessible route in a small building as well as a large one.
- **N.J.A.C. 5:23-4.5(b)** – The amendments list a new standard application form for annual permits.
- **N.J.A.C. 5:23-4.12(a), 4.13(a) and (b), and 4.14(b)** – The amendments allow third-party agencies to perform only inspections. Previously, the code limited private agencies to serving as the subcode officials exclusively, meaning they had to perform plan review and inspections. The conflict of interest standards applicable to employees of third-party agencies are also relaxed.

NOVEMBER 19, 2018 TRANSMITTAL

November 19, 2018, *New Jersey Register*

- **N.J.A.C. 5:23-6.31** – An administrative correction replaced a reference to the mechanical subcode with a reference to Section 915 of the building subcode or Section 315 of the one- and two-family dwelling subcode, as applicable.

Source: Code Assistance Unit
(609) 984-7609

Garden-Type Utility Sheds and Similar Structures – Clarification – Update

(Reprint with updated references -- Volume 25 Number 4 Winter 2013)

On April 20, 2009, the Department repealed N.J.A.C. 5:23-9.9, Foundation systems for garden type utility sheds and similar structures. The provisions of this section were moved within the applicable chapters of the building and the one- and two-family dwelling subcodes. Therefore, the exceptions in Sections 1809.4, Depth and Width of Footings, and 1809.5, Frost Protection, of the International Building Code/2015 (IBC/2015) and Section R403.1.4, Minimum Depth, of the International Residential Code/2015 (IRC/2015) have been modified to reflect old N.J.A.C. 5:23-9.9. Both the IBC/2015 and IRC/2015 allow free standing storage-type buildings to be built without a foundation to frost-depth as long as the building meets the following three conditions:

1) The building presents a low hazard to human life in the event of failure; these include, but are not limited to, agricultural buildings, temporary buildings, and minor storage facilities;
2) The building an area of 600 square feet or less for light framed construction (LFC), or 400 square feet or less for other than light-framed construction (OTLFC); and
3) The building has an eave height of 10 feet or less. However, unlike old N.J.A.C. 5:23-9.9, footings were required in all cases to be at least 12 inches in depth.

(Note: These sections remain the same in the 2018 editions.)

A brief summary follows (all 10 feet or less in height):

- 100 ft^2 or less – footings of 12 inches deep not required provided the structures do not contain utility connections and are of sufficient weight to remain in place or be anchored to the ground (like old N.J.A.C. 5:23-9.9(a));

(Continued on next page)

(Garden-Type Utility Sheds and Similar Structurs – Clarification)

- More than 100 ft^2 up to 200 ft^2 – footings of 12 inches deep not required provided the structures are dimensionally stable without the foundation system and do not contain utility connections. A structure shall be considered dimensionally stable if it is provided with a floor system that is tied to the walls of the structure such that it reacts to loads as a unit. These structures shall be of sufficient weight to remain in place or shall be anchored to the ground (like old N.J.A.C. 5:23- 9.9(b));
- Buildings of more than 200 ft^2 up to 600 ft^2 LFC or 400 ft^2 OTLFC – Footings of 12 inches deep required; or
- Buildings of more than 600 ft^2 LFC or 400 ft^2 OTLFC – Footings to frost required.

Garden-type utility sheds require a construction permit for building work unless the structure is 200 square feet or less in area, and 10 feet or less in height, and accessory to buildings of Group R-2, R-3, R-4, or R-5, and does not contain a water, gas, oil or sewer connection. A construction permit for electrical work shall be required, when applicable, pursuant to N.J.A.C. 5:23-2.14(b)8 (as updated 03/05/18).

For commercial farm buildings, the permit requirements are slightly different. As per N.J.A.C. 5:23-3.2(d)6, garden-type utility sheds and similar structures are exempt from permit requirements provided the structure is 200 square feet or less in area, 10 feet or less in height, has no utility (water, gas, oil, sewer or electric) connections, and the shed is dimensionally stable without the foundation system. A shed is considered dimensionally stable if it is provided with a floor system that is tied to the walls of the structure such that it reacts to loads as a unit. Also, as per N.J.A.C. 5:23-3.2(d)5, a three-sided turn-out shed used to shelter livestock is exempt from permit requirements provided there is no permanent foundation or floor and provided the structure is 250 square feet or less in area, and 14 feet or less in height, and has no utility (water, gas, oil, sewer or electric) connections. In both cases, the structure has to be of sufficient weight to remain in place or has to be anchored to the ground (concrete is not be required for anchoring).

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

Construction Code Communicator Index 2018

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Finishing Basements in Existing Detached Single Family Homes

As you may recall, on March, 5 2018, significant changes to the Uniform Construction Code (UCC) were adopted regarding ordinary maintenance and minor work. This adoption impacted the permitting and inspection process for work done in existing, detached single-family homes. These changes, among other factors, should be considered when finishing a basement in such homes. This work should be handled as follows:

- **Minor Work Permits** are to be issued pursuant to N.J.A.C. 5:23-2.17A(c)1ii (https://www.nj.gov/dca/divisions/codes/codreg/ucc.html), assuming that the scope of the project is limited to finishing the basement's perimeter, floors, and ceiling, and does NOT include creating rooms by adding partition walls. Adding plumbing fixtures would also be considered minor work. Building partition walls would require a full UCC permit per N.J.A.C. 5:23-2.14(a) for the reconfiguring of space.
- **Final inspection** shall be conducted as per N.J.A.C. 5:23-2.17A(d)2, assuming the finishing of the basement fits the above criteria as minor work. This means no rough inspections are required.
- **Typical installations** are addressed in Construction Code Communicator (CCC), Volume 24 (Fall 2012), Number 3, Page 7, "Items to Consider When Finishing a Basement." (https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/ccc_2012_vol_24_no3_fall.pdf)
- **Ceiling Height** is addressed in CCC, Volume 29 (Fall 2017), Number 3, Page 8, "Ceiling Height in Existing Homes." (https://www.nj.gov/dca/divisions/codes/publications/ccc.html)
- **Basement Drains and Sump Pumps** are addressed in CCC, Volume 30 (Fall 2018), Number 3, Page 14, "Permits are Not Required for Basement Drains" (as well as "Permits are Not Required for Basement Drains – Update" from this edition) (https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/CCC_Fall_2018.pdf), **and** CCC, Volume 4 (Spring 1992), Number 1, Page 10, "Basement Drainage Trench." (https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/1992_v4.pdf)
- **Radon** work is addressed in UCC Bulletin 93-4, "Radon Hazard Subcode and Radon Mitigation Work in Existing Buildings." (https://www.nj.gov/dca/divisions/codes/resources/bulletins.html)
- **Documentation** is addressed in UCC Bulletin 94-3, "Permit Documentation." (https://www.nj.gov/dca/divisions/codes/publications/pdf_bulletins/b_94-3.pdf)

For more involved basement refinishing projects, one should assume a full UCC permit is to be issued per N.J.A.C. 5:23-2.14(a).

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

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Volume 29, Number 1 Spring 2017

"Flipping" Properties and the Issuance of a Construction Permit

There have been some questions regarding the issuance of a construction permit when a homeowner is performing construction, and it is suspected that when the work is completed, the home will be sold. The issue is that when a homeowner takes out a construction permit, he or she signs an affidavit indicating that he/she intends to live there. However, as soon as the home has a certificate of approval or certificate of occupancy, it is put up for sale. This circumstance is not all that different from a long-time homeowner fixing up his or her house in order to sell it.

When a homeowner applies for a permit to repair his or her house, signs a certification in lieu of oath stating that the plans have been submitted for a home that he or she owns and occupies, and all prior approvals are met, a construction permit is to be issued. Penalties may be issued for falsifying the information submitted on a construction permit if, during the course of construction, the code official determines that a contractor is performing the work. In this case, a permit update would be filed to include the contractor information in the construction permit application. However, it is not the responsibility of the code official to determine if the homeowner is going to "flip" the home.

Note that, as per N.J.A.C. 5:25-2.1(d), no person is permitted to construct a new home for his or her own use and occupancy more often than once every five years without being registered as a builder.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

(Marcelino Iglesias retired on April 1, 2017 after 29 years of service. Please join us in wishing him a long, happy, and healthy retirement.)

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Private detached garages in the One- and Two-Family Dwelling Subcode

The definition of "accessory structure" has been modified with the adoption of the 2015 International Residential Code (IRC).

A side-by-side comparison of the definition from Chapter 2 of the International Residential Code (IRC) is below:

- 2009 IRC – A structure not greater than 3,000 square feet in floor area, and not over two stories in height, the use of which is customarily accessory to and incidental to that of the dwelling(s) and which is located on the same lot.
- 2015 IRC – A structure that is accessory to and incidental to that of the dwelling(s) and that is located on the same lot.

Thus, the 2015 definition no longer contains the 3,000 square feet and 2 stories in height limitation. The reason for the change is that it does not make any sense to limit the size of an accessory structure since the *unamended* text of the IRC does not restrict the size of a home; keep in mind, the *unamended* text also requires an automatic sprinkler system.

In New Jersey, because automatic suppression is not required, the 2015 IRC is amended to limit the height and area as per Section R300. To address the inconsistency that would result, Exception 2 of Section R302.1 is amended as follows:

> Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1(1); or dwellings equipped throughout with an automatic sprinkler system installed in accordance with Section P2904 shall comply with Table R302.1(2).
>
> **Exceptions:**
>
> 2. Walls of dwellings and accessory structures located on the same lot **provided the aggregate area of all buildings on the same lot do not exceed the permissible area from Section R300.**

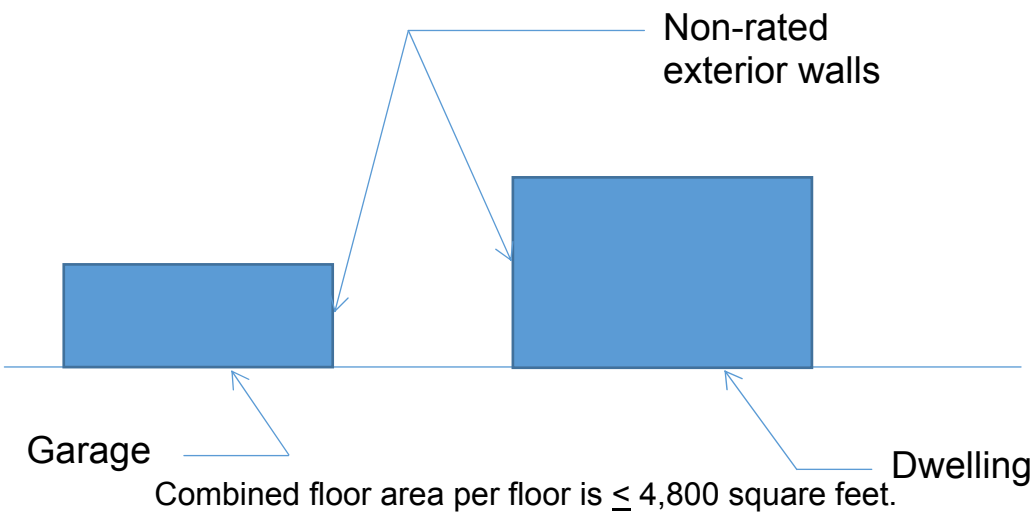
To best describe how to deal with area limitation, the following examples have been prepared:

- Ex. 1: Dwelling plus garage under the area limitation restriction.
- Ex. 2: Dwelling plus garage (combined) over the area limitation – separated – 10 feet minimum.
- Ex. 3: Dwelling plus garage (combined) over the area limitation – rated exterior walls.

Example 1:

The project consists of a non-sprinklered single-family dwelling with a detached garage with a **combined** area per floor of not more than 4,800 square feet.

Dwelling and accessory structure comply with the requirements of Section R300



Combined floor area of the dwelling and garage must be less than or equal to 4,800 square feet.

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(Private Detached Garages in the One- and Two-Family Dwelling Subcode - 2)

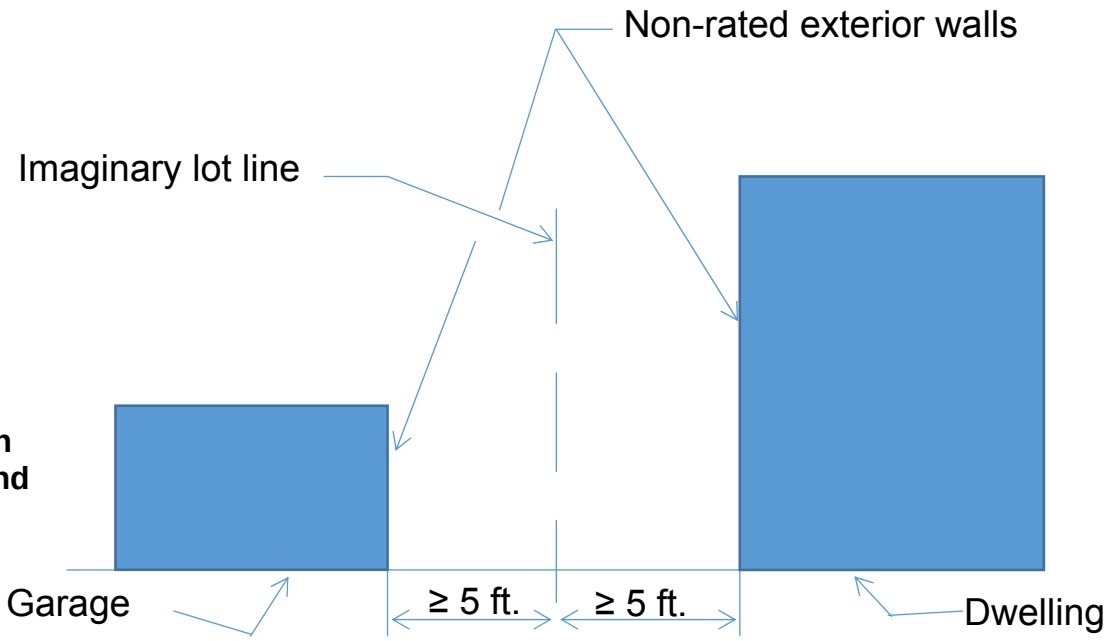
As noted in the sketch, there is no fire resistance rating required for the walls facing each other. Buildings on the same lot may be considered one building when the building height, number of stories, and the aggregate building area of the buildings are within the limitation specified in Section R300.

Example 2:

The project consists of a non-sprinklered, single family dwelling with a detached garage where the floor area per floor of **each** building is not more than 4,800 square feet and the fire separation distance to the imaginary lot line is 5 feet or greater.

The dwelling is designed and constructed in compliance with Section R300 and Section R302.1.

The accessory structure is designed and constructed in compliance with Section R300 and Section R302.1



Each building is ≤ 4,800 square feet in area per floor.

Buildings on the same lot may be designed and constructed as separate buildings. As noted in the sketch, there is no fire resistance rating required for the walls facing each other. In accordance with Table R302.1(1), a fire separation distance of 5 feet or greater does not require a fire resistance rating.

(continued on next page)

Glazing in Windows – Four Criteria

Since the Code Assistance Unit receives many questions regarding the four (4) general glazing in windows criteria listed in Section 2406.4.3 of the International Building Code/2015 (and the identical code requirements at Section R308.4.3 of the International Residential Code/2015); this article provides the simple answer. The "Glazing in Windows" section states:

> Glazing in an individual fixed or operable panel that meets ALL of the following conditions shall be considered to be a hazardous location.
>
> 1. The exposed area of an individual pane is larger than 9 square feet;
> 2. The bottom edge of the glazing is less than 18 inches above the floor;
> 3. The top edge of the glazing is more than 36 inches above the floor; AND
> 4. One or more walking surfaces are within 36 inches, measured horizontally and in a straight line, of the glazing.

The code clearly states that all four criteria must be triggered for the window glazing to be considered a hazardous location requiring safety glazing (criteria #3 has an "and" to inform the user that all four criteria are required). If only one, two, or three of the conditions are triggered, this would **not** require safety glazing.

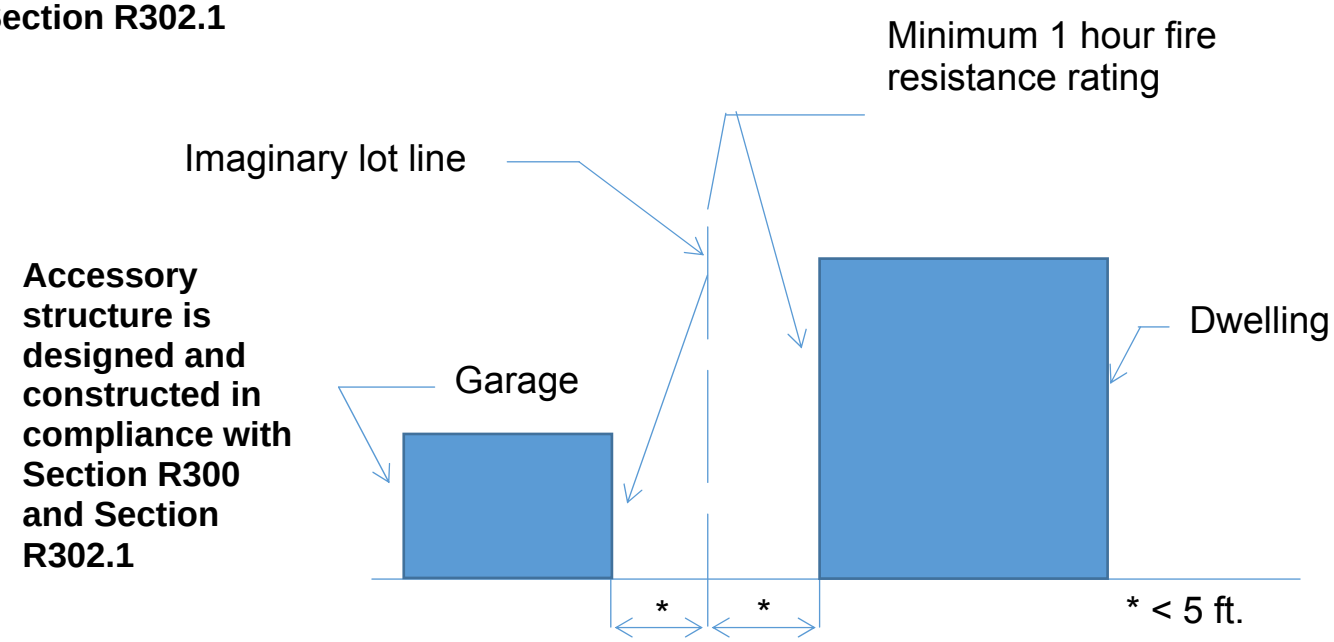
Source: Rob Austin
Code Assistance Unit
(609) 984-7609

(Private Detached Garages in the One- and Two-Family Dwelling Subcode - 3)

Example 3:

The project consists of a non-sprinklered, single-family dwelling with a detached garage where the floor area per floor of **each** building is not more than 4,800 square feet, and the fire separation distance to the imaginary lot line is less than 5 feet.

The dwelling is designed and constructed in compliance with Section R300 and Section R302.1



Each building is ≤ 4,800 square feet in area per floor.

Buildings on the same lot may be designed and constructed as separate buildings. As noted in the sketch, the walls facing each other must be designed and constructed with a minimum of 1-hour fire resistance rating. In accordance with Table R302.1(1), fire separation distances of less than 5 feet require a minimum of 1-hour fire resistance rating for the walls facing each other.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

Grace Period and the Rehab Subcode

This article serves as an explanation of the applicability of the grace period (N.J.A.C. 5:23-1.6) to changes to the rehabilitation subcode.

This question is common when changes to the rehab subcode are made following the adoption of more recent editions of the model codes. To the extent that changes to the rehab subcode involve section number changes, with the requirements remaining the same, there is no real issue. However, if a new requirement is being added to the rehab subcode, then the grace period would apply. The decision to add – or not to add – a requirement to the rehab subcode is one that is taken deliberately. It is not automatic upon adoption of the most recent edition of the national model code.

Note: We have just received notice from the Office of Administrative Law that the September 19, 2016 proposal has been adopted May 1, 2017. Therefore, for those who wish to use the previous provisions, a complete permit application would have to be submitted on or before October 31, 2017.

Source: Code Assistance Unit
(609) 984-7609

Where Elevator Layout Drawings Should Be Forwarded for Review/Release

Although the assumption that two buildings on the same block and lot (for example, a garage and medical clinic) will be reviewed by the same entity is logical, it is not necessarily true in every instance.
If a project is reviewed within the DCA, it may be reviewed by either the Elevator Safety Unit (ESU) or the Bureau of Construction Project Review (BCPR). However, not all projects are reviewed by the ESU or BCPR.

To avoid confusion and loss of time, it is extremely critical for the elevator applicant to know who performs the building plan review for the project so that the elevator layout drawings and other required materials may be forwarded to the correct review group.

The following are examples:

1. When the BCPR reviews building plans and specifications, the elevator layout drawings and other required materials should be forwarded to the BCPR for review/release.
2. When a municipal building department is reviewing the building plans and specifications, with the ESU enforcing the elevator subcode, the elevator layout drawings and other required materials should be forwarded to the ESU for review/release. **In this case only**, the architect of record is required to submit the 15-item questionnaire in lieu of building plans. The answers should be submitted along with all other required materials.
3. When a municipal building department that has a contract with a third-party agency (or their own elevator subcode official/inspector) reviews building plans and specifications, the elevator layout drawings and other required materials should be forwarded to the municipality for review/release.

If you have further questions regarding this subject, please direct your calls to me.

Source: Paulina Caploon
Elevator Safety Unit
(609) 984-7833

Electrical Meters Relocated Below Design Flood Elevation

It has come to the attention of the Office of Regulatory Affairs that some electrical utility employees are requiring electrical meters to be relocated below the required design flood elevation (DFE) before they will energize the service. This is a violation of the Uniform Construction Code and the agreement between the electrical utilities, the Board of Public Utilities and the Department of Community Affairs. Any known utility employee(s) requiring the relocation of an electrical meter into a flood zone should be brought to my attention by email at ken.verbos@dca.nj.gov with the following information:

- Name of the utility;
- Name of the utility worker; and
- Location of the property.

All help is greatly appreciated, and necessary, in order to prevent these utility employees from violating the flood resistant requirements of New Jersey and their employer's agreement with the State.

If you have any further questions or concerns, please feel free to contact me.

Source: Kenneth W. Verbos
Office of Regulatory Affairs
(609) 984-7768

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.

Stadiums, Arenas, and Theaters

In November of 2012, the Department amended N.J.A.C. 5:23-3.11(a) by adding #12 to the list of projects for which the Department has sole plan review jurisdiction. This amendment gives the Bureau of Construction Project Review sole plan review jurisdiction for all stadiums, arenas and theaters with an occupant load of 5,000 or greater. This includes all work in existing buildings that meet this criterion.

Local enforcing agencies are reminded that there is no exception to this regulation. Should the owner wish to have the local agency review the plans, authorization must be requested from the Bureau.

If you have any questions regarding this, please feel free to contact me by phone or by email at John.Terry@dca.nj.gov.

Source: John N. Terry
Chief, Bureau of Construction Project Review
(609) 984-7850

One- and Two-Family Dwelling Occupancy Classifications

As the title implies, there are two possible occupancy classifications for one- and two-family dwellings: Groups R-3 and R-5. Why two? It all comes down to the details of the design.

In review, Sections 310.5 and 310.7 of the 2015 International Building Code (IBC) pertain to Group R-3 and R-5, respectively. For the purpose of this article, the focus is on the portion of Section 310.5 for Group R-3 that includes, "Detached one- and two-family dwellings greater than three stories in height, multiple single-family townhouses greater than three stories in height, attached two-family dwellings separated from adjacent units by firewalls, and other one- and two-family dwellings that are outside the scope of the one- and two-family dwelling subcode."

This may look similar to Section 310.7 for Group R-5, but a closer analysis clarifies the differences between the classifications. Section 310.7 states, "Residential Group R-5 occupancies shall include all detached one- and two-family dwellings not more than three stories in height with a separate means of egress and multiple single-family townhouses not more than three stories in height with a separate means of egress designed and constructed in accordance with the 2015 International Residential Code" (IRC).

Therefore, detached one- and two-family dwellings or attached single-family townhouses that are three stories or fewer are Group R-5; one- and two-family dwellings or attached single-family townhouses that are greater than three stories are Group R-3.

Note that to maintain Group R-5 status, Section 310.7 of the IBC states that each unit is to have its own separate means of egress in accordance with the IRC. More specifically, when applying Section R311.1 of the IRC, the means of egress is not to be shared before making it outdoors. If the units share a small vestibule before going outside, the occupancy would be Group R-3, instead of Group R-5, regardless of stories.

Additionally, Group R-3 dwellings require an automatic suppression system in accordance with Section 903.2.8 of the IBC regardless of stories, unlike the options listed in Section R300 of the IRC.

Another element to consider is that if a one- or two-family dwelling is attached to a building of another occupancy, the dwelling is no longer detached, making it a Group R-3. For example, an apartment above a Business (Group B) would be a Group R-3 dwelling. Another example would be multiple sets of two-family dwellings attached to each other – with each set separated by firewalls – which would also be Group R-3.

Lastly, in any event, if there are 3 or more dwelling units in a building, the use is straight-up Group R-2 for the residential portion.

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

Detection in MRL Elevators

I always hated it as a kid when I was playing a game and the rules changed in the middle of it. Unfortunately, the same thing happens from time to time in my adult life. In my childhood life, the rules often "changed" (or were usually expanded) to address some situation that we hadn't thought about when the game started. The same thing happens in the codes.

Specifically, it has happened recently with the use of fire detection in elevator shafts. For many years, the requirements were clear; detection was required in machine and control spaces and was only allowed in the shaft if it contained fire suppression. If there was fire suppression, detection was needed to activate the shunt trip that would disconnect power to the elevator prior to the activation of the sprinkler head. Otherwise, because of the limited risks associated with elevator shafts and the chance of nuisance alarms, it was not permitted to locate a detector in the shaft. It was a simple, straightforward rule, and everyone playing the game of elevators and fire protection understood it.

Recently though, the game has changed. In their never-ending quest to make elevators use less and less of the rentable area of the building, elevator companies have begun locating the elevator machinery in the shaft. This new equipment is fittingly called a "machine room-less elevator" or "MRL" for short, and it's as popular as fantasy football. Applying the 2013 edition of NFPA 72 to this new arrangement creates a situation that has led to some questions. When there is a shaft with no suppression, there cannot be any detection, but when a shaft is also a machine space, detection is required. As a result, it's time to come up with a new rule for this game. The 2016 edition of NFPA 72 allows detection in shafts that do not have suppression if they contain the elevator machine. The Department is suggesting that this new rule be followed.

There is one more necessary refinement to the rule to address the type of detector that should be installed. While many elevator inspectors support smoke detection because it often activates faster, the choice is not that simple. Elevator shafts are not always pristine, and the older they are, the less pristine they are. So, it's an environment that may be dusty and dirty, and there's, essentially, a giant piston going up and down to stir that dust and dirt up. Some of the people on the fire protection team who are playing the game are concerned about this, and NFPA 72 is, too. Both versions of NFPA 72 (2013 and 2016) state that the type of detection selected must be appropriate for the environment to which the device will be subjected. As a result, if smoke detectors are selected, they must be approved by the manufacturer for installation in an elevator shaft. Alternatively, a heat detector can be installed. The fire protection subcode official is charged with making sure that the type of detection used is appropriate in the shaft of a MRL; the elevator subcode official just needs to make sure that some form of detection is there.

Hopefully, this article will help resolve any issues that may arise from this new twist to the game.

Source: Michael Baier
Bureau of Code Services
(609) 984-7974

Air BnB Rentals

The Code Assistance Unit has received multiple inquiries regarding Air BnB rentals. The following is guidance to keep in mind in evaluating requirements applicable to these rentals.

The most common configuration for Air BnB is the use of a single-family house, which should be treated as a whole house rental. It would not be subject to any change of use provisions of the Uniform Construction Code, nor would it be subject to the Hotel and Multiple Dwelling regulations. Note that whole house rentals are fairly common in shore towns, and some have municipal ordinances in place which are applicable to these rentals. However, if the owner is renting out individual rooms, this would trigger additional requirements.

Additionally, an R-2 building being used as an R-1 would be subject to change of use provisions depending on whether the occupants are primarily transient (staying for up to 30 days) or primarily permanent.

If you have any further questions regarding this, please call the Code Assistance Unit.

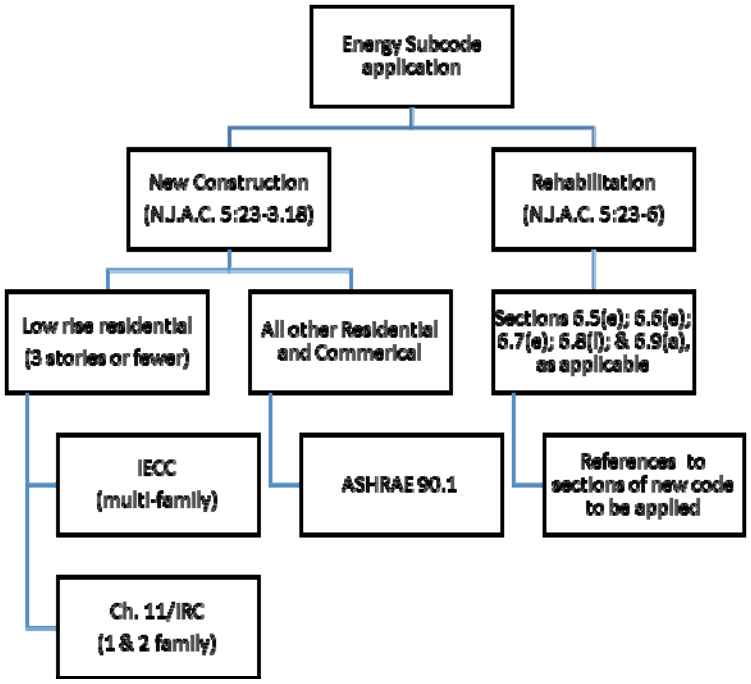
Source: Code Assistance Unit
(609) 984-7609

Energy Subcode Application

As noted in Bulletin 15-4, http://www.nj.gov/dca/divisions/codes/resources/bulletins.html, the Uniform Construction Code requires applicants to show compliance with the Energy Subcode as part of the permit application process for a newly constructed building or an addition; rehabilitated buildings must meet the requirements under N.J.A.C. 5:23-6, the Rehabilitation Subcode.

As always, if the building in question is not heated or cooled, it is not subject to the building thermal envelope portions of the Energy Subcode.

To best demonstrate the application of the Energy Subcode, below is a general breakdown of new construction projects and rehabilitation projects. Hopefully, this little tool is useful in the application of Chapter 11 of the International Residential Code/2015, the International Energy Conservation Code/2015 and the ASHRAE Standard 90.1-2013 in terms of new and existing buildings.



In order to demonstrate compliance, N.J.A.C. 5:23-2.15(f)1vi requires calculations for all new buildings and additions to existing buildings. Note that this does not apply to rehabilitated buildings themselves in terms of the building thermal envelope. However, when lighting systems are completely replaced in buildings subject to the ASHRAE 90.1, the Electrical tab within COMcheck may be used to verify the lighting-power densities of the space/building.

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

Group A-4 Membrane Structures: How Big and How Tall Can They be?

Let's start with the 2015 International Building Code (IBC/2015), as adopted at N.J.A.C. 5:23-3.14, Section 3102.3, Type of construction. More specifically, Section 3102.3.1, Membrane and interior liner material, allows either noncombustible membranes as set forth in Section 703.5, Non-combustibility tests, or materials meeting the fire propagation performance criteria of Test Method 1 or Test Method 2 of NFPA 701. If these conditions are met, the construction type is permitted to be classified as Type IIB.

Now that we have determined that a noncombustible frame or a cable-supported structure covered by one of these approved materials is Type IIB construction, we need to determine the allowable area and height.

(continued on next page)

(Group A-4 Membrane Structures: How Big and How Tall Can They be?)

AREA

Section 3102.4, Allowable floor areas, states, "The area of a membrane structure shall not exceed the limitations specified in Section 506." Section 506.1.1, Unlimited area buildings, states, "Unlimited area buildings shall be designed in accordance with Section 507." Section 507.4, Sprinklered, one-story buildings, allows the area to be unlimited when an A-4 occupancy is a single story at grade structure. Exception #2 of this section allows for occupied indoor participant sports areas to be exempt from the automatic sprinkler system requirement as long as two conditions are met. First, the participant sports area needs exit doors going directly to the exterior, and second, the space must be equipped with a manual fire alarm system installed in accordance with Section 907. Unlimited, non-sprinklered structures must comply with these requirements.

HEIGHT

Section 3102.5, Maximum height, states, "Membrane structures shall not exceed one story nor shall such structures exceed the height limitations in feet specified in Section 504.3." Type IIB structures are limited to 55 feet per Table 504.3. There is one exception to Section 3102.5, where it states, "Noncombustible membrane structures serving as roofs only." Noncombustible membrane structure is a defined term and this definition is not used in connection with to Section 3102.3.1. The definition is, "A membrane structure in which the membrane and all component parts of the structure are noncombustible." The key word in the definition is "noncombustible" and both the membrane and all component parts of the structure must be noncombustible. When the membrane fabric is noncombustible, the 55 feet height restriction of Table 504.3 may be exceeded. When the membrane fabric (and not the structure/frame) meets **only** the fire propagation performance criteria of NFPA 701 method 1 or 2, the height is restricted to 55 feet. It should be noted that there are structural implications. The design professional must address wind loads which may limit the height.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Flood Resistant Materials Usage Revisited

The 2014 Spring/Summer CCC contained a similar article regarding the permitted materials used for flood resistance based on the 2009 International Residential Code (IRC). With the adoption of the 2015 IRC, Section R322.1.8 has been revised. The section used to have two criteria that had to be met, but now there is only one: FEMA's Technical Bulletin #2 (TB-2). In other words, item #1 from the 2009 IRC was deleted and item #2, TB-2, became the only item required in the 2015 IRC.

However, the logic of the elevation requirements has not changed. As stated in the previous article, when combining R322.2.1 of the 2015 IRC and NJ Department of Environmental Protection (DEP)'s regulations at N.J.A.C. 7:13, TB-2 is to be applied to all items below the design flood elevation (DFE). The DFE is the base flood elevation (BFE) and at least one additional foot per DEP regulations. In the event that a municipality has adopted a "freeboard" greater than one foot, then the DFE becomes the BFE plus freeboard required by municipal ordinance.

References:

- 2014 S/S CCC - http://www.nj.gov/dca/divisions/codes/publications/ccc.html
- R322 of 2015 - http://codes.iccsafe.org/app/book/toc/2015/New_Jersey/residential/index.html
- FEMA TB-2 - https://www.fema.gov/media-library/assets/documents/2655

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

The Basics of Planned Real Estate Development Exemptions and Warranties

Before issuing a certificate of occupancy for any condominium of at least two but fewer than ten units, request a copy of the Exemption issued by the Planned Real Estate Development (PRED) Section in the Bureau of Homeowner Protection from the owner. Condominiums of more than 9 units (including commercial) cannot be exempted unless the residential units are all low- or moderate-income units.

The Exemption Form is a three-page form entitled "Planned Real Estate Development Exemption Disclosure Notice." Every page will have an "E" number on the top. Note that some applicants may have used the previous two-page form; this form is valid as long as it has an "E" number. The Exemption signifies that the project is exempt from registration under the Planned Real Estate Development Full Disclosure Act. It is very important to know that **all** local land use and construction obligations continue to apply.

(continued on next page)

(The Basics of Planned Real Estate Development Exemptions and Warranties)

Additionally, the Statute provides for certain automatic exemptions from the need to register a development with PRED, including single-family home developments of 99 homes or fewer, dispositions pursuant to a court order, and entirely commercial projects. Thus, there is usually no PRED document relating to the project, but occasionally, the sponsor of a statutorily exempt development will apply for an Exemption to show proof to a lender. Although most single-family home developments of 100 or more homes are registered, it is possible that such a development qualified for a Bureau-issued exemption, so it's best to ask if one has been issued. PRED Registration is required if no exemption applies.

For applicants using the State's Warranty Program, the Bureau has verified the granting of an Exemption before validating the warranties. The concern is greatest when a developer warrants through a private warranty plan because he or she may have failed to apply for an Exemption before selling units. This is a serious violation of the Planned Real Estate Development Full Disclosure Act and must be brought promptly to the attention of the Bureau of Homeowner Protection at (609) 984-7574. One additional concern is to verify that the person or entity conveying title to the property has an unexpired builder's registration in their name issued by the Bureau's New Home Warranty Program as evidenced by the same card builder's must show the construction official before obtaining a building permit.

If you have any questions about the validity of an Exemption, call the number above, or, if it concerns the Builder's Registration, call the Bureau of Homeowner Protection at (609) 984-7905.

Source: Edward Hannaman
Bureau of Homeowner Protection
(609) 984-7574

Single Exit Buildings in the 2015 International Building Code

It has come to the attention of the Code Assistance Unit that Chapter 10 (Means of Egress) of the International Building Code/2015 (IBC/2015) uses incorrect terminology regarding egress from single exit buildings. Tables 1006.3.2(1) and 1006.3.2(2) each refer to stories with one exit or access to one exit and include headings using the phrase "maximum common path of egress travel distance." In the IBC/2015, common path of egress travel is defined as "that portion of the exit access travel distance measured from the most remote point within a story to that point where the occupants have separate access to two exits or exit access doorways." This term is **not** applicable to single exit buildings. The term "exit access" as defined by the IBC/2015 is, "that portion of a means of egress system that leads from any occupied portion of a building or structure to an exit." Thus, the correct term to use for single exit buildings would be "exit access travel distance."

We have been advised by the ICC that the incorrect terminology in Chapter 10 of the IBC/2015 cannot be revised or processed as an errata because it was approved by the ICC code change process as part of a larger change to reorganize the Chapter. Instead, a code change proposal will be submitted for consideration to correct this error in the 2021 International Building Code.

Source: Code Assistance Unit
(609) 984-7609

Restaurant Bar Accessibility

The Code Assistance Unit has received multiple questions regarding accessibility of the bar area within a restaurant. This stems from Section 1108.2.9.1 (Dining surfaces) of the International Building Code/2015, where it states, "Where dining surfaces for the consumption of food or drink are provided, at least 5 percent but not less than one of the dining surfaces for the seating and standing spaces shall be accessible and be distributed throughout the facility and located on a level accessed by an accessible route." As the inquirers were told, the answer to this can be found in the International Building Code/2015 commentary. Here it states:

> The issue of whether a portion of a bar or dining counter in a restaurant is required to be lowered to be accessible is subjective. The assumption is that if other types of seating are provided adjacent to the counter, then services provided at the counter will be available at the adjacent seating. Therefore, if adequate accessible seating is available adjacent to the bar area, the bar is not required to be lowered. If the bar is the only eating or dining surface in a restaurant, or in a separate room in the restaurant, then a portion of the bar must be made accessible.

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

December 2016 Construction Highlights

The following are highlights from the December 2016 issue of the New Jersey Construction Reporter, an on-line magazine on building permit and other construction activity in the State available at: www.nj.gov/dca/divisions/codes/reporter/.

- The dollar amount of construction authorized by building permits was $1.306 billion in December.
- Residential work totaled $694.1 million (53.2 percent).
- Office, retail, and other nonresidential activity amounted to $611.5 million (46.8 percent).
- December activity is based on permits from 553 of New Jersey's 565 municipalities.
- Jersey City, Camden, and Newark had the most work; $133.2 million, $92.7 million, and $45.2 million, respectively.
- Two of the bigger permits in Jersey City were for multifamily housing. A permit update authorized an additional $34.5 million for a 221-unit apartment building, and a $41.1 million permit was issued for a new condominium development with 153 dwellings.
- In Camden, $69.6 million was authorized for the New Jersey American Water Company's new headquarters.
- The big project in Newark was a $34.2 million conversion of a church to business and office use.

- **Year to Date**

- Three of four major construction indicators grew significantly in 2016.
- New retail space declined by 17.8 percent.
- The dollar amount of work exceeded one billion dollars every month in 2016. $16.797 billion was authorized between January and December 2016. This was 11.5 percent more than last year at this time.
- Office space grew by 1.4 million square feet.
- 24,014 new dwellings were authorized by building permits. This was 24.6 percent more than last year and the highest level in eight years.
- Over 62 percent of all new dwellings were attached to other housing or in mixed-use buildings.
- 13.2 percent of all new dwellings were in Jersey City.

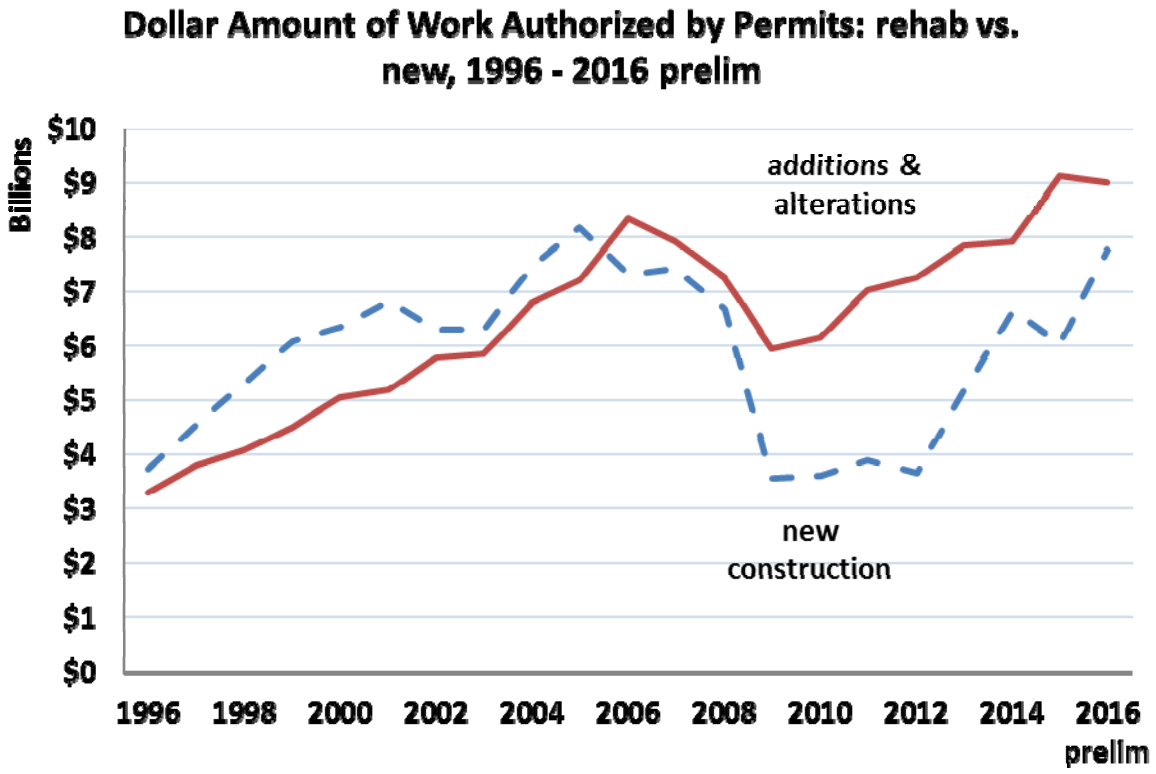
Major Construction Indicators, New Jersey: January - December
NJ DCA, 2/7/17

	Estimated cost of construction	Authorized housing units	Authorized office space (square feet)	Authorized retail space (square feet)
	year-to-date figures (January - December)			
Jan – December 2016	$16,797,744,601	24,015	7,172,207	2,913,459
Jan – December 2015	15,069,210,207	19,267	5,731,747	3,544,140
Jan – December 2014	14,439,333,570	22,840	5,325,631	3,536,520
Jan – December 2013	13,007,550,849	18,733	5,822,166	2,240,758
Jan – December 2012	10,901,351,075	15,145	7,376,324	2,073,947
Jan – December 2011	10,890,224,961	11,822	4,889,841	1,649,925
Jan – December 2010	9,657,851,990	11,578	5,192,205	2,135,558
Jan – December 2009	9,454,767,714	11,067	4,035,812	2,417,629
Jan – December 2008	13,834,284,685	16,203	7,869,822	5,459,374
Jan – December 2007	14,907,746,308	25,472	8,875,968	4,993,848
	pecent change (January - December)			
2015-16	$1,728,534,394	4,748	1,440,460	-630,681
percent change	11.5%	24.6%	25.1%	-17.8%
2014-15	$629,876,637	-3,573	406,116	7,620
percent change	4.4%	-15.6%	7.6%	0.2%
2013-14	$1,431,782,721	4,107	-496,535	1,295,762
percent change	11.0%	21.9%	-8.5%	57.8%

(Continued on next page)

(December 2016 Construction Highlights)

- New construction permits grew by $1.749 billion compared to last year, a 28.9 percent increase.
- Alterations and additions totaled just over $9 billion, 1.3 percent less than last year.
- New houses accounted for $4.772 billion or 28.9 percent of work authorized by permits.
- Home renovations added another $4.068 million (24.2 percent).



- Four cities: Jersey City, Newark, Camden, and Atlantic City were among the municipalities with the most construction.
- Jersey City led all municipalities with $1.389 billion. The City had 3,174 new dwellings. Since 2001, no other locality has built more new houses.
- Newark had $456.8 million of construction through December. A new vocational education center for Essex County accounted for $80 million. A new charter school added another $52.4 million. $41 million was for a multi-purpose building for the New Jersey Institute of Technology.
- New home construction accounted for most of the activity in Fort Lee, Secaucus, Weehawken, Franklin in Somerset County, and Lakewood.
- Office development for Holtec, Subaru, and the American Water Company accounted for much of the activity in Camden. The City building department also issued big permits for several charter schools.
- The big development in Atlantic City was by Stockton State University and included a multi-purpose building, a new science center, and a dormitory.

New Home Prices

- 1,970 new houses were completed and began enrollment in a new home warranty in the fourth quarter of 2016. Their median sales price was $485,000. This was 0.7 percent more than last quarter.
- The most expensive new houses were in Bergen, Cape May, Hunterdon, and Union counties.
- Most new houses built in New Jersey that are for sale are required to have a new home warranty. The exception is for those houses where the homeowner served as his/her own general contractor.

(continued on next page)

(December 2016 Construction Highlights)

New House Prices

NJ DCA 2/7/2017

Period	# of New Houses	Median Sales Price	Percent Change
4th qtr 2016 (p)	1,970	$485,000	0.7%
3rd qtr 2016 (p)	1,961	481,785	1.3%
2nd qtr 2016 (p)	1,820	475,825	10.7%
1st qtr 2016 (p)	1,595	430,000	
4th qtr 2015	2,166	431,350	0.3%
3rd qtr 2015	2,342	430,000	0.8%
2nd qtr 2015	2,490	426,718	7.2%
1st qtr 2015	1,916	397,985	
2015	8,914	$434,589	8.6%
2014	8,956	400,000	0.3%
2013	7,861	399,000	-0.2%
2012	7,165	399,900	2.5%
2011	6,839	390,000	1.3%
2010	8,712	384,899	4.4%
2009	9,161	368,512	-13.3%
2008	13,841	425,000	0.1%
2007	18,397	424,570	2.6%
2006	22,697	413,825	9.2%
2005	24,571	378,992	8.3%
2004	23,844	349,900	13.9%
2003	22,226	307,168	11.8%
2002	23,647	274,705	8.3%
2001	23,372	253,670	9.5%
2000	25,058	231,728	3.2%
1999	24,479	224,496	6.9%
1998	23,884	209,980	10.5%
1997	21,640	190,000	3.7%
1996	20,903	183,300	

Note: (p) data are preliminary

Source: John Lago
Code Assistance Unit
(609) 984-7609



Roof Insulation and Rehab

The applicability of the energy subcode requirements to any rehab project, including roofing, is as specified in the rehabilitation subcode, N.J.A.C. 5:23-6. Specifically, N.J.A.C. 5:23-6.5(e)9, 6.6(e)16, and 6.7(e)12 state:

> When the work being performed exposes the roof decking/sheathing or the framing of any wall, floor, ceiling, or roof assembly that is part of the building thermal envelope (encloses conditioned space), any accessible voids in insulation shall be filled using insulation meeting the R-values of Table 402.1.2 of the residential energy code for wood framing and of Table 402.2.6 of the residential energy code for metal framing equivalents or of Table 5.5-4 or 5.5-5 of the commercial energy code, as applicable.
>
> i. In the event that insulation meeting the R-values above cannot be installed due to space constraints, insulation that fills the cavities of the framed assembly shall be installed.

As you can see, the goal is to achieve the maximum thermal value possible based on the space constraints. There was even a Construction Code Communicator article written about this, but it was in respect to the walls of the building thermal envelope (page 10 of the Summer 2016 CCC, http://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/CCC_Smr_2016.pdf). As the article reads, the available space of the thermal envelope being opened is to be filled with insulation. In terms of roofing, if all insulation is above the roof, space constraints made by parapet walls and/or vents and equipment may limit the insulation that may be possible to install. In most cases, the existing level of insulation is merely maintained due to these roofing issues. In the event that there are no space constraints, insulation should be added to the maximum extent possible in accordance with the tables mentioned above.

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

Mechanical Inspections

It has come to the Department's attention that many municipalities still are not accepting Mechanical Technical forms or using mechanical inspectors for one- and two-family dwellings. This is a direct violation of the Uniform Construction Code.

N.J.A.C. 5:23-3.4(d) requires that a mechanical inspector enforce the provisions of the code relating to the installation of mechanical equipment. If no mechanical inspector is assigned, then the responsibility is given to the plumbing subcode official as per N.J.A.C. 5:23-3.4(d)1. In addition, N.J.A.C. 5:23-4.5(b)2, Form F145, Mechanical Inspector Technical Section, is a requirement for municipal enforcing agencies. Lastly, N.J.A.C. 5:23-4.18(c)5 regulates how mechanical fees must be charged. These sections of the UCC must be followed even if a municipality's fee schedule does not allow for mechanical charges.

Source: William B. Schmidt
Office of Regulatory Affairs
(609) 984-7672

Kitchen Exhaust Hood Makeup Air

The Code Assistance Unit has received multiple questions regarding Section M1503.4 (Makeup air required) of the International Residential Code/2015. These questions are not generally about the need for makeup air when exhausting more than 400 cfm, but more commonly regarding the ability to "pull" air from other spaces. Subsection 1503.4.1 (Location) states that the kitchen exhaust makeup air is to be discharged into the same room in which it is located or into rooms or duct systems that communicate through one or more permanent openings. The commentary for this section clears things up by stating:

> This section simply clarifies how makeup air is delivered to the kitchen area. Some readers have interpreted the code to require the makeup air to be delivered directly to the kitchen; however, this has never been required by the code. The makeup air can be delivered to any space that freely communicates with the kitchen as well as to the kitchen or any combination of such locations.

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

Communications Wiring in Ordinary Maintenance

Recently, there has been some confusion regarding language within N.J.A.C. 5:23-2.7 (Ordinary Maintenance), specifically Section 5:23-2.7(b)6iii.(1). The language, as demonstrated below, is correct, but the Code Assistance Unit would like to dispel any possible misunderstandings with this article. Section 5:23-2.7(b)6iii.(1) states:

> "Ordinary maintenance shall not include addition to, or alteration, replacement, or relocation of electrical wiring, except that the following shall be considered ordinary electrical maintenance:
>
> Communications wiring in a Class 3 structure provided that the installation does not involve the alteration or penetration of a fire-rated assembly and is not in a hazardous location as defined in Chapter 5 of the electrical subcode."

This section states two different requirements for electrical work to be considered ordinary maintenance:

1. Communications wiring in a Class 3 structure cannot involve the alteration or penetration of a fire-rated assembly.
   And
2. Communications wiring in a Class 3 structure cannot be in a hazardous location as defined in Chapter 5 of the electrical subcode.

In short, if it is to be considered ordinary electrical maintenance, it is **not** through a rated assembly and **not** in a hazardous location. If either of those conditions are not met, then the work cannot be considered ordinary maintenance. Some believe the rule should be revised to replace the world "and" with "or." Doing so would not be accurate, because the rule uses verbs in the negative (ex: does **not;** is **not** in).

The word "or" would make sense only if the exceptions were written with verbs in the positive: "Communications wiring in a Class 3 structure will not be ordinary maintenance if **it involves** the alteration of a fire rated assembly or **it is in** a hazardous location as defined in Chapter 5 of the electrical subcode.

Hopefully, this explanation is helpful to anyone who may have been confused about how to apply the exceptions. The wording has not been a problem up until now, and with numerous changes to ordinary maintenance being considered, the Code Assistance Unit does not currently plan to change the rule text.

If you have any further questions on this subject, please contact the Code Assistance Unit.

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

Windows in Rehabilitated Bathrooms

What does one do with existing window(s) in a rehabilitated bathroom? Well, there are two answers. Let's head to the Rehabilitation Subcode, N.J.A.C. 5:23-6.

Each category of work under rehab (Repair, Renovation, Alteration and Reconstruction) contains the following requirement in subsection (e):

> Replacement glass shall comply with the "Safety Glazing" requirements of the building subcode and shall be installed in the "Specific Hazardous Locations" as specified by Section 2406.4 of the building subcode or by Section R308.4 of the one- and two-family dwelling subcode, as applicable.

Notice that the above refers to instances when someone chooses to replace their windows, **not** their bathroom fixtures. This is why I say there are two answers.

If a bathroom is redone and the fixtures are swapped out with no rearrangement, a pre-existing window that does not meet the safety requirements of R308.4 is permitted to remain as is.

This changes if a bathroom is redone and the fixtures are moved. If a pre-existing window was compliant and a newly installed bath tub is placed under it during the rehabilitation, the window is no longer in compliance. This is a violation of N.J.A.C. 5:23-6.2(c) as it is no longer compliant as a result of the rearrangement. The window is subject to the safety glazing requirements of R308.4. Please note that there may be a safety film that could be applied to the window in this case.

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

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
Trenton, NJ 08625-0802

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Volume 29, Number 2 Summer 2017

Public Swimming Pool Occupant Load

For those of you who reviewed the International Building Code/2015 proposal back on January 5, 2015, http://www.nj.gov/dca/divisions/codes/codreg/pdf_rule_proposals/2015_adopted_subcodes_propsal_final.pdf, Item 58 under the Building Subcode heading states:

> At N.J.A.C. 5:23-3.14(b)9iv, the amendment would delete the maximum floor area allowance per occupant of swimming pools and decks. These requirements that establish the minimum square foot per occupant for pools and their surrounding decks are regulated by the "International Swimming Pool and Spa Code" that would be adopted by reference at N.J.A.C. 5:23-3.14(b)21iv.

You may be asking why we deleted the occupant load requirements from Table 1004.1.2 of the International Building Code/2015 (IBC/2015). In response, as noted above, you can find the occupant load criteria within the International Swimming Pool and Spa Code/2015 (ISPSC/2015), as referenced by Chapter 31 of the IBC/2015. For example, a Class B or C public swimming pool, typical of a hotel/motel or apartment/condo building, would use the maximum bather load found at Table 403.1 of the ISPSC/2015, https://codes.iccsafe.org/public/document/toc/555/. The calculation would be based on the worst-case scenario (i.e. most occupants) for the combined pool/deck areas.

For example, if the pool deck area is at least more than twice the water surface area, the third of row Table 403.1 is to be used. Assuming the water surface area contains a diving area of 300 sq. ft., a deep area of 1,200 sq ft. and a shallow area of 900 sq. ft., the bather load would be as such:

- Diving area (1 board) = 300 sq. ft. area / 300 sq. ft. per bather = 1 bather.
- Deep area (>5 feet) = 1200 sq. ft. area / 10 sq. ft. per bather = 120 bathers.
- Shallow area (≤5 feet) = 900 sq. ft. area / 8 sq. ft. per bather = 112.5 bathers, which would be rounded up to 113 bathers.

Total bathers based on this pool/deck area: 234.

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

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The 36th Annual Building Safety Conference of New Jersey

The 36th Annual Building Safety Conference of New Jersey was held on May 3rd through 5th at Bally's Atlantic City. Our focus this year was on preparing the next generation of code enforcement officials and bringing together all of our partners in building safety. The International Code Council (ICC) was a larger part of our event this year, providing both continuing education seminars and certification academies for special inspectors as well as staffing a bookstore for our attendees to pick up codes and reference standards.

As always, the "Crackerbarrel" began our Conference. This very popular event gives our guests the opportunity to hear from a variety of presenters in a short format style with a focus on new items of particular interest to the code enforcement community. Topics ranged from the interaction of code officials with landscape irrigation installations to an opportunity to meet with ICC staff and representatives of the Board of Directors to find out about new offerings.

The centerpiece of the Building Safety Conference was the opportunity to recognize and honor those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year. We were honored to have both Commissioner Charles Richman and Director Edward Smith join with the Presidents of the respective associations in making the award presentations at the annual luncheon.

The following awards were presented:

New Jersey Building Officials Association
Building Inspector of the Year - Cornelius R. Byrne, Jr.

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year - Mario I. Patruno

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year - Kirk J. Miick

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year - Calvin L. King

New Jersey Association of Technical Assistants
Technical Assistant of the Year - Christine Groendyke



The award recipients with Commissioner Richman and Director Smith



New Jersey Building Officials Association
Building Inspector of the Year – Cornelius R. Byrne, Jr. (with NJBOA President Pat Naticchione, Commissioner Richman, and Director Smith)



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the year – Mario I. Patruno (with Brian Vanore, MEIA North, George Selah III, MEIA NJ, Commissioner Richman, and Director Smith)



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year – Kirk K. Miik (with Richard Silvia, NJFPPA, Commissioner Richman, and Director Smith)



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year – Calvin L. King (with Ronald Barbarulo, NJPIA, Commissioner Richman, and Director Smith)



New Jersey Association of Technical Assistants
Technical Assistant of the Year – Christine Groendyke (with Susan Mealey, Central Jersey TA Association, Commissioner Richman, and Director Smith)

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

The Building Safety Conference is a unique opportunity to broaden your knowledge of cutting-edge code enforcement and building construction techniques while also providing an opportunity to meet with your peers throughout the State to share ideas and promote camaraderie and collegiality among the code enforcement community. We also plan to provide certification academies again next year. Stay tuned!

The Conference Committee is always on the lookout for great and innovative ideas to meet the needs of our attendees. If you have an idea, please pass that along to your association or email me at john.delesandro@dca.nj.gov.

We hope to see you all next year at Bally's Atlantic City May 2nd through 4th, 2018. Please save the date and "like" us on Facebook for event updates, room locations and all other important information!

Source: John Delesandro
Supervisor, Education and Licensing Units
(609) 292-7899

PermitsNJ and the Mechanical Inspection Technical Section

We are in the process of creating the Mechanical Inspection Technical Section (F145) within the PermitsNJ construction permitting application. Once completed, users will be able to enter information directly from the form onto the corresponding screen, output the completed form, and run reports on the related information.

While we are addressing this matter, please continue to accept the Mechanical Inspection Technical Section and enter its contents into the PermitsNJ application as appropriate. You can add the appropriate line items to the existing subcode fee schedules as needed. Please remember that all subcode fee schedule changes take one calendar day to take effect.

If you have any questions, or if you need assistance on this matter, please do not hesitate to contact me by email at charles.pierson@dca.nj.gov or by phone.

Source: Charles Pierson Jr.
PermitsNJ Technical Support
(609) 292-7899

TO: Department of Community Affairs, Code Officials
FROM: Fire Alarm, Burglar Alarm and Locksmith Advisory Committee
DATE: April 19, 2017
SUBJECT: State Licensing Requirements for Alarm and Locksmith

Mailing Address:
P.O. Box 45042
Newark, NJ 07101
(973) 504-6245

It has come to the attention of the Fire Alarm, Burglar Alarm and Locksmith Advisory Committee (the "Committee") that there is some confusion as to the need for a license from this Committee for certain professions. There are individuals that believe a township license is sufficient for the types of work regulated by this entity.

The Committee is requesting that the following information be shared with the municipalities:

> *The State of New Jersey regulates and requires a license for fire alarm, burglar alarm, electronic security and locksmithing installation, maintenance and service. Electronic Security Systems is defined by regulations as CCTV Cameras and Systems, including network cameras, Access Control Systems and Intercom Systems. Possession of a Municipal license or registration does not exempt individuals or businesses from obtaining the proper State license in order to engage in these types of work.*

The Committee directs your attention to N.J.S.A. 45:5A-36 which states:

> *No municipality or county shall enact an ordinance or resolution or promulgate any rules or regulations relating to the licensing or registration of locksmiths or alarm businesses. The provisions of any ordinance or resolution or rules or regulations of any municipality or county relating to the licensing or registration of locksmiths or alarm businesses are superseded by the provisions of this act.*

Single Means (Sole Path) Fire Alarm Transmission – Revised

The Department has been receiving phone calls again about Plain Old Telephone Service (POTS) being removed from towns and businesses wishing to install single means (sole path) communications equipment for fire alarm transmission. In the 2012 article, we said this was acceptable.

National Fire Protection Association (NFPA) 72/2013, **Section 26.6.3.1.5, Single Communications Path,** allows the enforcing authority to approve a single transmission path. The path must be supervised at an interval of not more than 60 minutes. When there is a failure of the path, the supervising station must be notified within not more than 60 minutes. When there is a failure to complete a signal transmission it must be annunciated at the protected premises in accordance with Section 10.15 Trouble Signals.

Section 26.6.3.1.7, Single Technology, allows single technology to be used to create multiple paths provided the requirements of 26.6.3.1.6(1) through 26.6.3.1.6(3) are met. (Some manufacturers refer to this technology as a "mesh network.")

Section 26.6.3.1.6, Multiple Communications Paths. *If multiple transmission paths are used, the following requirements shall be met:*
*(1) Each path shall be supervised within not more than 6 hours.**
*(2) The failure of any path of a multipath system shall be annunciated at the supervising station within not more than 6 hours.**
(3) The failure to complete a signal transmission shall be annunciated at the protected premises in accordance with Section 10.15.

*Please note the test interval has changed from 24 Hours to 6 Hours in the current NFPA 72 standard.

In the NFPA 72/2007 edition, Section 8.6.4, Other Transmission Technologies, allowed for the installation of other means which the standard didn't already cover. The NFPA 72 committee has relocated supervising stations communications methods to Section 26.6 in the 2013 edition.

The question that needs to be asked is does your system currently use a Digital Alarm Communicator Transmitter (DACT)? NFPA 72 Section 26.6.3.2.1.4, Transmission Channels, requires systems using a DACT to use one phone line (number), and a second transmission means must be employed. In the past, this second means was permitted to be another phone line. However, the standard was changed, eliminating a second phone line as an acceptable transmission means. NFPA 72 now requires that the second means of transmission be one of the following:

(continued on next page)

(Single Means (Sole Path) Fire Alarm Transmission – Revised)

(1) One-way private radio alarm system;
(2) Two-way RF multiplex system; or
(3) Transmission means complying with 26.6.3.1.

There is an exception allowing the use of a second phone line, with the approval of the fire subcode official, where the secondary methods listed are not available.

Single means (Sole Path) communications are typically found in Radio Frequency (RF), Cellular and Internet Protocol (IP) Fire Alarm Communications Equipment, but any listed fire communications equipment that meets the performance criteria of NFPA-72 can be used as Single Means (Sole Path).

Code Officials should pay particular attention to the UL864 listing of communications equipment to assure that it is being installed, configured, and used in accordance with its listing, including but not limited to sole path communications.

Source: Michael E. Whalen
Code Assistance Unit
(609) 984-7609

Open Permits and Change of Owner

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. But 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 of the inspection reports, open violations, etc. should be transferred to the new permit, and the new (or old) contractors are responsible for correcting any noncompliant items identified on the old permit. The new permit application may continue to rely on the codes that were 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 Unit
(609) 984-7609

Digital Signature and Seal, Additional Information

With the May 1 adoption of rule amendments by the Board of Architects, all licensed design professionals (architects and engineers) now have the ability to seal plans electronically. The fact that design professionals are able to do this does not mean that local code officials are compelled to accept electronic signatures. We are not there yet. Many local code enforcement agencies lack the equipment and/or software to make this possible. With that said, truss drawings may be an exception to the general rule as they may be viewed more easily.

The Department now requires electronic submissions for plan review. However, paper plans, with a raised seal, are still required for all inspections. Inspectors do not have equipment in the field that would make it possible to reference electronic plans for inspection purposes. When the Department reviews and releases electronic plans, a release stamp is placed in the upper right corner. At that point, the plan is “locked” and no further amendments can be made. The design professional prints the sheet with the release stamp and supplies a paper copy with a raised seal as part of the permit application submitted to the town.

For further information regarding the use of digital seals, see the May 22 Memorandum to Construction Officials on our website at http://www.nj.gov/dca/divisions/codes/alerts/. Note that a .pdf file does not meet the requirements for the electronic sealing of plans.

Source: Code Assistance Unit
(609) 984-7609

Fire Rated Ductwork Systems and Assemblies for Ventilation

Where Fire Rated Ductwork Systems and Assemblies are proposed as an alternate to the horizontal or vertical shaft requirements, the alternate system must be at least the equivalent of that prescribed:

The applicable section of the Uniform Construction Code (UCC) is found at **N.J.A.C. 5:23-3.7, Municipal approvals of alternative materials, equipment, or methods of construction**, which states:

> "(a) Approvals: Alternative materials, equipment, or methods of construction shall be approved by the appropriate subcode official provided the proposed design is satisfactory and that the materials, equipment, or methods of construction are suitable for the intended use and are at least the equivalent in quality, effectiveness, fire resistance, durability and safety of those conforming with the requirements of the regulation.
>
> 1. A field evaluation label and report or letter issued by a nationally recognized testing laboratory verifying that the specific material, equipment, or method of construction meets the identified standards or has been tested and found to be suitable for the intended use, shall be accepted by the appropriate subcode official as meeting the requirements of (a) above."

The UCC building subcode code addresses the fire resistance rating of assemblies that are not symmetrical under **Section 703.2.1 Nonsymmetrical wall construction, "**Interior walls and partitions of nonsymmetrical construction shall be tested with both faces exposed to the furnace, and the assigned fire-resistance rating shall be the shortest duration obtained from the two tests conducted in compliance with ASTM E119 or UL 263."

Fire Rated Ductwork Assemblies:

In the case of fire rated ductwork, fire test standards ISO 6944, ISO 6944-01 or ASTM E2816 where the fire rated ducts for ventilation are tested to fire exposures may be considered equivalent to the standard-time temperature curve, as set forth for 'built-in' assemblies in ASTM E119. Under all three of these ventilation duct fire resistance test standards, there are four conditions that are necessary for fully testing the assemblies:

- Fire inside vertical
- Fire inside horizontal
- Fire outside vertical
- Fire outside horizontal

Examples of applications utilizing fire resistance ductwork systems or assemblies for ventilation may include the use of horizontal offsets as an alternate to the two-hour enclosure as currently required by the building subcode code:

- Exhaust systems (bathroom, domestic kitchen, commercial dryer, residential dryer)
- Supply air systems (make up, outside)
- Horizontal offset transitions for vertical risers
- Laboratory or hazardous exhaust systems
- Life Safety systems (stairwell & elevator shaft pressurization, smoke evacuation, smoke control)

Verification of Compliance:

- Ventilation duct testing certifications from a Nationally Recognized Testing Laboratory (NRTL) that document compliance of all four orientations;

ISO 6944 or ISO 6944-1, All 4 orientations:

- o Duct A (fire outside) Horizontal
- o Duct A (fire outside) Vertical
- o Duct B (fire inside) Horizontal
- o Duct B (fire inside) Vertical

Or, ASTM E2816, All 4 orientations:

- o Condition A (fire outside) Horizontal
- o Condition B (fire outside) Vertical
- o Condition C (fire inside) Horizontal
- o Condition D (fire inside) Vertical

Source: Michael Whalen and Thomas C. Pitcherello
Code Assistance Unit
(609) 984-7609

Quarterly State Training Fee Report Information

Most of you know me because I call about monthly building permit reports. You may now receive a call from me about training fee reports as well. These reports are submitted quarterly to the DCA along with a check. The report contains the volume of work for new construction and addition permits as well as the dollar amount for alteration permits. The quarterly report should also clearly show the amount of activity exempted from fees.

Here are some tips regarding the quarterly reports:

- The quarterly report and check are due on the 10th of the month after the quarter ends. I will call after a few weeks, and a letter will be sent a few weeks after that.
  - The first letter to the Construction Official goes out 45-60 days after the quarter ends.
  - The second letter to the Construction Official and the Mayor goes out about 30 days after the first letter.
- You must send the quarterly report ***and*** the check. If either one is missing, you are delinquent.
- The report must be signed and dated or it will not be accepted.
- ***Do not*** staple the check to the report.
- You can fax or email the report. Make sure you include my attention on the fax.
- ***Do not*** send vouchers. We ***do not*** accept them. They will be returned.
- Current Training Fee Rates:
  - .00371 per cubic foot volume for new construction and addition permits.
  - .0019 per dollar of construction for alteration permits.
  - Demolition permits do not get charged a training fee.
- Check the report before you send it. Do the math. If you have questions, call me.
- If possible, do not to combine other payments with the quarterly checks. If payments are combined, document them on the check stub.
- Even though the fiscal office may send the check, it is the responsibility of the Construction Office to make sure that the numbers add up and the DCA receives the report and check in a timely manner.

If you have problems, questions or concerns, then please do not hesitate to call. I am available from 8AM-4PM Monday through Friday, and I am here to help with anything related to the quarterly reports.

Please send the quarterly reports and checks to my attention at:
State of New Jersey
Department of Community Affairs
101 S. Broad St.
PO Box 802
Trenton, NJ. 08625

Source: Charles Pierson Jr.
PermitsNJ Technical Support
(609) 292-7899

Pool Access Handrails

The 2015 International Swimming Pool and Spa Code (ISPSC) is referenced within the International Building and Residential Codes. Chapters 4 through 10 contain the specific requirements by type of pool, while Chapter 3 contains general requirements that apply to all pools. For example, the requirements for pool barriers can found at Section 305 of the ISPSC.

One other example which the code assistance unit receives questions about is the installation of handrails. Section 323.2 states, “Where handrails are installed, they shall conform to this section,” which has the technical requirements. This means that there is another section, or sections, that contain the handrail scoping (when required) requirements. More specifically, Section 322.3.2 (handrails and handholds for ladders) and Section 322.4.3 (handrails and grab rails for recessed treads) provide the requirements for handrail installation for pool access.

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

Elimination of Six Month Inspection of Elevator Devices

Please be advised that the requirement for routine inspection (six month) of elevator devices has been eliminated. The proposed amendments to the Uniform Construction Code to bring about this change appeared in the *New Jersey Register* on July 5, 2016. The Notice of Adoption of these changes appeared in the July 3, 2017 issue of the *New Jersey Register.* A link to the notice of adoption is included below. Please note that escalators continue to require inspection every six months.

The notice of adoption may be found at http://www.nj.gov/dca/divisions/codes/codreg/pdf_rule_adoptions/elim_six_month_elev_insp.pdf. To read the rule proposal, see http://www.nj.gov/dca/division/codes/codreg/pdf_rule_proposals/PRN2016_104_DCA_5_23_12_2.pdf (or see the "July 5, 2016" row in the chart of rule proposals and adoptions posted at http://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html.)

The fee schedule at N.J.A.C. 5:23-12.6 has been adjusted to reflect this change, and a reinspection fee has been established for any device that is the subject of a Notice of Violation necessitating a reinspection.

Any questions should be directed to the Department's Elevator Safety Unit at (609) 984-7833 or elevatorsafetyunit@dca.nj.gov.

Source: Code Assistance Unit
(609) 984-7609

Public Swimming Pool Electrical Safety

Bulletin 99-1 was issued April 1999 and revised August 2008 regarding the Periodic Electrical Inspections, and "Bonding and Grounding" Certificates for Swimming Pools, Spas, and Hot Tubs (see http://www.nj.gov/dca/divisions/codes/resources/bulletins.html).

Lately, the Code Assistance Unit has been receiving questions regarding the first paragraph under "Electrical Certificate of Compliance," which states:

The electrical subcode official/inspector performs a visual (nondestructive) inspection of the electrical equipment and wiring associated with each pool, spa, or hot tub to ensure that the installation is safe, and meets the applicable requirements of the Electrical Subcode. This inspection should address all visible safety items covered by the Electrical Subcode, such as the condition of connections and terminations, GFCI protection for motors (where required), receptacles and underwater lights, the location of receptacles and switches, the location and sealing of junction boxes and deck boxes, etc. Retrofitting may be necessary to correct any deficiencies found during this inspection. Variations may be granted where retrofitting is impossible and safety is not compromised.

So, what does this mean for the GFCI protection for motors? Does the protection need to be evaluated during the visual inspection to see whether a possible upgrade is necessary based on the latest electrical subcode? The short answer is yes. In other words, if the pool motor is required to have GFCI protection, and it is not present, then it would need to be installed.

N.J.S.A. 52:27D-133.1 within the Uniform Construction Code Act defines an Electrical Certificate of Compliance as, "a document issued by the enforcing agency that verifies that all wiring located in or about the pool pump house or similar structure and associated electrical equipment is ***in compliance with the electrical subcode*** of the State Uniform Construction Code."

All items listed above would have to be upgraded if, upon a visual inspection, it is found that they do not meet the current electrical subcode. Of course, any defective conditions would have to be corrected, as well.

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

New Carbon Monoxide (CO) Detection Rules Adopted for New and Existing Buildings

The new CO detection rules were adopted June 5, 2017. They address newly-constructed buildings, buildings undergoing a rehabilitation project and buildings regulated by Subchapter 4 of the Uniform Fire Code (UFC). Please see each section of the attached links for your specific scope of work or situation. The Uniform Construction Code enforcement effective date (end of the six month grace period) is December 5, 2017. After that date, any applications for rehabilitation projects or new buildings must include CO alarms per the new rules. The effective date for enforcement in buildings regulated by Subchapter 4 of the UFC is September 3, 2017.

The proposal and notice of adoption can be found by clicking on Rule Proposals and Adoptions in the Rule Proposals and Notices of Adoption chart; go to the September 19, 2016 row within the chart at http://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html.

New Construction

The building subcode now requires CO alarms in all buildings that contain a fuel-burning appliance or fireplace or have attached garages with communicating openings into the building. Newly-installed CO alarms must receive their primary power from the building wiring and have a secondary battery backup source. Where there is no commercial power source in the building, battery CO alarms can be used. You can find corrected pages 238 and 239 (Section 915) of the 2015 New Jersey International Building Code (NJ IBC) under the BUILDING SUBCODE heading within the Adopted Codes and Standards chart; click on *Corrected pages (NJ errata) at http://www.nj.gov/dca/divisions/codes/codreg/.

Existing Buildings – Rehab Subcode

For existing buildings undergoing a rehabilitation project, the six month grace period ends on December 5, 2017. For a building undergoing a rehabilitation project, battery-powered or plug-in type CO alarms are acceptable. "When alarms are installed in lieu of detection, they shall be located such that the audible signal is not less than 15 dB above the average ambient sound level." You can find the updated pages under the REHABILITATION SUBCODE heading within the Adopted Codes and Standards chart, by clicking on NJUCC, Subchapter 6 at http://www.nj.gov/dca/divisions/codes/codreg/.

When a change in use occurs per NJAC 5:23-6.31 that involves Group I-1, I-2, I-4 or R or classrooms in Group E occupancies, systems complying with the building subcode Section 915 for new construction must be installed (battery-powered or plug-in type CO alarms are not acceptable).

Existing Buildings - UFC

The effective date for enforcement of the UFC requirements is September 3, 2017. (See N.J.A.C. 5:70-4.9 (d) for the new installation requirements.) For a building being inspected in accordance with UFC Subchapter 4, battery-powered or plug-in type CO alarms are acceptable. You can find the new requirements of NJAC 5:70-4.9 by clicking on Relationship to Uniform Construction Code after March 15, 2017 at http://www.nj.gov/dca/divisions/dfs/codes/.

Detection Systems

It is important to note that detection systems are not required. As per the above, alarms are acceptable for meeting the requirements for carbon monoxide detection. When someone wishes to install a CO detection system, the system must comply with the installation requirements of these new rules and the balance of the system must comply with NFPA 720.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

April 2017 Construction Highlights

- For the 25th month in a row, construction exceeded one billion dollars. The dollar amount of work authorized by building permits in April was $1.005 billion.
- Residential work totaled $540.8 million. This was 53.8 percent of authorized construction. New houses accounted for $243.4 million (24.2 percent).
- Edgewater in Bergen County had the most work, $46.9 million. Avalon Bay at Edgewater, a new, 240-unit development, accounted for $26.3 million.
- Edison in Middlesex County had $37.3 million of construction. $19.4 million was for a renovation of an Amazon warehouse.
- Plainsboro had $27.9 million of construction. A Life Time Fitness Center accounted for $22 million.

(continued on next page)

(April 2017 Construction Highlights)

Major Construction Indicators, New Jersey, January - April 2008 to 2017
NJ DCA, 6/7/2017

Period	Estimated cost of construction	Authorized housing units	Authorized office space (square feet)	Authorized retail space (square feet)
January - April 2017	$4,772,835,656	5,477	2,072,928	794,048
January - April 2016	5,734,978,178	9,149	1,617,303	810,587
January - April 2015	4,039,461,004	4,968	1,005,828	1,746,835
January - April 2014	3,876,038,930	6,230	1,601,420	628,231
January - April 2013	3,930,738,582	5,737	1,921,562	695,444
January - April 2012	3,390,078,746	4,208	2,415,800	646,398
January - April 2011	3,444,393,038	3,786	1,978,255	781,690
January - April 2010	2,869,962,723	3,474	1,487,311	431,806
January - April 2009	3,267,591,107	3,451	1,030,568	730,065
January - April 2008	4,877,901,636	6,720	3,086,873	3,058,145
2016-17	-$962,142,522	-3,672	455,625	-16,539
percent change	-16.8%	-40.1%	28.2%	-2.0%
2015-16	$1,695,517,174	4,181	611,475	-936,248
percent change	42.0%	84.2%	60.8%	-53.6%
2014-15	$163,422,074	-1,262	-595,592	1,118,604
percent change	4.2%	-20.3%	-37.2%	178.1%

Year to Date

- $4.772 billion was authorized by building permits between January and April. This was $962.1 million less than last year, a decline of 16.8 percent.
- New home construction is down 3,672 dwelling units (40.1 percent).
- Newark had the most activity through April. Jersey City ranks second. Two other Hudson municipalities rank among the top ten, Hoboken and Secaucus. Three Middlesex County municipalities—Edison, Woodbridge, and Sayreville—and two Bergen County localities—Paramus and Edgewater--also are among the top performers.
- The top ten localities accounted for over 20 percent of all authorized work in the State and 24.2 percent of all the new houses.

Dollar Amount of Authorized Construction, top municipalities, January - April 2017
NJ DCA, 6/7/2017

Municipality	County	Estimated cost of construction	Authorized housing units	Authorized office space (square feet)	Authorized retail space (square feet)
Newark	Essex	$189,299,087	259	140,443	2
Jersey City	Hudson	177,044,367	432	12,910	93,252
Edison Township	Middlesex	99,576,047	20	0	0
Hoboken City	Hudson	87,437,213	95	15,034	9,248
Woodbridge Township	Middlesex	82,608,382	17	1,260	9,105
Sayreville Borough	Middlesex	76,763,066	6	0	0
Parsippany	Morris	76,092,596	217	913	0
Secaucus Town	Hudson	71,557,301	6	0	0
Paramus Borough	Bergen	60,471,261	9	0	15,000
Edgewater Borough	Bergen	53,248,540	271	0	0
Top municipalities		974,097,860	1,332	170,560	126,607
New Jersey		**$4,772,835,656**	**5,477**	**2,072,928**	**794,048**
top munis as % of NJ		20.4%	24.3%	8.2%	15.9%

(continued on next page)

(April 2017 Construction Highlights)

Big permits, 2017

municpality	county	permit no.	month	year	use	activity	estm work $	sq ft	dwellings	description
Newark	Essex	20170398	02	17	R-2	NEW	$99,453,325	396,358	245	22-story apartment bldg
Sayreville	Middlesex	20170175	02	17	U	ALT	66,268,000	0	0	pump station renovation
Parsippany	Morris	20161303U	01	17	R-2	NEW	49,810,191	259,964	212	apartments
Weehawken	Hudson	20170049	02	17	R-2	NEW	43,595,250	276,199	236	Harbor Blvd apts
Newark (state review)	Essex	16-0339+C	01	17	E	NEW	33,318,000	update	0	elementary school
Vineland	Cumberland	16-60006+C	01	17	E	NEW	31,105,000	partial	0	Lincoln Av Middle School
Madison	Morris	17-008	01	17	B	ALT	30,327,748	0	0	office renovation
New Brunswick	Middlesex	16-60005+A	01	17	E	ADD	29,803,000	update	0	elementary school
Montvale	Bergen	16-00606	01	17	M	NEW	27,783,500	122,108	0	Wegmans
Union City	Hudson	20131332U	01	17	R-2	NEW	27,330,000	172,500	108	Summit Av, multifamily
Edgewater	Bergen	000020170113	04	17	R-2	NEW	26,320,000	314,404	240	Avalon Bay, 700 River Rd
Fort Lee	Bergen	20170010U	02	17	E	NEW	25,430,000	10,233	0	middle school
Bayonne	Hudson	17-01-092	01	17	R-2	NEW	24,965,556	142,815	138	Broadway apts
Jersey City	Hudson	20162394+A	01	17	R-2	NEW	24,800,001	238,050	0	NJ University dormitory
Lawrence	Mercer	000020170666	05	17	B	ALT	24,226,052	0	0	Bristol-Myers Squibb
Glassboro Boro	Gloucester	17-228	03	17	M	NEW	24,100,000	169,620	90	Rowan Univ; mixed use; 90 apts
Logan	Gloucester	20173	01	17	S-1	NEW	24,000,000	1,016,116	0	Amazon warehouse
Edison	Middlesex	00020165239U	01	17	S-1	ALT	22,480,000	0	0	warehouse, Lincoln Hwy
Plainsboro	Middlesex	00020162295U	04	17	A-2	NEW	22,035,454	117,593	0	Life Time Fitness, 700 Campus Rd
Piscataway	Middlesex	00020161357U	05	17	F-2	NEW	21,251,006	92,600	0	Colgate Palmolive, River Rd
Edison	Middlesex	00020165239U	04	17	S-1	ALT	19,407,096	0	0	Amazon warehouse
Greenwich	Warren	17-07094	05	17	S-1	ALT	18,286,800	0	0	2-story commercial renovation
Pennsville Twp	Sussex	00020170167U	03	17	E	ALT	18,000,000	0	0	Pennsville Memorial high school
Secaucus	Hudson	17-143	02	17	S-1	NEW	18,000,000	302,729	0	warehouse
Union Twp (state review)	Union	17-90042	02	17	R-2	NEW	17,280,000	112,555	0	Kean University dormitory
Somerdale	Camden	17-045	02	17	E	ALT	17,234,300	0	0	high school
Paramus	Bergen	00020161155U	02	17	I-2	ALT	16,965,785	86,764	0	assisted living
Cinnaminson	Burlington	17-00213	03	17	M	ADD	16,000,000	42,477	0	Walmart
Secaucus	Hudson	16-515+C	03	17	E	NEW	16,000,000	0	0	Hudson County vocational ed
Jersey City	Hudson	20170142	01	17	R-2	NEW	15,682,500	79,830	64	new apartments; Ocean Av
Manalapan	Monmouth	000020170205	01	17	I-2	NEW	15,668,507	99,462	0	assisted living

Source: John Lago
Code Assistance Unit
(609) 984-7609

Motor Fuel-Dispensing Facilities

There has been some confusion regarding the plan review and inspection responsibilities for the installation of motor fuel-dispensing facilities.

Chapter 4, Special Detailed Requirements Based on Use and Occupancy, of the International Building Code (IBC)/2015, New Jersey Edition, contains the requirements for Motor-Vehicle-Related Occupancies. Section 406.7, Motor Fuel-Dispensing Facilities states, “motor fuel-dispensing facilities shall comply with the IFC and Sections 406.7.1 and 406.7.2.”

Referring to N.J.A.C. 5:23-3.4, Responsibilities, the fire subcode official is responsible for both the plan review and inspection of motor fuel-dispensing facilities.

The confusion stems from the International Mechanical Code (IMC)/2015, Chapter 13, Fuel Oil Piping and Storage. This chapter regulates fuel oil and storage systems, **not** the installation of motor vehicle fuel dispensing systems. For this Chapter in the IMC/2015, the plan review for the storage system is the responsibility of the fire and plumbing subcode officials. Inspections are the responsibility of the fire subcode official for storage systems and the plumbing subcode official for piping systems.

Therefore, as stated above, for IBC/2015 Section 406.7, Motor Fuel-Dispensing Facilities, the fire subcode official is responsible for plan review and inspection.

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

Residential Smoke Alarms – Wireless Interconnection

Can battery-powered wireless interconnected smoke alarms be used for rehabilitation projects? **It depends**.

The key to good code enforcement is to read all rules pertaining to the scope of work. Underlined below are the methods that someone can use to comply with the five percent or more but less than 25 percent, or 25 percent additions of the Rehab subcode (N.J.A.C. 5:23-6.32) and the requirements of the one- and two-family dwelling subcode. Both codes require smoke alarms to have a primary AC power source, with battery back up power and they also require interconnection. While the code does require the alarms themselves to be hardwired to the AC power source, the interconnection can either be hardwired or utilize a radio signal.

Some manufacturers have developed listed smoke alarms that utilize a radio frequency (RF) signal for the interconnect portion that **can** be used in both new and existing construction. Keep in mind, however, that RF interconnected smoke alarms that only receive power from batteries are **not** permitted for these code applications.

These smoke alarms must receive their primary power from a non-switched wall or ceiling branch circuit, an overcurrent protection device (circuit breaker) is the only control that can be installed on these circuits. With that said, there are dedicated circuits in the electrical subcode (2014 National Electrical Code), Article 210.11(C), Dwelling Units, that cannot be used. These circuits are (1) Small-Appliance Branch Circuits, (2) Laundry Branch Circuits, (3) Bathroom Branch Circuits, (4) Garage Branch Circuits, or branch circuits dedicated for equipment by 110.3(B), Listed and Labeling, or 210.23, Permissible Loads. The Uniform Construction Code, at N.J.A.C. 5:23-6.8(d)2, has deleted 210.11. But if the branch circuits are code compliant, the work is not allowed to make the existing branch circuits less code compliant. All smoke alarms must be listed in accordance with UL 217. Smoke alarms do not require a dedicated AC Power Circuit and can receive their power from any AC circuit other than those listed above.

Can a complete low voltage wired or wireless household fire alarm system be used in lieu of the AC wired smoke alarms required by the code? **Yes**, as long as the system meets the requirements of the building subcode, fire protection subcode or one- and two-family dwelling subcode they can be approved and installed. (See applicable sections of each code.)

Uniform Construction Code (NJ UCC) N.J.A.C. 5:23-6.32

(f) Whenever an addition is made to a detached, single-family dwelling of Group R-3 or R-5, smoke alarms shall be installed in accordance with the following:

1. If the cumulative area of all floors of the addition(s) is 25 percent or more of the floor area of the largest floor of the existing building, smoke alarms (1) complying with the building subcode or (2) one- and two-family dwelling subcode, as applicable, shall be installed throughout the addition and the existing building. (Smoke alarms must be installed in each sleeping room, outside of the sleeping rooms within 21 feet of their doors and one on each level of the dwelling.)

2. If the cumulative area of all floors of the addition(s) is five percent or more, but less than 25 percent, of the floor area of the largest floor of the existing building, (1)hardwired, (2) interconnected smoke alarms with battery back-up meeting the requirements of NFPA 72, except as otherwise provided in the (1) building or (2) fire protection subcode or (3) (one- and two-family dwelling subcode), as applicable, shall be installed and maintained in each story in the dwelling unit, including basements. (Fire)

One- and two-family dwelling subcode (NJ IRC 2015)

R314.3 Location. Smoke alarms shall be installed in the following locations:

1. In each sleeping room.

2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.

3. On each additional *story* of the *dwelling*, including *basements* and *habitable attics* and not including crawl spaces and uninhabitable *attics*. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.

4. Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3.

(continued on next page)

(Residential Smoke Alarms – Wireless Interconnection)

R314.4 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual *dwelling unit*. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

R314.6 Power source. Smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

R314.7 Fire alarm systems. Fire alarm systems shall be permitted to be used in lieu of smoke alarms and shall comply with Sections R314.7.1 through R314.7.4.

R314.7.1 General. Fire alarm systems shall comply with the provisions of this code and the household fire warning *equipment* provisions of NFPA 72. Smoke detectors shall be *listed* in accordance with UL 268.

R314.7.3 Permanent fixture. Where a household fire alarm system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner.

R314.7.5 Monitoring. The system shall be monitored by an approved supervising station and shall be maintained in accordance with NFPA 72.

Source: Michael Whalen and Ken Verbos
Code Assistance Unit
(609) 984-7609

Gas Piping Protection – Above and Below Ground UPDATE

This is an update to an article that was printed in the CCC, 2002, Volume 14, Number 3, Page 4. It has been revised to clarify whether galvanized gas piping installed aboveground is permitted without additional factory applied coating or wrapping.

The International Fuel Gas Code (IFGC), Section 404.11, "Protection against corrosion," and the International Residential Code (IRC), Section G2415.11, state: "metallic pipe or tubing exposed to corrosive action, such as soil condition or moisture, shall be protected in an approved manner. Zinc coatings (galvanizing) shall not be deemed adequate protection for gas piping underground."

IFGC, Section 403.8, "Protective coating," and IRC, Section G2414.8, state: "where in contact with material or atmosphere exerting a corrosive action, metallic piping and fittings coated with corrosion-resistant material shall be used."

As stated in the IFGC commentary, which is not code, "protective coatings in the form of wrappings, tapes, enamels, epoxies, sleeves, casings and factory-applied coverings are a common method of isolating metallic piping materials from atmosphere ….." Zinc coating (galvanizing) would be an approved coating for aboveground gas piping only.

Therefore, any of the above protective coatings, including zinc coating (galvanizing), are acceptable methods for aboveground metallic gas piping.

Factory-applied protective coatings and wrappings, per IFGC, Section 404.11.2, and IRC, Section G2415.11.2, must be approved for the application and shall be used for gas piping underground. Approved factory-applied protective coatings and wrappings may be used for aboveground gas piping as well.

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

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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.

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Volume 29, Number 3 Fall 2017

Landings for IRC Stairways

The Code Assistance Unit has received multiple questions regarding landings for stairways. In most cases, the question relates to a stairway leading from a deck. For background, please review Sections R311.7.6, Landings for stairways, and R311.7.7, Stairway walking surface, of the 2015 International Residential Code (IRC).

The question is: Can the landing at the bottom of an exterior stairway be the ground or a gravel surface?

The answer is: Yes. The code does not regulate the type of material to be used at the landing for an exterior stairway. The code does not prohibit the ground or gravel surface serving as the landing as long as, at the time of final inspection, it complies with the required dimensions of Section R311.7.6 and the slope of Section R311.7.7.

Please note that the Uniform Construction Code (UCC) is not a maintenance code. It would be the homeowner's responsibility to maintain the landing.

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

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Sprinkler Protection of Mattresses or Upholstered Furniture Manufacturing, Sales and Storage Occupancies

Recently, the Code Assistance Unit has been receiving calls about reviewing plans for self-storage units that may be storing mattresses or upholstered furniture. Yes, we're talking about those metal structures where you can store your stuff. In some proposed buildings, designers are planning to install fire walls every 2,500 square feet so they do not have to install fire sprinkler systems. The 2015 International Building Code (IBC) does have thresholds for fire sprinklers in occupancies that have mattresses or upholstered furniture. Specifically, Group F-1 and Group S-1 have 2,500 square foot occupancy thresholds while Group M has a 5,000 square foot occupancy threshold.

The International Codes Council issued "IFC Interpretation 20-14" for the 2012 edition of the International Fire Code (IFC) referencing Section 903.2.9 of the IBC. This interpretation basically explains that, regardless of how much upholstered furniture and/or mattresses is actually stored, if one mattress is there, the entire occupancy needs to be sprinklered when the occupancy is over 2,500 square feet.

The Department respectfully disagrees with the IFC Interpretation 20-14 determination. Since the adoption of the 2015 IBC, we have been informing designers that the upholstered furniture and/or mattresses actually stored needed to be over 2,500 square feet. The IFC Committee's reason statement supports this by stating, "The proposal was modified to provide a reasonable threshold that would not penalize occupancies with very small amounts of such materials."

The 2015 IBC should be enforced as follows: When more than 2,500 square feet of mattresses or upholstered furniture are stored or used for manufacturing, the entire occupancy needs to be sprinklered. When a mercantile use displays more than 5,000 square feet of mattresses or upholstered furniture, the entire occupancy needs to be sprinklered.

Source: Michael E. Whalen
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Exit Access Stairs and Rehab

Exit Access Stairways (EAS) are a new concept that entered the International Building Code (IBC) in the 2015 edition. An EAS is defined as, "a stairway with the exit access portion of the means of egress system" and the specific requirements can be found at Section 1019. Upon review of this section, there are set parameters in which an EAS may be used as a means of egress. In new construction, this is easy to do; that is not the case in an existing building.

The Code Assistance Unit has received questions regarding an EAS in an existing building and whether a reference to Section 1019 will be incorporated into the Rehabilitation Subcode (N.J.A.C. 5:23-6). In short, it's not happening – for now. The existing building stock hasn't dealt with this new type of egress stair, and without knowing all the existing conditions of the building, especially in relation to the egress components, it would be difficult to implement. The specific requirements of Section 1019 necessitate a look at the whole building, which is not how the Rehabilitation Subcode works; N.J.A.C. 5:23-6 allows you to "put on your horse-blinders" to the rest of the building and focus on the immediate scope of the project.

Taking a look at New Building Elements, Basic Requirements (as triggered by Reconstruction), and Change of Use sections, Section 1019 was purposefully left out to avoid misapplication. Speaking of the Basic Requirements, an EAS could potentially be in conflict with the vertical opening protection requirements in the applicable [use] group.

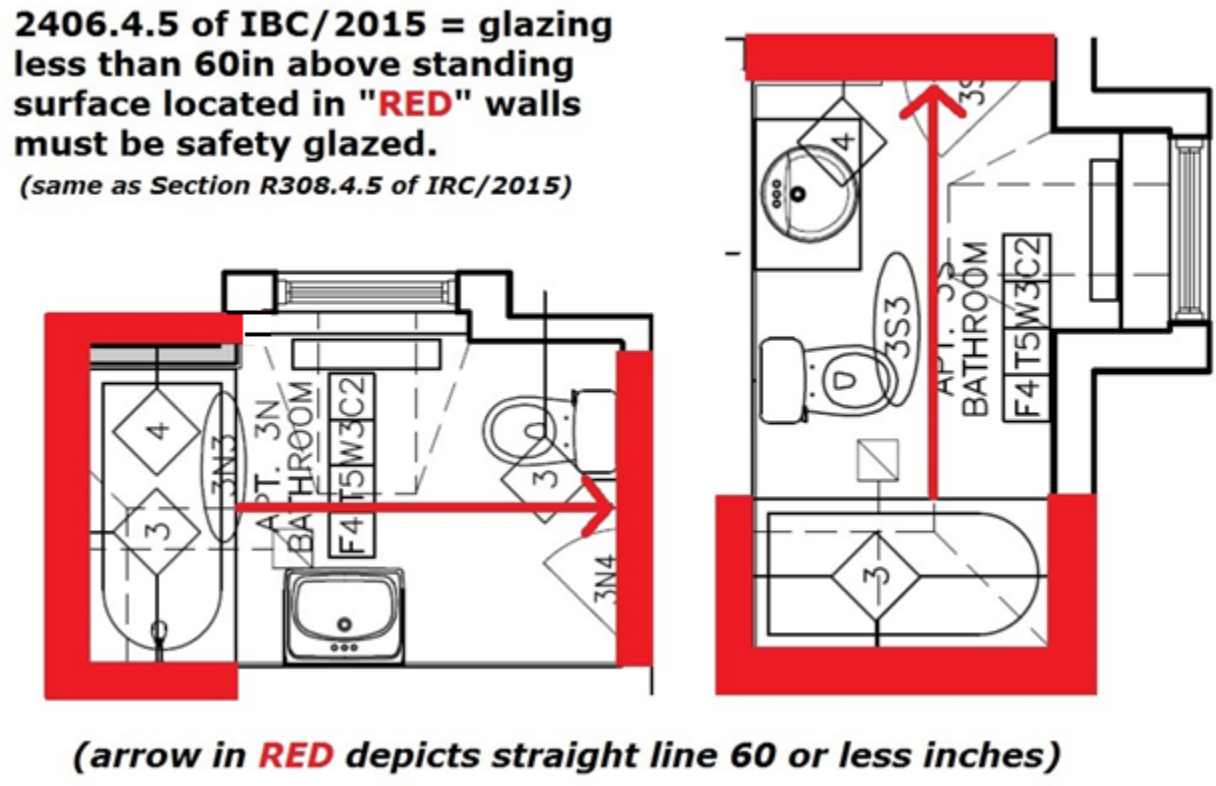
To be more specific, N.J.A.C. 5:23-6.9(a)8ii states, "[Newly created] exit stairways in buildings subject to the building subcode shall comply with Sections 1022 and 1028." When applying Section 1022.1, it states, "Exits shall comply with Sections 1022 through 1027 and the applicable requirements of Sections 1003 through 1015. An exit shall not be used for any purpose that interferes with its function as a means of egress." There is no reference to Section 1019. In the case of change of use to a higher hazard category, N.J.A.C. 5:23-6.31(c)2 does not reference Section 1019 either.

As you can see, we deliberately do not include an EAS for existing buildings. A local code official may consider a variation to allow for its use. In reviewing such an application, the construction official must ensure that the egress conditions of Section 1019 are met or that equivalent protection is provided, whatever that may consist of.

Source: Rob Austin
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Safety Glazing for Wet Locations

As code officials, we sometimes read provisions the way we wish they were written rather than the way they are actually written. That seems to be the case with the safety glazing provisions related to wet surfaces found in Section 2406.4.5 of the 2015 International Building Code. (Note that this section is duplicated in Section R308.4.5 of the 2015 International Residential Code.) The code specifically states that the need for safety glazing is for glazing that is a part of, or that faces, an enclosure of a bathtub, shower, hot tub, sauna, spa, whirlpool, or swimming pool. This means that glazing within walls that are not part of the enclosure and are not facing the above-mentioned fixtures or facilities do not need safety glazing. This principle is further reinforced in the exception to 2406.4.5 which indicates that the need for safety glazing is determined by projecting a horizontal straight line from the water's edge. Any glazing that is less than 60 inches above the walking surface and within a sixty-inch straight line from the water's edge would need safety glazing. Any glazing in the areas shown in red in the figures below would need safety glazing. For walls that are perpendicular to the water's edge, not all glazing would need to be safety glazing. Any areas <u>not</u> in red would not need to be. While we may wish that it said something different, the code only addresses forward falls. The code does not address falling out of the tub and teetering sideways. Maybe it should, but it doesn't.



Source: Michael Baier
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Replacement of a Water Heater and the Plumbing Subcode Technical Section

It has come to the Department's attention that some municipalities are not accepting the Plumbing Subcode Technical Section (F130) form for the replacement of a water heater. Instead, the municipality is requiring that a Mechanical Inspection Technical Section (F145) form be submitted. As per N.J.A.C. 5:23-3.4(d)1., the plumbing subcode official shall have responsibility for the provisions of the code, except electrical, for the installation and replacement of heating or cooling equipment, including water heaters, in existing R-3 and R-5 structures, when no mechanical inspector is assigned. In keeping with this, and in the interest of public service, municipalities should accept a properly signed and sealed Plumbing Subcode Technical Section for the replacement of a water heater.

Source: Code Assistance Unit
(609) 984-7609

Soil Erosion and Sediment Control (SESC) Act – Prior Approvals

It has been brought to the Department's attention that some municipalities are disregarding the Soil Erosion and Sediment Control Act as a prior approval. This article is written as a reminder that effective implementation of the Act depends upon cooperation between municipalities and the appropriate Soil Conservation District.

At N.J.S.A. 4:24-41(g), the Soil Erosion and Sediment Control Act defines "Project" as "any disturbance of more than 5,000 square feet of the surface area of land (1) for the accommodation of construction for which the State Uniform Construction Code would require a construction permit, except that the construction of a single-family dwelling unit shall not be deemed a "project" under this act unless such unit is part of a proposed subdivision, site plan, conditional use, zoning variance, planned development or construction permit application involving two or more such single-family units, (2) for the demolition of one or more structures, (3) for the construction of a parking lot, (4) for the construction of a public facility, (5) for the operation of any mining of quarrying activity, or (6) for the clearing or grading of any land for other than agricultural or horticultural purposes."

If a project requires a permit through the Uniform Construction Code (UCC) *and* the soil disturbance meets the definition of "project" given above, a prior approval by the Soil Conservation District is required**. A construction permit should not be issued unless a soil erosion and sediment control plan has been certified by the Soil Conservation District.** In addition, no certificate of occupancy should be issued upon completion of the project without a report of compliance from the soil conservation district. In municipalities that have a soil erosion and sediment control ordinance approved by the State Soil Conservation Committee, the required prior plan certificate and reports of compliance must be issued by the responsible municipal official. A Temporary Certificate of Occupancy may be issued only if a Report of Compliance or Report of Compliance with Conditions has been issued by the soil conservation district.

It is necessary that construction officials follow the requirements of the SESC Act. Any project not in compliance with this law that is brought to the Department's attention by a soil conservation district will be handled through the Office of Regulatory Affairs, (609) 984-7672.

Resources

Contact the appropriate soil conservation district to determine whether a project is covered by the SESC Act or for any additional information. Contact information is available online at http://www.nj.gov/agriculture/divisions/anr/pdf/soilconservationdistricts2017.pdf.

UCC Bulletin 91-2 addresses compliance with requirements of the SESC Act, and is available online at http://www.nj.gov/dca/divisions/codes/publications/pdf_bulletins/b_91_2.pdf.

Answers to frequently asked questions can be found at http://www.nj.gov/agriculture/divisions/anr/news/faq.html.

Further information may be obtained from:

State Soil Conservation Committee
New Jersey Department of Agriculture
Post Office Box 330
Trenton, New Jersey 08625-0330
Telephone: (609) 292-5540
Fax: (609) 633-7229

Source: Rob Austin
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Stories Above Grade Plane

As you should know, stories of a building are counted when they are above grade plane. This is in accordance with Section 504.4, Number of stories, of the 2015 International Building Code (IBC). This section states, "The maximum number of stories of a building shall not exceed the limits specified in Table 504.4." This table is entitled, "Allowable Number of Stories Above Grade Plane."

The question remains: how do you know whether or not the story is above grade plane? To figure this out, one must review the definitions in Section 202. Here, we start with:

STORY ABOVE GRADE PLANE - Any ***story*** having its finished floor surface entirely above ***grade plane***, or in which the finished surface of the floor next above is:

1. More than 6 feet above grade plane; or
2. More than 12 feet above the finished ground level at any point.

As you can see, this term has two other defined terms that have to be included to get the full meaning of "Story Above Grade Plane." Please note that any italicized word(s) in the International Building Code is a tip to the user to review Section 202 for the definitions. In this case, "Story" and "Grade Plane" are both italicized. These terms are defined as:

GRADE PLANE - A reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet from the building, between the building and a point 6 feet from the building.

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

Once you read all the definitions together, you can now see how many stories the building is. (If you have a Commentary book, please see figure 202(7) on page 2-13.) Exceptions to this would be: (1) basements not considered a story above grade; (2) mezzanines; (3) habitable attics in Group R-5; and (5) the applicable provisions of Section 510.

Source: Rob Austin
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Flood Resistant Materials Usage Revisited – Update

(originally printed in the Spring/Summer 2014 edition)

The 2014 Spring/Summer CCC contained a similar article regarding the permitted materials used for flood resistance based on the 2009 International Residential Code (IRC). With the adoption of the 2015 IRC, Section R322.1.8 has been revised. The section used to have two criteria that had to be met, but now there is only one: FEMA's Technical Bulletin #2 (TB-2). In other words, item #1 from the 2009 IRC was deleted and item #2, TB-2, became the only item required in the 2015 IRC.

However, the logic of height application has not changed. As stated in the previous article, when combining R322.2.1 of the 2015 IRC and NJ Department of Environmental Protection (DEP)'s regulations at N.J.A.C. 7:13, TB-2 is to be applied to all items below the design flood elevation (DFE). The DFE is the base flood elevation (BFE) and at least one additional foot per DEP regulations. In the event that a municipality has adopted a "freeboard" greater than one foot, then the DFE becomes the BFE plus freeboard.

References:

- 2014 S/S CCC - http://www.nj.gov/dca/divisions/codes/publications/ccc.html
- R322 of 2015 - http://codes.iccsafe.org/app/book/toc/2015/New_Jersey/residential/index.html
- FEMA TB-2 - https://www.fema.gov/media-library/assets/documents/2655

Source: Rob Austin
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(609) 984-7609

2015 I-Code Flood Hazard Construction – DEP Revisions – Update

(originally published in the Fall 2015 edition)

Previous editions of the International Building Code and Residential Code (IBC and IRC, respectively) adopted by New Jersey differed in flood resistant standards regarding Coastal A flood zones. With the adoption of the 2015 edition of these codes on September 21, 2015, the Coastal A flood zone is one and the same regardless of whether the project is under the IBC or the IRC. The 2015 IRC has now aligned its Coastal A flood zone requirements with the V flood zone requirements (this was already the case in previous editions of the IBC). In short, whether using the 2015 IBC or IRC, a foundation in a Coastal A flood zone is required to meet the same requirements as a V zone.

The rule applies to new construction and those property owners whose properties were "substantially damaged/improved." A structure is considered substantially damaged if the cost of restoration equals or exceeds 50 percent of the market value of the structure prior to the damage; this determination is made by the local floodplain administrator. Substantially improved means improvement(s) of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement.

Keeping in mind that DEP's existing rules already contain a mandatory 1-foot freeboard*, which is maintained within NJAC 7:13, and applies to the lowest floor of the home or building, the question remains, how does this interface with the Uniform Construction Code (UCC), NJAC 5:23? The quick answer is to see your local floodplain administrator as he or she will let you know the elevation and the flood zone applicable to the home or building in question. Under the UCC, this is handled through the prior approval process. Previously, the DEP rules only used "lowest floor" and the UCC, by means of referenced model codes and standards, used this term and "lowest supporting horizontal structural member". This has been remedied with DEP's July 17, 2017 adoption of revisions to the Flood Hazard Area Control Act rules. "Lowest floor" now includes a reference to lowest horizontal structural member (see NJAC 7:13-1.2 at *http://www.nj.gov/dep/rules/rules/njac7_13.pdf* for definition of Lowest Floor). In short, the revisions harmonize NJAC 7:13 and the Uniform Construction Code, NJAC 5:23, regarding this issue and should minimize confusion when applying the two sets of rules. Provided below is the boiled-down version of the interaction between the rules.

* Note – Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. (*http://www.fema.gov/freeboard*)

Combining DEP's newly-revised rules and the UCC's existing requirements allows for the determination of the Design Flood Elevation (DFE). The breakdown of the elevation requirements in a flood zone per the 2015 IBC and IRC is as below.

		IRC[a]	IBC[b]			
			Cat 1	Cat 2	Cat 3	Cat 4
A zone	Elevation of the lowest floor[c]	BFE +1 ft	BFE +1 ft	BFE +1 ft	BFE +1 ft	BFE +2 ft
Coastal A zone and V zone	Elevation of the bottom of lowest supporting horizontal structural member of lowest floor[c]	BFE +1 ft	BFE +1 ft	BFE +1 ft	BFE +2 ft	BFE +2 ft

a – Per Sections R309.3/IRC and R322.2.2/IRC and Section 1.5.2/ASCE 24, attached and detached enclosed areas used solely for parking of vehicles, building access or storage may be below the BFE.
b – Category classifications are from Table 1-1 of the ASCE 24-14 (see attached).
c – Minimum elevations are based on the model codes adopted by NJAC 5:23, in combination with NJAC 7:13; municipalities may adopt local ordinances for greater freeboard which increases the DFE.

There actually are three entities involved in the enforcement of requirements for elevation of structures in identified flood hazard areas:

- The local floodplain administrator is responsible for the enforcement of the municipal flood ordinance. These ordinances are adopted as a condition of the municipality's participation in the National Flood Insurance Program. (It should be noted that municipalities may choose to adopt requirements for higher elevations.) DEP provides a model flood ordinance at: *http://www.nj.gov/dep/floodcontrol/modelord.htm.*
- DEP is responsible for enforcement of the State's Flood Hazard Area Control Act rules, NJAC 7:13. Under NJAC 7:13, if a home or building is being raised or reconstructed in the original footprint, DEP's "permit by rule" allows construction to proceed without a separate review or approval from DEP. This same rule allows for an increase in the footprint of up to 300 square feet under the permit by rule provisions, which is helpful in terms of additional steps or ramps necessary to access elevated buildings. Other construction in a flood hazard area requires approval from DEP.
- The local construction official is responsible for enforcement of the UCC, including the elevation requirements described above.

(continued on next page)

(2015 I-Code Flood Hazard Construction – DEP Revisions – Update)

ASCE 24-14 Table 1-1, Flood Design Class of Buildings and Structures	
Category	Use or Occupancy of Buildings and Structures
1	Buildings and structures that normally are unoccupied and pose minimal risk to the public or minimal disruption to the community should they be damaged or fail due to flooding. Flood Design Class 1 includes: (1) temporary structures that are in place for less than 180 days; (2) accessory storage buildings and minor storage facilities (does not include commercial storage facilities); (3) small structures used for parking of vehicles; and (4) certain agricultural structures. [Note (a)]
2	Buildings and structures that pose a moderate risk to the public or moderate disruption to the community should they be damaged or fail due to flooding, except those listed as Flood Design Classes 1, 3, and 4. Flood Design Class 2 includes the vast majority of buildings and structures that are not specifically assigned another Flood Design Class, including most residential, commercial, and industrial buildings
3	Buildings and structures that pose a high risk to the public or significant disruption to the community should they be damaged, be unable to perform their intended functions after flooding, or fail due to flooding. Flood Design Class 3 includes: (1) buildings and structures in which a large number of persons may assemble in one place, such as theaters, lecture halls, concert halls, and religious institutions with large areas used for worship; (2) museums; (3) community centers and other recreational facilities; (4) athletic facilities with seating for spectators; (5) elementary schools, secondary schools, and buildings with college or adult education classrooms; (6) jails, correctional facilities, and detention facilities; (7) healthcare facilities not having surgery or emergency treatment capabilities; (8) care facilities where residents have limited mobility or ability, including nursing homes but not including care facilities for five or fewer persons; (9) preschool and child care facilities not located in one- and two-family dwellings; (10) buildings and structures associated with power generating stations, water and sewage treatment plants, telecommunication facilities, and other utilities which, if their operations were interrupted by a flood, would cause significant disruption in day-to-day life or significant economic losses in a community; and (11) buildings and other structures not included in Flood Design Class 4 (including but not limited to facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, hazardous waste, or explosives) containing toxic or explosive substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released. [Note (b)]
4	Buildings and structures that contain essential facilities and services necessary for emergency response and recovery, or that pose a substantial risk to the community at large in the event of failure, disruption of function, or damage by flooding. Flood Design Class 4 includes: (1) hospitals and health care facilities having surgery or emergency treatment facilities; (2) fire, rescue, ambulance, and police stations and emergency vehicle garages; (3) designated emergency shelters; (4) designated emergency preparedness, communication, and operation centers and other facilities required for emergency response; (5) power generating stations and other public utility facilities required in emergencies; (6) critical aviation facilities such as control towers, air traffic control centers, and hangars for aircraft used in emergency response; (7) ancillary structures such as communication towers, electrical substations, fuel or water storage tanks, or other structures necessary to allow continued functioning of a Flood Design Class 4 facility during and after an emergency; and (8) buildings and other structures (including, but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, or hazardous waste) containing sufficient quantities of highly toxic substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released. [Note (b)]
Note (a) - Certain agricultural structures may be exempt from some of the provisions of this standard; see ASCE 24-14 Section C1.4.3. Note (b) - Buildings and other structures containing toxic, highly toxic, or explosive substances shall be eligible for assignment to a lower Flood Design Class if it can be demonstrated to the satisfaction of the authority having jurisdiction by a hazard assessment as described in ASCE 7-10 Section 1.5.3 of Minimum Design Loads for Buildings and Other Structures that a release of the substances is commensurate with the risk associated with that Flood Design Class.	

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

Ceiling Heights in Existing Homes

Are you really allowed to finish a basement for habitable purposes even if the ceiling is below 7-feet? The short answer is yes.

All projects undertaken in existing buildings, including homes of Group R-5, are required to start the construction code journey by visiting the Rehabilitation Subcode, N.J.A.C. 5:23-6, first. There, it will state what portions of new code apply based on the scope of the project. Since the "finishing of a basement" is an Alteration per N.J.A.C. 5:23-6, sections 6.2 (scope of project), 6.6 (alteration), 6.8 (materials and methods) and 6.9 (new building elements) are applicable.

If this were new construction, Section R305.1, Minimum Height, of the International Residential Code/2015 would require a minimum ceiling height of 7-feet for habitable space, hallways and portions of basements containing these spaces. In considering basements, it is important to note that exception #3 permits new basements containing habitable space to have beams, girders, ducts or other obstructions to project to within 6 feet 4 inches of the finished floor.

However, this article is for existing basements, and Section R305.1 is not listed at N.J.A.C. 5:23-6.8(h) as a material and method, nor is it listed as a basic requirement within N.J.A.C. 5:23-6.27 by means of N.J.A.C. 5:23-6.6(h). This means that an existing basement at, for example, 6'7" could be finished with a ceiling at or near this height. I say "near" because there would have to be some allowance for building materials to fur/stud-out the ceiling for finished materials. This is also why I make note of exception #3 from Section R305.1, as there may be some instances where the space may be in compliance with the new code when finishing the basement.

Source: Rob Austin
Code Assistance Unit
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Reconstruction Definition and De Minimis Example

For those of you trying to apply the definition of reconstruction to a 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 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 new code. The design professional would certify that the existing foundation can be used for the new home installed (above).

Source: Rob Austin
Code Assistance Unit
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Horizontal Building Separation Allowance

Section 510.2, Horizontal building separation allowance, of the 2015 International Building Code (IBC) permits a building to be considered as separate and distinct buildings for the purpose of determining area limitations, continuity of fire walls, limitation of number of stories, and type of construction where the listed six conditions are met. In the previously referenced New Jersey edition, the 2009 IBC, there were seven conditions to be met; this was the same for the 2012 IBC, which New Jersey never adopted.

(continued on next page)

(Horizontal Building Separation Allowance)

The 2015 IBC "lost" condition #2 as indicated by a "←" in the margin to demonstrate that it was deleted. As a reference, in the 2009 IBC, condition #2 stated, "The building below the horizontal assembly is no more than one story above grade plane." To find out why this condition was deleted, we would need to consult the "archived" International Code Council's (ICC) code development cycles at https://www.iccsafe.org/codes-tech-support/codes/code-development/code-development-archives/.

Since the condition was removed from the 2012 IBC, researching the 2012/2014 cycle provides the answer at the change listed at G133-12. Here are the proponents' reasoning statements, which obviously were good enough for the change to be approved for the 2015 IBC:

- (Klein) Item #2 of Section 510.2 is an antiquated section of the Code that was a carryover from the legacy 1997 UBC Section 311.2.2.1, "Group S, Division 3 with Group A, Division 3; Group B, Group M or R, Division 1 Occupancy above". Under this section of the UBC the occupancies permitted below the 3 hour fire rated horizontal separation (i.e. parking garage, B, M and A-3 occupancies) were not required to be sprinklered. In the 2009 IBC, we revised the requirements under this Section of Code to require the building below the 3 hour fire rated horizontal separation to be sprinklered per Section 903.3.1.1 (NFPA 13) (See 2012 IBC Section 510.2(6)). Therefore, to limit the building under Section 510.2 that is of Type 1A Construction Type and sprinklered makes no sense anymore, and limits the use of this section of Code in major urban renewal areas of the US.

  From a life safety/fire protection standpoint, permitting the Type 1A portion under the 3 hour horizontal separation to go to any number of stories, is an equal or better type of construction that is permitted by this section of code under Section 510.2(7) [of the 2012 IBC]. Section 510.2(7) permits the building(s) above the Type IA portion to be a maximum height in feet not to exceed the height limits set forth in Section 503 for the "…building having the smaller allowable height as measured from the grade plane…". Therefore, a project built under Section 510.2 can presently have above the Type IA portion an R-2 occupancy, sprinklered per NFPA 13R, 4 story, Type 5A, maximum of 60' above grade plane (or an R-2 occupancy, sprinklered per NFPA 13, 4 story, Type 5A, maximum of 70' above grade plane). However, *if Item #2 is deleted, then as the Type IA portion is increased in its number of stories above grade plane, the portion above is still limited by Item #7's height limitation [of the 2012 IBC] and its "height footprint" is being reduced.* The net effect is that because this section of the Code will not permit more stories for the Type IA Construction Type, sprinklered portion of the project, the net effect is the reduction of the height of the portion of the project that is of a lesser construction type that is above the Type IA portion. Therefore, from a life safety/fire protection standpoint, we have an equal or better code requirement that is more flexible to provide for the needs of our urban needs to bring people back into our major cities to live and work.

- (Thompson) Section 510.2 of the IBC has requirements to allow buildings with certain occupancies to be constructed with mixed construction types by using what is commonly referred to as pedestal construction where a building of a lesser type of construction is permitted to be built on top of a building of Type IA construction and the different types of construction are allowed to be considered separate buildings. This method of construction is allowed provided specific criteria are met including the installation of a 3 hour horizontal assembly that acts as a de facto "fire wall" separating the two buildings from vertical fire exposure (Item 1) and by limiting the total building height to the maximum height permitted in Table 503 for the lesser construction type (Item 7). However, the present code limits the height of the Type IA portion of the building below the 3 hour horizontal assembly to a single story above grade plane (Item 2).

  Type IA is the most stringent construction type in the IBC from a fire resistance and noncombustibility point of view. According to Table 503, except for Group H-1 and H-2 occupancies, all other occupancies in buildings of Type IA construction are permitted to be of unlimited height and area due to the inherent fire safety provided by the most fire resistive construction type. However, Item 2 in Section 510.2 limits the Type IA building serving as the base of the pedestal construction to one story in height. *This code change proposes to delete the one story limitation for the Type IA building portion of the pedestal construction. This will allow the Type IA building serving as the base of the pedestal construction to be multiple stories while still maintaining the total building height limit in Item 7 of Section 510.2 [of the 2012 IBC] which is based on the construction type of the lesser type of construction built on top of the Type IA pedestal.* This makes good sense since the more stories of Type IA construction allowed above the grade plane, the less potential stories of combustible construction with less fire resistance there will be in the building above.

Hopefully the italicized/underlined text above sheds some light on why this provision was deleted.

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

Reliable Power Source for Fire Pumps

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

To analyze whether 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.

> **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 that 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 2014 National Electrical Code Article 695 and 2013 edition of NFPA 20 are the codes and standards which reference reliable power sources for fire pumps.

The related sections in the 2014 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 2013 edition of NFPA 20 and its Annex A for an explanation of reliable power source. Annex A is explanatory material, not code, and 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 20/2013 Section 9.3 **Alternate Power** specifically Section **9.3.2 Other Sources**, refers you to Annex A, A.9.3.2 "A reliable power source should possess the following characteristics."

(continued on next page)

(Reliable Power Source for Fire Pumps)

- **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.
    - 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 to connect the pumper to the fire department connection, then, if warranted, he/she calls the electric utility to cut power to prevent electrocution of the fire personal. Regardless of whether 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 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 a reliable power source.

Sources: Michael E. Whalen, Code Assistance Unit, (609) 984-7609
Kenneth W. Verbos, Office of Regulatory Affairs, (609) 984-7768

Lighting System Replacements

The Alteration and Reconstruction sections of the Rehabilitation Subcode contain requirements when the scope of the project is the total replacement of a building lighting system. As per N.J.A.C. 5:23-6.6(e) and 6.7(e), commercial buildings would be required to comply with Section 9.1.2, lighting alterations, of the ASHRAE Standard 90.1-2013.

There have been questions regarding what this section of the ASHRAE Standard means when it states "the automatic shutoff requirements of Section 9.4.1.1." For those of you who are familiar with Section 9.4.1.1, it contains a smattering of interior lighting control requirements and options (e.g. letters a through i). Note that Section 9.1.2 scopes only the automatic shutOFF requirements. This means that only the "OFF" provisions of Section 9.4.1.1 apply when meeting Section 9.1.2. To be specific, letters g, h and I would be required (automatic partial OFF, automatic full OFF and scheduled shutoff, respectively).

Hopefully this is helpful to those who are dealing with total replacement lighting systems in a commercial building. As a reference, a "lighting system" is defined by the commercial energy code as "a group of luminaires circuited or controlled to perform a specific function."

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

Building Cavity Usage – Energy

For those of you who are designing, installing, reviewing, or inspecting HVAC systems in one- and two-family dwellings, or multi-family dwellings three stories or less in height, please be aware of a difference between sections in the code. Spoiler alert – the more restrictive section applies.

Consider the International Residential Code/2015 (IRC/2015) having a split personality. In this case, Chapter 16 and Chapter 11 are having an argument over how to use cavities created in the building.

Chapter 16 of the IRC/2015, by means of Section M1601.1.1, Above-ground duct systems, Item 7.1, says, "I do not allow for stud wall cavities and the spaces between solid floor joists to be used as plenums for supply air."

"Not so fast," says Chapter 11 of the IRC/2015. "My Section N1103.3.5, Building cavities, states that building framing cavities shall not be used as ducts or plenums for supply or return. And, our friend, the International Energy Conservation Code/2015, agrees with me at Section R403.3.5, Building cavities (mandatory)."

To put this argument to rest, the more restrictive requirement at Section N1103.3.5 is to be applied. This means building framing cavities cannot be used as a supply duct/plenum nor can they be used as a return duct/plenum.

On a more serious note, this change first appeared in the 2012 edition of the codes. It's based on EC109-09/10, https://cdn-web.iccsafe.org/wp-content/uploads/IECC1.pdf, which became code text for the 2012 edition. The text remained for 2015 and remains for 2018. The code change is included below to better show the rational for the change in the energy conservation provisions.

EC109–09/10
403.2.3; IRC N1103.2.3

Proponent: Ronald Majette, representing US Department of Energy

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IECC COMMITTEE. PART II WILL BE HEARD BY THE IRC BUILDING/ENERGY COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IECC

Revise as follows:

403.2.3 Building cavities. Building framing cavities shall not be used as ~~supply~~ ducts or plenums.

PART II – IRC BUILDING/ENERGY

Revise as follows:

N1103.2.3 Building cavities. Building framing cavities shall not be used as ~~supply~~ ducts or plenums.

Reason: It is difficult to effectively use building framing cavities within the building envelope due to insulation requirements for the ducts and the thermal envelope and the difficulty in sealing them against air leakage. This is the basis for the current requirement in the code for supply ducts. Other than a lower temperature in return ducts their negative pressure in relation to the outside environment can and will draw unconditioned air into the HVAC system, increasing loads on the HVAC equipment and inducing building infiltration/exfiltration unless the cavities can be effectively sealed. Just as cavities are not allowed for supply due in part to the difficulty in sealing they should also be precluded from being used as part of the return air duct system.

Cost Impact: The code change proposal may increase or decrease the cost of construction depending on the builder's choices with regard to duct system design, construction and location compared to previous expenses involved with framing, enclosing, and sealing building cavities as part of the duct system.

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

Board of Examiners of Electrical Contractors FAQs

As a reminder, the Division of Consumer Affairs ("other DCA") within the Department of Law and Public Safety licenses electrical contractors. Their website offers "frequently asked questions" at http://www.njconsumeraffairs.gov/elec/Pages/FAQ.aspx. The following are two questions that the Code Assistance Unit gets often that this website answers:

#9 - Does New Jersey offer a "low voltage" electrical license, or any other category of "limited" electrical license, as an alternative to meeting the qualifications needed to obtain an electrical contractor's license?

(continued on next page)

(Board of Examiners of Electrical Contractors FAQs)

No. The electrical contractor license is the only category of electrical license available in New Jersey.

Anyone interested in performing any type of electrical work in New Jersey should fully familiarize themselves with N.J.S.A. 45:5A-18 "Exempt work or construction". There you will find details regarding "Electrical work or construction which…shall not be included within the business of electrical contracting so as to require the securing of a business permit…". Generally speaking, unless the electrical work you are interested in performing is covered within this section, an electrical contractor's license is required. Of particular note is N.J.S.A. 45:5A-18(j) "Any work with a potential of less than 10 volts". Again, generally speaking, electrical work with a potential of 10 or more volts is not exempt from licensing requirements.

#10 - What is a limited telecommunications wiring exemption and how do I obtain an application?

In essence, any work other than wiring for voice and/or data transmission is not within the permissible scope of work for the holder of a limited telecommunications wiring exemption. A limited telecommunications wiring exemption should never be construed as authorization to perform what is often erroneously referred to as "low voltage" electrical work.

Pursuant to N.J.A.C. 13:31-4.1(b), "telecommunications wiring" means wiring within a premises, either inside or outside a building for voice and/or data transmission at voltage(s) compatible with the system being installed and connected to an F.C.C.-recognized communication network at the point of connection provided by the public utility providing communication services to the customer. It shall also include the interconnection of data wiring between computers and/or terminals.

The applicable Statutes may also be found on this website. For example, by clicking on Laws and Regulations and then selecting Electrical Contractor Statutes (http://www.njconsumeraffairs.gov/Statutes/electricalcontractorlaw.pdf), one can find NJSA 45:5A-18. This is where it provides exemptions to the licensing law, such as a homeowner doing work in their home. To get an official interpretation of these rules and regulations, you may contact the Board's office at (973) 504-6410 or send an email at askconsumeraffairs@dca.lps.state.nj.us.

Source: Code Assistance Unit
(609) 984-7609

Bulletin 95-1A through D Updates

Bulletin 95-1, which is divided into four separate bulletins (95-1A, 1B,1C, and 1D), has been updated. Each bulletin deals with either the installation or the removal/abandonment of certain types of tanks. The bulletins can be found online at: http://www.nj.gov/dca/divisions/codes/resources/bulletins.html. This article provides a brief overview of the changes made to each bulletin.

Bulletin 95-1A, which addresses the installation of residential heating oil tanks and other heating oil tanks under 2,001 gallons, corrects the outdated references to the Mechanical Subcode and the International Residential Code (IRC). It also provides updated information on cathodic protection systems and provides additional resources for corrosion protection.

Bulletin 95-1B addresses when residential heating oil tanks and other heating oil tanks under 2,001 gallons need to be abandoned or removed, who is responsible for inspection, and how tanks are to be abandoned or removed. This bulletin has been revised to reflect current regulations and to address comments from the Department of Environmental Protection (DEP). Most notably, the Bulletin contains the provisions for how to abandon heating oil tanks from the International Fire Code (IFC), the American Petroleum Institute (API), and the National Fire Protection Association (NFPA) 30, in accordance with N.J.A.C. 5:23-3.6. The revisions also cite N.J.A.C. 5:23-3.4, which gives the fire subcode official responsibility for both plan review and inspections.

Revisions to Bulletin 95-1C, regarding the installation of underground storage tanks regulated by DEP, update references to DEP's rules. The revisions also update the required checklist for the installation of underground storage tanks regulated by DEP to clarify and to align the checklist with current regulations.

Bulletin 95-1D, which addresses the abandonment or removal of underground storage tanks regulated by DEP, has been revised to reflect DEP's current rules and practices. The checklist for the closure of underground storage tanks regulated by DEP was also revised to update references to NFPA 30 and the American Petroleum Institute's Bulletin 1604.

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

NJ Licensed HVACR Contractor and Electrical Work

There seems to be some confusion as to what electrical work a New Jersey Licensed HVACR contractor can perform when replacing mechanical refrigeration equipment (condensing unit), whether residential or commercial. This would also apply to heating equipment.

Based on N.J.A.C. 13:32A, State Board of Examiners of Heating, Ventilating, Air Conditioning, and Refrigeration Contractors, N.J.A.C. 13:32A-1.2, Definitions, item 10 states: "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."

Please note that the definition of "Replacement" means a change of equipment with the same type or similar equipment.

A New Jersey Licensed HVACR contractor can connect the wiring from the replacement equipment to the equipment service disconnect box for replacements **only**. There is nothing in the regulations that states whether the equipment is single phase or three phase, so either would be permitted to be connected to the disconnect box for replacements. The disconnect box cannot be changed or replaced by the HVACR contractor. The disconnect box must be replaced by a New Jersey Licensed Electrical contractor.

An electrical technical section and inspection would be required for the replacement. The HVACR contractor is permitted to sign the electrical technical section as an exempt applicant. The HVACR contractor should also seal the technical section with their HVACR seal.

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

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Volume 29, Number 4 **Winter 2017**

The Winter Communicator: A Reminder

The final (Winter) issue of the *Construction Code Communicator* each year now consists of a collection of Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year. This year, we are including articles that were printed in earlier editions of the *Construction Code Communicator* on topics that continue to generate questions. As noted on the last page, once this edition of the *Construction Code Communicator* has been posted, these individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from those sections of Division's website. There is one exception; the materials related to Superstorm Sandy will remain in place. In short, there are no new articles in this issue.

Please note that, although the documents will be removed from the Alerts and Hot Topics, they will still be accessible through the Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

Also, the indices for all issues of the *Construction Code Communicator* 2017 are included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain new articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year with previously printed articles where the topic continues the generate questions.

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at Emily.Templeton@dca.nj.gov.

Source: Emily W. Templeton
Division of Codes and Standards

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Weyerhaeuser TJI Joists with Flak Jacket Protection – Guidance

(Memorandum to Construction Officials – August 30, 2017; Updated Information email – October 6, 2017, superseded by email update – November 6, 2017)

The first memorandum, issued on August 30, provided guidance on how to address the administrative and technical code issues involved with remediation of TJI Joists with Flak Jacket Protection. On October 6, after receiving a revised ICC-ES report, a message was sent to Code Officials advising that the top coating (W20115) paint applied would meet the requirements of Section R302.13 of the International Residential Code (IRC). The Department was then made aware of multiple problems occurring with the Flak Jacket protection. The email sent on November 6, 2017, below, supersedes the October 6, 2017 email and advises that the guidance in the August 30 memorandum should be followed.

From: Codes and Standards Information
Sent: Monday, November 06, 2017 11:57 AM
Subject: Weyerhaeuser TJI Joists with Flak Jacket Protection update

It has been reported to the Department that problems have occurred with the Flak Jacket protection: both cracking or delaminating of the Flak Jacket protection due to exposure to weather (unrelated to the remediation) and cracking or flaking of the top coating (W20115 paint) applied to address the formaldehyde emissions. Because the testing performed for the ICC-ES report (ESL-1091) did not involve coating with cracks or other damage, it is not known whether this cracking impacts fire protection. Accordingly, the guidance issued on August 30 should be followed. Compliance with the requirements of Section R302.13 of the IRC/2015 should be required.

October 6, 2017 message (below) superseded except for August 30, 2017 memo:
As a follow up to the memo from Director Edward Smith dated August 30, 2017, please be advised that a revised ICC-ES report (ESL-1091) has been issued. Accordingly, TJI joists with Flak Jacket protection and the top coating (W20115 paint) applied may be accepted as meeting the requirements of Section R302.13 of the IRC.

A link to the newly-revised ICC ES report is included below:
http://www.icc-es.org/Reports/pdf_files/load_file.cfm?file_type=pdf&file_name=ESL-1091.pdf

A link to the August 30 memo is included below for your convenience:
http://www.nj.gov/dca/divisions/codes/alerts/pdfs/TJI_Flak_Jacket_Guide.pdf

Should you have any questions, please contact the Code Assistance Unit at codeassist@dca.nj.gov or (609) 984-7609.

Source: Edward M. Smith, Director, Division of Codes and Standards

Swimming Pool Barriers Revisited

(Originally published Winter 2008)

Many of you may remember the confusion created when the 1993 Building Officials and Code Administrators National Building Code was amended to include requirements for swimming-pool barriers. There have been many telephone calls made, letters written, and *Construction Code Communicator* articles published on this topic.

After hours of debate, this article is intended to clarify one of the more contentious issues that has arisen: "is it permissible to share a swimming-pool barrier with my neighbor?"

The opinion of the Department is "yes." It is permissible to share a swimming-pool barrier, provided the local authority having jurisdiction grants a variation to do so. The variation should include a statement from the fence owner acknowledging use of his fence as a swimming-pool barrier and a statement from the pool owner acknowledging his responsibility to install a compliant barrier should the neighbor remove his fence for any reason. The barrier should not be climbable, as per code, from the side away from the swimming pool; and if there is a swimming pool on both sides of the barrier, the barrier should not be climbable from either side.

This should solve many of the problems before us as code officials on the subject. We believe this solution is reasonable and protects the public at the same time. Should you have any questions on this article, please contact the Code Assistance Unit at (609) 984-7609.

Source: Code Assistance Unit
(609) 984-7609

Registered Architects – Digital Signature and Seal, Additional Information

(Memorandum to Construction Officials – May 22, 2017)

As of May 1, 2017, digital signing and sealing has now been extended to Registered Architects. Previously, digital signing and sealing was only allowed by rule for Professional Engineers (adopted 11/16/15).

Pursuant to the rules adopted by the Board of Architects, digital sealing at N.J.A.C. 13:27-6.5(a)1., the digital signature and seal must be:

i. Unique to the licensee;
ii. Verifiable by a trusted third party or some other approved process as belonging to the licensee;
iii. Under the licensee's direct and exclusive control; and
iv. Linked to a document in such a manner that the digital signature and seal is invalidated if any data in the document is [sic] changed. Once the digital signature and seal are applied to the document, the document shall be available in read-only format if the document is to be digitally transmitted.

The rules may be accessed at:
Proposal/Adoption: http://www.nj.gov/dca/divisions/codes/alerts
Board of Architects: http://www.njconsumeraffairs.gov/arch/Pages/regulations.aspx

Clicking on or sliding the cursor over a digital signature and seal causes a box or a window to pop up with additional information, including the name of the software company. Any electronic submissions should bear such a digital seal.

The bottom line is that paper submissions must have a pressure seal. Electronic submissions must have a digital seal. This means that nothing requiring a seal should be sent via facsimile.

Source: Code Assistance Unit
(609) 984-7609

Elevator "Routine (six-month) Inspections" Eliminated

(Letter to Code Officials – June 1, 2017)

Please be advised that the requirement for routine inspections (six month) of elevator devices has been eliminated. The proposed amendments to the Uniform Construction Code to bring about this change appeared in the *New Jersey Register* on July 5, 2016. The Notice of Adoption to these changes will appear in the July 3, 2017 issue of the *New Jersey Register.* A link to the proposed rule is included below. Please note that escalators continue to require inspection every six months.

http://www.nj.gov/dca/divisions/codes/codreg/pdf_rule_proposals/PRN2016_104_DCA_5_23_12_2.pdf (or see the "July 5, 2016" row in the chart of rule proposals and adoptions posted at http://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html. The Notice of Adoption is available in the chart.)

The fee schedule at N.J.A.C. 5:23-12.6 has been adjusted to reflect this change. A reinspection fee has been established for any device that is the subject of a Notice of Violation necessitating a reinspection.

Questions should be directed to the Department's Elevator Safety Unit at (609) 984-7833 or elevatorsafetyunit@dca.nj.gov.

Source: Elevator Safety Unit
(609) 984-7833

2017 Proposals and Adoptions

The following is a list of the 2017 proposals and adoptions. This list, with previous years included, can be found at http://www.nj.gov/dca/divisions/codes/codreg/ by scrolling to "Rule Proposals and Adoptions."

Posted in NJ Register	Subject	Submit Comments by:	Adoption Date*
Oct 16, 2017	Notice of Administrative Correction - UCC; Rehabilitation Subcode N.J.A.C. 5:23-6.4, 6.5, 6.6 and 6.7	N/A	Oct 16, 2017
Sept 05, 2017	Notice of Readoption - Liquefied Petroleum Gas Readoption: N.J.A.C. 5:18	N/A	Sept 05, 2017
Sept 05, 2017	Notice of Readoption - Rules for Proprietary Campground Facility Health and Safety Standards Readoption: N.J.A.C. 5:10A	N/A	Sept 05, 2017
Sept 05, 2017	Notice of Readoption - Lead Hazard Evaluation and Abatement Code Readoption: N.J.A.C. 5:17	N/A	Sept 05, 2017
Sept 05, 2017	Notice of Readoption - Condo, Fee Simple, Cooperative Conversion, and Mobile Home Retirement Readoption: N.J.A.C. 5:24	N/A	Sept 05, 2017
Sept 05, 2017	Notice of Readoption - New Jersey State Housing Code Readoption: N.J.A.C. 5:28	N/A	Sept 05, 2017
Sept 05, 2017	Notice of Readoption - Rooming and Boarding Homes Readoption: N.J.A.C. 5:27-1 through 12 and 14	N/A	Sept 05, 2017
Aug 21, 2017	Maintenance of Hotels and Multiple Dwellings - Human Trafficking Proposed Amendments: N.J.A.C. 5:10-1.12 and 28.1 Proposed New Rule: N.J.A.C. 5:10-29	Oct 20, 2017	
Aug 07, 2017	Carnival-Amusement Rides Proposed Amendments: N.J.A.C. 5:14A-1.2, 1.3, 2.4, 2.5, 2.6, 2.7, 2.10, 2.11, 2.14, 2.15, 4.13, 5.5, 7.1, 7.7, 7.8, 9.11, 10.7, 10.8, 13.3, 13.8, 13.9, 14.5	Oct 6, 2017	
Aug 07, 2017	Liquefied Petroleum Gas Proposed Amendment: N.J.A.C. 5:18-1.6	Oct 6, 2017	
Aug 07, 2017	Uniform Construction Code Proposed Amendments: N.J.A.C. 5:23-2.15, 2.20, 3.2, 3.4, 3.14, 4.4, 4.5, 4.12, 4.13, 4.14, 4.18, 4D, 6.2, and 7.1	Oct 6, 2017	
Aug 07, 2017	Uniform Construction Code - Minor Work & Ordinary Maintenance Proposed Amendments: N.J.A.C. 5:23-1.4, 2.7, 2.14, and 2.17A **Notice of Public Hearing November 29, 2017 for above Proposed Amendments**	Oct 6, 2017	
July 17, 2017	Uniform Construction Code - Emergency Shelters for the Homeless Proposed Readoption: N.J.A.C. 5:15 Proposed Amendments: N.J.A.C. 5:15-1.5 and 4.2	Sept 15, 2017	Dec 18, 2017 NSC
July 17, 2017	Standards for Licensure of Residential Health Care Facilities Not Located With, and Operated By, Licensed Health Care Facilities Proposed Readoption with Amendments: N.J.A.C. 5:27A Proposed New Rule and Repeal: N.J.A.C. 5:27A-17.4 Proposed New Rules: N.J.A.C. 5:27A-19	Sept 15, 2017	Dec 18, 2017 NSC
June 5, 2017	Uniform Construction Code - Cranes Proposed Amendment: N.J.A.C. 5:23-2.34	Aug 4, 2017	Dec 18, 2017 NSC

(continued on next page)

(2017 Proposals and Adoptions)			
June 5, 2017	Uniform Construction Code / Rooming and Boarding Houses - Sober Living Res Proposed Amendments: N.J.A.C. 5:23-3.11, 3.14, 6.31; and 5:27-1.4, 1.5, 1.6, 1.9, 2.1, 3.2 through 3.6, 3.8, 3.9, 3.12, 4.1 through 4.9, 6.1, 6.2, 6.3, 7.1 through 7.4, 8.1 through 8.4, 9.1, 10.1, 11.1, 12.1, 13.1, and 14.1	Aug 4, 2017	
Feb 21, 2017	Uniform Construction Code Proposed Amendments: N.J.A.C. 5:23-2.2, 2.6, 2.7, 2.14, 2.15, 2.15A, 2.20, 2.23, 2.35, 2.37, 3.2, 3.4, 3.8, 3.14, 3.15, 3.22, 4.26, 5.3 and 12.8	Apr 22, 2017	
Sept 19, 2016	Uniform Construction Code & Uniform Fire Code; Carbon Monoxide Detection Proposed Amendments: N.J.A.C. 5:23-3.14, 6.1, 6.4 through 6.7 and 6.31 and 5:70-4.3, 4.9 and 4.19	Nov 18, 2016	June 05, 2017 NSC
Sept 19, 2016	Uniform Construction Code; Rehabilitation Subcode Proposed Amendments: N.J.A.C. 5:23-6.1 through 6.9, 6.12, 6.13, 6.13A, 6.14, 6.15, 6.16, 6.17, 6.18, 6.18A, 6.19, 6.20, 6.20A, 6.21, 6.22, 6.22A, 6.23, 6.24, 6.25, 6.26, 6.27, 6.28, 6.28A, 6.29 through 6.33 and 12.8	Nov 18, 2016	May 01, 2017
Sept 19, 2016	Condominium, Fee Simple and Cooperative Conversion and Mobile Home Park, Retirement; New Home Warranties and Builders' Registration; Landlord-Tenant Relations Proposed Amendments: N.J.A.C. 5:24-1.4, 2.2 and 2.9; 5:25-2.2, 2.5 and 2.8; and 5:29-1.2	Nov 18, 2016	Mar 20, 2017
Sept 19, 2016	Relocation Assistance and Eviction Proposed Readoption with Amendments: N.J.A.C. 5:11 Proposed Repeals: N.J.A.C. 5:11-7.3 and 7.4	Nov 18, 2016	Feb 24, 2017
Sept 06, 2016	LP Gas Regulations; Update of the edition of NFPA 58 referenced; timeframes for Certified Employee Traning Program; training for motor vehicle fueling Proposed Amendments: N.J.A.C. 5:18-3.1, 6.3, 10.3 and 10.4	Nov 05, 2016	May 01, 2017
Aug 15, 2016	Ski Lift Safety - Adoption of ANSI B77.1-2011 Proposed Readoption: N.J.A.C. 5:12 Proposed Amendments: N.J.A.C. 5:12-1.4 and 4.2 Proposed Repeal: N.J.A.C. 5:12-6	Oct 14, 2016	Feb 21, 2017
July 05, 2016	Uniform Construction Code; Permit Updates regarding Zoning Proposed Amendments: N.J.A.C. 5:23-2.16, 2.18 and 2.29	Sept 03, 2016	
July 05, 2016	Uniform Construction Code; Elevator Subcode Elimination of Six-Month Elevator Inspections Proposed Amendments: N.J.A.C. 5:23-12.1, 12.2, 12.3 12.6 and 12.9 Proposed Repeal: N.J.A.C. 5:23-12.10	Sept 03, 2016	July 03, 2017 NSC

Source: Code Assistance Unit
(609) 984-7609

Dedication of Revenue: Fees for Uniform Construction Code Enforcement

(Local Finance Notice – August 11, 2017)

The Department of Community Affairs has become aware of instances where municipal construction code enforcement offices are consistently earning revenue well in excess of the offices' operating costs. This Notice, issued jointly by the Division of Local Government Services and the Division of Codes and Standards, reminds municipalities with construction code enforcement offices of fee limitations set forth in State law and how fee proceeds must be budgeted and accounted for. The within guidance also applies to any county that operates a construction code enforcement agency.

(continued on next page)

(Dedication of Revenue: Fees for Uniform Construction Code Enforcement)

Expenses that Construction Code Fees Can Cover

N.J.S.A. 52:27D-126a limits municipal fees for plan review, certificates of occupancy and issuance of construction, demolition, moving of building, elevator, and sign permits to only the level necessary to satisfy the enforcement agency's annual operating costs. Regulations promulgated by the Commissioner of DCA, specifically N.J.A.C. 5:23-4.17 and 4.18, set forth detailed parameters governing municipal construction code fees.

The fee schedule set by municipal ordinance must be calculated to reasonably cover the municipal costs of enforcing the regulations, and shall be reviewed against the revenues and expenditures listed in the Uniform Construction Code Annual Report along with the accompanying recommendation from the construction code official on whether changes to the fee schedule are necessary.

Subsection (c) of N.J.A.C. 5:23-4.17 strictly limits which costs can be utilized in calculating construction code enforcement fees. Those costs set forth in detail under Appendix "A".

Please note that indirect and overhead expenses charged to construction code fee revenues shall not exceed 12 percent of all other costs of the enforcing agency unless the indirect and overhead expenses of the municipality exceed 12 percent of the entire municipal budget, in which case indirect and overhead expense may be charged to construction code fee revenues in proportion to the general municipal overhead and expense ratio. A detailed written justification for any charge for indirect and overhead expenses in excess of 12 percent must be prepared and made available for inspection both by the Department of Community Affairs and by the public.

If the municipality deposits UCC fee revenue into a trust fund ("dedication by rider"), fees may be set at such a level so as to accumulate a reasonable level of funds for offsetting future code enforcement expenses. It is recommended that a three-year average be used for projecting a "reasonable" level of future expenses. See the "Budgeting and Accounting" section below for further discussion on dedicating construction code fee revenue.

Subsection (d) of N.J.A.C. 5:23-4.17 governs fees for development-wide inspection of homes after issuance of a certificate of occupancy. Municipal construction code enforcement fees are subject to further standards which are detailed in N.J.A.C. 5:23-4.18.

Treatment of Fees in Shared Services or Third-Party Vendor Context

When construction code enforcement is provided under a shared services agreement, one uniform fee schedule shall be applied by all parties to the agreement. Said fee shall be collected by the enforcing agency performing the administration and enforcement of the regulations, with no additional fee required to be paid by an applicant to any municipality or county. The enforcing agency shall maintain financial records showing for each municipality the amounts of money collected and expended.

In instances where private on-site inspection and plan review agencies carry out all of the enforcement responsibilities of the local code enforcement agency, fees cannot exceed the contracted amount the municipality must pay the third-party vendor(s) except to cover additional overhead and other operational costs incurred by the municipality in connection with the administration of code enforcement activities. In instances where private on-site inspection and plan review agencies carry out a portion of the enforcement responsibilities of the local code enforcement agency for one or more disciplines, fee revenue cannot exceed the contracted amount the municipality must pay the third-party vendor(s) and the costs incurred by the municipality in carrying out its enforcement responsibilities as allowed pursuant to N.J.A.C. 5:23-4.17 and as described in this LFN.

Budgeting and Accounting for Construction Code Fees

Revenue earned from construction code enforcement fees must be dedicated to enforcing the UCC. Municipalities can dedicate fee revenue in either one of two ways.

The first method, set forth in N.J.S.A. 40A:4-36, is to state fee revenues in a separate section of the budget according to their respective sources together with the appropriations for the purposes to which such revenues are applicable; with the total of anticipated revenues equaling the total of appropriations. Under this method, current year revenue cannot exceed prior year realized revenue absent documentation supporting the disparity (e.g. amended ordinance to increase fees, substantial increase in the number of inspections).

(continued on next page)

(Dedication of Revenue: Fees for Uniform Construction Code Enforcement)

The second method of dedicating UCC fee revenue is to utilize a "dedication by rider" (i.e. a trust fund) pursuant to N.J.S.A. 40A:4-39. A dedication by rider must be used if the municipality wishes to accumulate funds at a reasonable level for offsetting future code enforcement expenses.

Municipalities with code enforcement offices should ensure they are sufficiently staffed to handle their duties. Although municipalities are not prohibited from using general fund to pay the costs of UCC enforcement when fee revenues are insufficient to cover costs, or when necessary to compensate for work done without fee pursuant to statute or ordinance, municipalities are expected to set fees at a level sufficient to cover the costs of their construction code offices.

The appropriation and expenditure of construction code fee revenues shall be tested annually for compliance with N.J.A.C. 5:23-4.17 as part of the municipal audit. As is the case for municipal court and dog license revenues, a separate dedicated report shall be included with the annual audit; CFOs shall be responsible for providing their auditors with all information necessary to complete the report. This UCC Enforcement Fee Report shall be included with all municipal audits starting with the 2017 audit (SFY2018 audit for municipalities on a State Fiscal Year budget cycle). Guidance will be forthcoming on how the dedicated report is to be incorporated into the upcoming electronic audit submission process (the FAST system).

By no later than March 1 each year (September 1 for SFY municipalities), the Department of Community Affairs will notify a municipality whether they are required to perform further sample testing of the supporting expenditures for all direct and indirect expenses allocated to the Construction Department. This testing should provide support to validate the appropriateness of the charges as they relate to compliance with N.J.A.C. 5:23-4.17, namely that all expenditures of construction code fees have been made for purposes permitted under the regulation. The outcome of said testing shall be specifically reflected as a separate opinion contained in an addendum to the annual Audit. The CFO is responsible for providing the auditor with all necessary supplemental supporting information.

Document	Internet Address
Subchapter 4 of N.J.A.C. 5:23	http://www.nj.gov/dca/divisions/codes/codreg/pdf_regs/njac_5_23_4.pdf
UCC Annual Report (pdf)	http://www.nj.gov/dca/divisions/dlgs/resources/fa_docs/UCC%20Annual%20Report%20Online.pdf
UCC Annual Report Login	http://fs2.formsite.com/njdca/uccrpt/form_login.html
UCC Report (Annual Audit)	http://www.nj.gov/dca/divisions/dlgs/resources/fa_docs/UCC%20Annual%20Audit%20Report.docx

APPENDIX

Calculating UCC Enforcement Fees – Permissible Costs under N.J.A.C. 5:23-4.17

- Salaries and employee benefits for licensed code enforcement officials and inspectors and clerical personnel assigned to the enforcing agency[1], in an amount proportionate to the time spent in performing work for the enforcing agency. Detailed time records must be kept where employees divide their time between Uniform Construction Code and Non-Uniform Construction Code duties.

- Cost of motor vehicles in an amount proportionate to their use by or for the enforcing agency. Payments for this purpose may be in the form of
  - mileage reimbursement paid to employees for use of their own motor vehicles
  - cost of purchase of motor vehicles by the municipality for the exclusive use of the enforcing agency (which cost may not be amortized)
  - depreciation and operating expenses of motor vehicles made available to the enforcing agency by another municipal agency, and
  - cost of rental of motor vehicles for use by the enforcing agency

- Direct costs in support of the agency such as equipment, supplies, furniture, office equipment maintenance, standardized forms, printing, and safety equipment that are supplied directly to the enforcing agency for its sole use

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(Dedication of Revenue: Fees for Uniform Construction Code Enforcement)

- Professional expenses of enforcing agency personnel that are directly related to the enforcement of the regulations, including publications, membership dues, license fees, and authorized travel to conferences, meetings and seminars
- Fees for services performed under contract by private on-site inspection agencies
- Documented charges for legal services connected to construction code enforcement litigation
- Fees for the annual audit of the dedicated fund by an independent auditor
- Indirect, overhead, and other expenses of the municipality in support of the enforcing agency, including:
    - Legislative and Executive expenses (e.g. administrative warrants; appeals to construction board of appeals)
    - Administration, including personnel, payroll, and general training services provided to the agency in common with all other municipal offices;
    - Central services shared jointly with other municipal offices, such as telephone, reproduction, centralized computer services, etc.;
    - Insurance except for group insurance premiums under employer fringe benefits;
    - General building maintenance expenses;
    - Finance, including bookkeeping, purchasing, and auditing;
    - Office space expenses, including rent or interest and debt service on municipal capital facilities; and
    - Such other expenses as may be properly allocable to construction code enforcement.

[1] Please note that all references to the "enforcing agency" pertain to the department, division, or office of the municipality that effectuates code enforcement responsibilities (including entities that provide code enforcement through a shared service agreement or as a private third-party provider), and not the municipality as a whole.

Source: Timothy J. Cunningham, Director, Division of Local Government Services
Edward M. Smith, Director, Division of Codes and Standards

Lateral Deck Connection: Reminder – Update

(Originally published Fall 2011)

It has recently come to the Department's attention that there has been some confusion as to when a lateral deck attachment, like the ones illustrated in Figures R507.2.3(1) and R507.2.3(2), Deck Attachment for Lateral Loads, of the International Residential Code/2015 (IRC/2015), is required.

The ***specific*** deck attachment for lateral loads as demonstrated in Figures R507.2.3(1) and R507.2.3(2), Deck Attachment for Lateral Loads, of the IRC/2015, is not required. 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/2015, states "Detached one- and two-family dwellings and attached single family townhouses are exempt from the seismic requirements of this code."

Based on this, the ***specific*** lateral deck attachment like the ones illustrated in Figures R507.2.3(1) and R507.2.3(2) is 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/2015.

If you have any questions, please direct your calls to the Code Assistance Unit at (609) 984-7609.

Source: Code Assistance Unit
(609) 984-7609

Building Permits, Part 1: What We See

Every month, the Department gets information on tens of thousands of building permits and certificates of occupancy. Most building departments send these data electronically. The Department counts every permit – new construction as well as additions, alterations, and demolitions – and reports the number of new houses, the dollar amount of work, and the square feet of office and retail space. The monthly tally for each of the State's 565 municipalities is available online at: http://www.state.nj.us/dca/divisions/codes/reporter/

This is the first of four articles on building permits and certificates. It discusses what a permit looks like to the Department and why this information is important. The Department does not get actual permits; we only see certain items on them. This information does not include names, addresses, the applicant, who is doing the work, or phone numbers. The table below shows what permits look like to the Department.

Big permits, 2017

municpality	county	permit no.	month	year	use	activity	estm work $	sq ft	dwellings	description
Hoboken	Hudson	00002017095S	07	17	R-2	NEW	150,000,000	650,000	424	700-32 Jackson St; Monroe Ctr urban renewal
Jersey City	Hudson	20172162	06	17	R-2	NEW	140,316,750	655,074	549	235 Grand St; hi-rise, mixed use
Englewood Cliffs	Bergen	17-216	08	17	B	NEW	123,565,000	303,650	0	LG Electronics headquarters
Jersey City	Hudson	20163416+D	06	17	R-2	NEW	118,000,000	501,432	359	75 14th St / 75 Park Ln LLC
Newark	Essex	00002017039S	02	17	R-2	NEW	99,453,325	396,358	245	Park Pl Apts; 22-story bldg
West New York	Hudson	00002017079S	10	17	R-2	NEW	92,957,000	711,071	360	17 Av of Port Imperial; 11 story apt bldg
Harrison Twp	Gloucester	17-00532	08	17	I-2	NEW	75,347,680	465,348	0	Inspira Hospital network
Sayreville	Middlesex	00002017017S	02	17	U	ALT	66,268,000	0	0	pump station renovation
Hoboken	Hudson	20171480	10	17	R-2	NEW	60,989,100	211,516	0	1018-28 Maxwell Av, Toll Bros
Atlantic City	Atlantic	16-70079+C	07	17	R-2	NEW	56,000,000	0	0	dormitory, Stockton State Univ
Jersey City	Hudson	20174172	11	17	R-2	NEW	55,858,615	213,790	180	321 Warren St; 18 story
New Providence	Union	17-Z9905	09	17	R-2	NEW	50,000,000	311,531	171	Lantern Hill independent lvg; bldg 6
Parsippany	Morris	00020161303U	01	17	R-2	NEW	49,810,191	259,964	212	Modera Apts; 1715 Rte 46
Hackensack	Bergen	00002017132S	09	17	R-2	NEW	48,000,000	431,472	254	Brick Yard Urban Renewal, 18 E Camden Av
Newark	Essex	17CP001339+C	10	17	B	NEW	44,920,000	267,666	0	upadate, Rector St urban renewal, mixed use, 153 apts
Weehawken	Hudson	00002017004S	02	17	R-2	NEW	43,595,250	276,199	236	Harbor Blvd Apts
Harrison	Hudson	00020170183U	11	17	R-2	NEW	41,000,000	210,972	0	permit update, 799 S 3rd, 270 apts
Weehawken	Hudson	00020170049U	06	17	R-2	NEW	36,812,025	0	0	Harbor Blvd Apts update
Newark (st bldg)	Essex	16-0839+C	01	17	E	NEW	33,318,000	0	0	New South Elementary School
Woodbridge	Middlesex	00020175273U	11	17	S-1	NEW	33,000,000	620,040	0	update; warehouse; Arizon Ice Tea
Bridgewater	Somerset	20171162+A	07	17	B	NEW	32,814,000	0	0	PSE&G data center, update
Vineland	Cumberland	16-60006+C	01	17	E	NEW	31,105,000	1	0	Lincoln Av Middle School
Madison	Morris	17-008	01	17	B	ALT	30,327,748	0	0	Allegan Pharmaceuticals
New Brunswick	Middlesex	16-60005+A	01	17	E	ADD	29,803,000	1	0	Paul Robeson Elementary School
Passaic City	Passaic	16-60010+A	10	17	E	NEW	28,467,938	1	0	update, new school, 30 Henry St
Montvale	Bergen	16-00606	01	17	M	NEW	27,783,500	122,108	0	Wegman's
Camden City	Camden	00002017081S	07	17	B	NEW	27,500,000	703,859	0	18-story office bldg & parking deck
Union City	Hudson	00020131332U	01	17	R-2	NEW	27,330,000	172,500	108	Summit Av Apts, update
Bayonne	Hudson	17-08-159	08	17	R-2	NEW	26,399,198	181,466	91	957 Broadway
Edgewater	Bergen	00002017011S	04	17	R-2	NEW	26,320,000	314,404	240	Avalon Bay, 700 River Rd
Fort Lee	Bergen	00020170010U	02	17	E	NEW	25,430,000	10,233	0	update, Cole Middle School
Bayonne	Hudson	17-01-092	01	17	R-2	NEW	24,965,556	142,815	138	434-36 Broadway, Ingerman development
Montvale	Bergen	17-00321	07	17	B	ADD	24,855,000	86,086	0	KPMG Accounting

Permit number: While formats vary, every record has a permit number. This helps to distinguish initial work from updates. Updates show the progression of work over months, even years. It is important to only report new information on updates. For example, if you report $200,000 of work on the initial permit, and another $200,000 on an update, the Department will see $400,000. If the total cost of work for the entire project is only $200,000, don't report this again. This is overreporting, and the Department will overcount.

Permit dates: Building permits are vital signs on the economy. A permit date tells when work began; a certificate date says when it ends. Timing is important, as it shows the Department when construction heats up and slows down.

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(Building Permits, Part 1: What We See)

Location: The only locational information the Department gets is the name of the municipality where the work occurred and the block and lot.

Building Use: Each permit has a building use, as shown in the table below. They show the Department, in broad terms, what is being built. More buildings today have multiple uses; report the predominant use first. Because the Department only sees the first use entered, order matters. A ten-story building with apartments on eight levels and parking on two is an R-2 / S-2, not an S-2 / R-2.

Use	Description - International Building Code, New Jersey Edition, 2015
Assembly	Buildings where people gather for civic, social, or religious purposes.
A-1	Theaters, concert halls
A-2	Banquet halls, casinos, restaurants, night clubs, bars
A-3	Churches, art galleries, bowling alleys, arcades
A-4	Indoor sporting events, swimming pools, skating rinks, tennis courts
A-5	Outdoor activities, amusement parks, bleachers, grandstands, stadiums
Business	Buildings for professional or office services.
B	Office buildings, banks, barber shops, car washes, auto showrooms, government office buildings, post offices
Education	School and other educational buildings for six or more persons through 12th grade
E	Public and private schools K-12th grade, day care facilities for children older than 2 ½ years.
Factory	Factory and industrial buildings used to assemble, disassemble, and manufacture products
F-1	Moderate-hazard factories: aircraft and appliance manufacturers, bakeries, food processing plants
F-2	Low-hazard factories: brick, masonry, glass, and ceramic plants
High Hazard	Buildings used to make, process, or store materials that are a physical or health hazard
H-1	Detonation hazards: fireworks, explosives
H-2	Accelerated burning hazards
H-3	Combustion or physical hazard
H-4	Health hazard
H-5	Hazardous production materials (HPM)
Institutional	Buildings where supervision is provided and evacuation is slow or impractical *(See also, Bulletin 15-3)*
I-1	Supervised residential homes for 17 or more people
I-2	Hospital, nursing home, and other facilities for six or more people
I-3	Jails, reformatories, and asylums for six or more people
I-4	Daycare for six or more people 2 ½ years or older
Mercantile	Retail buildings where products are displayed and sold.
M	Department stores, drug stores, gas stations, markets
Residential	Buildings where people can sleep *(See also, Bulletin 15-3)*
R-1	Hotels, motels, boarding homes
R-2	Multifamily buildings, dormitories
R-3	1 & 2 family houses; adult/child care for five or fewer occupants
R-4	Therapeutic residences for six to 16 residents
R-5	1&2 family houses, International Residential Code
Storage	Buildings used for the storage of products not classified as high-hazard
S-1	Moderate-hazard storage: warehouses that store things like book, paper, furniture, tires, sugar, clothes
S-2	Low-hazard storages: parking garages and warehouses that store things like frozen foods, glass meats, metals, and pottery
Utility	Utility and accessory buildings, also a miscellaneous category
U	Signs, fences, detached garages, sheds, pool houses, pagodas, decks, agricultural buildings, oil tanks, and greenhouses.

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(Building Permits, Part 1: What We See)

Permit activity: This tells the Department what's being done. There are four types of permits: new construction, alterations, additions, and demolitions. A new construction permit is for a new structure. It can be a house, office, store, fence, or pool, but it has to be new. The other three permit types are for work on existing structures. An alteration is for work that does not add space, like a roof replacement, new water heater, or upgrade of an electrical service. Additions add space. Anytime a permit is issued for an addition, the floor area (square feet) and volume (cubic feet) must be reported. Again, be careful not to repeat information on an update that was reported earlier. Sometimes, a permit has both alteration and addition work. Like building use, order matters; report the predominant activity first, because that is the only one the Department sees.

Demolition permits are for the complete removal of structures, and are covered in Part Four of this article series.

Permit activity should stay the same throughout the course of a project. The Department receives too many permits that start out as alterations, but are updated and changed to new construction. This typically seems to be done for a partial release for the footings and foundations to new buildings. A footing and foundation to a new building requires a new construction permit, not an alteration. If you must switch permit activity through the course of a job, consider issuing another permit.

Dollar amount of work: This the estimated cost of the work authorized by the building permit. The amount can be reported all at once or in increments, as long as the information is not repeated.

Square feet: Anytime a building permit is issued for a new building or an addition to an existing one, the square feet and cubic feet must be reported. As with dollars and housing units gained, don't repeat anything that was reported earlier.

Dwellings gained: This is the most important indicator on a permit. Anytime a building permit results in a new dwelling, the number of new housing must be reported. Both the Department and the U.S. Census Bureau publish this information. Census is interested only in new housing created from new construction permits, but the Department wants to know about all new housing—those dwellings created from new construction, as well as those created by alteration and additions to existing buildings.

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

Building Permits, Part 2: Counting Houses

Every month, both the Department and the U.S. Census Bureau publish statistics on authorized housing, specifically the number of new dwellings authorized by building permits. This is one of the most important indicators on a building permit. It is used by demographers, planners, and economists to gauge a vital part of the construction industry, new homebuilding, and examine emerging settlement patterns. School administrators, utility companies, businesses, and others use the data to predict demand. Because authorized housing is such a useful indicator, it is important to report it accurately.

Dwellings, not Buildings: The Department is counting new housing. A dwelling is a place where someone can live, for example a house or apartment. It has a kitchen, but not all buildings with ovens and refrigerators are dwellings. Motel rooms aren't, and neither is an extended-stay apartment or timeshare; these are meant mainly for short-term stays (less than thirty days). Most college dormitories, nursing home beds, and jail cells aren't dwellings either. However, some assisted living units can be, typically the ones that look more like apartments than nursing home rooms. People in dwellings live more independently; they may still drive, buy food, and cook meals. Use your best judgement, but if you need advice, call the Department.

Tenure: Report the number of dwellings by tenure, whether they are for sale or for rent. If you're not sure, guess, but don't double count. If you report five for-sale units gained and five for-rent units, the Department will count ten authorized dwellings.

(continued on next page)

(Building Permits, Part 2: Counting Houses)

New Construction vs. Housing Rehab: Most new housing is from new construction. However, sometimes dwellings are created by work on existing buildings; for example, the conversion of an old factory to loft apartments. Anytime the work authorized by a building permit creates new housing, the number of dwellings gained must be reported. This applies to new construction permits, as well as additions and alterations. Remember, an alteration to replace fire escapes in a hi-rise apartment building with 100 condominiums does not create any new housing.

Avoid multiple permits for multiple dwellings: Today, more housing is being built in multifamily or mixed-use buildings. Some building departments feel they must issue separate permits for each dwelling. Try to avoid this; it is one building with a lot of dwellings. Think of a multifamily housing building like a shopping mall. If you must issue multiple permits, issue one new construction permit for the shell, and multiple alteration permits for the fit outs that come later. Call if you have questions, because multiple permits for multiple dwellings can lead to multiple mistakes.

Mixed-use Buildings: More housing today is in buildings with mixed uses. Apartments and condominiums are sharing space with other uses, like parking decks, shops, offices, and gyms. The Department has trouble with building permits authorizing work in mixed-use buildings because we do not see the multiple uses. We only see the first building use reported. This is why it is important to report the predominant use first. If the mixed-use building has new housing, let the Census Bureau know by using the appropriate Item Number. Part 3 of this series discusses Census Item numbers.

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

Additions in a Flood Zone – Update

In the Summer 2016 edition of the Construction Code Communicator, the following article was published regarding those who would like to install an addition to their existing home in a flood zone regulated by Uniform Construction Code (UCC).

> For those wondering if an addition is allowed in a flood zone, here's your answer:
> First, check with the local floodplain administrator to (a) see if the addition is permitted by local zoning regulations and NJ DEP regulations and (b) if the permitted addition is considered a substantial improvement.
>
> As a refresher, FEMA defines substantial improvement as "Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the 'start of construction' of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed" (http://www.fema.gov/floodplain-management-old/substantialimprovement). This is reiterated within the Rehabilitation Subcode at N.J.A.C. 5:23-6.3A(a).
>
> This leads us to the addition section of the Rehabilitation Subcode at N.J.A.C. 5:23-6.32. If you recall, subsection (a) states, "Any addition to a building or structure shall comply with the requirements of the Uniform Construction Code applicable to new construction." Since N.J.A.C. 5:23-6.3A(a) includes addition within the requirements for flood resistant construction, an addition not considered a substantial improvement would not have to be elevated.

The key here is: it is important to follow through with the Prior Approval process. Even though the UCC may not necessarily require an addition to be placed at today's flood elevation in a non-substantially improved project, the NJ DEP regulations at N.J.A.C. 7:13 will require the addition to be placed at today's flood elevation regardless of substantial improvement status. Please note that there is a small exception at N.J.A.C. 7:13-7.12(a)2 which permits up 400 ft^2 to be added to a non-substantially improved home at its current elevation.

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

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.

Building Permits, Part 3: Census Item Numbers

Every month, both the Department and the U. S. Census report on the number of new dwellings authorized by building permits. While the Department looks at every permit, Census focuses only on new construction. Item Numbers tell the Census Bureau which permits to look at and which to ignore.

Census gets only those building permits with Item Numbers 101, 103, 104, or 105. These vary, based on the number of new housing units. A permit with Item Number 105 is for a new, residential building with five or more dwellings, for example, a new, high-rise apartment building with 100 units.

A 104 is for a new residential building with three or four new dwellings, for example, a new garden apartment.

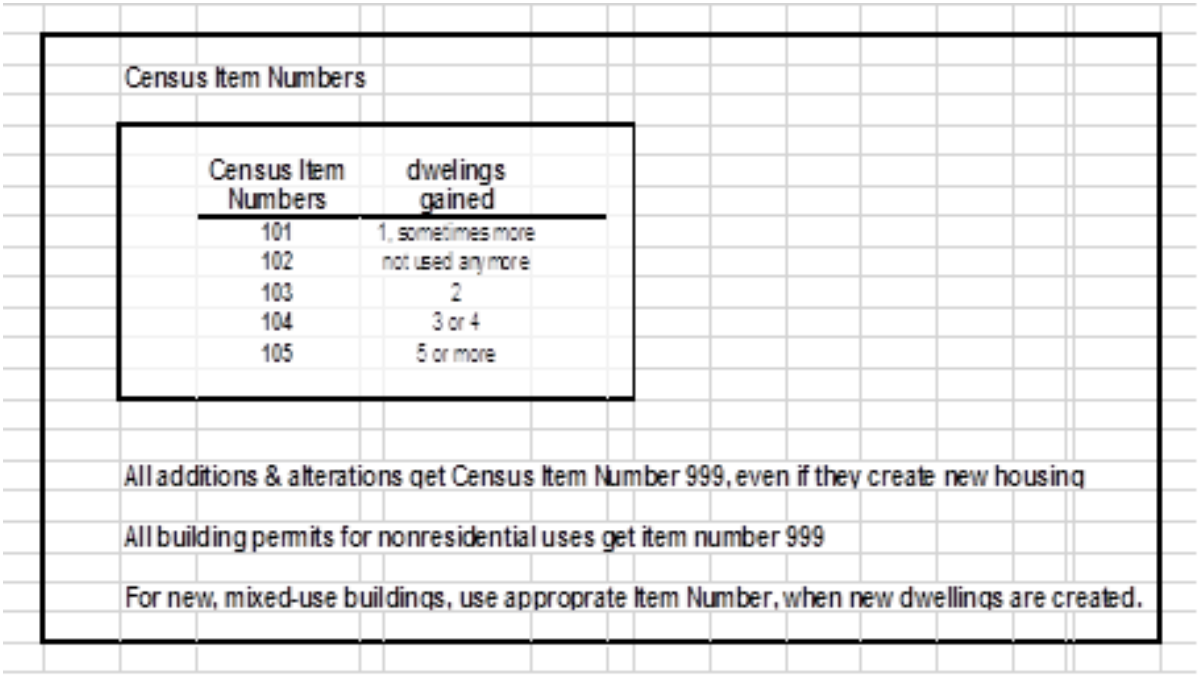
Item Number 103 is for a new duplex. One of the dwellings might be built for sale, the other for rent, but there are only two new dwellings.

A 102 is no longer used. It was for new, single-family, attached housing.

A permit with Census Item Number 101 is a new, single-family house. Most times, report only one dwelling gained. Sometimes, 101s can have multiple units. These are attached, single-family dwellings, rowhouses or townhouses.

Remember, Census focuses only on new construction permits. They are not counting new housing created from alterations and additions. All alteration or addition permits must be tagged as 999, even those that authorize new housing. All permits for nonresidential uses must also be tagged as 999. This tells Census to ignore the permits.

Mixed-Use Buildings: More housing is being built in mixed-use buildings. For an example, an assisted living complex can have nursing home beds as well as apartments for those able to live independently. Another example is a building with shops on the ground level and apartments overtop. Anytime you issue a new construction permit that creates new housing, let Census know by selecting the appropriate Item Number. The table below summarizes Item Numbers.



If you have questions, the Census Bureau can be contacted directly at the toll free number 1-800-845-8244. I am also available by phone or by email at john.lago@dca.nj.gov.

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

Building Permits, Part 4: Demolition Permits

Demolition permits are issued for the complete removal of a structure. It can be a shed, underground storage tank, old factory, or house. Whatever it is, the entire structure must be torn down. Any partial removal is an alteration. Most technical assistants and construction officials know how to report demolitions, but this article provides five things to remember.

1. **Lost housing is key**: Report every demolition, but pay special attention anytime housing is lost. The number of lost dwellings must be reported. This is important, as demographers, planners, and others keep track new housing built, as well as existing housing that is torn down. For a demolition of a single-family house, report one dwelling lost. When a duplex is demolished, report two housing units lost. Enter the information by tenure, for sale or for rent. If you don't know, guess, but don't double count. In addition, it is important to not confuse buildings with dwellings. The Department wants to know about lost housing, not buildings.
2. **Report building uses accurately**: Make a mistake here and more typically follow. Too many issue a demolition permit for a pool house, shed, storage tank, or pagoda and enter a residential building use. These are accessory structures, not houses. The correct building use is "U." Only enter a residential building use for demolitions that result in lost housing, a place of residence.
3. **Hotels and other R-1s are not dwellings**: Don't report how many hotel rooms are lost. The Department only needs information on lost housing. If your reporting software forces you to enter lost dwellings every time you demolish a hotel, call your vendor. This must be fixed. If they don't know what you're talking about, direct them to me.
4. **The dollar amount on a demolition permit is the cost of the removal**.
5. **Only report the tear down, not what comes next**: The building use on a demolition permit is for the structure torn down, not what comes later. Anything built after the demolition needs a new permit, and should only be reported when the new permit is issued.

Building permit data appears in the New Jersey Construction Reporter at http://www.nj.gov/dca/divisions/codes/reporter/.

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

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

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Building Thermal Envelope Values of ASHRAE 90.1-2013

I'm assuming by now you have all have become intimately involved with the information available for energy subcode compliance through Bulletin 15-4 (http://www.nj.gov/dca/divisions/codes/resources/bulletins.html). As a follow-up to this bulletin, I am providing the building thermal envelope (BTE) tables within ASHRAE 90.1-2013 applicable to the State of NJ (Climate Zones 4A and 5A). Bulletin 15-4 makes reference to Tables 5.5-4 and 5.5-5 within the "Tip" that says to use these tables, as applicable, for a starting point in your calculations using the COMcheck compliance software.

As we all know, it doesn't matter how well the mechanical and lighting perform if the BTE that encloses these elements isn't done properly from the get-go. You can find the entire ASHRAE 90.1, including these tables, at https://www.ashrae.org/standards-research--technology/standards--guidelines by clicking on "Standard 90.1-2013 (IP)" under the heading "Preview ASHRAE Standards." Note that IP stands for Inch-Pound (English customary) units versus SI (International System) units – this standard is used in areas outside the US. These tables are provided because the read-only electronic version of the Standard is tedious to use.

Before you view the tables, keep in mind that, the values are only applicable per the text of Chapter 5 which dictates the installation of the insulation, etc. *(Tables are included on the following two pages)*

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

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Building Envelope Requirements for Climate Zone 4A (Table 5.5-4)[a]									
	Nonresidential			Residential			Semiheated		
Opaque Elements	Assembly Maximum	Insulation Minimum		Assembly Maximum	Insulation Minimum		Assembly Maximum	Insulation Minimum	
ROOFS									
* Insulation Entirely above Deck	U-0.032	R-30 ci		U-0.032	R-30 ci		U-0.093	R-10 ci	
* Metal Building[b]	U-0.037	R-19 + R-11 Ls or R-25 + R-8 Ls		U-0.037	R-19 + R-11 Ls or R-25 + R-8 Ls		U-0.082	R-19	
* Attic & Other	U-0.021	R-49		U-0.021	R-49		U-0.034	R-30	
WALLS, ABOVE GRADE									
* Mass	U-0.104	R-9.5 ci		U-0.090	R-11.4 ci		U-0.580	NR	
* Metal Building	U-0.060	R-0 + R-15.8 ci		U-0.050	R-0 + R-19 ci		U-0.162	R-13	
* Steel Framed	U-0.064	R-13 + R-7.5 ci		U-0.064	R-13 + R-7.5 ci		U-0.124	R-13	
* Wood Framed & Other	U-0.064	R-13 + R-3.8 ci or R-20		U-0.064	R-13 + R-3.8 ci or R-20		U-0.089	R-13	
WALL, BELOW GRADE									
* Below Grade Wall	C-0.119	R-7.5 ci		C-0.092	R-10 ci		C-1.140	NR	
FLOORS									
* Mass	U-0.057	R-14.6 ci		U-0.051	R-16.7 ci		U-0.107	R-6.3 ci	
* Steel Joist	U-0.038	R-30		U-0.038	R-30		U-0.052	R-19	
* Wood Framed & Other	U-0.033	R-30		U-0.033	R-30		U-0.051	R-19	
SLAB-ON-GRADE FLOORS									
* Unheated	F-0.520	R-15 for 24in		F-0.520	R-15 for 24in		F-0.730	NR	
* Heated	F-0.843	R-20 for 24in		F-0.688	R-20 for 48in		F-0.900	R-10 for 24in	
OPAQUE DOORS									
* Swinging	U-0.500			U-0.500			U-0.700		
* Nonswinging	U-0.500			U-0.500			U-1.450		
Fenestration	Assem. Max. U	Assem. Max. SHGC	Assem. Min. VT/SHGC	Assem. Max. U	Assem. Max. SHGC	Assem. Min. VT/SHGC	Assem. Max. U	Assem. Max. SHGC	Assem. Min. VT/SHGC
VERTICAL FENESTRATION, 0%-40% of WALL									
* Nonmetal framing, all	0.35	0.40	1.10	0.35	0.40	1.10	0.51	NR	NR
* Metal framing, fixed	0.42			0.42			0.73		
* Metal framing, operable	0.50			0.50			0.81		
* Metal framing, entrance door	0.77			0.68			0.77		
SKYLIGHT, 0%-3% of ROOF									
* All types	0.50	0.40	NR	0.50	0.40	NR	1.15	NR	NR

Notes:

a. ci = continuous insulation (see Section 3.2); Ls = liner system (see Section A2.3.2.5); NR = no (insulation) requirement.

b. When using the R-value compliance method for metal building roofs, a thermal spacer block is required (see Section A2.3.2).

Building Envelope Requirements for Climate Zone 5A (Table 5.5-5)[a]									
	Nonresidential			Residential			Semiheated		
Opaque Elements	Assembly Maximum	Insulation Minimum		Assembly Maximum	Insulation Minimum		Assembly Maximum	Insulation Minimum	
ROOFS									
* Insulation Entirely above Deck	U-0.032	R-30 ci		U-0.032	R-30 ci		U-0.063	R-15 ci	
* Metal Building[b]	U-0.037	R-19 + R-11 Ls or R-25 + R-8 Ls		U-0.037	R-19 + R-11 Ls or R-25 + R-8 Ls		U-0.082	R-19	
* Attic & Other	U-0.021	R-49		U-0.021	R-49		U-0.034	R-30	
WALLS, ABOVE GRADE									
* Mass	U-0.090	R-11.4 ci		U-0.080	R-13.3 ci		U-0.151[c]	R-5.7 ci[c]	
* Metal Building	U-0.050	R-0 + R-19 ci		U-0.050	R-0 + R-19 ci		U-0.094	R-0 + R-9.8 ci	
* Steel Framed	U-0.055	R-13 + R-10 ci		U-0.055	R-13 + R10 ci		U-0.084	R-13 + R3.8 ci	
* Wood Framed & Other	U-0.051	R-13 + R-7.5 ci or R-19 + R-5 ci		U-0.051	R-13 + R-7.5 ci or R-19 + R-5 ci		U-0.089	R-13	
WALL, BELOW GRADE									
* Below Grade Wall	C-0.119	R-7.5 ci		C-0.092	R-10 ci		C-1.140	NR	
FLOORS									
* Mass	U-0.057	R-14.6 ci		U-0.051	R-16.7 ci		U-0.107	R-6.3 ci	
* Steel Joist	U-0.038	R-30		U-0.038	R-30		U-0.052	R-19	
* Wood Framed & Other	U-0.033	R-30		U-0.033	R-30		U-0.051	R-19	
SLAB-ON-GRADE FLOORS									
* Unheated	F-0.520	R-15 for 24in		F-0.510	R-20 for 24in		F-0.730	NR	
* Heated	F-0.688	R-20 for 48in		F-0.688	R-20 for 48in		F-0.900	R-10 for 24in	
OPAQUE DOORS									
* Swinging	U-0.500			U-0.500			U-0.700		
* Nonswinging	U-0.500			U-0.500			U-1.450		
Fenestration	Assem. Max. U	Assem. Max. SHGC	Assem. Min. VT/SHGC	Assem. Max. U	Assem. Max. SHGC	Assem. Min. VT/SHGC	Assem. Max. U	Assem. Max. SHGC	Assem. Min. VT/SHGC
VERTICAL FENESTRATION, 0%-40% of WALL									
* Nonmetal framing, all	0.32	0.40	1.10	0.32	0.40	1.10	0.45	NR	NR
* Metal framing, fixed	0.42			0.42			0.62		
* Metal framing, operable	0.50			0.50			0.70		
* Metal framing, entrance door	0.77			0.68			0.77		
SKYLIGHT, 0%-3% of ROOF									
* All types	0.50	0.40	NR	0.50	0.40	NR	0.98	NR	NR

Notes:

a. ci = continuous insulation (see Section 3.2); Ls = liner system (see Section A2.3.2.5); NR = no (insulation) requirement.

b. When using the R-value compliance method for metal building roofs, a thermal spacer block is required (see Section A2.3.2).

c. Exception to Section 5.5.3.2 applies for mass walls above grade.

Plumbing Technical Section Required for Backflow Preventers

The question is whether a NJ Licensed Master Plumber is required to sign and seal the Plumbing Technical Section for the following:

1. ***On a combination (single service) water service*** providing domestic and fire water service where a backflow preventer is installed on the fire service, is a NJ Licensed Master Plumber required to install the backflow preventer and sign and seal the plumbing technical section? Yes.
2. ***On a "dedicated" fire water service,*** the installation of the backflow preventer is not required to be installed by a NJ Licensed Master Plumber and must be installed by a person certified by the NJ Division of Fire Safety. Therefore, a plumbing technical section is not required. A fire technical section is required.

There is an opinion interpretation from the NJ Board of Examiners of Master Plumbers that the installation of the backflow preventer on a dedicated fire water service is not required to be installed, repaired or replaced by a NJ Licensed Master Plumber.

This should clear up some of the confusion as to what technical sections are required for the installation of a backflow preventer.

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

Fire Separation Distance Based on Materials

As all of you should be aware, exterior walls of dwellings and accessory buildings subject to the International Residential Code/2015 must comply with Section R302.1 for fire separation distances. This section references Table R302.1(1) for non-sprinkled dwellings and Table R302.1(2) for sprinkled dwellings. However, as per Section R703.14.2, polypropylene siding may not be installed on walls with a fire separation distance of less than 5 feet and walls closer than 10 feet to a building on another lot.

Moral of this article…make sure all your i's are dotted and all your t's crossed, making sure that the desired materials don't dictate a specific fire separation distance over what the basic requirements are in Section R302.1

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

Construction Official's Responsibility Regarding Hotels and Multiple Dwellings

One of the many responsibilities of the Construction Official in dealing with newly-constructed or rehabbed hotels and multifamily buildings, as defined in the Hotel and Multiple Dwelling Law (N.J.S.A. 55:13A-1 et seq.), is to ensure that these buildings are properly registered with the Bureau of Housing Inspection, Division of Codes and Standards at the Department of Community Affairs. N.J.A.C 5:23-2.24(e) stipulates that the Construction Official ***shall not*** issue a certificate of occupancy until the owner has provided a copy of the Certificate of Registration issued by the Bureau of Housing Inspection; this is a required prior approval.

Source: Fayez Fanik
Bureau of Housing Inspection
(609) 633-6216

Bulletin 15-1 Correction

A correction has been made to Bulletin 15-1, Liquid Carbon Dioxide (CO_2) Carbonated Beverage Systems. It appears that the bulletin misstated the threshold found in the 2015 International Fire Code (IFC). On page 3, the first item #1 now states: 1. *More than 100 lbs* of carbon dioxide used in beverage dispensing applications will be required to comply with the new regulations (italicized text previously stated as, 100 lbs or more). On page 4, the "UCC and UFC" paragraph now states in part: A business owner could comply with the new threshold of 100 lbs and the other requirements of the 2015 IFC above instead of requiring the ventilation for all businesses that have *100 lbs or less* (italicized text previously stated as, less than 100lbs).

The correction is minor but well worth mentioning. We apologize if it has caused any confusion. If you would like a copy of the corrected bulletin, please visit http://www.nj.gov/dca/divisions/codes/resources/bulletins.html.

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

Building America Solution Center – Energy Subcode

The US Department of Energy offers many tools through its Building America Solution Center (BASC) online. The BASC provides access to expert information on hundreds of high-performance construction topics, including air sealing and insulation, HVAC components, windows, indoor air quality, and much more. Links are provided to explore:

- Program checklists – Access guides for general energy conservation code compliance and above code programs such as ENERGY STAR Certified Homes, Zero Energy Ready Home and EPA Indoor airPLUS.
- Building Components – Access guides for new and existing homes based on building components.
- Sales Tool – Access to the Building Science-to-Sales Translator which provides a new glossary of sales themes that can be used across the industry to consistently reinforce the value of high-performance homes.
- Climate Packages – Access to review materials related to new home energy efficiency specifications and case studies that exceed 2009 IECC by 30%.
- Building Science Publications – Access to a "library" of building science publications that include CAD files, an image gallery, case studies, videos and more.

If you have a moment, feel free to visit https://basc.pnnl.gov/ and play with this website. You as a code official would most likely be interested in the Building Components link. All other links can further your knowledge of current and future construction techniques, especially as energy conservation codes continue to get more aggressive.

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

Fire Safety and Evacuation Plans

The building subcode (IBC/2015 edition) now requires fire safety and evacuation plans to be in place per Section 1001.4. Pursuant to the State's Fire Prevention Code, N.J.A.C. 5:70-3 (currently the 2006 NJ edition of the International Fire Code), the fire official has been required to make sure these plans have been submitted and updated annually. The fire subcode official must require that a new building owner submit these plans to the fire official and have approved plans in place per Sections 401.2 and 404 of the IFC/2015 edition. This will be a prior approval for issuance of a Certificate of Occupancy.

A full list of the occupancies required to have plans appears at IFC Section 403. IFC Section 401.2 requires that these plans be approved by the fire official. IFC Section 404 requires fire safety, evacuation and lockdown plans to be submitted in accordance with Sections 404.2 through 404.4.1. Fire evacuation plans must contain the ten items listed in Section 404.2.1, as applicable. Fire safety plans must contain the seven items listed in Section 404.2.2, as applicable. Most of these requirements will be handled by the fire official, and once they are approved, a written notice must be provided to the fire protection subcode official. Any fire alarm or voice alarm communication procedures must be coordinated with the fire protection subcode official during plan review, when applicable. When facility managers wish to develop a lockdown plan, such plans must comply with Section 404.2.3.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Energy Subcode Online Training

The US Department of Energy, through its Building Energy Codes Program (BECP), offers a variety of training resources related to the world of energy codes, ranging from overviews to a variety of special topics and tutorials. A list of the most commonly requested materials is included below (and more topics can be found at https://www.energycodes.gov/training):

- Codes 101: An Overview of Building Energy Codes
- Energy Code Compliance Paths: Which is best for you?
- Achieving and Evaluating Residential Compliance of Tight Envelopes
- REScheck Basics
- Lighting Requirements and compliance with the ASHRAE 90.1-2013

Additional resources are also available in their full Training Catalog (https://www.energycodes.gov/resource-center/training-catalog).

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

What is a Rooming/Boarding House?

The *Rooming and Boarding House Act of 1979 (N.J.S.A. 55:13b-1 et seq) (Act)* and the attendant *Regulations Governing Rooming and Boarding Houses (N.J.A.C. 5:27-1 et seq) (regulations)* were enacted as remedial legislation to protect a vulnerable population of New Jersey from unscrupulous individuals and provide for the health, safety and welfare of all those who reside in rooming/boarding houses. Individuals residing in unlicensed facilities oftentimes are subjected to hazardous living conditions which lack the mandatory safeguards for fire and personal safety and may be subject to financial exploitation, illegal eviction, unhealthy diets, denied access to medical professionals and medication and become victims of predatory individuals.

The Act statutorily requires that ANY person or entity shall apply for and obtain a license to Own/Operate a rooming/boarding house issued by the Department of Community Affairs, Bureau of Rooming and Boarding House Standards (DCA) before owning/operating a rooming/boarding house in the State. DCA is the regulatory agency appointed to enforce the Act and the corresponding regulations regarding the licensure and inspection requirements for rooming/boarding houses.

So…What is a rooming/boarding house? Simply put, a rooming/boarding house is ANY building which contains two or more units of dwelling space arranged or intended for single room occupancy. A boarding house is a rooming house in which the licensee is required to provide personal services, such as assistance in bathing, assistance dressing, meals, etc. to the residents. A rooming house owner is prohibited from providing personal services.

The Act lists exceptions and exclusions to the above which you can read in the Act at N.J.S.A. 55:13B-3, Definitions. You can view the Act and regulations on line at
http://www.nj.gov/dca/divisions/codes/codreg/CurrentAdministrative__and_statutes.html

Single room occupancy is an arrangement of dwelling space that does ***not*** provide a private, secure dwelling space arranged for independent living which contains a full bath, a complete kitchen and which is ***not*** used for limited tenure (occupancy in a hotel, motel or established guest house) regardless of the number of individuals occupying any room or rooms. If a dwelling space contains either a full bath or a complete kitchen, but not both, that dwelling space or room is not arranged for independent living, and therefore, would be counted as single room occupancy. If there are two single room occupancies being rented out or held out for rent in a building, it's probably a rooming/boarding house.

If a property owner chooses to rent one room in their house to an individual or bona fide couple, a license from DCA is not required. Once the property owner rents a second room, or intends to rent a second room, the premises falls under the regulatory authority of DCA. An example of intent is a simple sign in the local laundromat or on the front yard advertising "2 rooms for rent", either of which meets the statutory definition of intent to operate a rooming house in the Act. The owner may be required to obtain a license to own/operate a rooming/boarding house issued by DCA.

As the Construction Official having jurisdiction in a town that, by a local ordinance, permits a property owner to rent more than one room in their house, you must instruct the owner to contact DCA and apply for and obtain a license to own/operate a rooming/boarding house. The municipal ordinance permitting the rental of more than one room in a house does not obviate the State licensing requirement contained in the Act.

A building used as a rooming house for six or more occupants is classified as Group R-2. Buildings being used as boarding homes with six to sixteen occupants are classified as Group R-4; those with more than sixteen occupants are classified Group I-1. As you are aware, the R-4 and I-1 group classifications require additional safeguards. (See Bulletin 15-3 for guidance on group classification.) It is not uncommon for DCA to find a building's use has been illegally changed making it ripe for enforcement action by the Construction Official having jurisdiction. A building being used as a rooming or boarding house with five or fewer occupants is to be classified as Group R-3 or R-5. Regardless of whether there is a change in the building's group designation, the owner and operator of the building still must be licensed by DCA. If you locate an unlicensed facility, you should take steps to compel the owner to apply to DCA for a license or return the subject premises to its original intended use. (Note: FTO-10 will be revised or withdrawn in the near future as it no longer accurately reflects the group designations for rooming and boarding homes since adoption of the 2015 I Codes.)

(continued next page)

(*What is a Rooming/Boarding House?)*

The majority of the time DCA issues two separate licenses, an Owner's License and a separate Operator License. DCA licenses the person or entity appearing on the recorded deed as the owner of the premises. DCA licenses the Operator as well. In accordance with the Act, the Licensed Operator must reside in the rooming/boarding house. If the licensed owner resides at the rooming/boarding house, DCA will issue a License to Own & Operate to the Owner. The regulations stipulate all licenses issued by DCA must be posted in plain view within the rooming/boarding house.

DCA has initiated enforcement action in accordance with the Act based solely on information submitted to DCA by the Construction Official's Office or Code Enforcement Office having jurisdiction. Examples of the types of information that DCA can use to take this action are:

- The number of individuals residing,
- The date of occupancy of each resident,
- The rental amount paid,
- To whom the rent is being paid,
- A short narrative as to the conditions and layout of the building suspected of being an unlicensed rooming/boarding house,
- Photos of keyed entry hardware on the doors to each room,
- Copies of Incident Reports from First Responders, and
- Subsequently providing testimony at proceedings held at the Office of Administrative Law.

Please note that this is not a request for the Construction Official to provide the above information. When a complaint is received, DCA will conduct a jurisdictional investigation of the alleged unlicensed rooming/boarding house and take the necessary action at the conclusion of the investigation.

If you or your staff have any question or concerns, please feel free to contact DCA. DCA can verify if a property you may suspect of operating as a rooming/boarding house is licensed or not licensed simply by telephoning DCA at (609) 633-6251.

Source: Jay Raywood
Bureau of Rooming and Boarding House Standards

Multiple Motor Vehicle Dealerships

There seems to be confusion regarding the change of use of existing buildings for use as licensed motor vehicle dealerships. Typically, these dealerships are connected to each other and located in the same building.

This article is to inform you of the licensing requirements of the NJ Motor Vehicle Commission (NJ MVC). As UCC personnel, you are not required to enforce these provisions as part of the UCC. A lack of compliance with the NJ MVC construction requirements will preclude the facility from being issued a motor vehicle dealership license from the NJ MVC. You are, however, responsible to ensure that the building complies with the change of use requirements of the Rehabilitation Subcode (N.J.A.C. 5:23-6.31).

The MVC's regulation, N.J.A.C. 13:21-15.4(d), Established Place of Business states: "A proposed place of business is deemed to occupy the same premises as another dealership if the two facilities are not completely separated by exterior walls or a fire wall conforming to the National Building Code requirements." In order to have multiple licensed motor vehicle dealers at the same location, the dealerships must be separated by either exterior walls or fire walls as defined in the building subcode. From a UCC standpoint, the building is typically permitted be constructed without the exterior walls or fire walls, however, in order to meet the NJMVC licensing requirements, the building would still require these features.

Do not consider this MVC fire wall requirement as a prior approval to the issuance of a permit. The enforcement responsibility of this regulation is entirely the responsibility of the MVC and the owner of the facility.

Source: John Maher
Office of Regulatory Affairs
(609) 984-7672

Current Nationally Recognized Testing Laboratories (NRTLs)

In reference to N.J.A.C. 5:23-3.6, Standards; accepted practice, the current list of NRTLs is as follows:

- Canadian Standards Association (CSA)
- Curtis-Straus LLC (CSL)
- FM Approvals LLC (FM)
- International Association of Plumbing and Mechanical Officials EGS (IAPMO)
- Intertek Testing Services NA, Inc. (ITSNA)
- MET Laboratories, Inc. (MET)
- Nemko-CCL (CCL)
- NSF International (NSF)
- QAI Laboratories, LTD (QAI)
- QPS Evaluation Services Inc.
- SGS North America, Inc.
- Southwest Research Institute
- TUV Rheinland of North America, Inc.
- TUV Rheinland PTL, LLC
- TÜV SÜD America Inc.
- TÜV SÜD Product Services GmbH
- Underwriters Laboratories Inc.

This information can be found at https://www.osha.gov/dts/otpca/nrtl/nrtllist.html. It is important to note this and periodically check this information as organizations may no longer be recognized. This would not negate previous testing if an item came into question and was installed at a time when the organization was recognized. Organizations no longer listed can be found at https://www.osha.gov/dts/otpca/nrtl/recgterm.html.

Lastly, Bulletin 90-1 addresses CSA acceptance in the State of NJ. Since CSA is recognized, this bulletin is no longer necessary and will be withdrawn.

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

Footing and Foundation Inspection for Class 1 Buildings

The article is being published to add some clarity regarding the requirements of foundation inspections for Class 1 buildings, as defined at N.J.A.C. 5:23-4.3A(d). Chapter 17 of the 2015 International Building Code (IBC/2015) requires special inspections for Class 1 buildings in accordance with Section 1704.2.

Inspections for foundations of buildings of other than one- and two-family dwellings are found at N.J.A.C. 5:23-2.18(b)2. Here it states: Inspections for all subcodes of construction, other than one- and two-family dwellings, shall be limited to those required for one- and two-family dwellings and the following: fire suppression systems; heat producing devices; any special inspections required by any subcode of the regulations.

As you can see, it references the foundation inspections required for one- and two-family dwellings are addressed in N.J.A.C. 5:23-2.18(b)1. (see NJAC 5:23-2 at http://www.nj.gov/dca/divisions/codes/codreg/ucc.html)

Special inspections are required as per Chapter 17 of the IBC/2015. Special inspections and tests of concrete construction shall be performed in accordance with Section 1705.3, Concrete construction, and Table 1705.3, Required Special Inspections and Tests of Concrete Construction. Section 1705.3 requires foundation special inspection of reinforcing bars in accordance with Section 1705.3.1, Welding of reinforcing bars, and material tests in accordance with Section 1705.3.2, Material tests.

Table 1705.3, Inspection and Test of Concrete Construction, lists the required special inspections.
(see Chapter 17 at http://codes.iccsafe.org/app/book/toc/2015/New_Jersey/building/index.html)

Special inspections and tests of driven deep foundations (piles) must be performed during installation of driven deep foundation elements as specified in Table 1705.7, Required Special Inspections and Tests of Driven Deep Foundation Elements. The approved geotechnical report and the construction documents prepared by the registered design professionals are used to show compliance.

Table 1705.7, Required Special Inspections and Tests of Driven Deep Foundation Elements, lists the required special inspections and tests of driven deep foundation elements.
(see Chapter 17 at http://codes.iccsafe.org/app/book/toc/2015/New_Jersey/building/index.html)

(continued next page)

(Footing and Foundation Inspection for Class 1 Buildings)

Comparing foundation inspections required for all buildings versus the foundation special inspections required for Class 1 buildings, we can clearly see that the foundation special inspections of Chapter 17 do not address those required at N.J.A.C. 5:23-2.18.

Therefore, the inspection of items addressed at N.J.A.C. 5:23-2.18 must be performed by the local jurisdiction having authority, and in the case of a Class 1 buildings, the applicable special inspections of Chapter 17 are performed by the appropriate Special Inspector ***in addition to*** the local's inspections.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

Accessibility – "Regular" Condo/Apartment Buildings

A typical condo/apartment building follows Section 1107.6.2.2 of the International Building Code/2015 (IBC/2015), and more specifically Subsection 1107.6.2.2.1. Please note, this subsection does not reference Table 1107.6.1.1 and states that a building containing 4 or more condo/apartments with:

- No elevator; units at ground level – all units at ground level must be Type A;
- No elevator; units not at ground level – vertical accessibility shall be provided to at least the 1st level of residential units and be Type A units at this level;
- Elevator; all units shall be Type A.

The table referenced would apply to such places like an extended-stay hotel/motel that exceeds the transient limitation set forth in the IBC/2015 and what might seem like a Group R-1 is now a Group R-2, which would require a specific number or a percentage of rooms to be accessible.

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

Code references updated 08/30/2022

Utility Solar Projects

It has come to the attention of the Department that the regulations of the Uniform Construction Code (UCC) are being applied to Utility owned or leased property regarding solar projects. As stated in Bulletin 88-1, these projects are outside of the scope of the UCC.

In other words, if the project in question is sited upon land that is either owned or leased by a Utility Company, the photovoltaic panels are NOT housed within or sited upon a building, and all power generated is provided through a direct connection to the Utility, then no plan review or construction permits are required for the project. If, however, **any** of these conditions changes, please contact the Bureau of Construction Project Review at (609) 984-7850 for a jurisdictional determination.

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

Generators Revisited!

In a recent article, we discussed conductor ampacity and sizing based on the over current device contained within a generator. In this article, we need to understand the correlation between "**general load"** and "**total connected load"** and the allowances of NEC 310.15(B) (7). Article 702 states that the system capacity shall be made in accordance with Article 220 or by **another approved means**. Article 220 is branch circuit; feeder and service calculations and the formulas contained within are used to size conductors to avoid overloading, overheating and potential fire hazards. When it comes to sizing a service, Article 220 gives a method which will provide a "**general load**" calculation. The **general load** calculation will be more than sufficient to carry all the loads to the dwelling without the potential of overheating the conductors if the guidelines contained within are followed.

When sizing a generator, the "**total connected load"** can be used, and by doing so, the allowance of 310.15(B)(7) can also be used. This means that the conductors from the generator to the transfer switch which feeds the entire **connected load** can be calculated with an allowable reduction factor of 83% for feeders rated 100 through 400 amps. The first question to pop up is, "What if there is load shedding and half of the total connected load is not being used?"

(continued on page 12)

Accessibility Responsibilities

As you are aware, the 2015 codes (and referenced standards) were adopted 09-21-15. One of the big changes was moving the majority of the Barrier Free Subcode, N.J.A.C. 5:23-7, to Chapter 11 of the International Building Code/2015. This adoption left N.J.A.C. 5:23-7.15 to 7.32 intact: Enforcement (7.15) and recreation (7.16 – 7.32). The Recreation portions will remain, but the Enforcement section has been moved to its proper location, N.J.A.C. 5:23-3.4, Responsibilities as of 04-04-16. Just like the old section, the code enforcement responsibilities of the ICC/ANSI A117.1 will now be reflected within the Building Subcode at Section 3.4 for the 2009 ICC/ANSI A117.1. The breakdown of the 2009 ICC/ANSI A117.1 is as follows:

Ch. 11	Accessibility	Building	Building
A117.1	301.1- 308.3.2	Building	Building
	309	As applicable	As applicable
	401.1- 406.14	Building	Building
	407 - 410	Elevator	Elevator
	501.1 - 506.1	Building	Building
	602.1 – 602.2	Building/Plumbing	Building
	602.3 – 602.6	Building/Plumbing	Plumbing
	603.1 – 603.6	Building	Building
	604.1	Building/Plumbing	Building
	604.2	Building/Plumbing	Plumbing
	604.3	Building/Plumbing	Building
	604.4	Building/Plumbing	Plumbing
	604.5	Building/Plumbing	Building
	604.6	Building/Plumbing	Plumbing
	604.7 – 604.11.1	Building/Plumbing	Building
	604.11.2	Building/Plumbing	Plumbing
	604.11.3	Building/Plumbing	Building
	604.11.4	Building/Plumbing	Plumbing
	604.11.5	Building/Plumbing	Building
	604.11.6	Building/Plumbing	Plumbing
	604.11.7 – 605.1	Building/Plumbing	Building
	605.2	Building/Plumbing	Plumbing
	605.3	Building/Plumbing	Building
	605.4	Building/Plumbing	Plumbing
	605.5 – 606.2	Building/Plumbing	Building
	606.3 – 606.6	Building/Plumbing	Plumbing
	607.1 – 607.4.2.3	Building/Plumbing	Building
	607.5 – 607.6	Building/Plumbing	Plumbing
	607.7 – 608.2.1	Building/Plumbing	Building
	608.2.1.1	Building/Plumbing	Plumbing
	608.2.1.2 – 608.2.2	Building/Plumbing	Building
	608.2.2.1	Building/Plumbing	Plumbing
	608.2.2.2 – 608.2.3	Building/Plumbing	Building
	608.2.3.1	Building/Plumbing	Plumbing
	608.2.3.2 – 608.3.3	Building/Plumbing	Building
	608.4 – 608.5	Building/Plumbing	Plumbing
	608.6 – 608.7	Building/Plumbing	Building
	609 – 701.1	Building	Building

(continued next page)

(Accessibility Responsibilities)

	702.1	Fire/Electrical	Electrical
	703.1 - 1002.6	Building	Building
	1002.7 – 1002.9	As applicable	As applicable
	1002.10	Building	Building
	1002.11	As applicable	As applicable
	1002.12 – 1003.6	Building	Building
	1003.9	As applicable	As applicable
	1003.10	Building	Building
	1003.11 – 1003.11.2.1	Building/Plumbing	Building
	1003.11.2.2	As applicable	As applicable
	1003.11.2.3 -1003.11.2.4	Building/Plumbing	Building
	1003.11.2.4.1	Building/Plumbing	Plumbing
	1003.11.2.4.2 – 1003.11.2.4.4	Building/Plumbing	Building
	1003.11.2.4.5 – 1003.11.2.4.6	Building/Plumbing	Plumbing
	1003.11.2.5.1 – 1003.11.2.5.2	As applicable	As applicable
	1003.12 – 1003.12.3.3	Building	Building
	1003.12.4 – 1004.12.4.2	Building/Plumbing	Building
	1003.12.4.3 – 1003.12.4.4	Building/Plumbing	Plumbing
	1003.12.5.2-1006.7	Building	Building

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

Windowless Basement - Sprinkler or Supervised Automatic Fire Alarm

The Department has been receiving a great number of calls from property owners and contractors regarding the requirements for windowless basements. Many have been receiving citations for Uniform Fire Code (UFC) violations. All buildings regulated by Subchapter 4 of the UFC (those that received a construction permit to build before 01/01/77) have been required to install fire sprinklers in windowless basements and stories. Below is the fire retrofit code text (emphasis added) that allows a supervised low voltage automatic fire alarm system to be installed in lieu of the code required sprinklers when the basement space does not exceed 3,000 sq ft.

N.J.A.C. 5:70-4.7(h)6.
(h) In all buildings, *any windowless basement* or story located below the seventh story shall be *equipped throughout with an automatic fire suppression system* installed in accordance with the New Jersey Uniform Construction Code.
6. *Windowless basements* not exceeding 3,000 square feet in area *shall be exempt* from this *automatic suppression requirement*, provided *a supervised automatic fire alarm system* shall be installed in accordance with the New Jersey Uniform Construction Code.

The automatic fire alarm system allowed by number six above needs to be installed within the window basement in accordance with the Uniform Construction Code. Many callers are telling me that they are being told to install a full fire alarm system throughout the entire building that contains a windowless basement. This is incorrect; the code requires only the automatic fire alarm system in the basement. The basement detection system is required to be monitored so early notification is provided to the fire department so that they can respond quickly before the fire has a chance to compromise the floor/ceiling assembly.

Other sections of our codes do require the entire building to be protected; however, those sections specifically state that the system needs to be "installed throughout the building." In this case, the sprinkler protection is only required for "any windowless basement" and it can be a limited area fire sprinkler system in most cases. The "equipped throughout with an automatic fire suppression system" is only referring to the basement space. So a 19 or fewer sprinkler head limited area sprinkler system can be used and does not need to be supervised; alternatively, if the basement space does not exceed 3,000 square feet, the owner of the building may opt to install a "supervised automatic fire alarm system."

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Nonresidential Development Fee, Part 2

In July 2008, Governor Corzine signed a bill[1] that created a uniform and statewide system for municipalities to assess and collect a fee on new, nonresidential development. The purpose was to raise affordable housing funds. The law set a uniform fee on new, commercial development and created a process to collect it. Local building departments had a key role. They weren't asked to be the money handlers, but they were required to notify planners and community development officers, tax assessors, and/or other local officials when they issued building permits for new, nonresidential work. They also were required to withhold certificates of occupancy (CO) until the fee was paid. The fee was based on the assessed value of new development, and it was added to the list of "prior approvals" local building officials considered before they released COs.

Money was collected, much of which was soon returned, as the nonresidential development fee was victim to bad timing. Just before it was enacted, the housing bubble burst. New Jersey took steps to spur economic recovery and placed a moratorium on collection of the fee. There were two of these.[2] They were temporary measures. They've expired. The fee is back.

As construction officials and technical assistants, here are some things to consider:

1. Check with your municipality. There should be in place a way to collect the fee. Some localities collect money directly; others have developers pay the New Jersey Department of Treasury.
2. The building department's role is to: a) notify appropriate local officials of building permits for new, nonresidential work; and b) withhold COs until payment is made.
3. The fee applies only to commercial buildings for new construction and additions. Permits for rehabilitation work (e.g. alterations) are excluded, as are all permits for new houses and home repair.
4. Projects affected: offices, restaurants, shops, hotels, warehouses, and other new, commercial buildings.
5. Public buildings and public amenities are excluded. These include government buildings, schools, and community and recreational centers. Churches, synagogues, and other places of worship are exempt, too. So are parking decks (for either residential or commercial uses).
6. Also excluded are developments in special places and for special purposes, like the relocation of a hospital or nursing home. An example of a site exemption is development in a designated transit village or near a light-rail line.
7. New commercial farm buildings and buildings of group "U" for utilities, accessory, and other miscellaneous structures don't pay either.
8. Only permits for new commercial projects with site plan approval after July 1, 2013 **and** a permit-issue date on or after January 1, 2015 are subject to the fee.

[1] P.L. 2008, c. 46.
[2] P.L. 2008, c. 90 and P.L. 2011, c. 122.

Questions about whether the fee applies should be directed to the local tax assessor. For more information, check the link to the DCA website at: http://www.nj.gov/dca/divisions/codes/forms/pdf_forms/NRDF_info_2014

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

(Generators Revisited! – continued from page 8)

When you think about it, this question answers itself. Total connected load means everything which is capable of being energized from the optional stand-by generator. Load shedding is an added safety feature not allowing additional circuits to be turned on during emergency operation, which means they are not connected.

The second question is, "How should the total connected load be calculated and/or be accepted for permit release?" This goes back to Article 220 for specific allowable reductions and/or the nameplate rating of the actual fixed appliance in the structure. The contractor can provide calculations for every light, appliance and accessory device that will be supplied by the generator. Some calculations may be required based on continuous use and also some reductions are allowed based on the specific appliance. Another method allowed is obtaining the highest KW demand in months from the utility provider and taking the average of those highest months. However it is submitted, as long as the capacity of the generator is sufficient to carry all the loads connected while in operation, the use of 310.15(7) for conductor size should be accepted.

Source: Dave Greenhill
Code Assistance Unit
(609) 984-7609

December 2015 Construction Highlights

- $1.368 billion of construction was authorized by building permits in December. This was the ninth straight month of activity in excess of one billion dollars.
- Residential work totaled $666.4 million, 48.7 percent of all construction authorized by building permits.
- Office, retail, and other nonresidential construction accounted for $702.0 million (51.3 percent).
- December construction is based on building permits from 553 of New Jersey's 565 municipalities.
- Livingston Township in Essex County had nearly $100 million in December, top among localities. The big project was an $88.8 million addition to St. Barnabas Medical Center.
- Jersey City had $80.9 million of work, half of which was for new houses. The City's building department issued permits for 154 new dwellings. Only Maplewood Township and Newark, both in Essex County, had more with 236 and 177, respectively.
- State Buildings had $139.8 million of construction. Two of the bigger projects were a $38.9 million renovation by New Jersey City University in Jersey City of its science center and $34.4 million for a new school in Keansburg in Monmouth County. (The permit was authorized for the New Jersey School Development Authority, which is why it appears as a "State Building.")

Year to Date

Major Construction Indicators, New Jersey: January - December
NJ DCA, 2/8/16

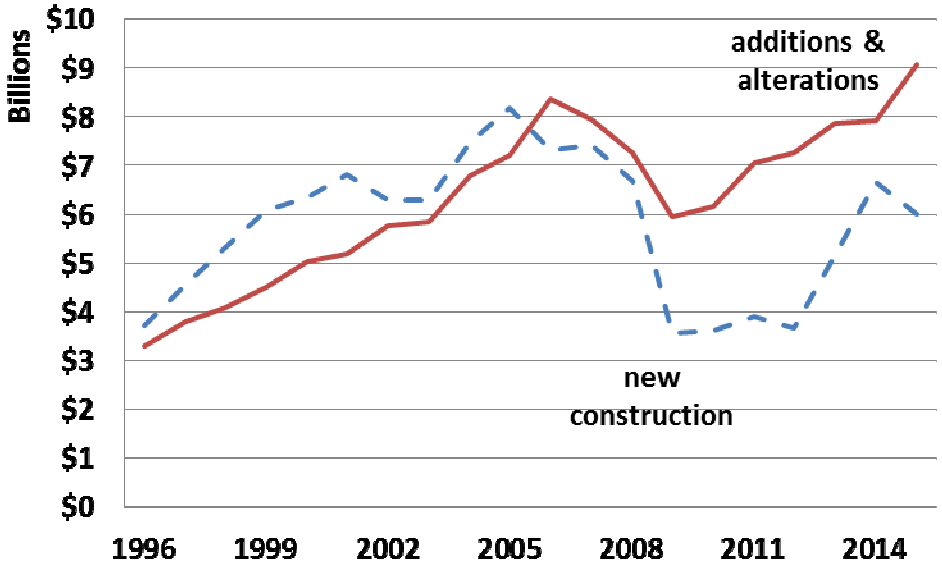
	Estimated cost of construction	Authorized housing units	Authorized office space (square feet)	Authorized retail space (square feet)
	year-to-date figures (January - December)			
Jan – December 2015	$15,069,210,207	19,267	5,731,747	3,544,140
Jan – December 2014	14,439,333,570	22,840	5,325,631	3,536,520
Jan – December 2013	13,007,550,849	18,733	5,822,166	2,240,758
Jan – December 2012	10,901,351,075	15,145	7,376,324	2,073,947
Jan – December 2011	10,890,224,961	11,822	4,889,841	1,649,925
Jan – December 2010	9,657,851,990	11,578	5,192,205	2,135,558
Jan – December 2009	9,454,767,714	11,067	4,035,812	2,417,629
Jan – December 2008	13,834,284,685	16,203	7,869,822	5,459,374
Jan – December 2007	14,907,746,308	25,472	8,875,968	4,993,848
	annual figures			
2014	$14,584,198,988	22,896	5,426,729	3,536,522
2013	13,037,845,643	18,795	5,830,508	2,240,758
2012	10,941,709,996	15,270	7,395,704	2,088,658
2011	10,939,809,749	11,882	4,915,544	1,680,445
2010	9,768,642,343	11,885	5,496,579	2,192,231
2009	9,517,725,396	11,145	4,253,888	2,248,935
2008	13,944,534,578	16,338	7,962,998	5,557,101
2007	15,356,572,820	25,948	9,569,501	5,423,889
	pecent change (January - December)			
2014-15	$629,876,637	-3,573	406,116	7,620
percent change	4.4%	-15.6%	7.6%	0.2%
2013-14	$1,431,782,721	4,107	-496,535	1,295,762
percent change	11.0%	21.9%	-8.5%	57.8%
2012-13	$2,106,199,774	3,588	-1,554,158	166,811
percent change	19.3%	23.7%	-21.1%	8.0%

(continued next page)

(December 2015 Construction Highlights)

- Permit data for 2015 are preliminary, as not all building departments have reported. Most have, and preliminary indicators show, mixed signs of recovery for New Jersey's construction industry.
- The dollar amount of work between January and December 2015 is $15.069 billion, 4.4 percent more than last year at this time.
- Not all sectors of the construction industry, however, made gains.
- New home construction is down by 3,473 dwellings (15.6 percent) compared to last year at this time.
- New office space is up 7.6 percent. The biggest project was the new headquarters for Bristol Meyer Squibb in Lawrence Township, Mercer County.
- Retail development is at about the same level as last year. The American Dream retail and entertainment complex in East Rutherford, Bergen County accounted for 1.5 million square feet of the space in 2015.
- Work on existing buildings grew by $1.138 billion (14.3 percent).

Dollar Amount of Work Authorized by Permits: rehab vs. new, 1996 - 2015 prelim



- The dollar amount of construction for new buildings, however, declined by $652.1 million (9.8 percent).
- State Buildings had an especially strong year. Nearly $1.3 billion of construction was authorized in 2015. The American Dream development accounted for $441.2 million and appears as a "State Building" because the permits were issued to the New Jersey Sports and Exposition Authority.
- State colleges and universities, particularly the College of New Jersey and Rowan University, as well as public school construction by the New Jersey School Development Authority, also account for the strong showing.

State Buildings, January - December 2015
NJDCA, 2/8/16

American Dream, NJ Sports & Exposition Authority	East Rutherford, Bergen County	$441.2 million
New Jersey School Development Authority	public schools, various locations	197.0 million
College of New Jersey	Ewing, Mercer County	126.2 million
Rowan University	Glassboro, Gloucester County	108.5 million
New Jersey City University	Jersey City, Hudson County	68.9 million
subtotal		$941.8 million
State Buildings		$1.291 billion

(continued next page)

(December 2015 Construction Highlights)

- New houses played an important role in the municipalities with the most work in 2015.
- Jersey City led all municipalities with $989.7 million of construction in 2015. The City also had the most new houses, 2,649. This trend has lasted more than a decade.
- Newark had $294.8 million of construction in 2015. The City also had 417 new dwellings, ranking sixth among municipalities.

Authorized Housing, New Jersey, Newark, & Jersey City
Source: NJ Department of Community Affairs, 5/7/15

Year	New Jersey	Newark	rank	Jersey City	rank
2015 prelim	19,267	417	6	2,649	1
2014	22,896	734	3	3,766	1
2013	18.795	309	9	1,705	1
2012	15,270	266	14	618	2
2011	11,882	180	13	700	1
2010	11,885	169	18	249	11
2009	11,145	285	4	1,132	1
2008	16,338	289	6	1,468	1
2007	25,948	927	2	2,765	1
2006	31,709	2,125	2	2,578	1
2005	39,688	2,611	2	3,778	1
2004	39,254	1,702	2	2,156	1
2003	35,171	1,730	1	969	2
2002	34,589	1,223	1	907	2
2001	35,680	1,066	2	2,009	1

- Toms River in Ocean County was one of the New Jersey municipalities hardest hit by Super Storm Sandy in October 2012. The Township reported $294.8 million of construction in 2015. New houses and home renovations accounted for nearly 88 percent.
- Princeton had $220 million of work. Two of the bigger developments were Princeton University's renovation of Frick Hall for its engineering department and a 240-unit apartment complex on the site of the old medical center.
- The City of Camden is among top performers. This is due to a new technology campus on a 50-acre site on the City's waterfront for Holtec, an alternative energy firm.

Dollar Amount of Authorized Construction, 2015 top municipalities
NJ DCA, 2/8/16

Municipality	County	Estm. Cost of Construction ($)	Authorized Housing Units	Authorized Office Space (square ft)	Authorized Retail Space (square ft)
Jersey City	Hudson	$989,701,974	2,649	196,258	1,009
Newark	Essex	294,826,707	417	25,409	10,452
Toms River	Ocean	280,914,502	684	42,801	0
Princeton (consolidated)	Mercer	220,792,498	369	52,262	0
Hoboken	Hudson	213,737,391	457	0	1,626
Camden	Camden	204,128,524	52	186,900	9,180
Livingston	Essex	196,460,462	24	43,545	0
Lakewood	Ocean	189,552,239	782	245,394	5,496
Edison	Middlesex	167,046,676	60	82,883	13,602
Woodbridge	Middlesex	140,178,903	122	115,831	11,760
State Buildings		1,290,659,396	0	493,943	1,527,953
New Jersey		**$15,069,210,207**	**19,267**	**5,731,747**	**3,544,140**

(continued next page)

(December 2015 Construction Highlights)

New Home Prices

- 1,950 new houses were completed and began enrollment in a new home warranty in the fourth quarter of 2015. Their median sales price was $435,000. This was 1.1 percent less than in the previous quarter.
- Essex, Union, and Bergen Counties had the most expensive new houses.
- Most new houses built in New Jersey that are for sale are required to have a new home warranty. The exception is those houses where the homeowner served as his/her own general contractor.

New House Prices

NJ DCA 2/8/2016

Period	# of New Houses	Median Sales Price	Percent Change
4th qtr 2015 (p)	1,950	$435,000	-1.1%
3rd qtr 2015 (p)	2,023	439,900	-2.0%
2nd qtr 2015 (p)	2,060	449,000	12.3%
1st qtr 2015 (p)	1,673	400,000	-0.9%
4th qtr 2014	2,336	410,400	3.4%
3rd qtr 2014	2,375	396,824	-1.7%
2nd qtr 2014	2,488	403,785	4.9%
1st qtr 2014	1,757	385,020	
2014	8,956	$400,000	0.3%
2013	7,861	399,000	-0.2%
2012	7,165	399,900	2.5%
2011	6,839	390,000	1.3%
2010	8,712	384,899	4.4%
2009	9,161	368,512	-13.3%
2008	13,841	425,000	0.1%
2007	18,397	424,570	2.6%
2006	22,697	413,825	9.2%
2005	24,571	378,992	8.3%
2004	23,844	349,900	13.9%
2003	22,226	307,168	11.8%
2002	23,647	274,705	8.3%
2001	23,372	253,670	9.5%
2000	25,058	231,728	3.2%
1999	24,479	224,496	6.9%
1998	23,884	209,980	10.5%
1997	21,640	190,000	3.7%
1996	20,903	183,300	

Note: (p) data are preliminary

DCA vs. Census

Building permits are an important measure of the economy and settlement patterns. They are one of the few sources of information available for every municipality, every month. Both the New Jersey Department of Community Affairs (DCA) and the US Census Bureau (Census) examine them and report on authorized housing, the number of new dwellings authorized by these permits.

(continued next page)

(December 2015 Construction Highlights)

Figures from both agencies appear in the *Construction Reporter*. Data users will find significant differences between authorized housing reported by the two agencies. DCA reports 19,267 authorized dwellings, while Census reports 31,050. DCA's tally is 15.6 percent *less than* this time last year. Census shows a 10.2 percent *increase*.

What's going on?

Housing Units Authorized by Building Permits, New Jersey
DCA vs. Census, January - December 2015
NJDCA 2/8/16

month	DCA authorized housing (revised)	Census Bureau authorized housing (revised)	Census Bureau no. of imputed housing units	percent imputed
Jan	1,295	1,840	818	44.5%
Feb	1,402	1,889	554	29.3%
Mar	1,046	1,687	1,165	69.1%
Apr	1,837	2,835	2,189	77.2%
May	1,689	3,451	1,116	32.3%
Jun	1,769	4,502	3,537	78.6%
Jul	2,082	2,153	1,032	47.9%
Aug	1,713	2,345	887	37.8%
Sep	1,440	2,287	1,064	46.5%
Oct	1,837	2,774	1,216	43.8%
Nov	1,449	2,261	873	38.6%
Dec	1,708	3,026	1,627	53.8%
year-to-date total	19,267	31,050	16,078	51.8%

The introduction to the *Construction Reporter*, which follows these highlights, discusses some of the differences between how DCA and Census report authorized housing. One of the differences not in this introduction is Census imputes data when it does not get information from a local building department. DCA does not. It reports "No report" for missing information. It does not guess.

Thus far, for 2015, more than half of the authorized housing reported by Census was imputed. For June 2015, Census reports over 4,500 new houses. Three-quarters of which were imputed. DCA reports 1,769 authorized dwellings for June 2015. Both tallies are as of February 2016. The DCA count is based on reports from all 565 municipalities in the State.

DCA and Census are working closely to try to remove the guesswork in building permit data.

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

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.



At its March meeting, the Municipal Construction Officials of New Jersey (MUNCO) presented the inaugural William M. Connolly Construction Official of the Year award to Sal DiCristina, Construction Official for Rutgers University. Pictured are: Bill Connolly, Sal DiCristina and Steve Gluck, Chairman of MUNCO.

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Volume 28, Number 3 Fall 2016

Continuous Insulation and Notes

Those who have been paying attention to the insulation tables within the ASHRAE Standard 90.1-2013 might have noticed the notes at the bottom of the page. Tables 5.5-4 and 5.5-5, applicable to New Jersey for Climate zones 4A and 5A respectively, show an asterisk at the bottom. This very important note informs the user to consult the definitions in Section 3.2 for the applicability of the requirement for continuous insulation (c.i.).

Continuous insulation is defined as "insulation that is uncompressed and continuous across all structural members without thermal bridges other than fasteners and service openings. It is installed on the interior or exterior or is integral to any opaque surface of the building envelope."

The second part of the definition is the part people have the most questions about in relation to the insulation tables. Whether or not the insulation can be installed on the exterior or interior relies on the manufacturer's installation instructions and how the continuous insulation has been tested. This should help determine where to place the insulation.

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

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Smoke Alarm and Carbon Monoxide (CO) Alarm Compliance

This article is intended to assist Construction Officials with the smoke alarm and carbon monoxide alarm requirements when a reconstruction, alteration, renovation, or repair is undertaken.

The Division of Codes and Standards has been receiving calls about code officials requiring verification of the existence of these alarm devices before they will issue a permit to a homeowner or contractor. This is not the intent, nor is it supported by the UCC. Some code officials have even gone as far as modifying the application form from the Division of Fire Safety that is required for resale, rentals and re-occupancy of one-or two-family dwellings. Some officials are requiring that the contractor or homeowner sign a form and, in some cases, have the form notarized, before issuing a permit.

The installation of smoke alarms and carbon monoxide alarms **is not a prerequisite** to the issuance of a construction permit for reconstruction, alteration, renovation or repair work. The Construction Official should simply notify the permit applicant that these alarm devices need to be installed when they were not part of the original construction.

When smoke or CO alarms have been installed as part of the original construction or other rehabilitation project, they must be maintained. The UCC does not hold the contractor responsible for installing these alarm devices, nor does it require an inspection of these devices; it only requires them to be installed and maintained in the dwelling unit or building.

It is the responsibility of the Construction Official to ensure that these code provisions are made known to all permit applicants. A guidance document has been prepared that may be distributed/used as a counter document. This document can be found on the Codes & Standards website "SMOKE ALARM AND CARBON MONOXIDE ALARM COMPLIANCE" and is published on the following page.

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

Typo in Bulletin 03-5

If you have looked at your Special Inspections bulletin recently, Bulletin 03-5, you will notice one inconsistency with the Uniform Construction Code (N.J.A.C. 5:23) and two inconsistencies with the International Building Code(IBC)/2015.

- On page 1, "Class I" should be "Class 1" to be consistent with N.J.A.C. 5:23-4.3A.
- On page 2, the "Building Permits and Reports" section should state "responsible person in charge of the work" in lieu of "design professional."
- On page 4, the "Special Inspection for Smoke Control" section has an incorrect reference to the IBC/2015; Section 1705.13 should be 1705.18.

So please take the time to update your bulletin physically (e.g. turn the 3 into an 8) or download new pages at http://www.nj.gov/dca/divisions/codes/resources/bulletins.html.

Source: Code Assistance, (609) 984-7609

Seeing Double – Tables R404.1.2(2) and (8) of IRC/2015

The Code Assistance Unit has received multiple questions regarding Tables R404.1.2(2) and R404.1.2(8) of the International Residential Code/2015 regarding reinforcement of basement walls. At first glance, the minimum vertical reinforcement for a 6-inch nominal flat basement wall in both tables seems odd since the numbers do not match up. Keep in mind, a table within the code is only as good as how you got to it…the section reference!

This means that even if you are staring down the tables, you have to go back to the section that referenced it for applicability. In the case of the tables mentioned above, Section R404.1.3.3.7.2, Location of reinforcement in wall, should be your starting point. You will find that:

- The center of vertical reinforcement in basement walls determined from **Tables R404.1.2(2)** through R404.1.2(7) is at the centerline of the wall.
- Vertical reinforcement in basement walls determined from **Table R404.1.2(8)** is to provide a maximum cover of 1-1/4 inches measured from the inside face of the wall.

So the subtle difference (but huge impact) between tables is the location of the wall reinforcement.

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

SMOKE ALARM AND CARBON MONOXIDE ALARM COMPLIANCE FOR SOME REHABILITATION PROJECTS

The application for permit that you have submitted requires the installation of smoke alarms and carbon monoxide alarms when they have not been installed as part of the original construction. This information does not contain change of use requirements located at N.J.A.C. 5:23-6.31(i) and (j) or addition requirements located at N.J.A.C. 5:23-6.32(f). Smoke and carbon monoxide alarms must be installed in accordance with the following information.

The following are the requirements for Smoke Alarms:

- Work being performed in accordance with N.J.A.C. 5:23-6.4(f) repair, 6.5(f) renovation and 6.6(f) alteration require smoke alarms to be installed in the dwelling units of Group R-2 and buildings of Groups R-3, R-4 and R-5.

- Smoke alarm(s) must be installed on each level of the dwelling, including the basement, outside of each separate sleeping area in the immediate vicinity of the bedroom. Smoke alarms may be placed on the ceiling or within 12 inches of the ceiling on the wall.

- Smoke alarms are permitted to be battery operated, but shall not replace any required A/C-powered smoke alarms or a household fire alarm system.

- The installation of battery operated smoke alarms does not require a permit.

The following are the requirements for Carbon Monoxide Alarms:

- Work being performed in accordance with N.J.A.C. 5:23-6.4(g) repair, 6.5(g) renovation, 6.6(g) alteration, and 6.7(f) reconstruction require that carbon monoxide alarms be installed in buildings of Groups I-1, R-1, R-2, R-3, R-4, and R-5 that contain a fuel burning appliance or have an attached garage.

- Section 915 of the building subcode and Section R315 of the one- and two-family dwelling subcode require that carbon monoxide alarms be installed in the immediate vicinity of each sleeping area when the building contains a fuel burning appliance or has an attached garage. Carbon monoxide alarms may be placed anywhere on the ceiling or the wall.

- Carbon monoxide alarms are permitted to be battery operated, hard-wired or the plug in type.

    - The installation of battery operated or plug in type carbon monoxide alarms does not require a permit or an inspection.

It is your responsibility to ensure that these provisions have been met.

Annual Permit Audit

The Licensing & Education office is responsible for collecting training fees connected to the issuance of annual permits and the subsequent training of workers named in those permits. Over the past few years, there has been a noticeable drop in the number of permits submitted to our office, despite a long history of the permits being issued to particular institutions. In an effort to verify that the permits we've tracked in the past have, indeed, expired and are no longer valid, we are asking each building department to check its records and verify any and all annual permits issued through their offices and send that information to us.

This should not affect many departments, and those that issue these types of permits should have the information readily available. Please send the information to our office via mail, fax (609-633-6729) or by email (muriel.smith@dca.nj.gov) as soon as possible.

Thank you very much for your cooperation on this topic!

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

Chimney Liners – Required or Not Required 

In the Fall 2015 edition, Volume 27, Number 3, Page 13 of the Construction Code Communicator, I wrote an article entitled "Chimney Liner Requirement – Rehab". I would like to update this article as follows:

The International Residential Code/2015, Section G2427.5.5 (503.5.6) Inspection of chimneys, states: "before replacing an existing appliance or connecting a vent connector to a chimney, the chimney passageway shall be inspected in accordance with the chimney verification program as provided for in N.J.A.C. 5:23-2.20(d), and it shall be cleaned if previously used for venting solid or liquid fuel-burning appliances or fireplaces.

Exception: where an existing chimney complies with Section G2427.5.5 through G2427.5.5.3 and in sizing is in accordance with G2427.5.4, its continued use shall be allowed where the appliance vented by such chimney is replaced by an appliance of similar type, input, rating and efficiency."

Replacing a furnace, boiler or water heater in an existing one- or two- family dwelling falls under the Rehabilitation Subcode, N.J.A.C. 5:23-6; this work is typically classified as "Renovation" by definition (replacement of equipment). N.J.A.C. 5:23-6.5(h) refers to N.J.A.C. 5:23-6.8, the Residential Materials and Methods. Here, N.J.A.C. 5:23-6.8(h)14 requires compliance with all portions of Chapter 24 from the 2015 International Residential Code (IRC) that pertains to gas equipment, and there are many sections that refer to resizing chimneys when equipment is replaced or removed.

Since this article was written, I have been told by two of the major water heater manufacturers that the efficiency of "natural draft" water heaters has not changed within the last 20 years. The only change is the requirement for more insulation to reduce heat loss.

For example, based on IRC/2015 Section G2427.5.5, Exception, a 40 gallon, 40,000 BTU/Hr., natural draft water heater can be installed in an existing chimney, whether interior or exterior, as long the existing chimney is sized properly, already lined, and in good shape.

This would not pertain to boiler or furnace replacements, which are more efficient than in past years. An exterior chimney would most likely have to be relined for these installations.

I know this is a major change, but it is a section in the IRC/2015 that would permit the use of the existing exterior chimney without having it relined for the replacement or installation of natural draft water heaters.

The submission of the chimney verification form would determine whether the existing chimney meets the code as to whether the chimney has to be relined.

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

NJ DOL Registration of Liquid Carbon Dioxide CO_2 Carbonated Beverage Systems

Recently, the Department has been receiving calls regarding the New Jersey Department of Labor (NJ DOL), Boiler and Pressure Vessel Bureau registrations of liquid CO_2 beverage tanks. The actual registration certificate from the NJ DOL takes between 30-45 days to be printed and mailed. The NJ DOL inspector will leave a signed copy of **"**NB-7 PRESSURE VESSELS REPORT OF INSPECTION Standard Form for Jurisdictions Operating under the ASME Code." This form is acceptable as meeting the requirement for proof of registration (a required prior approval), so that the installation may be approved by the fire protection subcode and construction official.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

TO: Division of Community Affairs, Code Officials

FROM: Fire Alarm, Burglar Alarm and Locksmith Advisory Committee

Mailing Address:
P.O. Box 45042
Newark, NJ 07101
(973) 504-6245

DATE: June 28, 2016

SUBJECT: Licensing Requirements and Submitting Permits for the Installation and Service of Magnetic and Mag Locks/Access Control Devices

The Fire Alarm, Burglar Alarm and Locksmith Advisory Committee would like to take this opportunity to clarify the Business license categories that are licensed to install Electronic Access Control. As a point of clarification, magnetic locks and electronic locking systems are included in the definition of Access Control per **N.J.A.C. 13:31A-1.2** which in the pertinent part reads:

> *"Access control system" means a system that provides access to authorized persons and may record and report which persons entered or exited a facility or areas within a facility, which doors or areas were accessed while persons are within a facility, and the time that such activity occurred. "Access control systems" may include the use of keys, access cards, locks, card readers, biometric identification devices, recorders, printers and control devices. "Access control systems" may be independent systems or may be integrated with other electronic security systems."*

Electronic Access Control Systems by their nature require the use of magnetic locks, electric strikes, electrified locksets, electrified crashbars, etc. as part of an electronic access control system.

Businesses which hold licenses through the Fire Alarm, Burglar Alarm and Locksmith Advisory Committee begin with one of the following prefixes:

34BX - Burglar Alarm Business License
34FX – Fire Alarm Business License
34LX – Locksmith Business License
34BF – Burglar Alarm and Fire Alarm Business License
34BL – Burglar Alarm and Locksmith Business License
34FL – Fire Alarm and Locksmith Business License
34AL – Fire Alarm, Burglar Alarm and Locksmith Business License

These licensed businesses are authorized to install systems within their respective trades. All three trades can install Electronic Access Control Systems.

Statutes and Regulations also provide an **Exemption** for Licensed Electrical Contracting Businesses (34EB). Since only licensed businesses can install, service and maintain these systems, Construction Officials should accept permit applications only from a licensed business firm.

Board of Landscape Irrigation Contractors Now Part of Codes & Standards

Pursuant to P.L. 2015 c.169, the Board of Landscape Irrigation Contractors was moved from the Department of Environmental Protection to the Department of Community Affairs on June 1, 2016. The administration and enforcement of the Board's functions have been assigned to the Licensing and Education Office in the Division of Codes and Standards.

Questions regarding the certification of landscape irrigation contractors should be directed to (609) 984-7834 or email, LIC@dca.nj.gov.

This reorganization presents a good opportunity to review the relationship between the installation and maintenance of these systems and the Uniform Construction Code (UCC). The relationship is limited, but important. The installation of an irrigation system requires the use of a backflow prevention device to protect the domestic water supply. This requires a plumbing permit and must be installed by a NJ Licensed Master Plumber.

Another topic that warrants discussion is rain sensors. Irrigation systems are required to contain a rain sensing device. When a wireless sensor will be used, no electrical permit is required. The responsibilities section listed in the N.J.A.C. 5:23-3.4(a)3 states that plan review is joint between plumbing and electrical, but if a wireless rain sensor is used, the plan review and inspection are performed by the plumbing official. When a hard-wired rain sensor is utilized, both a plumbing and electrical technical form must be submitted. The responsibility for the inspection of the hard-wired rain sensor is assigned to the electrical official. It should be noted that today's technically advanced systems no longer use the familiar wireless sensor that was placed where the rain could be sensed, often a gutter. The newer systems do not use a sensor, but instead use a wireless link that communicates with weather stations in the area and that turns the system off when more than half an inch of rain is recorded.

In sum, no electrical permit is required for a wireless rain sensor, whether it is the physical (wireless) type mounted on the structure or the wireless communication sensor contained in the control unit. The plumbing inspector should ensure that the control panel is plugged into an existing receptacle without the use of an extension cord. If during an inspection, the plumbing inspector finds that extension cords are being used, the electrical subcode official must be informed, and the owner must be notified that an electrical permit will now be required. A permit is still required for any low voltage zone valve wiring. The landscape irrigation contractors are exempt from the licensing requirement, and are able to apply for required electrical permits to install any wiring for the irrigation system not greater than 30 volts pursuant to N.J.S.A. 45:5A-18(p).

Beyond these items, there are no other permitting requirements under the UCC; however; the installation work must be done by a certified landscape irrigation contractor.

Greater enforcement of the certification law is a goal of the Board and the Department, and we may be seeking the aid of local agencies in meeting that goal.

Source: John Delesandro, Dave Greenhill & Thomas Pitcherello
Licensing & Education and Code Assistance Units
(609) 984-7834 and (609) 984-7609

Agency Classifications Based on Structure

For those trying to figure out the classification of their local enforcing agency for plan review purposes, this is determined by the lowest level of inspector license held by any of the subcode officials appointed to establish such agency. Enforcing agencies are classified as an agency of Class 3, 2 or 1 (lowest to highest classification). Each Class is defined by building/structure at N.J.A.C. 5:23-1.4.

- Class 3 structure means a structure listed in N.J.A.C. 5:23-4.3A(d)1i – vi.
- Class 2 structure means a structure listed in N.J.A.C. 5:23-4.3A(d)2ii – xxii.
- Class 1 structure means a structure not listed in N.J.A.C. 5:23-4.3A(d)1i – vi or 2ii – xxii.

(continued next page)

(Agency Classifications Based on Structure)

As you can see, the key to these definitions is the cross references to N.J.A.C. 5:23-4.3A(d). For future reference, the following table merges this section with the applicable the definitions:

	Occupancy (Group)	Area less than (per floor)	Stories (max above grade)	Height (max above grade)
CLASS 3 Structures; Buildings; & Agency	Business	7,200	2	40
	Mercantile	4,800	1	40
	Storage-1	4,200	1	40
	Storage-2	7,200	2	40
	Residential-3	As permitted in Section 503 of the building subcode and including accessory private garages, radio and television antennae and swimming pools		
	Residential-5	As permitted in Section R300 of the one- and two-family dwelling subcode and including accessory private garages, radio and television antennae and swimming pools		
CLASS 2 Structures; Buildings; & Agency	All plan review activities permitted to class 3 officials and…			
	Assembly-1	4,200	1	40
	Assembly-2	2,400	1	55
	Assembly-3	8,400	2	55
	Assembly-4	9,500	2	55
	Assembly-5	5,000	1	55
	Business	37,500	5	65
	Educational	14,400	2	55
	Factory-1	25,000	4	65
	Factory-2	37,500	5	65
	Paint Spray Booths	As permitted by Section 416 of the building subcode		
	Institutional-1	8,400	3	55
	Institutional-2	7,200	1	55
	Institutional-3	6,000	1	55
	Institutional-4	13,000	3	55
	Mercantile	21,500	4	65
	Residential-1	9,600	3	55
	Residential-2	9,600	3	55
	Residential-4	9,600	3	55
	Storage-1	26,000	4	65
	Storage-2	39,000	5	65
	Utility	As permitted by the building subcode		
CLASS 1 Structures; Buildings; & Agency	All plan review activities permitted to class 2 and class 3 officials and…			
	All remaining occupancy groups and categories not reserved to the State.			
Note: The group classifications are per Chapter 3 of the building subcode, areas are per floor and stories/height are above grade.				

Some applications of this within N.J.A.C. 5:23 are section 2.15(a)6 for Class 1 structures, section 2.15(f)1vii(1) and (3) for Class 3 structures and section 2.20(b) for Class 1 buildings.

It should be noted that, as per N.J.A.C. 5:23-4.3A(e), for existing buildings the above also applies to the reconstruction, change of use, additions and installation or alteration of fire protection systems. With that said, repairs, renovations and alterations to other than fire protection systems in any class building are the jurisdiction of the local enforcing agency regardless of their classification.

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

CO Not Contingent on Commissioning

The information provided in the Winter 2002 Construction Code Communicator article continues to reflect accurately the Department's position on commissioning. This is for many reasons. How does a code official enforce the proper calibration of elements related to Section 6.7.2.4 of the ASHRAE 90.1-2013? The code official can make sure that minimum efficiencies are met and proper sizing of equipment and layout are per design, but the performance of the system and whether it is being used as designed is not something the code official is charged with overseeing. These last two items are contractual matters and would not be linked to the issuance of a certificate of occupancy. We know that LEED and other "above code" programs rely heavily on commissioning, but the Uniform Construction Code is a minimum standard. It does not diminish the importance of commissioning, but again, it does not make the certificate of occupancy contingent on commissioning.

So, if we were to update the original article to today's adopted energy subcode, it would say:

N.J.A.C. 5:23-3.18, Energy Subcode, adopts the 2015 edition of the International Energy Conservation Code (IECC) with technical amendments. The commercial section of the IECC references the American Society of Heating, Refrigeration, and Air-Conditioning Engineers 90.1, the 2013 edition (ASHRAE 90.1-2013) as the only standard to be used for the design of all buildings except residential buildings of three or fewer stories in height.

It is important to remember that only those portions of the referenced standard that address building design are applicable. This applies to the building itself, including the building envelope, percent glazing, R-values, and U-values. This does not include the performance of the equipment installed. Equipment is required to be listed and labeled with a percentage AFUE (furnaces and boilers), HSPF (air source heat pumps), and/or SEER (air-conditioning) efficiency; however, it does not require "system commissioning" (ASHRAE 90.1-2013, Section 6.7.2.4). An inspector must make sure the equipment is listed and labeled as required by the Energy Subcode, but does not need to ensure that the owner/operator is aware of the operating and maintenance requirements for the equipment. Requirements for Groups B and E are different. N.J.A.C. 5:23-2.23(i)7, "Certificate Requirements," does require a "Test and Balance" report for mechanically ventilated Class 1 and 2 buildings of Groups B and E, but other portions of the commissioning process are outside of the scope of the Uniform Construction Code.

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

Day Care Classified as Institutional Group I-4

I guess with any update of a model code, things can get missed, or the "bread crumbs" they thought they left so the code users could find their way were eaten. That being said, the Code Assistance Unit has been receiving calls regarding the 2 ½ years of age cut-off for child day care facilities and whether it falls under Group E or Group I-4.

Section 308.6 (Institutional Group I-4, day care facilities) of the International Building Code (IBC)/2015 states that Group I-4 occupancies include buildings and structures occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This section further states that this group includes adult day care and child day care.

As you can see, the child day care seems a little lost without its up to 2 ½ years of age clarifier. For this, you must go to the "other" day care facility classification, Section 305.2, which states that Group E, day care facilities include buildings and structures, or portions thereof, occupied by more than five children older than 2 ½ years of age who receive educational, supervision or personal care services for fewer than 24 hours per day.

Yes, this may seem like a lot of trouble to find the answer to apply certain sections of the IBC/2015, but it what it is. So, the next time you are having your breakfast at your desk and reviewing the code, drop some bread crumbs in your book so you can find your way regarding child day care facilities.

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

Installation of Manufactured Homes

Most code officials are aware that manufactured homes are regulated by the Federal Department of Housing and Urban Development (HUD). Up until recently, that regulation was limited to the construction of the unit at the factory. Through a system of quality control processes, third party inspections, and labeling, a manufactured home would arrive on site with all of the necessary inspections for the work that was done in the factory. The code official, with the exception of inspecting for damage during transit, would limit his inspections to the work that was done on site. The dividing line between the factory work (overseen by HUD) and the site work (overseen by the local building department) was clear.

That line is no longer so clear. The National Manufactured Housing Construction and Safety Act of 1974 was amended on December 27, 2000 to require that HUD establish and implement a new manufactured home installation program for States that chose not to have their own installation program. HUD published rules in June of 2008 that became effective in October of 2008. New Jersey has two of the three necessary components for a HUD-compliant installation program. It has established standards for the installation of manufactured homes, and it has an inspection and approval system to ensure that the installation meets the standards. However, it lacks the third requirement, which is a training and certification program for those doing the installation work. Because that third piece is not in place, HUD began administering an installation program in New Jersey beginning in May of this year.

This has caused some duplication of effort between the State's building code enforcement program and the HUD installation program. It has left the installers in the awkward position of trying to satisfy two regulatory agencies. Nothing has changed under the State enforcement system. Permits are still required as are inspections, and ultimately, a certificate of occupancy. At this time there is no requirement under the Uniform Construction Code to ensure that the installer is certified by HUD. Under the HUD rules, installers are required to be certified, follow the HUD installation requirements, and have a qualified third party inspector sign off on a form certifying that the installation meets the HUD installation standards. It should be noted that the installers have to meet both the Federal installation standards and the UCC installation standards. This is something that the State must resolve and is working to resolve. Until it is resolved, the installers not only have to meet two sets of standards, they also have to navigate through two inspection systems. As noted above, HUD requires that the installation be certified through the filling out and submission of Form 305. Some officials may have already seen the form. It essentially is a checklist that is to be filled out by the installer and a qualified third party attesting that the installation meets the Federal installation standards.

The installers would like to be able to use the inspection by the building inspector under the UCC to satisfy the inspection by the qualified third party. The good news is that the local building inspector meets the requirements of a qualified third party under the HUD rules. The bad news is that the building inspector is not inspecting to the HUD installation standards, and therefore, cannot certify that the installation meets those requirements. Therefore, it is not appropriate for the building inspector to sign Form 305 based on a UCC inspection. Code officials can note on the form that the installation meets the installation requirements of the Uniform Construction Code and sign it accordingly. The Department is encouraging code officials to sign the form with the notation described until the State and HUD can resolve the issue of two different installation standards and two different inspection requirements.

It should also be noted that the HUD requirements do not apply to a used manufactured home that is being relocated. The HUD rules only apply to a new manufactured home being installed for the initial time. If there are questions, please contact Michael Baier, Bureau of Code Services (609) 984-7974.

Source: Michael Baier
Bureau of Code Services



Fire Escapes (FTO-3) Update

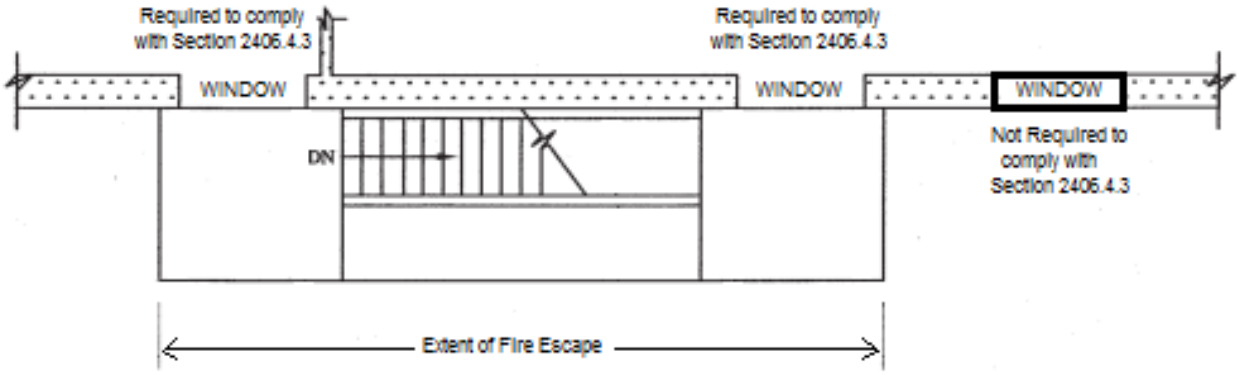
Formal Technical Opinion (FTO) – 3, Fire escapes, was revised in October 2016. The revisions to this FTO are on pages 3 and 6, both within letter H, and consist of the following:

1. Wired-glass has been deleted;
2. Protection of window openings that are 10 feet within any direction of a fire escape has been deleted; and
3. Requirements for window openings directly adjacent to a fire escape to be safety glazed in accordance with the Building Subcode, specifically Section 2406.4.3 of the 2015 International Building Code (IBC) have been added.

With the adoption of the 2006 IBC and subsequent editions, the exception for wired glass in fire doors, fire windows, and view panels was deleted from the code in Section 2406.1 of the building subcode. Therefore, wired glass is not an option for use in lieu of safety glazing.

The decision to delete the requirement for window protection within 10 feet of the fire escape is based on several factors. To truly protect openings that are 10 feet within any direction of the fire escape, both the window and the frame must be replaced. If the frame is not replaced, it will burn faster than the window will deteriorate, and the opening would no longer be protected. Another factor is that a window can be left open during a fire and again would not afford protection.

Therefore, window openings adjacent to the fire escape must comply with the 2015 IBC for safety glazing. The intent of the phrase "directly adjacent" is for window openings that are within the projection and walking area of the fire escape. See plan view below:



The revised section H(1) of FTO – 3 reads as follows:

> In existing buildings 3 stories or more in height, all door openings leading directly to a fire escape shall be protected by a minimum of 3/4-hour fire-rated door assemblies. Window openings directly adjacent to a fire escape shall be safety glazed in accordance with Section 2406.4.3 of the building subcode. No type of fire-escape exit door or window is to be located so that the distance from the fire-escape landing platform to the bottom of the door or window opening exceeds 8 inches.

This revised FTO can be found at http://www.nj.gov/dca/divisions/codes/resources/ftos.html.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

Photovoltaic Panels and Modules on Roofs

Recently, we have been receiving inquiries about whether or not roof access, roof pathways, and spacing requirements need to be applied to photovoltaic (PV) roof systems on one- or two-family dwellings or townhouses designed in accordance with the International Residential Code (IRC)/2015, Group R-5. The short answer: **No.**

(continued next page)

(Photovoltaic Panels and Modules on Roofs)

The longer answer: The International Fire Code (IFC)/2015 rules that pertain to PV systems on roofs do not apply to installations on buildings of Group R-5, and there are even exclusions/reductions for Group R-3 buildings designed in accordance with the International Building Code (IBC)/2015. Section R324.3 of the IRC/2015 does not reference the IFC/2015 for PV systems; this section contains requirements for listed equipment, wind resistance, fire classification, and roof live load design. Section 605.11.1.2 of the IFC/2015 further reinforces this by providing an exception saying for buildings constructed under the IRC/2015. In essence, the entire roof of a Group R-5 building can be covered with PV panels or integrated shingles as long as the required plumbing and mechanical vents are not covered. Yes, Section R324.2 of the IRC/2015 does reference the IFC/2015, but that is for solar thermal systems, which are not the same as PV systems. Please don't make this link just because both systems are within Section R324.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Garage Step-Up

The Code Assistance Unit has received many calls regarding a four-inch step-up from the garage leading into the main portion of a residence. This is not required and has not been required since the adoption of the International codes. This was previously a requirement of the BOCA National Building Code, and the last one adopted by the State was the 1996 edition.

Currently, both Section R309.1 of the International Residential Code (IRC)/2015 and Section 406.3.3 of the International Building Code (IBC)/2015 require that the area of floor used for parking of automobiles or other vehicles be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway; no minimum slope is provided. This would be why the old BOCA requirement went to the wayside.

In review, the four-inch step-up hasn't been a requirement since the 1996 BOCA was in effect. On May 5, 2003, the 2000 editions of the IRC and IBC were adopted which ended BOCA's reign, and the sloped floor became gospel. If someone chooses to install the step-up, they may, but it is not required, and the absence of a step up is not a violation of code.

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

Kitchen Sinks and the ICC/ANSI A117.1-2009

Prior to the adoption of the 2015 I-Codes, N.J.A.C. 5:23-7.2(b) delineated the modifications to the ICC/ANSI A117.1-2003 (http://www.nj.gov/dca/divisions/codes/codreg/pdf_regs/sub%203_6_7_12_2009_codes.pdf). The modifications to the ICC/ANSI A117.1-2009 are now found at Section 1101.2 of the International Building Code/2015 at N.J.A.C. 5:23-3.14(b)10ii.

For example, N.J.A.C. 5:23-7.2(b)21 provided an exception to kitchen/kitchenette at Section 804.4 of the 2003 standard stating that a conventional height of 36 inches is permitted when there is no cooktop, and that a parallel approach must be provided. This exception still exists but only partially. Section 804.4 of the 2009 standard references Section 606, Clear floor space at [lavatories and sinks]. The exception provided in the cross reference allows for a parallel approach provided there is no conventional range, **but** a height of 34 inches is now required.

This may seem like an inconvenience, but when applying the reach ranges of Section 308, flush-mount electrical outlets above the conventional height counter were not in reach. The 34-inch max would allow the electrical outlets to remain flush-mount and more importantly, be consistent with the American with Disabilities Act.

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

All "New Homes" are not Created Equal

Recently, a distinction has been noted amongst the New Jersey State Uniform Construction Code Regulations (UCC) and the New Home Warranty and Builders' Registration Act (NHWA) relative to the definition and treatment of a "New Home" under the UCC and its eligibility to receive a New Home Warranty under the NHWA. The distinction arises most often in matters involving remodeled / rehabilitated housing where the preexisting structure is essentially demolished.

It is stated under the UCC that, "if a structure is demolished except for a de minimis amount, the construction official shall designate the replacement structure as a new structure and apply the requirements of the Uniform Construction Code applicable to new construction," pursuant to N.J.A.C. 5:23-6.2(b)2i. Hence, where the preexisting structure is essentially demolished, the structure will be considered as a "new structure" and all the requirements of the UCC relative to new construction will be applicable.

However, the fact that the structure and building are subject to the "new construction" requirements of the UCC does not mean the structure will be eligible under the NHWA. The NHWA regulations, specifically N.J.A.C. 5:25-1.3, "Definitions", defines a "New Home" as, "any dwelling unit not previously occupied, excluding dwelling units constructed solely for lease, and units governed by the Federal Mobile Home Construction and Safety Standards Act, 42 USC 5401 et seq."

While the definition of "New Home" under NHWA does not expressly exclude preexisting structures which have been essentially demolished, there is established case law, namely *Glaum v. Bureau of Construction Code Enforcement, New Jersey Home Warranty Program, Dept. of Community Affairs*, 221 N.J.Super. 79, 533 A.2d 986 (App. Div. 1987) which addresses the distinction. In *Glaum*, the Court considered the question of whether a rehabilitated home was eligible for participation in the NHWA program. The home in the Glaum case had been severely damaged in a fire and underwent substantial rehabilitation. The builder sold the home, and the buyers received from the builder a Certificate of Participation in the New Home Warranty Security fund. Subsequently, the buyers filed a notice claim with the DCA for defects in the home that the builder left unaddressed. The DCA notified the buyers that, "its investigation revealed that plaintiff's had purchased a home which had been rehabilitated following major fire damage and that the home was not a "new home" within the contemplation of N.J.S.A. 46:3B-1 et seq and N.J.A.C. 5:25-1 et seq." *Id.* At 82. The Court concluded:

> The Act is designed to protect the integrity of the new home owner from the new home builder. It is not the intent of the statute to cover remodeled, or what is referred to in the building trade as "gut rehabilitated" housing, i.e., housing in which every part of the house is knocked down except the shell. Petitioner's home is a substantial remodeling of a preexisting house. *Id.* At 84.

The Court went on to indicate that "new home" for coverage in the NHWA means entirely new structure. Although a substantially remodeled or rehabilitated structure may be classified as new construction pursuant to the requirements of the UCC, the structure cannot be considered a "new home" under the NHWA. The incorporation of any component of the preexisting structure into the new structure would cause the new structure to fail the requirement of N.J.A.C. 5:25-1.3, "Definitions," that the structure/dwelling unit not have been previously occupied. Essentially, unless every component of a structure is new, the structure cannot be considered a "New Home" under the NHWA even if classified and built as "new construction" under the UCC.

Any questions pertaining to the definitional distinction between a "New Home" under the NHWA and the UCC please feel free to contact the Bureau of Homeowner Protection at (609) 984-7905.

Source: Steve Denenholtz, Esq. & James F. Fahy, Esq.
Bureau of Homeowner Protection



Rehab and Energy Subcode Update

(updated reprint from Spring 2012, Vol. 24, No. 1)

The first provisions of the Energy Subcode entered the Rehabilitation Subcode on May 7, 2007. Construction Code Communicator articles were published in the Spring, 2007 and Spring 2012 editions on how to apply these provisions; until now, it has provided definitive guidance.

We anticipate the Rehabilitation Subcode will be updated in the first quarter of 2017. This update will include an expansion of the provisions of the Energy Subcode and I would like to call attention to some of these amendments:

• Definitions – N.J.A.C. 5:23-6.3

o "Commercial energy code" means the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) standard 90.1 adopted at N.J.A.C. 5:23-3.18 and applicable to all buildings other than residential buildings as defined at "residential energy code."

o “Residential energy code” means the International Energy Conservation Code adopted at N.J.A.C. 5:23-3.18 and applicable to residential buildings as defined as Group R-3 and R-5 buildings, as well as Group R-2 and Group R-4 buildings three stories or less in height above grade. Group R-5 buildings requirements are denoted in parentheses for the equivalent requirement in the one- and two-family dwelling subcode.

• Renovation – N.J.A.C. 5:23-6.5(e)10 through 13;
• Alteration – N.J.A.C. 5:23-6.6(e)17 through 20;
• Reconstruction – N.J.A.C. 5:23-6.7(e)14 through 17;
• Materials and Methods – N.J.A.C. 5:23-6.8(l); and
• New Building Elements – N.J.A.C. 5:23-6.9(a)27 through 34.

Taking the most extensive project, a reconstruction project, the following would apply to a building subject to the residential or commercial energy code:

1. When the work being performed creates or exposes the roof decking/sheathing or the framing of any wall, floor, ceiling, or roof assembly that is part of the building’s thermal envelope (encloses conditioned space), any accessible voids in insulation shall be filled using insulation meeting the R-values of Table R402.1.2 (N1102.1.2) of the residential energy code for wood framing and of Table R402.2.6 (N1102.2.6) of the residential energy code for metal framing equivalents or of Table 5.5-4 or 5.5-5 of the commercial energy code, as applicable.
    i. In the event that insulation meeting the R-values above cannot be installed due to space constraints, and the equivalency exceptions of Sections R402.2.1 and R402.2.2 (N1102.2.1 and N1102.2.2) cannot be applied for residential buildings, insulation that fills the cavities of the framed assembly shall be installed.

2. When fenestration (windows, skylights, or doors) is newly installed or replaced, the U-factor (thermal transmittance) shall not exceed the U-factor of Table R402.1.2 (N1102.1.2) of the residential energy code or of Table 5.5-4 or 5.5-5 of the commercial energy code, as applicable.
    i. Exception: In residential buildings, fenestration that meets Sections R402.3.3 (N1102.3.3) and R402.3.4 (N1102.3.4), as applicable.

3. Ducts that are newly installed or replaced shall be installed with insulation meeting the R-values of Section R403.3.1 (N1103.3.1) of the residential energy code or of Section 6.4.4.1.2 of the commercial energy code, as applicable.

4. The total replacement of a building lighting system or a newly installed building lighting system shall meet [the following sections]: Section R404 (N1104) of the residential energy code or Section 9.1.2 of the commercial energy code, as applicable. (A “lighting system” is defined by the commercial energy code as “a group of luminaires circuited or controlled to perform a specific function.”)
    i. Exception: The total replacement of a lighting system within a room, space or tenancy shall be required to meet Section 9.1.2 for the room, space or tenancy only.

If the building owner decides to install new building elements in a building subject to the residential or commercial energy code, the following applies regardless of whether the project is a reconstruction:

1. Newly created thermally isolated sunrooms shall meet the R-value and U-factor requirements of Sections R402.2.13 and R402.3.5 (N1102.2.13 and N1102.3.5) of the residential energy code.

2. Newly installed wood burning fire places shall meet Section R402.4.2 (N1102.4.2) of the residential energy code and Section R1006 of the one- and two-family dwelling subcode or Section 5.4.3.1.2 of the commercial energy code and Section 2111.14 of the building subcode, as applicable.

(continued next page)

(Rehab and Energy Subcode Update)

3. Newly installed heating, cooling and ventilation systems shall have controls meeting Sections R403.1 and R403.6 (N1103.1 and N1103.6) of the residential energy code or Sections 6.4.3, 6.5, 7.4.4, and 7.4.6 of the commercial energy code, as applicable. Systems include, but are not limited to, the heating and cooling of air or liquids and the ventilation or exhausting of spaces.
4. Newly installed systems that include piping carrying fluids shall meet Sections R403.4 and R403.5 (N1103.4 and N1103.5) of the residential energy code or Sections 6.4.4.1.3 or Section 7.4.3 of the commercial energy code and Section 1204 of the mechanical subcode, as applicable.
5. Newly installed heating and cooling equipment shall be sized in accordance with Section R403.7 (N1103.7) of the residential energy code or Section 6.4.2.1 and 7.4.1 of the commercial energy code, as applicable.
6. Newly-installed snow and ice melting systems shall be installed in accordance with Section R403.9 (N1103.9) of the residential energy code or Section 6.4.3.7 of the commercial energy code, as applicable.
7. Newly-installed pool heaters shall meet Section R403.10 (N1103.10) of the residential energy code or Section 7.4.5 of the commercial energy code, as applicable.
8. Newly-installed sensible heating systems and radiant floor heating systems shall meet the insulation requirements of Sections 6.4.4.1.4 and 6.4.4.1.5 of the commercial energy code, as applicable.

Currently, N.J.A.C. 5:23-2.15(f)1vi requires energy subcode compliance documentation only for brand new buildings and additions. However, per N.J.A.C. 5:23-2.15(f)1vii, engineering details may be required for calculating the light power densities for a new lighting system. For this, the lighting portion of COMcheck for the building or space could be used.

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

Wind Design Criteria IRC/2015

There have been inquiries as to when wind provisions are no longer applicable, and when buildings must be designed in accordance with one of the reference standards in Section R301.2.1.1, Wind Limitations and Wind Design Required, of the 2015 International Residential Code (IRC/2015).

Previously, Section R301.2.1.1 of the 2009 IRC stated that in regions where the basic wind speeds (from Figure R301.2.4) equaled or exceeded 100 miles per hour in hurricane prone regions, or 110 miles per hour elsewhere, the design of the building was outside of the scope of the IRC, and had to be designed in accordance with one of the reference standards. **This has changed.**

Currently, according to Section R301.2.1, Wind Design Criteria, of the IRC/2015, buildings must be constructed using Table R301.2(1), Climatic and Geographic Design Criteria, as determined from Figure R301.2(4)A, Ultimate Wind Design Speeds. The referenced standards are required to be used in regions where the wind design is subject to Figure R301.2(4)B, Regions Where Wind Design is Required. According to Figure R301.2(4)B, New Jersey is **not** in a region where wind design is required, therefore, Section R301.2.1.1, Wind Limitations and Wind Design Required, is not applicable.

Therefore, all buildings designed pursuant to the provisions of the IRC/2015 are not required to comply with the reference standards in Section R301.2.1.1, Wind Limitations and Wind Design Required, and may be designed in accordance with Section R301.2.1, Wind Design Criteria.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

Acceptance Testing – Single- and Multiple-Station Smoke Alarms vs Smoke Detectors

Back in 2006, an article was written addressing this issue for smoke alarms. However, some misinformation was provided when dealing with the methods to perform the acceptance test of smoke alarms for Groups R-1, R-2, R-3, R-4, R-5, and I-1.

I have recently received several phone calls from contractors and property owners stating that they have failed their acceptance test because they did not have artificial smoke in the can on site. The required smoke alarm requirements in Section 907.2.11 of the International Building Code (IBC) and Section R314 of the International Residential Code (IRC), as amended at NJAC 5:23-3.14 and 3.21 respectively, do not specifically regulate how smoke alarms need to be acceptance tested.

Chapter 14 of the 2013 NFPA 72 provides the specific requirements for smoke alarm and smoke detector testing. Single- and multiple-station smoke alarms installed in Groups R-1, R-2, R-3, R-4, R-5, and I-1 shall be tested for proper operation, however this test may not involve the introduction of artificial smoke being sprayed into the smoke chamber as some fire protection inspectors have required.

NFPA 72 only requires smoke entry testing for smoke detectors (fire alarm systems) in other than one- and two-family dwellings utilizing an approved method in accordance with the manufacturer's instructions.

NFPA 72, Table 14.4.3.2, number 17 (g) gives specific test methods that are acceptable tests for single station smoke detectors, but not alarms. The functional test of smoke alarms is done by holding the test button and making sure that the system operates properly. A/C power, backup power and interconnection are some examples of what must be checked to ensure proper function. When detectors are used in other than one- and two-family dwellings, they need to be tested in accordance with the manufacturer's listing and installation instructions or by introducing smoke into the sensing chamber.

For smoke alarms in one and two family dwellings, NFPA 72 does not specify requirements for sensitivity or smoke entry testing other than what may be specified by the manufacturer's instructions, just a functional test by the homeowner pushing the test button to check operability.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Type NM cable in Suspended Ceilings

Those of you who know me have heard me say there are two types of enforcers, the literal enforcer, who only knows the code as written, and the enforcer who applies the code based on visual inspection and intent. For this reason, and the way the language is presented in many sections of our code, topics are opened for interpretation. For example, in the 2014 National Electrical Code (NEC) at 334.12(A), it sates the type NM (romex) cannot be run above a suspended ceiling in other than one- and two-family dwellings and multi-family dwellings. New Jersey deleted this requirement in the UCC at N.J.A.C. 5:23-3.16 because, "if romex is allowed above a drop ceiling of One, Two and Multi-family dwellings, why would it not be allowed in other structures where Romex is allowed in the walls?"

To understand the history of this deletion, we need to look at the code adoption between 1999 and 2002. In the 1999 NEC, type NM was found in article 336. The 1999 NEC at 336-5(a)(1) excluded the use of romex in multi-family dwellings or other structures greater than three stories. There was nothing in the 1999 NEC that restricted its use above a drop ceiling in the structures where its use was allowed. In the 2002 NEC, romex was moved to article 334, and its permitted use had changed. The height limitation was removed, but the article stated that it could only be used above drop ceilings of one, two and multifamily dwellings (2002 NEC 334.12(A)(1)). During the adoption period, the 2002 proposal took notice to the new requirements. Listed in the New Jersey Register dated Monday, December 16, 2002, New Jersey chose to delete this section of the code. The proposal stated that the 2002 now allows romex cable in multistory buildings of types III, IV and V construction. However, it prohibits the use of romex in drop or suspended ceilings in other than one and two-family and in multifamily dwellings. The reasoning behind the deletion of this requirement was due to the lack of technical justification in not allowing romex to be run throughout these buildings. Therefore, the use of romex in any drop or suspended ceiling, regardless of class of structure, is allowed.

(continued next page)

(Type NM cable in Suspended Ceilings)

Pretty simple when explained, but now we get back to the literal reading of the code. Although NJ allows romex to be installed in drop or suspended ceilings, people now look at what is stated in 334.10(3). Here, it states that romex can be run in other structures of types III, IV, and V provided it is covered by a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies. A drop ceiling is not a rated assembly, nor is it required to be. When romex is allowed in the walls of structures type III, IV and V, it is also allowed in the drop or suspended ceiling portions of these structures without requiring the ceiling to be a rated assembly. Reflecting back to the proposal, there is no technical justification to prohibit the use of this product in any drop ceiling where romex is allowed.

Source: Dave Greenhill
Code Assistance Unit
(609) 984-7609

Working Clearances and 110.26 of the NEC

When we think about electrical installations, the first thing that should come to mind is safety. Safety includes picking the right components and making sure that the wiring from these components is done to the minimum requirements of the code. When pieces of equipment, such as switch gear or panel boards, are installed, consideration must be given to the potential of the equipment being worked on while energized. Although Occupational Safety and Health Administration (OSHA) and National Fire Protection Agency (NFPA) 70E frown upon working on energized equipment, sometimes the cause and effect of shutting an entire panel down outweighs the safety aspect and work must be done "hot." With the proper Personal Protective Equipment (PPE) and instruction, live work can be done without injury. This leads to the purpose of Article 110.26, providing working clearances. This article states that working space for equipment operating at 600 volts nominal or less to ground and "**likely to require examination, adjustment, servicing or maintenance *while energized* shall comply with….."** It provides safe dimensions in width and depth so the "HOT" work can be performed safely.

The reason this topic is being discussed is that the Code Assistance Unit gets numerous calls about inspectors requiring the above-referenced clearances for a disconnect located adjacent to an air conditioning condenser. This is a required maintenance switch as per Article 440.14 of the National Electric Code (NEC), not clearance's per Article 110.26(A). There is no reason for this switch ever to be worked on while energized.

Article 440.14 (Location) states: "Disconnecting means shall be located within sight from and readily accessible from the air conditioning or refrigerating equipment. The disconnecting means shall be permitted to be installed **on or within** the air-conditioning or refrigerating equipment."

Now apply the definition of readily accessible in Article 100 which states:

"Accessible, Readily (Readily Accessible). Capable of being reached quickly for operation, renewal, or inspections without requiring those to whom ready access is requisite to actions such as to use tools, to climb over or remove obstacles, or to resort to portable ladders, and so forth."

Article 440.14 requires a **readily accessible** disconnecting means and states it can be **located on or within** the unit. This leads to questions regarding what is readily accessible "within the unit?" How can an installation be code compliant by mounting the disconnecting means within the unit? In this instance, it would require tools and possibly a ladder depending on the location of the equipment. Applying the code literally would mean that there are thousands of air handlers, condensers and chillers installed not in compliance throughout the state.

The clearances required through Article 110.26 are for equipment that **cannot** be shut down for servicing. We have to use common sense and understanding of the intent of the code. A disconnect located slightly above or just to the left or right of an outdoor condensing unit is not a piece of equipment that requires the clearances given in Article 110.26.

Source: Dave Greenhill
Code Assistance Unit
(609) 984-7609

Accessibility and Sales Offices

(updated reprint from Winter 2001, Vol. 13, No. 4)

The Department of Community Affairs has received several requests for clarification on the accessibility requirements for sales offices at developments of single-family homes.

Accessible route: The office is required to be accessible to all customers; therefore, there must be an accessible route into the office. When the office is in an on-site trailer, this is usually accomplished by a ramp. When the office is in the garage of the on-site model home, the entrance to the office is at grade and is accessible. The model home itself is not required to have an accessible route into and through the dwelling, and the toilet facilities in this single-family home are (of course) exempt from the Chapter 11 of the Building subcode.

Accessible toilet room: When toilet facilities are available to customers, an accessible toilet room must be provided. When the sales office is in the garage of the model home, this may be accomplished by providing an accessible port-a-john on an accessible route (stable, firm, and slip-resistant) adjacent to the office. When toilet facilities are not available to customers, but are available only for employees, an accessible toilet must be provided (in compliance with the Americans with Disabilities Act, Title I) as an accommodation to an employee.

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

Source: Code Assistance
(609) 984-7609

Shower Pan Inspections

The Department has received numerous questions regarding the inspection of shower pan liners. The major questions are whether the pan is required to be tested, and if it is, whether the testing may hold up a rough inspection.

As per N.J.A.C. 5:23-2.18(b)1iv(3), construction must stop for the inspection of the rough piping only. The applicant/agent must notify the Local Enforcing Agency (LEA), and the LEA has three (3) business days to perform the inspection in accordance with N.J.A.C. 5:23-2.18(c).

The answer to the question as to whether the pan is required to be tested is yes, as per Section 7.10.6g of the National Standard Plumbing Code/2015. However, this inspection **cannot** hold up construction. Construction must cease for the inspection of rough piping **only** and **not** for the associated plumbing appurtenances. N.J.A.C. 5:23-2.18(b)3 states that any additional inspections that may be required shall be of the type and nature that construction may continue uninterrupted. As a result, this inspection, which is a requirement of the National Standard Plumbing Code/2015, does not stop construction.

The shower pan liner does not need to be installed for a rough piping inspection to take place; therefore, it cannot hold up a rough inspection.

Source: Bill Schmidt
Office of Regulatory Affairs
(609) 984-7672



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.

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Division of Codes and Standards
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Charles A. Richman, Commissioner

Volume 28, Number 2 **Summer 2016**

Acceptance of ES-Reports to Comply With the Adopted Codes

There have been numerous inquiries on the acceptance of the ICC Evaluation Services Reports (ESR) to show compliance with the code. As per the Uniform Construction Code, N.J.A.C. 5:23-3.7, the ESRs are an acceptable method for compliance.

N.J.A.C. 5:23-3.7(a)2. Reports of engineering ***findings issued by nationally recognized evaluation service programs***, such as, but not limited to, the Building Officials and Code Administrators (BOCA), the International Conference of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI), ***the International Code Council (ICC), and the National Evaluation Service, Inc.***, shall be accepted by the appropriate subcode official as meeting the requirements of (a) above. The materials, equipment, or assembly shall be installed in accordance with the conditions specified in the report.

In order to determine if the report is acceptable, it must be determined if it is applicable to the code year in question and it has not expired. If the answer to both questions above is yes, and the report indicates compliance with the section in question, then this ESR meets the code and becomes another alternative to demonstrate compliance without further documentation. Keep in mind, all materials, equipment, and/or assemblies must be installed in accordance with the conditions specified in the report.

Note: An ESR is only one of the methods to show compliance; there are a multitude of others as specified in N.J.A.C. 5:23-3.7.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

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The 35th Annual Building Safety Conference of New Jersey

The Building Safety Conference celebrated its 35th Anniversary on May 4th through 6th at Bally's Atlantic City. Our focus this year was on bringing together the broad spectrum of people that make up our code enforcement community from code officials, to special inspectors to design professionals.

The "Crackerbarrel" began our Conference, as it always does. This very popular event gives our guests the opportunity to hear from a variety of presenters in a short format style with a focus on new items of particular interest to the code enforcement community. The topics this year ranged from hearing the latest from the International Code Council (ICC) from Director-at-Large James E. Morganson and Past President Stephen Jones, to the latest changes in fire alarm systems and tables concerning UCC and Multiple Dwelling interaction.

The centerpiece of the Building Safety Conference was the opportunity to recognize and honor those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year.

The following awards were presented:

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year -- Donald A. Clare

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year -- Ronald J. Barbarulo

New Jersey Building Officials Association
Building Inspector of the Year -- Robert J. Mittermaier

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year -- Kevin C. Batzel

New Jersey Association of Technical Assistants
Technical Assistant of the Year -- Joseph F. Haggerty





New Jersey Building Officials Association
Building Inspector of the Year -- Robert J. Mittermaier (w/ NJBOA President Pat Naticchione & Director Smith)



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year -- Ronald J. Barbarulo (w/ NJPIA President Frank Speranza & Director Smith)



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year -- Kevin C. Batzel (w/ Director Smith & NJFPPA President Rich Silvia)



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year -- Donald A. Clare (w/ Director Smith & MEIA of NJ President Ed Reed)



New Jersey Association of Technical Assistants
Technical Assistant of the Year -- Joseph F. Haggerty (w/ NJ ATA President Dawn Neil & Director Smith)

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

The Building Safety Conference is a unique opportunity to broaden your knowledge of cutting-edge code enforcement and building construction techniques while also providing an opportunity to meet with your peers throughout the State to share ideas and promote camaraderie and collegiality among the code enforcement community. The Conference Committee is always on the lookout for great and innovative ideas to meet the needs of our attendees--if you have an idea, please pass that along to your association or email us at john.delesandro@dca.nj.gov.

We hope to see you all next year at Bally's in Atlantic City May 3rd through 5th, 2017. Please save the date and "like" us on Facebook for event updates, room locations and all other important information!

Source: John Delesandro, Supervisor
Licensing & Education Unit, (609) 984-7834

Swimming Pool Definition – IRC/2015

In an obvious attempt to bring old Appendix G of the 2009 International Residential Code (IRC) into the main body of the code, it appears something was missed on the national level. Yes, there is no definition of Swimming Pool within the 2015 IRC and it appears there is no published errata at http://www.iccsafe.org/errata-central/ addressing it. However, it still is enforceable, just as it always has been.

As per R201.3, where terms are not defined in the IRC, such terms shall have the meanings ascribed in other publications of the International Code Council. In the case of "Swimming Pools," please visit Section 202 of the IBC/2015 where it states: SWIMMING POOL. Any structure intended for swimming, recreational bathing or wading that contains water over 24 inches (610 mm) deep. This includes in-ground, aboveground and on-ground pools; hot tubs; spas and fixed-in place wading pools.

Therefore, the 2015 International Swimming Pool and Spa Code, by the means of R326, applies just as Appendix G has in previous editions of the IRC with the definition in the 2015 International Building Code serving the 2015 IRC also.

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

TO: Department of Community Affairs, Code Officials

FROM: Fire Alarm, Burglar Alarm and Locksmith Advisory Committee

Mailing Address:
P.O. Box 45042
Newark, NJ 07101
(973) 504-6245

DATE: May 13, 2016

SUBJECT: Licensing Requirements for Fire Protection, Security System and Locksmithing Construction Permits

The Fire Alarm, Burglar Alarm and Locksmith Advisory Committee would like to take this opportunity to clarify the business license categories that are required in order to install Fire Alarm Systems, Burglar Alarm Systems, perform Locksmith work and install Electronic Access Control, CCTV and Intercom Systems. Statutes and Regulations provide an **Exemption** for Licensed Electrical Contracting Businesses (34EB) and business with a Fire Protection (Fire Alarm P#) Contractor Certification issued through DCA (The Department of Law and Public Safety, Division of Consumer Affairs).
Since only licensed businesses can install, service and maintain these systems, Construction Officials should accept permit applications only from a licensed business firm.

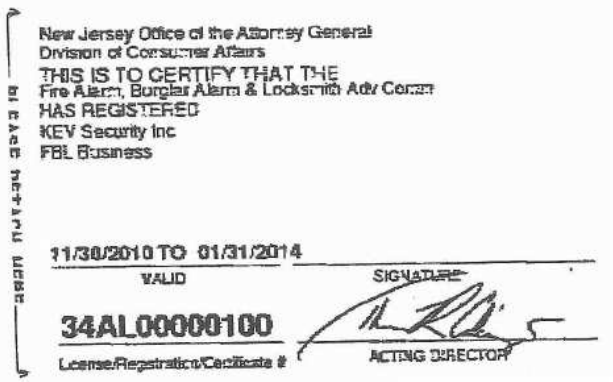
Businesses which hold licenses through the Fire Alarm, Burglar Alarm and Locksmith Advisory Committee begin with one of the following prefixes:

34BX - Burglar Alarm Business License
34FX – Fire Alarm Business License
34LX – Locksmith Business License
34BF – Burglar Alarm and Fire Alarm Business License
34BL – Burglar Alarm and Locksmith Business License
34FL – Fire Alarm and Locksmith Business License
34AL – Fire Alarm, Burglar Alarm and Locksmith Business License

These licensed businesses are authorized to install systems within their respective trades. All three trades can install Electronic Access Control Systems, CCTV Systems and Intercom Systems. Attached is an example of a business permit identification card and wallet card. Either is acceptable documentation.

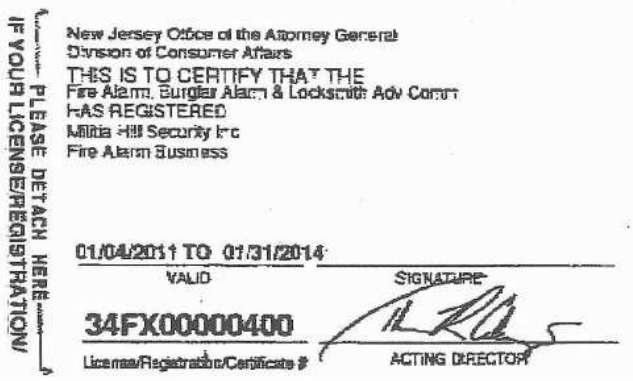
Individuals possessing an individual (Photo ID) license for Burglar Alarm (34BA), Fire Alarm (34FA) or Locksmithing (34LS) may qualify a business for a Business License but are not authorized to install these systems separate and apart from a licensed business. A business license is required to file for a permit.

The Advisory Committee has also found a number of businesses doing the above referenced work and obtaining permits having only a telecommunications wiring exemption issued by the Board of Examiners of Electrical Contractors. That exemption does not authorize a contractor to install any type of security system.


PLEASE RETAIN THIS CARD

New Jersey Office of the Attorney General
Division of Consumer Affairs
THIS IS TO CERTIFY THAT THE
Fire Alarm, Burglar Alarm & Locksmith Adv Comm
HAS REGISTERED
KEV Security Inc
FBL Business

11/30/2010 TO 01/31/2014
VALID
SIGNATURE
34AL00000100
License/Registration/Certificate #
ACTING DIRECTOR


PLEASE DETACH HERE IF YOUR LICENSE/REGISTRATION

New Jersey Office of the Attorney General
Division of Consumer Affairs
THIS IS TO CERTIFY THAT THE
Fire Alarm, Burglar Alarm & Locksmith Adv Comm
HAS REGISTERED
Millia Hill Security Inc
Fire Alarm Business

01/04/2011 TO 01/31/2014
VALID
SIGNATURE
34FX00000400
License/Registration/Certificate #
ACTING DIRECTOR

NOTE: Not all work done by these licensed trades requires a UCC permit.

Bureau of Housing Inspection Responsibilities for UCC Officials

If you are appointed as a Uniform Construction Code (UCC) Construction Official, did you know you are also an agent of the Department of Community Affairs, Bureau of Housing Inspection? Yes, N.J.A.C. 5:23-2.18(g) gives you or your subcode officials the responsibility to ensure newly-constructed and altered hotels/multiple dwellings comply with the provisions of the regulations for the maintenance of hotels and multiple dwellings (N.J.A.C. 5:10).

The Construction Official has a responsibility to ensure that certain properties are properly registered with the Bureau of Housing Inspection prior to issuance of a UCC Certificate of Occupancy. There are also technical provisions for which the Construction Official is responsible; see UCC Bulletin 79-6 http://www.nj.gov/dca/divisions/codes/resources/bulletins.html.

N.J.A.C. 5:10-1.11 requires the owner of each hotel or multiple dwelling to file with the Bureau of Housing Inspection for a Certificate of Registration. Prior to issuance of a Certificate of Occupancy, N.J.A.C. 5:23-2.24(e) requires a photocopy of a Bureau of Housing Inspection, Certificate of Registration be submitted to the UCC Construction Official. However, the UCC Construction Official may utilize UCC Bulletin No. 01-2 which states that a Temporary Certificate of Occupancy may be issued without a Hotel and Multiple Dwelling Certificate of Registration.

Sometimes, there is confusion as to what constitutes a multiple dwelling. A multiple dwelling is defined as a building or structure in which three or more dwelling units that are occupied or intended to be occupied, any group of ten or more buildings on a single/contiguous parcel(s) of land each with two dwelling units occupied or intended to be occupied, all condominiums, co-ops, non-owner occupied mutual housing corporations, townhouse communities and retirement communities.

NJ Hotel and Multiple Dwelling Law, N.J.S.A. 55:13A(k)2, exempts certain condominiums, co-ops and non-owner occupied mutual housing corporations from the multiple dwelling definition. These properties must still register with the Bureau of Housing Inspection and apply for exemption from the Bureau's inspection process.

Townhouse communities may not have to register with the Bureau however, they must apply for exemption from the registration process through the Bureau's Code Administration Unit.

If you have any questions related to the registration requirements/status of a property, please feel free to contact the Bureau of Housing Inspection's Code Administration Unit at (609) 633-6219.

Source: Carmine Giangeruso, Supervisor of Enforcement
Code Administration Unit, Bureau of Housing Inspection

Additions in a Flood Zone

For those wondering if an ***addition*** is allowed in a flood zone, here's your answer:

First, check with the local floodplain administrator to (a) see if the ***addition*** is permitted by local zoning regulations and NJDEP regulations and (b) if the permitted ***addition*** is considered a substantial improvement.

As a refresher, FEMA defines substantial improvement as "Any reconstruction, rehabilitation, ***addition***, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the 'start of construction' of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed" (http://www.fema.gov/floodplain-management-old/substantial-improvement). This is reiterated within the Rehabilitation Subcode at NJAC 5:23-6.3A(a).

This leads us to the ***addition*** section of the Rehabilitation Subcode at NJAC 5:23-6.32. If you recall, subsection (a) states, "Any addition to a building or structure shall comply with the requirements of the Uniform Construction Code applicable to new construction." Since NJAC 5:23-6.3A(a) includes ***addition*** within the requirements for flood resistant construction, an ***addition*** ***not*** considered a substantial improvement would ***not*** have to be elevated.

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

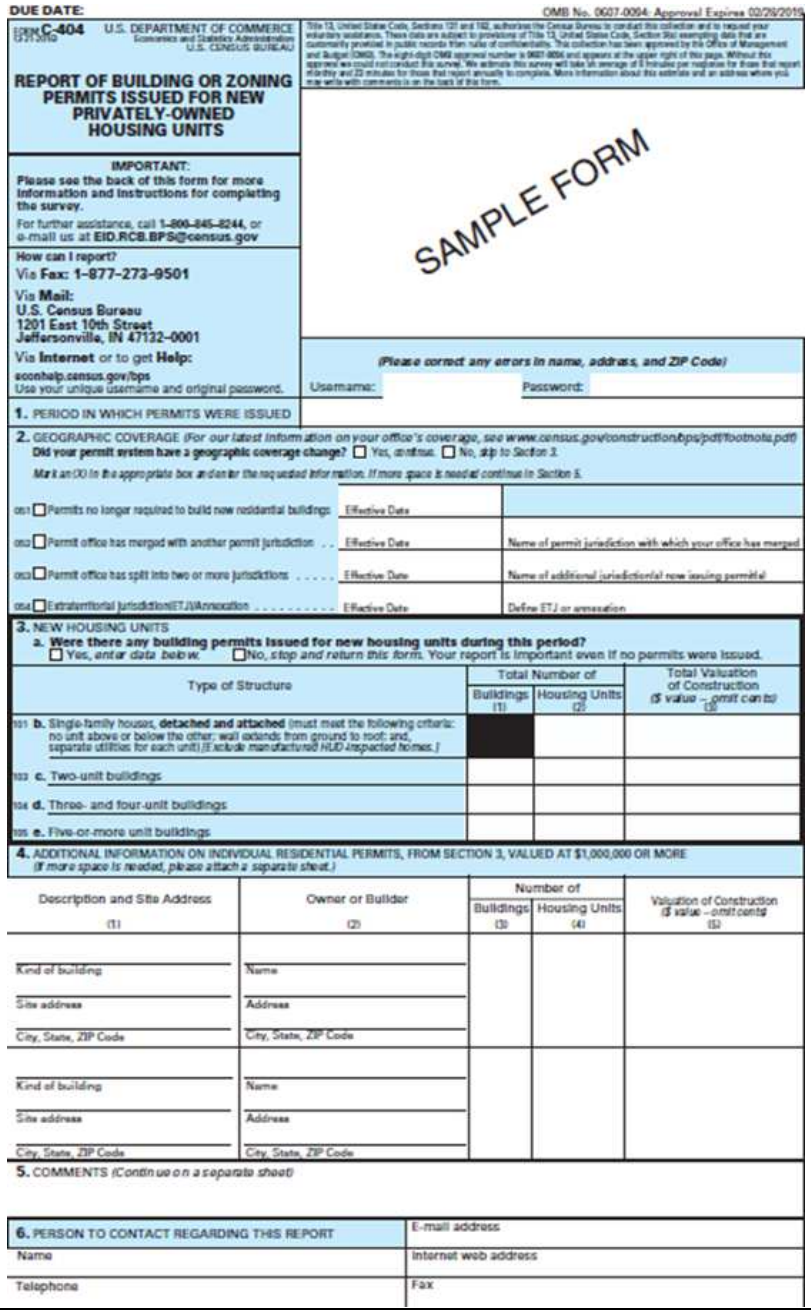
US Census Bureau: Building Permits Survey

The United States Code, Title 13, authorizes the collection of building permits data via Form C-404 "Report of Building or Zoning Permits Issued for New Privately-Owned Housing Units" to individual localities. The Building Permits Survey requests the number of buildings, housing units, and valuation for residential construction permitted in permit-issuing places and may be submitted online, by mail, email, or fax. The data you provide are used by the Census Bureau in the annual creation of population estimates used by local, state, and federal government agencies to allocate funding and other resources to your local area and for various planning purposes. If you have any questions, the Census Bureau can be reached at 1-800-845-8244 or www.census.gov/permits

Census classifications:

- Census Item 101 – Include all new privately-owned detached and attached single-family houses.
- Census Item 103 – Include all new privately-owned residential buildings that contain two housing units – stacked units or shared common utilities.
- Census Item 104 – Include all new privately-owned residential buildings that contain three or four housing units - stacked units or shared common utilities.
- Census Item 105 – Five-or-more unit buildings – stacked units or shared common utilities.

Source: Fletcher E. Blackmon, Jr.
U.S. Census Bureau
(301) 763-4657
eid.rcb.bps@census.gov



DUE DATE:

FORM C-404 (2019) U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. CENSUS BUREAU

OMB No. 0607-0094: Approval Expires 02/29/2019

REPORT OF BUILDING OR ZONING PERMITS ISSUED FOR NEW PRIVATELY-OWNED HOUSING UNITS

Title 13, United States Code, Sections 131 and 182, authorizes the Census Bureau to conduct this collection and to request your voluntary assistance. These data are subject to provisions of Title 13, United States Code, Section 9(a) exempting data that are customarily provided in public records from rules of confidentiality. This collection has been approved by the Office of Management and Budget (OMB). The eight-digit OMB approval number is 0607-0094 and appears at the upper right of this page. Without this approval we could not conduct this survey. We estimate this survey will take an average of 5 minutes per response for those that report monthly and 20 minutes for those that report annually to complete. More information about this estimate and an address where you may write with comments is on the back of this form.

IMPORTANT:
Please see the back of this form for more information and instructions for completing the survey.
For further assistance, call **1-800-845-8244**, or e-mail us at **EID.RCB.BPS@census.gov**

SAMPLE FORM

How can I report?
Via **Fax: 1-877-273-9501**
Via **Mail:**
U.S. Census Bureau
1201 East 10th Street
Jeffersonville, IN 47132-0001
Via **Internet** or to get **Help:**
econhelp.census.gov/bps
Use your unique username and original password.

(Please correct any errors in name, address, and ZIP Code)

Username: Password:

1. PERIOD IN WHICH PERMITS WERE ISSUED

2. GEOGRAPHIC COVERAGE *(For our latest information on your office's coverage, see www.census.gov/construction/bps/pdf/footnote.pdf)*
Did your permit system have a geographic coverage change? ☐ Yes, continue. ☐ No, *skip to Section 3.*
Mark an (X) in the appropriate box and enter the requested information. If more space is needed continue in Section 5.

001	☐ Permits no longer required to build new residential buildings	Effective Date	
002	☐ Permit office has merged with another permit jurisdiction	Effective Date	Name of permit jurisdiction with which your office has merged
003	☐ Permit office has split into two or more jurisdictions	Effective Date	Name of additional jurisdictional now issuing permits
004	☐ Extraterritorial jurisdiction(ETJ)/Annexation	Effective Date	Define ETJ or annexation

3. NEW HOUSING UNITS
a. Were there any building permits issued for new housing units during this period?
☐ Yes, *enter data below.* ☐ No, *stop and return this form.* Your report is important even if no permits were issued.

Type of Structure	Total Number of Buildings (1)	Total Number of Housing Units (2)	Total Valuation of Construction ($ value – omit cents) (3)
101 **b.** Single-family houses, **detached and attached** (must meet the following criteria: no unit above or below the other; wall extends from ground to roof; and, separate utilities for each unit) *(Exclude manufactured/ HUD-inspected homes.)*			
103 **c.** Two-unit buildings			
104 **d.** Three- and four-unit buildings			
105 **e.** Five-or-more unit buildings			

4. ADDITIONAL INFORMATION ON INDIVIDUAL RESIDENTIAL PERMITS, FROM SECTION 3, VALUED AT $1,000,000 OR MORE
(If more space is needed, please attach a separate sheet.)

Description and Site Address (1)	Owner or Builder (2)	Number of Buildings (3)	Number of Housing Units (4)	Valuation of Construction ($ value – omit cents) (5)
Kind of building Site address City, State, ZIP Code	Name Address City, State, ZIP Code			
Kind of building Site address City, State, ZIP Code	Name Address City, State, ZIP Code			

5. COMMENTS *(Continue on a separate sheet)*

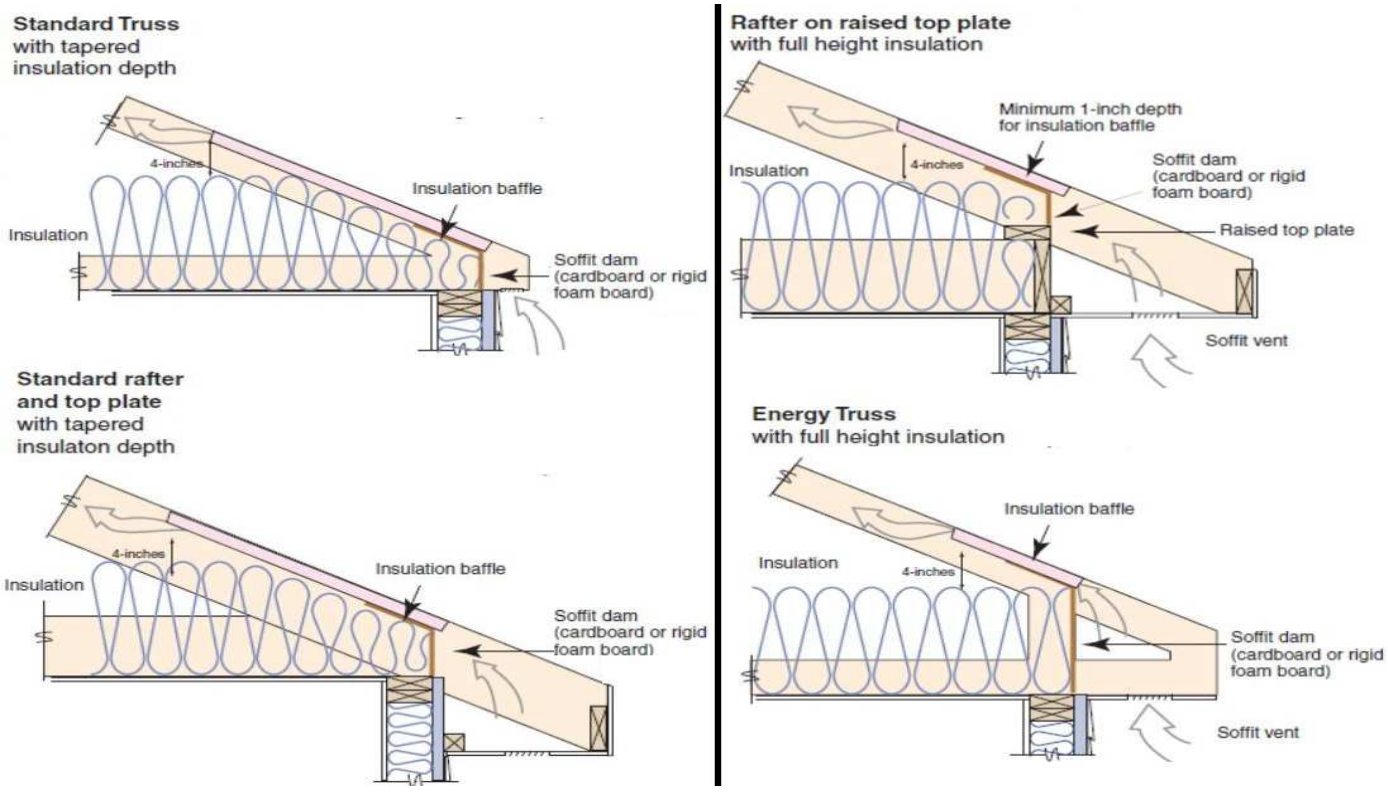
6. PERSON TO CONTACT REGARDING THIS REPORT	E-mail address
Name	Internet web address
Telephone	Fax

Raise the Roof – Energy Subcode

By now, I'm assuming you are all aware that the International Energy Conservation Code (IECC)/2015 lists the ceiling building thermal envelope value at R-49 in Table R402.1.2, Insulation and Fenestration Requirements by Component. Yes, this a decent jump in insulation for the ceiling compared the former energy subcode, IECC/2009, but there are ways to deal with this increase. Here are two ways:

1. REScheck (non-prescriptive): As mentioned in Bulletin 15-4, the REScheck computer software is based on Section R402.1.5, Total UA alternative, and starts with the prescriptive values of Table 402.1.2 and allows you to trade-off insulation values. Technically, REScheck evaluates a design so that the total building thermal envelope UA (sum of U-factor times assembly area) is less than or equal to the total UA resulting from using the U-factors in Table R402.1.4 (multiplied by the same assembly area as in the proposed building); this will demonstrate that the building is in compliance with Table R402.1.2. In short, you may see more insulation elsewhere (walls, floors) or better performing windows to compensate for a ceiling R-value less than R-49.
2. Extended Wall Framing/Raised-Heel Trusses (prescriptive): Section R402.2.1, Ceilings with attic spaces, and Section R402.2.2, Ceilings without attic spaces, both contain an exception, if you will, to the Prescriptive Packages from Bulletin 15-4 for the ceiling building thermal envelope value. Here you will find:
   a. Ceilings with attic spaces - Where Table R402.1.2 would require R-49 insulation in the ceiling, installing R-38 over 100 percent of the ceiling area requiring insulation shall be deemed to satisfy the requirement for R-49 insulation wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves.
   b. Ceilings without attic spaces - Where Table R402.1.2 would require insulation levels above R-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements of Section R402.1.2 shall be limited to 500 square feet or 20 percent of the total insulated ceiling area, whichever is less.

   These two "exceptions" (a. and b. above) do not apply to the U-factor alternative approach in Section R402.1.4 and the total UA alternative in Section R402.1.5, as the REScheck program (or hand calculations, if you went that route) already allow you to trade-off between components.



Diagrams courtesy of USDOE's Building America Solution Center (https://basc.pnnl.gov)

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

Installing Insulation in Existing Buildings

Let me start out by saying, empty areas of the building thermal envelope should be filled with insulation when exposed by the scope of the construction project. This is based on the language found in the Renovation, Alteration and Reconstruction sections of the Rehabilitation Subcode, NJAC 5:23-6.5(e)9, 6.6(e)16 and 6.7(e)12, respectively. Here, it states:

> When the work being performed exposes the roof decking/sheathing or the framing of any wall, floor, ceiling, or roof assembly that is part of the building thermal envelope (encloses conditioned space), any accessible voids in insulation shall be filled using insulation meeting the R-values of Table 402.1.2 of the residential energy code for wood framing and of Table 402.2.6 of the residential energy code for metal framing equivalents or of Table 5.5-4 or 5.5-5 of the commercial energy code, as applicable.
> i. In the event that insulation meeting the R-values above cannot be installed due to space constraints, insulation that fills the cavities of the framed assembly shall be installed.

Note that the language above does not require the exposed wall framing members be extended so that whatever insulation material chosen fills the space in meeting the values of the energy code. It is simply stating that the portion of the existing wall, regardless of size, should be filled with a recognized insulation material of the applicant's choice. So, if someone chooses to use batt insulation versus spray-foam insulation, that is perfectly acceptable (even though we know spray will provide a better R-value per inch) as long as the existing framed is filled. Going further, if someone chooses to finish their basement, frames out of existing walls with 2x4 studs and uses batt insulation but does not meet today's energy subcode R-values, this is still acceptable per the exception at "i" above. The underlying notion here is to prevent thermal envelope breaks and provide some resistance for heated/cooled air to escape.

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

Dementia Care Homes - Transfer of Jurisdiction from DCA to DOH

On November 9, 2015, Governor Chris Christie signed into law P.L. 2015, c.125 transferring the regulatory authority for licensing and inspecting Class C Boarding Homes for individuals with a dementia-related disorder or other special needs from the Department of Community Affairs, Bureau of Rooming and Boarding House Standards (DCA) to the Department of Health (DOH). This law, which took effect on June 1, 2016, defines this type of boarding house as a Dementia Care Home.

You may contact Mr. John A. Calabria, Director, Department of Health, Division of Certificate of Need & Licensing, (609) 292-8773 if you are interested in obtaining more information regarding Dementia Care Homes.

In the event you discover a facility that provides housing and personal services to two or more residents, whether or not the residents have a diagnosis of a dementia-related disorder, and the operator cannot produce a valid license issued by DOH, another State department or agency or prove the premises is under contract with a State department or agency, continue to report this type of facility to DCA.

Since DCA is the agency charged with enforcing the Rooming and Boarding House Act of 1979 (N.J.S.A. 55:13B-1 et seq) and correlating Regulations Governing Rooming and Boarding Houses (N.J.A.C. 5:27-1 et seq) DCA will conduct a jurisdiction investigation in order to determine if the property falls under the regulatory purview of DCA. If the subject premises meets the definition of a Dementia Care Home, it will be the responsibility of the property owner to provide a valid license from DOH. Until a valid license issued by DOH is provided, DCA will deem the facility to be an unlicensed boarding home and take the appropriate action accordingly.

If you or your staff have any questions or concerns, please feel free to contact DCA. We can verify if a property you may suspect of operating as a rooming/boarding house is licensed or not licensed. Simply call DCA at (609) 633-6251.

Source: Jay Raywood
Bureau of Rooming and Boarding House Standards

Exterior Wall Ductwork

There has been discussion out there that ducts are not permitted to be installed in an exterior wall part of the building thermal envelope. Well, the answer to that question is…it depends.

If you recall the four options to demonstrate compliance with the energy subcode listed in Bulletin 15-4, you have (1) hand calculations, (2) REScheck, (3) Clean Energy Program for Residential New Construction (formerly Energy Star) and (4) Prescriptive Packages. Since item #3 is a separate program outside the International Energy Conservation Code/2015, I won't address its ductwork requirements here. As for the other three options, this is how it works:

Ducts may be installed in the exterior wall – If using the ***hand calculations*** or the ***REScheck*** option, you may have ducts installed in this wall. Both methods follow the Overall UA calculation and permit trade-offs between components. The stud bay that has the duct within is calculated separately because it will not accommodate R-20. When using REScheck, that particular bay would be separately inputted into the wall category with the lesser insulation value and the program will calculate the overall value of the wall/home.

Ducts may not be installed in the exterior wall – If using a ***prescriptive package***, it is assumed that every single cavity of the exterior wall is going to meet R-20 or R-13+5ci. This is why ductwork cannot be installed in the exterior wall when using this option for demonstrating compliance.

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

Determining the Height of a High-Rise Building

There have been a number of inquiries as to how the definition of a high-rise building in the 2015 International Building Code is applied (identical definition in the 2009 International Building Code).

Section 202, Definitions, defines a High-Rise as a building with an occupied ***floor*** located more than 75 feet above the lowest level of fire department vehicle access.

The measurement is from the lowest ground location where a fire department can set its fire-fighting equipment in order to access the highest occupied floor. If the highest ***floor*** level is greater than 75 feet, then it is a high-rise building. When the roof of the building is occupied, the roof becomes the highest occupied ***floor*** and the height is measured to this ***floor*** level.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

Landscape Irrigation Contractor Board Now at DCA

Effective June 1, 2016, the Board of Landscape Irrigation Contractors was transferred the Department of Community Affairs in accordance with P.L.2015, c.169. For those of you unfamiliar with this Board, their regulations were originally part of the Department of Environmental Protection regulations at NJAC 7:62. We are still waiting for the official move of the regulations by the Office of Administrative Law and are hoping to have them located at NJAC 5:62. Until such time, the regulations remain in Title 7. If you would like to know more about this Board and/or how to become certified, please visit http://www.nj.gov/dca/divisions/codes/advisory/LICboard.html or contact the Licensing and Education Unit at (609) 984-7834.

Source: Code Assistance Unit
(609) 984-7609

State New Home Builder Registration -- FYI

As you know the Uniform Construction Code section N.J.A.C. 5:23-2.15(b) 1i states, "A current validated State builder registration card shall be shown by the contractor and the registration number of the contractor shall be recorded on the permit, pursuant to the New Home Warranty and Builder's Registration Act (N.J.S.A 46:3B-1 et seq.)". The contractor must provide this registration number prior to commencement of work for a newly-constructed home.

What the UCC doesn't tell you is that the seller of the property upon which the new home is built must be the registered builder regardless of his participation in the actual construction of the home. As per the Regulations Governing New Home Warranties and Builders' Registrations, the person transferring title of a property containing a newly-constructed home must be the registered builder. [See N.J.A.C. 5:25-2.1(c), 2.1(c)1 and 2.1(c)2. See also NJAC 5:25-3.1(a).]

There have been instances when a contractor who has a current builder registration is incorrectly recorded as the registered builder. This contractor cannot supply the home warranty because this contractor is not transferring title. It is important that the company or individual transferring title provide the current State builder registration number that will be recorded on the permit for that new home.

The drafters of the Regulations Governing New Home Warranties and Builders' Registrations foresaw difficulties should this not be a requirement. For example, a company or individual who subdivides a large tract of land for development could escape warranty responsibility by hiring a contractor of modest means to supply the construction office with his builder registration and subsequent home warranty certificates of participation. Should warranty claims arise, that contractor could cease operations and leave responsibility to the warranty program. The developers who sold the defective homes and reaped the profits could build again without consequence. Please advise your staff when reviewing permit applications that the seller of the property must provide a New Home Builder registration number. Additionally, the registered builder (seller) must provide proof of warranty through either the State or a private warranty plan.

Source: Office of Regulatory Affairs and Bureau of Homeowner Protection/New Home Warranty Program
(609) 984-7672 and (609) 984-7910

Dwelling Unit Ventilation Required

Dwelling unit ventilation entered the International Residential Code (IRC) with the 2012 edition. Since the State of NJ never adopted this edition, it became a new requirement with the adoption of the 2015 edition. Section R303.4, Mechanical Ventilation, of the 2015 IRC, requires whole-house ventilation when the air infiltration rate is five air changes per hour or less. Section N1102.4.1.2, Testing, requires an air leakage rate not exceeding three air changes per hour. This is more stringent than the five air changes per hour of Section R303.4, and therefore, triggers the requirement for the dwelling unit to be provided with whole-dwelling unit ventilation in accordance with Section M1507.3, Whole-house mechanical ventilation system.

Some of you may be saying, what about the amendment to the 2015 IRC at NJAC 5:23-3.21(c)10iv (and at NJAC 5:23-3.18(c)4i of the 2015 International Energy Conservation Code – IECC)? This modification allows a permit holder to demonstrate compliance for building envelope tightness through either the blower door test or visual inspection. Offering alternatives for documenting compliance does not change the underlying assumption that compliance (three air changes) is achieved.

This may sound like a big issue but in reality, it can be designed/built into the mechanical systems already being provided for the dwelling unit's HVAC. Section M1507.3.1, System design, Section M1507.3.2 System controls and Section M1507.3.3, Mechanical ventilation rate, will aid the designer in the proper design.

Note that the above is written in accordance with the 2015 IRC. As you know, all other residential buildings outside the scope of the IRC would follow the 2015 IBC and IECC with the same outcome. The correlating 2015 sections are: R303.4 = 1203.1 of the International Building Code; N1102.4.1.2 = R402.4.1.2 of the IECC; and M1507.3 = 403.3.2 of the International Mechanical Code.

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

When is an Addition...an Addition?

As per NJAC 5:23-6.3, an Addition means an increase in (1) the footprint area of a building, (2) the average height of the highest roof surface or (3) the number of stories of a building. To truly understand this definition, and apply it correctly, we need to visit the definitions in the building and one- and two-family dwelling subcodes, International Building and Residential Codes, respectively.

* *Area, Building* – The area included within surrounding exterior walls (or exterior walls and fire walls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.
* *Height, Building* – The vertical distance from grade plane to the average height of the highest roof surface.
* *Story* – That portion of a building included between the upper surface of a floor and upper surface of the floor or roof next above (see "Basement," "Building Height," Grade Plane" and Mezzanine"). A story is measured as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces and, for the topmost story, from the top of the floor finish to the top of the ceilings joists or, where there is not a ceiling, to the top of the roof rafters.

The main reason I bring this to your attention is due to a rumor going around regarding covered patios being added to a home. Regardless of whether walls are being added, based on the definition of Building Area, extending the existing roof over a patio constitutes an addition.

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

Construction Permit Application Packet & Related Forms Usage

It has come to our attention that a number of towns are using the UCC standard forms for other (eg. zoning) purposes. This has resulted in appeals that have nothing to do with the UCC going to the Construction Board of Appeals. Code officials who are aware of such a practice in their towns are asked to advise their colleagues in other departments not to use the UCC forms for other than their intended purpose. This practice just creates confusion.

As a friendly reminder, the permit packet forms available to the general public can be found on our website at http://www.nj.gov/dca/divisions/codes/resources/constructionpermitforms.html.

Source: Code Assistance Unit
(609) 984-7609

Building Safety Conference 2016 - Congratulations on another year Well Done!



Director Edward Smith, the award recipients and the Presidents of the respective associations

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.

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Volume 28, Number 4 Winter 2016

The Winter Communicator: A Reminder

The final (Winter) issue of the *Construction Code Communicator* each year now consists of a collection of Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year. This year, we are including articles that were printed in earlier editions of the *Construction Code Communicator* on topics that continue to generate questions. As noted on the last page, once this edition of the *Construction Code Communicator* has been posted, these individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from those sections of the Division's website. There is one exception: the materials related to Superstorm Sandy will remain in place. In short, there are no new articles in this issue.

Please note that, although the documents will be removed from the Alerts and Hot Topics, they will still be accessible through the Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

Also, the indices for all issues of the *Construction Code Communicator* 2016 are included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain new articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year with previously printed articles where the topic continues to generate questions.

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at Emily.Templeton@dca.nj.gov.

Source: Emily W. Templeton
Division of Codes and Standards

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Permit Extension Act Extended for Superstorm Sandy-Impacted Counties

(Letter to Construction Officials – July 5, 2016)

This is to inform you that the Permit Extension Act has been extended for one year for the Sandy-impacted counties only. P.L. 2016, c. 14, signed into law by the Governor on June 30, amends the "Permit Extension Act of 2008," P.L. 2008, c.78, and again extends the expiration date, but this time the extension applies only to “Superstorm Sandy-impacted counties.” These counties are listed as: Atlantic, Bergen, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean and Union counties. Under this most recent enactment, the extension period ends on December 31, 2016. This extension is retroactive to the beginning of the year. This means that, for the Superstorm Sandy-impacted counties, permits or approvals that were still in place on December 31, 2015 now remain open until December 31, 2016. On December 31, 2016, when the extension period ends, any permit or approval will be valid for the time that would have remained, but not for more than six months.

Information, including the full text of the Act and updated guidance on the application of the Permit Extension Act, which has been revised to reflect the new expiration dates for Superstorm Sandy-impacted counties, may be found on the Division’s website at the links below: http://www.njleg.state.nj.us/2016/Bills/A4000/3617_R1.PDF. Should you have any questions about the application of the Permit Extension Act, please feel free to call the Code Assistance Unit at (609) 984-7609.

Source: Edward M. Smith
Director, Division of Codes and Standards

(enclosure)

Permit Extension Act of 2008, as amended and extended by P.L. 2016, c. 14
Superstorm Sandy-Impacted Counties
Examples of Applying the Act to UCC Permits

The Permit Extension Act extends all permits that were open and valid as of January 1, 2007. Under the UCC rules, a construction permit lapses if (1) no work is done for a year; or (2) work, having been started, is discontinued for six months. (See N.J.A.C.5:23-2.16(b)) The following are some examples of how certain scenarios would be affected by the Permit Extension Act:

Examples:
1. A construction permit was obtained prior to January 1, 2006 and no work was done. The permit has lapsed and is not revived by the Permit Extension Act because it was not a valid, open permit on January 1, 2007.

2. A construction permit was obtained on April 1, 2006 and no work was done. The permit was deemed to have lapsed as of April 1, 2007. However, the permit is deemed to have been revived by the passage of the Permit Extension Act. Since it would have been valid for three more months as of January 1, 2007, it will continue to be valid for three more months as of December 31, 2016, and its new expiration date, if it is not acted upon, will be March 31, 2017.

3. A construction permit was obtained on October 1, 2006 and no work was done. The permit would have been valid for nine more months as of January 1, 2007 and is deemed to have been revived. However, since a permit that is only valid because it was extended by the Permit Extension Act can only remain valid for six months following the end of the extension period (now December 31, 2016), the permit would expire on June 30, 2017.

4. For any construction permit issued between January 1, 2007 and June 30, 2016, though the time would not begin to run until December 31, 2016, the permit would expire on June 30, 2017 since the Permit Extension Act does not allow any extensions beyond June 30, 2017 unless the permit would have continued in existence beyond that date had the Permit Extension Act not been adopted.

5. For any construction permit issued after June 30, 2016, since the permit is valid for a year, it is unaffected and expires one year from the date of issuance, just as it would have if the Permit Extension Act had not been adopted.

Rehabilitation Subcode Update – Incorporating 2014/2015 Model Codes

The proposal for the Rehabilitation Subcode update incorporating the 2014 National Electrical Code, 2015 I-Codes and 2015 National Standard Plumbing Code was published at *48 N.J.R. 1854(a)* on September 19, 2016. You can find a link to the proposal at http://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html. The 60-day comment period ended November 18, 2016 and the Division staff are working diligently on responses to the comments received. Until then, please use the link above to keep track of this adoption. If a design professional would like to take advantage of using the proposed changes, code officials should be accepting of this so Rehabilitation Subcode projects can align themselves with the newest model codes adopted.

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

Digital Signatures and Seals for NJ Architects

Similar to the State Board of Professional Engineers and Land Surveyors amendments at N.J.A.C. 13:40 on November 16, 2015, the Board of Architects has proposed (read: not yet adopted) to allow digital signatures and seals for digitally-transmitted plans. In the near future, this will become an acceptable practice for plan submittal by a licensed NJ architect in order to comply with N.J.A.C. 5:23-2.15. Stay tuned for further information!

You may review the proposal at http://www.nj.gov/dca/divisions/codes/alerts/. More official information about the revisions to N.J.A.C. 13:27 can be found at http://www.njconsumeraffairs.gov/arch/Pages/default.aspx.

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

Swimming Pools & Spas - Plan Review & Inspections

(Memorandum to Construction Officials – July 11, 2016)

This memorandum is intended to focus enforcement effort with regard to swimming pools and spas and to establish priorities.

With the adoption of the 2015 International Codes, the 2015 International Swimming Pool and Spa Code (ISPSC) is adopted by reference as part of the Uniform Construction Code. It should be noted that the provisions of the ISPSC are not new. These provisions were previously contained in referenced standards or in appendices (NSPI/APSP or Appx G).

As always, attention should be given to the requirements that go to safety, including:

- Entrapment hazards (APSP/ICC 7)
- Pool barriers (Section 305/ISPSC)
- Bonding and grounding (Art 680/NEC).

For plan review purposes, a general note indicating that the pool or spa will conform to the 2015 ISPSC should be accepted. It is not necessary to require plans that show every detail of the pool or spa to be installed. The pressure testing of piping, which has been required since adoption of the 2009 codes, should be included as part of the inspection as this is not easily addressed after concrete has been poured. And again, the inspection should focus on safety: entrapment hazards (plumbing,) pool barriers (building) and bonding and grounding (electrical.)

All of us are trying to get the job done with scarce resources. Focusing on the requirements of the ISPSC that go to safety, rather than giving equal import to every detail, will enable local code enforcement agencies to fulfill their responsibility to the public they serve without devoting a disproportionate amount of time to ISPSC enforcement.

Should you have any questions, please feel free to contact the Code Assistance Unit at codeassist@dca.nj.gov or 609-984-7609.

Source: Edward M. Smith
Director, Division of Codes and Standards

2016 Proposals/Adoptions

The following is a list of the 2016 proposals/adoptions. This list, with previous years included, can be found at http://www.nj.gov/dca/divisions/codes/codreg/ by scrolling to "Rule Proposals and Adoptions."

Posted in NJ Register	Subject	Submit Comments by:	Adoption Date
Sept 19, 2016	Uniform Construction Code & Uniform Fire Code - Carbon Monoxide Detection Proposed Amendments: N.J.A.C. 5:23-3.14, 6.1, 6.4 through 6.7 and 6.31 and 5:70-4.3, 4.9 and 4.19	Nov 18, 2016	
Sept 19, 2016	Uniform Construction Code - Rehabilitation Subcode Proposed Amendments: N.J.A.C. 5:23-6.1 through 6.9, 6.12, 6.13, 6.13A, 6.14, 6.15, 6.16, 6.17, 6.18, 6.18A, 6.19, 6.20, 6.20A, 6.21, 6.22, 6.22A, 6.23, 6.24, 6.25, 6.26, 6.27, 6.28, 6.28A, 6.29 through 6.33 and 12.8	Nov 18, 2016	
Sept 19, 2016	Condominium, Fee Simple and Cooperative Conversion and Mobile Home Park, Retirement; New Home Warranties and Builders' Registration; Landlord-Tenant Relations Proposed Amendments: N.J.A.C. 5:24-1.4, 2.2 and 2.9; 5:25-2.2, 2.5 and 2.8; and 5:29-1.2	Nov 18, 2016	
Sept 19, 2016	Relocation Assistance and Eviction Proposed Readoption with Amendments: N.J.A.C. 5:11 Proposed Repeals: N.J.A.C. 5:11-7.3 and 7.4	Nov 18, 2016	
Sept 06, 2016	Liquefied Petroleum Gas Regulations; Update of the edition of NFPA 58 referenced; timeframes for Certified Employee Traning Program; training for motor vehicle fueling Proposed Amendments: N.J.A.C. 5:18-3.1, 6.3, 10.3 and 10.4	Nov 05, 2016	
Aug 15, 2016	Ski Lift Safety - Adoption of ANSI B77.1-2011 Proposed Readoption: N.J.A.C. 5:12 Proposed Amendments: N.J.A.C. 5:12-1.4 and 4.2 Proposed Repeal: N.J.A.C. 5:12-6	Oct 14, 2016	
July 05, 2016	Uniform Construction Code; Permit Updates regarding Zoning Proposed Amendments: N.J.A.C. 5:23-2.16, 2.18 and 2.29	Sept 03, 2016	
July 05, 2016	Uniform Construction Code; Elevator Subcode Elimination of Six-Month Elevator Inspections Proposed Amendments: N.J.A.C. 5:23-12.1, 12.2, 12.3 12.6 and 12.9 Proposed Repeal: N.J.A.C. 5:23-12.10	Sept 03, 2016	
Apr 04, 2016	Notice of Readoption; Maintenance of Hotels and Multiple Dwellings Readoption: N.J.A.C. 5:10-1, 1A, 1B, 2 and 4 through 28	N/A	Apr 04, 2016
Apr 04, 2016	Uniform Construction Code Proposed Amendments: N.J.A.C. 5:23-2.14, 2.15 and 12.1	June 03, 2016	Sept 19, 2016
Mar 21, 2016	Notice of Readoption; Urban and rural Centers Unsafe Buildings Demolition LoanFund Readoption: N.J.A.C. 5:7 Effective Date: February 19,2016 New Expiration Date: February 19, 2023	N/A	Mar 21, 2016

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

Summary of Rule Changes for 2016

NOVEMBER 21, 2016 TRANSMITTAL

September 19, 2016 New Jersey Register

- **N.J.A.C. 2.14 Construction Permits – When Required:** The amendment to N.J.A.C. 5:23- 2.14(g) exempts retaining walls under the purview of a county or of the State Department of Transportation (DOT) from the requirement to obtain a construction permit.
- **N.J.A.C. 2.15 Construction Permits – Application:** The amendment to N.J.A.C. 5:23-2.15(a)5 adds a cross-reference to a provision adopted in 2009 (N.J.A.C. 5:23-2.15(f)4ii(1)) providing for plan review to be performed, notwithstanding the fact that required approvals may not yet be in place, as long as the permit application is otherwise complete.
- **N.J.A.C 12.1 Title; scope; intent:** The amendment to N.J.A.C. 5:23-12.1(e)1 makes the terminology used in the Uniform Construction Code consistent with the terminology used in ASME (American Society of Mechanical Engineers) A17.1.

Bulletins

Revised

- **79-2, Testing of Plumbing Systems –** Deletes reference to Section 15.2.2 of the National Standard Plumbing Code because that section no longer exists; and
- **94-7, Plans for Elevator Devices –** Adds language to reflect current terminology.

Withdrawn

- **79-8, Permit Fees for Large, Open-Volume Buildings –** Superseded by NJAC 5:23-4.18 and 4.20;
- **88-4, Concrete-Filled Pipe Columns –** Superseded by "engineered design" in building subcode and one- and two-family dwelling subcode; and
- **90-1, Canadian Standards Association as Referenced Standard –** Superseded as the Canadian Standards Association is a Nationally Recognized Testing Laboratory.

Formal Technical Opinions (FTOs)

Revised

- FTO-3, Fire Escapes – Letter H, #1 on pages 3 and 6 has been modified to delete wired-glass and the protection of window openings that are within 10 feet in any direction of a fire escape. The exception for wired-glass in fire doors, fire windows and view panels was deleted from the code with the adoption of the 2006 International Building Code. Also, the requirement that all safety glazing must comply with the Building Subcode has been added.

Withdrawn

- FTO-1, Shopping Cart Corrals
- FTO-10, Rooming and Boarding Houses – Superseded by Bulletin 15-3; and
- FTO-15, Commercial Kitchen Exhaust Hoods – Superseded by Section 507 of the mechanical subcode.

Page 23-30.4.19 – Correction to the footer.

MAY 16, 2016 TRANSMITTAL *(includes April 4, 2016 transmittal and 2015 changes to UCC Act)*

- **N.J.S.A. 52:27D-123f and 124, Carbon monoxide detectors required in certain structures:** Per P.L. 2015, c.146, the requirement for the installation of carbon monoxide devices has been expanded to all occupancies. (*Please note that rules will be proposed and adopted to implement this requirement.)*

(continued next page)

(Summary of Rule Changes for 2016)

- **N.J.S.A. 52:27D-126e, Waiving of construction permit, enforcing agency fees for certain construction projects to benefit disabled persons:** Per P.L. 2015, c.273, a municipality shall not charge a person who has a service-connected disability declared by the United States Department of Veterans Affairs, or its successor, to be a total or 100% permanent disability that would entitle them to a property tax exemption under section 1 of P.L.1948, c.259 (C.54:4-3.30) or a spouse, parent, sibling, or guardian of the disabled veteran, a construction permit surcharge fee or enforcing agency fee for any construction, reconstruction, alteration, or improvement designed and undertaken solely to promote accessibility by the disabled veteran to his own living unit.
- **N.J.S.A. 52:27D-131. Construction permits; application, approval, expiration, cancellation, extension:** Per P.L. 2015, c.159, applications limited to the construction of a ramp designed to provide wheelchair access to a one- or two-unit dwelling, and required for such access by a resident of the dwelling shall be granted or denied within five business days. (*Please note that rules will be proposed and adopted to implement this requirement.)*

April 4, 2016 New Jersey Register

- **N.J.A.C. 5:23-3.4, Responsibilities:** The adopted amendments contain the assignment of enforcement responsibilities for the 2015 I Codes, 2015 NSPC and 2014 NEC, now adopted as subcodes of the UCC. N.J.A.C. 5:23-7.15 is repealed because Chapter 11 of the building subcode, and ICC A117.1-2009 as referenced therein, are now the standard for accessibility and enforcement responsibility is assigned in N.J.A.C. 5:23-3.4.
- **N.J.A.C. 5:23-12.6, Tests and inspection fees:** The adopted amendment here modifies the Department fees for inspections and witnessing of tests on devices installed in buildings of Group R-3, Group R-4, Group R-5 or otherwise exempt devices in Group R-2. This amendment reduces the fees charged for dumbwaiters, stairway chairlifts, inclined and vertical wheelchair lifts from $227.00 to $76.00, to bring them in line with fees charged for such devices installed in other occupancies.

May 16, 2016 New Jersey Register

- **N.J.A.C. 5:23-4.18 and 4.20, Fees:** For large open-volume buildings, the adopted amendments cap the height at 20 feet for purposes of calculating the volume upon which the fee is based. This will reduce the fee to reflect more accurately the associated work for the construction code enforcing agency.

JANUARY 4, 2016 TRANSMITTAL *(includes November 2 and 16, 2015 transmittals)*

November 2, 2015 New Jersey Register

- **N.J.A.C. 5:23-3.16, Electrical Subcode:** This Notice corrects the reference to the Information Note Bulletin, #15-2.

November 16, 2015 New Jersey Register

- **N.J.A.C. 5:23-3.21, One- and Two-Family Dwelling Subcode:** This Notice corrects the misnumbered references to the International Swimming Pool and Spa Code within Section R326 of the International Residential Code, 2015 edition.

January 4, 2016 New Jersey Register

- **N.J.A.C. 5:23-3.15, Plumbing Subcode:** This rule amendment adopts the 2015 National Standard Plumbing Code by reference.
- **Bulletin 15-4, Energy Subcode Compliance:** This bulletin is updated to reflect the changes within the 2015 International Energy Conservation Code. (Bulletin 11-1 is withdrawn following the end of the six month grace period.)
- **Bulletin 15-3, Group Classifications for Residential and Institutional Occupancies:** This bulletin assists in determining the correct group designation for residential occupancies.
- **Bulletin 15-2, Adopted Codes, Standards and Recommended Practices Referenced Under Informational Notes of the National Electrical Code 2014:** Replace pages 1 and 2 due to an error regarding the ASME A17.1; 2013 is the correct edition.

(continued next page)

(Summary of Rule Changes for 2016)

- **Bulletin 05-2, Seismic Hazard Maps:** This bulletin is updated to reflect the changes within the 2015 International Building Code and includes an example of utilizing the USGS's online software to obtain seismic criteria.
- **Bulletin 03-5, Special Inspections:** This bulletin is updated to reflect the changes within the 2015 International Building Code.
- **Bulletin 03-4, Wind Speed Map:** This bulletin is simplified and contains an example of how to utilize the Applied Technology Council's online software to obtain wind speed.
- **Bulletin 94-8, Ground Snow Loads:** This bulletin adds an example of how to utilize the Applied Technology Council's online software to obtain ground snow load.

Wireless Alarm Systems – Installation

(Letter to Construction Officials – July 28, 2016)

It has come to the Department's attention that some municipal code enforcement offices are requiring Uniform Construction Code (UCC) permits for the installation of wireless alarm systems, including supplemental security, fire detection, and home automation systems. Therefore, I am writing to remind you that the installation of wireless systems is categorized as ordinary maintenance (N.J.A.C. 5:23-2.17A(c)5i., ii., and iv.). The Department has published articles addressing these installations in the Construction Code Communicator ("Requirements for Supplemental Smoke or Heat Detector Installations for International Residential Code Buildings," 2008, Volume 20, No. 1, page 13; and "Wireless Systems and Permits," 2014, Volume 26, Number 1, page 9). These Construction Code Communicator articles may be found on the web site for the Department of Community Affairs, Division of Codes and Standards at http://www.nj.gov/dca/divisions/codes/publications/ccc.html. This letter provides direction regarding these installations.

Ordinary Maintenance (N.J.A.C. 5:23-2.7): A permit is not required for the installation of a supplemental wireless system; wireless systems are deemed to be ordinary maintenance. At N.J.A.C. 5:23-2.7(c)4.iii., the UCC specifies that the installation of battery-operated smoke detectors is ordinary maintenance. Because the UCC imposes no limitations regarding the installation of battery-powered devices in either ordinary electrical maintenance (N.J.A.C. 5:23- 2.7(c)3) or minor work (N.J.A.C. 5:23-2.17A(c)4), their installation is ordinary maintenance and does not require a permit. Furthermore, when a control panel has an attachment plug or modular plug (similar to one that comes with a computer or coffee pot) and no wire is run for the keypads, no permit is required. There is no inspection required for this type of work because there is no additional wiring to be inspected.

Minor Work (N.J.A.C. 5:23-2.17A): When any of the following conditions apply, the installation of a burglar alarm, fire alarm, or electronic security system requires a permit in conformance with the "minor work" provisions of the UCC: (1) The power supply requires running a low voltage wire(s) from a transformer to the control panel; (2) There are key pads or annunciators that require low voltage wiring; or (3) The low voltage wires require penetration of a fire-resistance rated assembly. In addition, at N.J.A.C. 5:23-2.15(b)7, Construction permits— application, to ensure compliance with N.J.S.A. 45:5A-18 et seq., the license number of the contractor must be provided on the permit application. Depending on the scope of work, the following licenses or certifications are acceptable: certification permit from the Division of Fire Safety; Individual Alarm Installer's License issued by the Board of Examiners of Electrical Contractors; or a New Jersey licensed electrical contractor.

The Department is planning to undertake a spot-checking initiative to ensure that the installation of wireless alarm systems is being appropriately categorized as ordinary maintenance with no permit requirement imposed. The Department's spot-checking initiative will also ensure that the installation of alarm systems that require wiring is being appropriately categorized as minor work and is being allowed to take place with notice to the code enforcement agency, submittal of a permit application within five business days from the date of the notice, and an inspection by the code enforcement agency within 30 days of the request for inspection.

Questions may be addressed to the Office of Regulatory Affairs at (609) 984-7672.

Source: Edward M. Smith
Director, Division of Codes and Standards

Kitchen Remodeling Projects

(Reprint -- Volume 23 Number 3 Fall 2011)

The Department has been receiving questions on the enforcement of code requirements in kitchen remodeling or renovation projects. Some of the most frequently asked questions revolve around determining the category of work; others are concerned with permit requirements and code compliance when the work is ordinary maintenance.
In this article, we will try to answer some of the most common questions as they have been asked of us.

Question 1: Bulletin 94-3 states that the installation of new and/or replacement cabinets does not need a permit and that only electrical or plumbing work requires permits. There is a discrepancy in this requirement in the categorization of the replacement or installation of cabinets as ordinary maintenance. N.J.A.C. 5:23-2.7(c)1vi refers to the replacement of a cabinet, which is singular, as in one cabinet, and only replacement, not the addition of new cabinets.
RESPONSE: The text states: "The repair or replacement of any non-structural member such as a partition railing or kitchen cabinet." "Any… kitchen cabinet" can mean one -- or more than one – kitchen cabinet, so there is no discrepancy.

Question 2: N.J.A.C. 5:23-2.7(c)1ii refers to "repair or replacement of 25% or more of interior finishes in any one room." The vast majority of kitchen cabinets replacements involve more than 25% of wall surfaces in the kitchen. Cabinetry is part of the interior finishes of a kitchen since they are permanently attached to the wall, they are not furniture or furnishings and are much more involved than installing paneling for which a permit is required. This should require a Building Technical Section for verification of compliance with N.J.A.C. 5:23-6.8 for materials, methods and attachment, especially for the upper cabinets.
RESPONSE: Because kitchen cabinets are not interior finishes, the 25% limitation does not apply to them.

Question 3: N.J.A.C. 5:23-2.7(b)4 and 5 refer to ordinary maintenance that "does not affect fire safety…[and] does not increase non-conformity with the regulations." Section 1901 of the International Residential Code, as adopted at N.J.A.C. 5:23-3.21, references clearances to combustibles above ranges and cooking appliances. At N.J.A.C. 5:23-3.4, the plan review and inspection responsibilities are assigned to the Fire Subcode Official. This clearly indicates the need for a Fire Technical Section to review and inspect for compliance with this regulation with regard to fire-related issues.
RESPONSE: Within the framework of the Uniform Construction Code (UCC), there is a distinction between requiring a construction permit and code compliance. Although a permit is not always required, the code requirements always apply. It is not unusual for code requirements to be associated with "ordinary maintenance" items. For example, the replacement of glazing in the side-light of a door is ordinary maintenance and therefore, no permit, inspection, or notice to the enforcing agency is required. However, the UCC requires that the glazing being installed be safety glazing. Regardless of whether a construction permit is required, the project must comply with the UCC. The same holds true for the clearances to combustibles above ranges and cooktops—a construction permit is not required, so a technical section is not required, but the code provisions do apply.

Question 4: N.J.A.C. 5:23-2.17A(c)1ii refers to requiring a minor work permit for "renovation provided no primary structures are altered and the project is not a reconstruction." A kitchen is, by definition, a renovation project and possibly even a reconstruction, since it usually takes from 1 to 4 weeks to do the project and the room, in some cases, cannot be used or occupied during the progress of work. This puts most kitchen renovations, at the very least, in the scope of minor work and, in some cases, a major project. Very few kitchen projects are replacement of cabinets only.
RESPONSE: Reconstruction, by definition, is work that is so extensive that it not only encompasses the entire primary function space, use group, or tenancy, but also requires a new certificate of occupancy. Therefore, remodeling a kitchen is never a reconstruction project. We agree that a kitchen remodeling project can be, and often is, minor work.
As a reminder, in a kitchen remodeling project, the cabinets would be exempt from the permit; only work that requires a permit should be included in the permit application and in the calculation of the fee.

One of the most basic, foundational ideas of the UCC is that its requirements be predictable; another is that its enforcement be uniform. Questions should be directed to the Code Assistance Unit at (609) 984-7609.

Construction Code Communicator Index 2016

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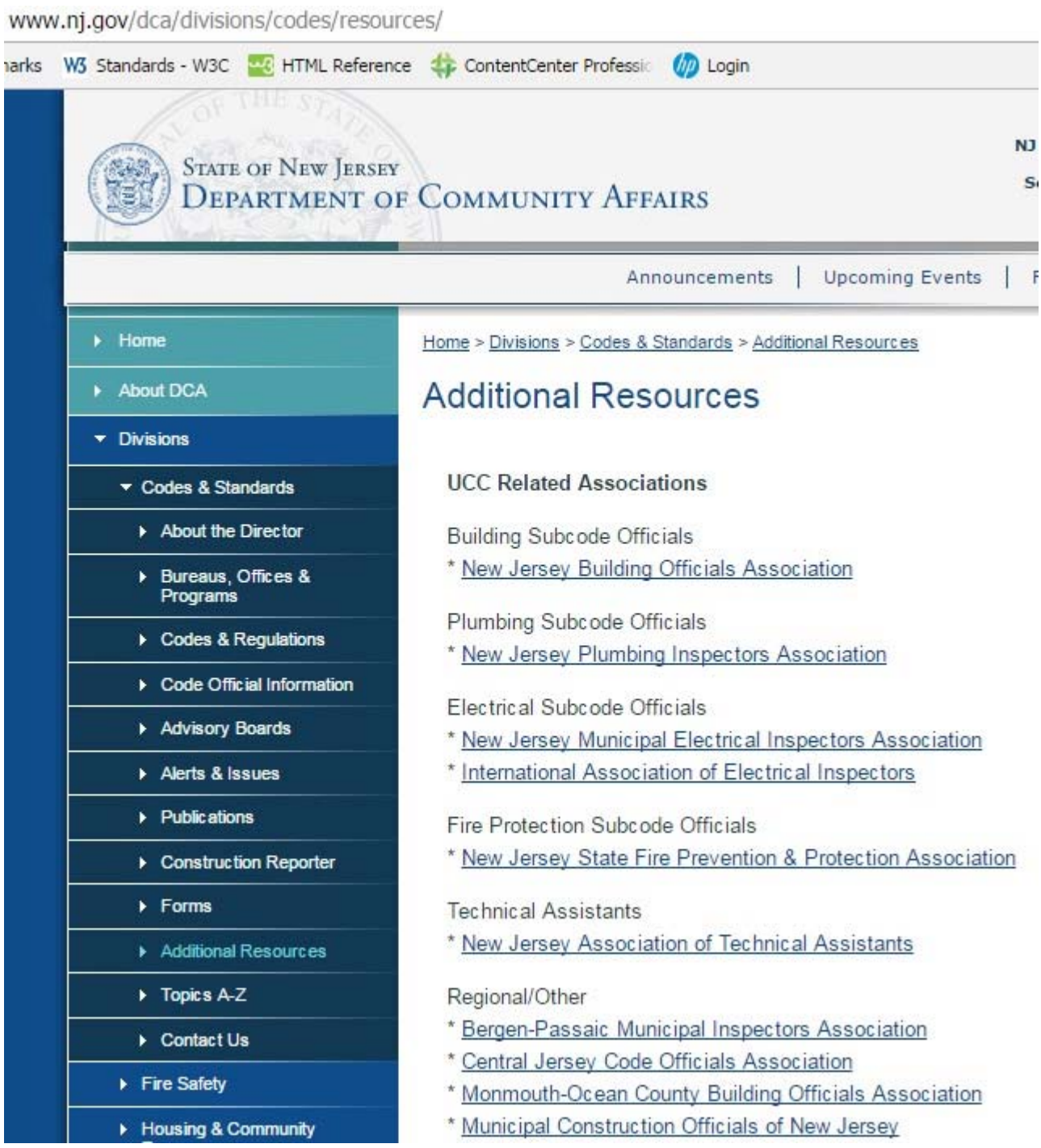
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UCC Related Associations

If you haven't noticed, there is a page on the Division's website that reflects the associated trades and organizations that represent the working code officials throughout the State. The division does its best to maintain the links so that people may find the related information they are looking for. If an organization should be represented or that any corrections should be made to the current list, please contact us at (609) 984-7609 or codeassist@dca.nj.gov.



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.

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Volume 27, Number 1 **Spring 2015**

How Do I Calculate The Permit Fee For An Elevated Structure?

With the number of permits being issued for elevated structures increasing, there have been numerous questions on how to calculate the volume of these structures for fee purposes. NJAC 5:23-2.28, entitled Volume Computation, provides the answer.

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

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

If you have any questions, feel free to contact the Code Assistance Unit at 609-984-7609.

Source: John N. Terry
Manager, Code Assistance Unit

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Licensing & Education Now Part of the Director's Office

Licensing & Education is now part of the Director's Office. Our phone numbers and e-mail addresses remain the same, but our P.O. Box is now 802. As a reminder, Licensing can be reached at 609-984-7834 or codes.licensing@dca.nj.gov and Education can be reached at 609-984-7820 or education.unit@dca.nj.gov.

Source: John Delesandro
Division of Codes and Standards

The DCA/RU Education Program Joins ICC Preferred Provider Program

We are now an International Code Council (ICC) Preferred Provider of continuing education. Our continuing education programs are now a part of the ICC preferred provider program and, as such, courses completed to maintain your NJ Uniform Construction Code licenses will now fulfill the continuing education requirements necessary to maintain ICC certifications. More information on the ICC program can be found at their website: http://ppp.iccsafe.org/

Source: John Delesandro
Division of Codes and Standards

Instructor Update Course / Advanced Train-the-Trainer

The Licensing Unit is in the process of updating its approved instructors and periodically requires the instructors to take courses to refresh their knowledge. This refresher will focus on preparing instructors to use "hybrid training" as part of their course development and delivery.

Hybrid training is delivering a course that is (1) face to face in a traditional classroom setting and (2) supplements the educational experience with online training. The online component will replace some elements of the face-to-face training, freeing up more classroom time for the most important topics and reducing the number of hours students need to be physically present in a classroom.

The idea behind this new focus is to attract new potential inspectors and to make courses more widely available, even to students in more remote locations within the State. The training will be broken into three components. The first component is an introduction to our online training platform which will be 2.5 hours in length. The second component is a five-hour, face-to-face classroom training on hybrid course development and teaching techniques. The third and final component will give the instructors an opportunity to put online training into practice, which will also be a shortened 2.5 hour class. Instructors who are currently teaching or otherwise active in the pre-licensing programs at the county colleges will be required to complete all three components and will receive a total 1.0 administrative CEU's. All other approved instructors must complete the second component, the face to face classroom training, and will receive 0.5 administrative CEU's. Both groups must complete the training in order to maintain their approvals.

Source: John Delesandro
Division of Codes and Standards

Conflicting Requirements

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: Amy Fenwick Frank
Division of Codes and Standards

When Are Emergency Responder Radio Coverage Systems Required?

Since the 2009 International Building Code (IBC) became effective on March 7, 2011, an emergency responder radio coverage system has been required for all new buildings. IBC/2009 Section 915.1 "**General"** requires these systems to be installed in all new buildings in accordance with the International Fire Code (IFC).

IFC/2009 Section 510.1 "Emergency responder radio coverage in buildings"
The IFC provides two exceptions to these requirements and they are as follows:

1. In lieu of a radio coverage system, the fire subcode official may allow a wired communication system that is installed in accordance with IBC/2009 Section 907.2.13.2.
2. The fire protection subcode official may also determine that the radio coverage system is not needed.

So a proposed wired system can be approved by the local fire protection subcode official; or when the building is small (under 50,000 square feet) or open enough that a radio system is not needed, it can be omitted.

The following is a list of what the fire protection subcode official should be requesting from the 2009 IFC:

Section 510.1 Emergency responder radio coverage in buildings basically requires the same level of coverage inside the building as the public safety communications system has for the exterior of the building.

Section 510.2 Radio signal strength considers the coverage to be acceptable when 95% of all areas of each floor has a signal strength of -95 dBm into the building from the public system and -100 dBm out of the building via the agency's radio back to the public system.

Section 510.3 Emergency responder radio coverage in existing buildings allows a radio system to be installed in existing buildings that do not have an approved radio coverage system or when the existing wired system cannot be repaired or replaced.

At a minimum, the fire protection subcode official should be getting an application showing the above is going to be met for all emergency responder radio frequencies within the municipality. The public safety radio professional from the municipality should be consulted for frequencies and communication levels around town. There is no across-the-board exemption for these systems. However, smaller buildings (under 50,000 square feet) or buildings without basements should be okay without a radio coverage system.

Source: Michael Whalen
Code Assistance Unit

Attention UCCARS I and II Users

We will be phasing out the UCCARS I and II systems completely in the not too distant future. Therefore, it is ***highly*** recommended that your municipality switch to either PermitsNJ or another third party permitting software package as soon as possible. If your municipality wishes to switch from UCCARS I to PermitsNJ, we will convert your UCCARS I data provided that you get it to us by **June 30, 2015**.

If your municipality wishes to continue using the UCCARS I or II system until the absolute deadline, whenever that may be, please be aware that UCCARS will not function on the **"64-bit versions of Windows 7 or Windows 8"**. In order to keep the UCCARS system operational, the computer must be running a version of the Windows operating system that is "**32-bit"**. Please keep this in mind if your municipality has to purchase new computer equipment. Once the deadline passes, we will no longer accept monthly data, in any capacity, from the UCCARS I or UCCARS 2 systems.

If you have any questions about this article or about how to get your UCCARS I data to the DCA for conversion into PermitsNJ, please feel free to contact me at (609) 292-7899 or charles.pierson@dca.nj.gov.

Source: Charles Pierson Jr.
PermitsNJ / UCCARS Product Support
Division of Codes and Standards

"Protection" of Oil Tanks

What does "protection from the weather" mean in terms of an aboveground outside heating oil tank?

Section M2201.2.2 of the International Residential Code (IRC) states, "Tanks installed outside above ground shall be a minimum of 5 feet from an adjoining property line. ***Such tanks shall be suitably protected from the weather and from physical damage.***"

(article continued on next page)

Looking to the IRC commentary, the intent of this section is that these tanks are to be protected, at a minimum, in a manner that usually consists of high-quality exterior grade paint.

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

Source: Tom Pitcherello
Code Assistance Unit

Openings in Wind-Borne Debris & Hurricane-Prone Regions

Since the adoption of the International Building Code (IBC) and International Residential Code (IRC), the requirements for openings subject to wind-borne debris or hurricane-prone regions have been a bone of contention. Other than the same old news, there is some good news on the horizon with the upcoming adoption of the 2015 I-codes.

As the State has adopted the 2000, 2006 and currently is still using the 2009 editions of the IBC and IRC, brand ***new buildings*** constructed within one mile of the mean high water line of the Atlantic Ocean and having a wind speed of 110 miles per hour are required to have openings that are protected from wind-borne debris. Protection measures can be found at Section 1609.1.2 of the IBC/2009 and Section R301.2.1.2 of the IRC/2009.

In terms of ***existing buildings***, the above referenced sections are NOT part of the Rehabilitation Subcode, as they are not listed as a material and method at NJAC 5:23-6.8(b) and (h), respectively. Therefore, the opening protection referenced above is not required for existing buildings. The only caveat to this is if the building was built to one of the referenced codes above and already had opening protection, then the protection would have to be maintained.

In the case of an addition in this location, we all know that NJAC 5:23-6.32(a) requires the addition to meet new code requirements. However, what should one do if the existing building never had opening protection? This is a good example of a time to utilize NJAC 5:23-2.9 through 2.13 and grant a variation for this addition not to meet the opening protection requirements since the existing building does not have these protection measures and this requirement is really one that is all or nothing; in this case, default to nothing.

Lastly, the GOOD NEWS…with the adoption of the 2015 codes upon us, the IBC/2015 and IRC/2015 have reevaluated these requirements (i.e. contour lines delineating zones have moved) and New Jersey is no longer subject to the opening protection requirements discussed above.

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

Source: Rob Austin
Code Assistance Unit

Are You Using the Right Pipe Dope/PTFE (Polytetrafluoroethylene) Tape?

Pipe dope and PTFE tape (often called by its DuPont trade name “Teflon”) are not appropriate for all applications. Whether the pipe dope or tape you are using is appropriate can depend on the pipe material being used, the substance that the pipe conveys (water, steam, Natural Gas, Liquefied petroleum Gas etc.), the temperature the pipe will be exposed to, whether the pipe is subject to vibration, and in some cases, the diameter of the pipe. There is no easy way to identify whether the pipe dope or tape is appropriate for the application because different manufacturers use different colors, names and containers to identify products that have similar performance characteristics. There is not a specific color of pipe dope or tape that is allowed for a given application though many use yellow to signify that a product is acceptable for Natural Gas applications. In some cases, the limitations of the pipe dope or tape can be pretty subtle. For example, pipe dope or tape that is allowed for Natural Gas may not be permitted for Liquefied Petroleum Gas and vice versa. Using the correct pipe dope or tape with Natural Gas and Liquefied Petroleum Gas is particularly critical.

To be sure that the appropriate pipe dope or tape is being used, always consult the container label and/or the manufacturer’s literature.

Source: John Tomasone
Liquefied Petroleum Gas Safety and Education Board

Minor Work and Building Drain/Sewer and Water Services

The Department has received numerous calls from project applicants inquiring as to how long a trench for water service and/or building sewer repair/replacement must be left open for inspection. Some towns put these open trench inspections to the top of their daily inspections; however, some are requiring that these trenches remain open until the next available inspection date. The Department has been made aware of scenarios in which the next available date is extended from one to two weeks out. **This is unacceptable and a violation of the UCC.** As per NJAC 5:23-2.18(c)2, inspections must be performed within three business days of the time for which it was requested.

This work can be considered Ordinary Maintenance, provided the scope of work is the replacement of piping between two adjacent joints, or Minor Work. The below scenarios describe the work and the applicable inspection requirement.

Scenario 1
Water and/or sewer service to a building is leaking. Service company digs up the service, cuts the leaking section of pipe out and replaces it with a new piece. This is Ordinary Maintenance under NJAC 5:23-2.7(c)2iv.
NO permit is issued / NO inspection performed.

Scenario 2
Water and/or sewer service to a building is leaking. Service company digs up the service and replaces the entire service with a new service **of like capacity (i.e. same diameter)**. **This is Emergency Work.** The applicant must notify the Local Enforcing agency (LEA) **"as soon thereafter as is practicable"** that the service was replaced and has 72 hours after this notification to apply for the permit as per NJAC 5:23-2.14(b)3. A Minor Work Permit should be issued as per NJAC 5:23-2.17A(c)2. The inspection must be performed within 30 days by the LEA and a Certificate of Approval is issued as per NJAC 5:23-2.17A(d)2.

Minor Work requires that the inspection be based upon what is visible at the time of said inspection. The connection to the utility and the connection to the existing piping is all that is inspected. If the connection to the existing piping is made on the interior of the building, then the penetration through the wall must be seen to ensure that both the interior and exterior sides of the wall are sealed properly. **The entire trench DOES NOT need to remain open.**

Scenario 3
Same as scenario 2 **however** the service is replaced with a new one of **DIFFERENT CAPACITY** (i.e. Change in diameter of the pipe either larger or smaller). This is **NOT** Minor Work, but **IS** Emergency Work. The work may be done and the permit applied for under NJAC 5:23-2.14(b)3. The inspection is to be performed within three business days as per NJAC 5:23-2.18(c)2.

Scenario 4
An addition is being constructed that includes fixtures that increase loads on the service and the service must be increased in size. The existing service is to be replaced with a new one of greater capacity. This is **NOT** Minor Work [except one- and two-family dwellings pursuant to NJAC 5:23-2.17A(c)1ii] nor is it Emergency Work. Before the service can be replaced, a permit must be applied for under NJAC 5:23-2.14(a). Inspections are performed as per NJAC 5:23-2.18(c)2.

These additional questions may arise from the above four scenarios:

How much pipe can be replaced under Ordinary Maintenance?
This distance will vary depending upon the material installed.

What if the leak is at a fitting between two other joints?
The leaking fitting should be considered as the "leak" and the distance should be based on the two adjacent joints on either side of the leak.

How should the contractor keep the areas open that need to be seen?

This is up to the contractor. They can use plates over the open holes, piping installed over the connections with a removable cap on top as a view port provided it is not Minor Work.

Source: William B. Schmidt & Thomas Pitcherello
Office of Regulatory Affairs & Code Assistance Unit

Foundation Drains Filter Membrane Material

A question has arisen about the filter membrane material required on top of the foundation drain. As per Section R406.4.2 of the International Residential Code/2009 and Section 1805.4.2 of the International Building Code/2009, a drain must be placed around the perimeter of a foundation that consists of gravel or crushed stone. The specific requirements are:

> "A drain shall be placed around the perimeter of a foundation that consists of gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. The drain shall extend a minimum of 12 inches beyond the outside edge of the footing. The thickness shall be such that the bottom of the drain is not higher than the bottom of the base under the floor, and that the top of the drain is not less than 6 inches above the top of the footing. The top of the drain shall be covered with an approved filter membrane material. Where a drain tile or perforated pipe is used, the invert of the pipe or tile shall not be higher than the floor elevation. The top of joints or the top of perforations shall be protected with an approved filter membrane material. The pipe or tile shall be placed on not less than 2 inches of gravel or crushed stone complying with Section R406.4 and shall be covered with not less than 6 inches of the same material."

A foundation drain is always required, however a dedicated drainage systems is not required where the site is located in a well-drained gravel or sand/gravel mixture.

But what about the approved filter membrane material? The code requires that the top of the drain, top of joints or the top of perforations, be covered with an approved filter membrane material.

What this means is, the top of the gravel or crushed stones or joints or perforations must be covered with an approved filter membrane material to prevent the fine particles that may be contained in the surrounding soil from entering the drainage system and being carried away by water. The filter membrane allows the water to pass through the perimeter drain tile or perforated pipe without allowing, or at least greatly reducing, the possibility of fine soil material entering the drainage system. The fine particles, in time, could possibly cause the undermining of the footing and settlement of the foundation wall.

If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

The CEO's Private Bathroom

Reviewing a set of plans that includes a private bathroom accessed only from the office of the CEO? Well, don't let them bully you and say they don't want an accessible bathroom with grab bars, etc! Just remind them, as per NJAC 5:23-7.12(a), all toilet and bathing facilities must be accessible in accordance with the ICC/ANSI A117.1-2003.

Now, not all is lost for the CEO though. He/she does get to have it his/her way, to a point. Yes, the bathroom must be accessible BUT there are exceptions built into Chapter 6, Plumbing Elements and Facilities, to customize the executive washroom. These exceptions are as follows:

* Section 603.2.3, Door Swing [Clearance], exception 1;
* Section 604.3.2, Overlap [Clearance], exception (as amended by NJAC 5:23-7.2(b)10);
* Section 604.4, [Toilet] Height, exception;
* Section 604.5, [Toilet] Grab Bars, exception 1;
* Section 606.2, [Lavatory] Clear Floor Space, exception 2;
* Section 606.3, [Lavatory] Height, exception;
* Section 607.4, [Bathtub] Grab Bars, exception 1
* Section 608.3, [Shower Compartment] Grab Bars, exception 1; and
* Section 608.4, [Shower Compartment] Seats, exception 1.

So, in short, the CEO's private bathroom has to be accessible with the exceptions provided above.

> Note: Upon adoption of the 2015 I-codes, the references from NJAC 5:23-7 above will be built into Chapter 11 of the IBC/2015, which in turn, will update the references to the 2009 edition of the ICC/ANSI A117.1.

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

Source: Rob Austin
Code Assistance Unit

Multiple Permits for Multiple Dwellings Mean Multiple Mistakes

Jane and Joe are construction official and technical assistant for a town with a new multifamily development. It has three buildings, each with 24 dwellings. They should issue three permits for the development, one for each building. Each permit should show 24 dwellings gained. For apartments, record 24 rental units. For condominiums, report 24 for-sale units. Three buildings. Three permits, each shows 24 dwellings.

What Jane and Joe did instead was to issue 72 building permits, one for each dwelling. They calculated all of the important building features on a per-dwelling basis. They divided the estimated construction cost, floor area, volume, and fees for each building by the number of dwellings. On each permit, however, they entered 24 units. They did this 72 times, reporting 1,728 new dwellings, when they meant 72. Silly mistake, right? Sure, but that is not the point of the story.

Jane and Joe do something many others do. They issue separate building permits for each dwelling in a multifamily building. Why?

There are several good reasons. One is to better track the construction process, which has become more complex. In the 1990s, over 80 percent of new housing was single-family, detached units. These were easy to monitor. Today, nearly half of all new dwellings are attached to other units. Housing is harder to track. Separate permits help keep tabs on what needs to be done, when, and where.

Another reason is homeowners, banks, mortgage providers, and warranty companies need these records. Fire walls and other construction practices allow for the dwellings in multifamily buildings to be completed and occupied at different times, over months, even years. Many need to know when dwellings are completed.

While these are valid reasons, they don't change what should happen. Joe and Jane should have issued three permits, one for each building. Each of these permits should have reported a gain of 24 dwellings. If they needed separate permits for each dwelling, they should view the multifamily building like a shopping mall. Issue a separate permit for the mall. Report features for the entire building. When it's time to fit out different shops within the shell, issue a separate permit for each store. These are alterations. Don't repeat information already reported for the shell.

For a multifamily building, issue one permit for the entire building. Report all important features of the building. This includes its estimated construction cost, floor area, volume, and the expected number of dwellings *for the entire building*. If you need a separate permit for each dwelling, and your reporting software can't do this, think of each unit as a shop in a mall. Issue separate alteration permits for them, but don't repeat information already on the primary permit. Report the number of dwellings expected for the entire building on the primary permit. When it's time for the first householder to move in, issue a certificate of occupancy (CO) or temporary CO for the entire shell.

If you have questions regarding this, please call (609) 292-7898 or email me at John.Lago@dca.nj.gov.

Source: John Lago
Division of Codes and Standards

Housing in Mixed-Use Buildings

A new house was easy to spot in the 1990s. Back then, most new houses were detached, single-family units. Now, nearly half are attached to other dwellings. Some are in buildings with office, retail, and other uses. Mixed-use buildings are a growing development trend. While they may make for better living, they raise special issues on how this information is reported.

Most construction officials and technical assistants know they must report new dwellings on building permits for mixed-use buildings. What they may not know, however, is the way they record this information matters. On permits for mixed-use buildings, construction officials and technical assistants are trained to report the primary use first. Secondary uses follow. Order matters, especially to the US Census Bureau. They only "see" the first building use entered on the permit. A permit for a new building with 25,000 square feet of retail space and three small apartments gets reported as an "M" use (for mercantile) and then an "R-2" use (multifamily housing). Because "M" is the primary use, the permit is tagged with a "999" item number. This tells the Census Bureau to ignore it, even though the building has new housing.

Your training still applies. For mixed-use buildings, enter the primary use first. Use your judgment. If housing is an equal or important part, enter the residential use first. This will bring the new housing to the attention of the Census Bureau.

If you have questions regarding this, please call (609) 292-7898 or email me at John.Lago@dca.nj.gov.

Source: John Lago
Division of Codes and Standards

Census Item Numbers

As technical assistants and construction officials, you know a lot gets entered on building permits. One important piece of information is Census Item Numbers. They are used by the US Census Bureau to track new housing on building permits. "Authorized housing" is an important economic indicator the federal agency reports each month.

What are the item numbers and how do they work? There are only five numbers to know. The most common is **999.** This is used for all the building permits the Census Bureau wants to ignore. These include any building permits for commercial buildings. It also is used for all permits on existing buildings, even if the authorized work creates new housing. You still must count and report the new units from conversions, additions, or other alterations. Just tag them with item number **999** to distinguish them from dwellings created from new construction permits.

For a new, single-family house, the correct item number is **101**. The number of dwellings gained is one. If the single-family house is attached to another unit, say a row-house, the correct item number is still 101. The Census Bureau used to have 102 for row houses, but this got too confusing. That item number is no longer used.

A new duplex is a **103.** The number of units gained is always two. One dwelling might be for sale, and the other for rent. Both can be either for sale or rent. Make your best guess if you don't know, but the sum must be two. If you enter two units for sale and another two for rent, you reported four dwellings. That is not a duplex.

Census item number **104** is for a new residential building with either three (3) or four (4) dwellings. They can be for sale or for rent or any combination of these two options, but the total must add up to three or four.

105 is the item number for a new, residential building with 5 or more dwellings. All permits for them should show at least five (5) housing units. Some building departments want to report individual dwellings in multifamily buildings separately. This is a dangerous practice, and a topic for a different article, titled "Multiple Permits for Multiple Dwellings Mean Multiple Mistakes." For now, when you issue a building permit for a new residential building, and it is expected to have five or more dwellings, use item number 105.

The table below summarizes Census Item Numbers.

Census Item Numbers		
Item #	**Used when:**	**Number of dwellings**
999	Used for all permits for office, retail, and other nonresidential buildings, as well as for all additions and alterations to any *existing* building, including those with residential uses. Use 999 even if the addition or alteration work creates new housing.	Usually zero, but report any new housing from alterations & additions.
101	A new single-family house; dwelling units gained is one. The dwelling can be detached or attached, for example, a townhouse.	**Most of the time: 1; can be more for single-family attached housing.**
103	A new duplex with two new dwellings	**2**
104	A new residential building with either three or four new dwellings.	**3 or 4**
105	A new residential building with five or more dwellings.	**5 or more**

If you have questions regarding this, please call (609) 292-7898 or email me at John.Lago@dca.nj.gov.

Source: John Lago
Division of Codes and Standards

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.

Pile Certifications Required Per NJAC 5:23-2.18

In accordance with P.L. 2014, c. 34, the Department of Community Affairs has adopted amendments and a new rule for the elevation of existing buildings. These amendments became effective on October 1, 2014 and one item of specific concern is the pile certification.

The rules state that "the certification shall include, but not be limited to, verification that the size, type, and location of the piles conforms to the released plans and that the piles are properly set to support the design loads. Such certification shall be based upon personal observations made by the design professional at the site."

So, what is needed to comply? A pile log and certification. What does this consist of?

- **Pile Log –** These are recorded field observations of piles being driven. (See sample form below.) A separate form should be completed for each pile witnessed. Completing pile logs requires on-site field inspection by the licensed design professional or one of his/her employees. This is not unlike a special inspection.

- **Pile Certification -** This term must be used in the submittal. The pile certification must address the size, type and location (including spacing) of the piles.

Sharing these expectations with applicants may help to avoid delays later in the process. This information can be provided in the format the design professional prefers: letter, plan, details, etc. The design professional may even reference the original plans, but the certification must indicate that the design professional has verified (through field observation) that the piles are as specified on the plans. Remember, the Pile Certification must be submitted BEFORE the house is set or constructed on the piles.

SAMPLE FORM

Pile Log					
Project:			Date:		
Contractor			Inspector:		
Building			Pile location:		
Pile	Type:		Size (Butt/Tip):		
Elevation Ground:	Pile Tip Elevation:		Cut off Elevation:		
Hammer/Make/Model					
Depth in ft.	Blows/ft.	comments	Depth in ft.	Blows/ft.	comments
1			16		
2			17		
3			18		
4			19		
5			20		
6			21		
7			22		
8			23		
9			24		
10			25		
11			26		
12			27		
13			28		
14			29		
15			30		

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

Source: Lisa LaRue & Marcel Iglesias
Division of Codes and Standards

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
Trenton, NJ 08625-0802

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Volume 27, Number 2 **Summer 2015**

2015 I-Codes and 2014 NEC Adoption… (September 21, 2015)

…2015 National Standard Plumbing Code Proposal… (August 17, 2015)

…Building Safety Conference 2015… (Recap)

…and more!

Registration for Fall 2015 CEU's, Now Open

http://www.nj.gov/dca/divisions/codes/forms/pdf_licensing/ucc_fall_brochure.pdf

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The 34th Annual Building Safety Conference of New Jersey

The 34th Annual Building Safety Conference was held May 6th through 8th at Bally's in Atlantic City. Our focus this year was on the pending adoption of new editions of the model codes. We had a successful conference this year with over 500 people in attendance.

The kickoff event for the Conference, as always, was the "Crackerbarrel." This very popular event gives our guests the opportunity to hear from a variety of presenters in a short format style that focuses on new items of particular interest to the code enforcement community. The topics this year ranged from a discussion of the integration of online training into code enforcement courses to brief updates on all the new model codes.

The centerpiece of the Building Safety Conference was the opportunity to recognize and honor those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year. We were honored to once again have Director Edward Smith and the Presidents of the respective associations in making the award presentations at the annual luncheon.

The following awards were presented:

New Jersey Building Officials Association
Building Inspector of the Year -- Robert A. Burlew

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year -- David M. Bishop

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year -- Ronald J. Piszar

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year -- Brian J. Vanore

New Jersey Association of Technical Assistants
Technical Assistant of the Year -- Pamela A. Schwarz





New Jersey Building Officials Association
Building Inspector of the Year -- Robert A. Burlew (w/ NJBOA President Bob LaCosta & Director Smith)



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year -- David M. Bishop (w/ NJPIA President Frank Speranza & Director Smith)



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year -- Ronald J. Piszar (w/ NJFPPA Treasurer Rich Vigliotti, NJFPPA Central Regional Vice President Kevin Batzel, NJFPPA President Rich Silvia & Director Smith)



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year -- Brian J. Vanore (w/ MEIA of NJ President Ed Reed & Director Smith)



New Jersey Association of Technical Assistants
Technical Assistant of the Year -- Pamela A. Schwarz (w/ Central Jersey Technical Assistant Association President Kathy Newcomb, NJ ATA Vice Pres. Debbie Simone & Director Smith)

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

The Building Safety Conference is a unique opportunity to broaden your knowledge of cutting-edge code enforcement and building construction techniques while also providing an opportunity to meet with your peers throughout the State to share ideas and promote camaraderie and collegiality among the code enforcement community. The Conference Committee is always on the lookout for great and innovative ideas to meet the needs of our attendees. If you have any ideas, please pass that along to your association or email us at john.delesandro@dca.nj.gov.

We hope to see you all next year at Bally's in Atlantic City May 4th through 6th, 2016. Please save the date and now you can "like" us on Facebook for event updates, room locations and all other important information!

Source: John Delesandro
Supervisor, Education and Licensing Units

2015 I-Codes and 2014 NEC Adoption

BIG NEWS…the 2015 I-Codes and 2014 National Electrical Code (NEC) are adopted as of September 21, 2015. Originally proposed January 5, 2015, additional changes were made upon adoption. You can find the proposal and the adoption, which modifies the proposal, at http://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html and scrolling to the "January 5, 2015" row in the chart provided.

As always, there is a six-month grace period starting from September 21, 2015 during which applicants may submit a complete permit application, including all prior approvals, to be reviewed under the code in force immediately preceding the subcode revision. Provided that the application is complete, the construction official and applicable subcode officials should perform the plan review and issue construction permit(s) based on the code in force immediately prior to the operative date of the subcode revision. This means that the last day for application submission under the 2009 I-Codes and 2011 NEC is March 20, 2016.

Please note that the 2015 National Standard Plumbing Code (NSPC) is not part of this adoption and has its own proposal and will be on a slightly different track, hopefully only being a few months delayed to catch up with the other 2015 codes. (More on this subject can be found in another article within this edition of the *Construction Code Communicator*.)

Some brief highlights of the move from 2009 to 2015 editions of the International Building and Residential Codes, IBC and IRC, are as follows (keep in mind, the change may have happened in the 2012 editions, which NJ did not adopt, and are new to the us in the 2015 codes):

- Chapter 10, Means of Egress, of the IBC has been reformatted. More specifically, Section 1006, Number of exits and exit access doorways, is a consolidation of 2009 Sections 1014.3 (Common path of travel), 1015 (Exit and exit access doorways) and 1021 (Number of exits and exit configuration). Section 1007, Exit and exit access doorway configuration, is a consolidation of 2009 Sections 1015.2 (Exit or exit access doorway arrangement) and 1021.3 (Exit configuration).
- Chapter 11, Accessibility, of the IBC has been adopted in place of most of NJAC 5:23-7, the Barrier Free Subcode (the recreation portions remain as is).
- Wind Borne Debris Regions in both the IBC and IRC have been narrowed and no longer cover or apply to the State of New Jersey with the exception of Category IV structures (police and fire stations, emergency shelters) and health care facilities.
- The wind design criteria of the IRC (Section R301.2.1) have changed in that ALL buildings subject to the one- and two-family dwelling subcode may be designed using the IRC and not the high wind manuals required in the past.
- The floors overhead in a basement that are constructed of engineered wood products in buildings not provided with fire sprinklers are required to be protected with a ½ inch gypsum wallboard or 5/8 inch wood structural panels per Section R302.13 of the IRC.

Again, these are only a few of the changes that occurred in the “building” codes and the full list of changes for all adopted codes can be found in the proposal and adoption link provided above.

For the IBC and IRC, there will be NJ specific versions that the International Code Council will have available for purchase from their website at www.iccsafe.org. For all other codes, be sure to mark the changes from Subchapter 3 of the UCC within the code book.

Also, as with any new code adoption, other updates are required throughout NJAC 5:23 for general cross references, Responsibilities (Section 3.4) and Rehab (Subchapter 6). These will appear as proposals in the New Jersey Register in the near future. Also, Bulletins and Formal Technical Opinions will be revised, have code reference updates, be newly introduced or withdrawn.

Source: Code Assistance Unit
(609) 984-7609

2015 National Standard Plumbing Code (NSPC) Proposal

As mentioned in the other 2015 codes article, the 2015 NSPC is on a slightly different track for adoption. It has been proposed on August 17, 2015 issue of the New Jersey Register meaning the clock for the 60-day comment period has already started (ends October 16, 2015). If you like to view the proposal, please visit http://www.nj.gov/dca/divisions/codes/codreg/rule_proposals_adoptions.html and scroll to the “August 17, 2015” row in the chart provided.

Source: Code Assistance Unit
(609) 984-7609

Electrical Bonding of Corrugated Stainless Steel Tubing (CSST) UPDATE

Section 310.1.1 of the 2009 and 2015 International Fuel Gas Code (IFGC) and Section G2411.1.1 of the 2009 and 2015 International Residential Code (IRC) require CSST gas piping to be bonded.

CSST manufacturers have recently introduced a new product that has been listed and tested that would not require additional bonding, provided the product is installed in accordance with the conditions specified in the manufacturer's installation instructions.

The question: May this product be used without a variation?

As per NJAC 5:23-3.7(a)2, Municipal approvals of alternative materials, equipment, or methods of construction, if the manufacturer has reports of engineering findings issued by nationally-recognized evaluation service programs, such as, but not limited to, the International Code Council (ICC- ES – PMG) and the National Evaluation Service, Inc., these findings shall be accepted by the appropriate subcode official as meeting the requirements of NJAC 5:23-3.7(a). The materials, equipment, or assembly shall be installed in accordance with the conditions specified in the report.

Therefore, if the product has a nationally-recognized evaluation service report, as described above, a variation would not be required.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Plumbing Fixture Count

(Reprinted with updated references from Volume 17 Number 1 Spring 2005)

Since the International Building Code (IBC) was adopted, the Department of Community Affairs has received many calls pertaining to the differences in [use] group classifications between those cited in the IBC and the National Standard Plumbing Code (NSPC).

Table 7.21.1 of the NSPC/2015 cites similar [use] group classifications as the IBC, but they are not exactly the same. So, to determine the proper plumbing fixture count, and to avoid any misinterpretation between the building and plumbing codes, it is recommended that the DESCRIPTIONS of the building use as set forth in both the building and plumbing codes be used, and NOT simply the [use] group classification.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

UPDATE - Flood Elevation FAQs: NJ's Emergency Flood Elevation Rule

In the Spring 2013 *Construction Code Communicator*, we published an article of frequently asked questions (FAQs) provided by the Department of Environmental Projection in relation to the Flood Hazard Area Control Act. The FAQ that addressed substantially damaged homes having up to four years to elevate using increased cost of compliance (ICC) monies has been revised as the time to elevate has been extended to six years per FEMA memorandum W-15038 dated August 10, 2015. Therefore, the FAQ should now read:

Q: If my home is determined to be substantially damaged, can I still live in it until I elevate?

A: Homeowners may live in structures that are deemed substantially damaged for up to six years before needing to elevate if they can take temporary measures to make their homes habitable. The determination of habitability must be made by the local construction official.

The official memorandum is provided on the next page but if you'd like your own copy, please visit http://nfipiservice.com/Stakeholder/pdf/bulletin/w-15038.pdf.

U.S. Department of Homeland Security
Washington, D.C. 20472

FEMA

W-15038

August 10, 2015

MEMORANDUM FOR: Write Your Own (WYO) Company Principal Coordinators, WYO Vendors, NFIP Servicing Agent, and Independent Adjusting Firms

FROM: Roy E. Wright
Deputy Associate Administrator for Insurance and Mitigation

SUBJECT: **Extension of the Current Four-Year Time Limit for Completing Increased Cost of Compliance Benefit Related Work to a Six-Year Time Limit for All Flood Claims Occurring After January 1, 2011**

The National Flood Insurance Program (NFIP) provides Increased Cost of Compliance (ICC) coverage to pay up to $30,000 towards the cost of compliance with State or local floodplain management laws or ordinances (Section III.D – Increased Cost of Compliance of the Standard Flood Insurance Policy (SFIP)). The Standard Flood Insurance Policies (SFIPs) provide two years from the date of loss for the policyholder to complete the ICC qualifying work in Section III, Coverage D.

In FEMA bulletins w-13006 and w-13024, the Associate Administrator for the Federal Insurance and Mitigation Administration exercised his waiver authority to conditionally allow for advance payments of ICC funds (up to ½ of the amount for the qualifying work or a maximum of $15,000) and extended the two year time frame to complete the ICC mitigation to four years from the date of loss. In the event the required mitigation measures are not completed within four years, the remaining ICC benefit cannot be paid and any advance payment received by the policyholder must be returned.

ICC benefits may also be used as the non-Federal cost share for FEMA mitigation grant projects where the cost share is the responsibility of the NFIP policyholder. The mitigation grant process, however, may often extend beyond four-years from the date of the flood loss.

To facilitate the completion of mitigation grant-related activities without the need for additional waivers of the now four-year time frame to complete qualifying ICC work, I hereby waive the provisions of Section III.D.5.e of the SFIP Dwelling form, General Property form and the Residential Condominium Building Association Policy form and allow an additional two years to complete the approved ICC mitigation measures for all losses occurring on or after January 1, 2011. This means NFIP policyholders will now have six years to complete the approved ICC mitigation measures starting on the date of the underlying flood insurance indemnity loss if the loss occurred on or after January 1, 2011. This bulletin does not alter any applicable time frames for any loss occurring before January 1, 2011.

Any conflicting and previously issued waivers and guidance are hereby amended by the issuance of this bulletin.

AUTHORITY: This waiver is made pursuant to the SFIP provisions dealing with Amendments, Waivers, and Assignments of the SFIP (VII. D of the SFIP Dwelling Form, General Property Form and VIII, D of the SFIP Residential Condominium Building Association Policy Form) and 44 C.F.R. § 61.13(d).

Thank you for your continued cooperation.

cc: IBHS, FIPNC, Government Technical Representative

Suggested Routing: Claims, Underwriting

Source: Code Assistance Unit
(609) 984-7609

Building Subcode		Electrical Subcode	Energy Subcode				Fire Protection Subcode		Mechanical Subcode		Fuel Gas Subcode	Plumbing Subcode	1 & 2 Family Dwelling		Barrier Free (Sub 7)		Rehab (Sub 6)	Effective Date
BOCA	IBC	NEC	BOCA	CABO MEC	IECC	ASHRAE Std. 90.1	BOCA	IBC	BOCA	IMC	IFGC	NSPC	CABO	IRC	CABO/ ANSI A117.1	ICC/ ANSI A117.1	updated yearly since 1998	(start date of six month grace period)
1975		1975					1975					1975						01-01-77
1976/S							1976/S											12-01-77
			1977															01-01-78
1978		1978					1978					1978						10-01-78
1981		1981					1981					1980						05-07-81
1983/AS							1983/AS					1981/82/S						02-22-83
1984		1984					1984		1984			1983						08-06-84
1985/S							1985/S		1985/S									04-01-85
													1983					07-01-85
												1984/85/S						02-03-86
1986/AS							1986/AS		1986/AS									09-22-86
1987		1987					1987		1987									04-01-87
												1987	1986				"25/50 Rule"	09-21-87
			1984															10-05-87
1988/S							1988/S		1988/S									06-20-88
													1987/88/A					08-15-88
			1987															09-06-88
												1988/S						02-06-89
1989/AS							1989/AS		1989/AS			1989/S						11-01-89
													1989					05-21-90
1990		1990	1990				1990		1990			1990						07-01-90
1991/S							1991/S		1991/S									03-04-91
												1991/S	1990/91/A					05-20-91
1993		1993	1993				1993		1993			1993	1992					05-01-93
						1989									1992			07-01-95
																	1998	01-05-98
1996		1996	1993				1996		1993			1996	1995				(updated yearly)	07-06-98
		1999																02-07-00
										2000	2000							06-18-01
												2000						09-17-01
				1995		1999												01-16-02
																1998		11-04-02
	2000	2002						2000						2000				05-05-03
										2003	2003	2003						01-18-05
		2005																05-01-06
	2006				2006	2004		2006		2006	2006	2006		2006				02-20-07
																2003		05-07-07
		2008																04-06-09
	2009				2009	2007		2009		2009	2009	2009		2009				09-07-10
		2011																05-07-12
	2015	2014			2015	2013		2015		2015	2015			2015		2009		09-21-15

PV System Grounding and Bonding

The topic of grounding and bonding of Photovoltaic Systems is ever changing. With an increase of AC arrays and self-grounding rail or rail less systems it always a good idea for a little refresher.

Article 690 of the NEC is where you will see the requirements for PV systems, and very early in the section, in 690.6(A), it states that article 690 for PV source circuits do not apply to AC modules. That tells me that all the grounding and bonding requirements go back to a chapter one through chapter three methods. So what are AC modules? These are the panels with micro-invertors attached to each panel. When installed, the equipment grounding conductor acts as it would for any other piece of equipment or appliance requiring no additional grounding or bonding for the panels or connection to a rail or rail-less system. Most phone calls to the code assistant unit are asking about inspectors requiring that the panels be bonded, but this requirement is negated when the specifications show that all panels and components for the arrays are listed for grounding purposes. The grounding is built in. Another call received questions lightning protection, and some state that in "this seminar" or reading "that author," I am told the rails should be additionally bonded and tied to an electrode system. To that the response is: lightning protection is not covered in the NEC, nor is it stated as a requirement which we can enforce. It is optional, just as an auxiliary grounding electrode is, as stated in 250.54 of the NEC.

DC modules are different and additional grounding and bonding is required and these requirements start in 690.47. The problem is the bonding/grounding can be obtained in many ways as stipulated in 690.47. A conductor run from the frame of an array can be connected with the equipment grounding conductor and the requirement is met. No additional ground rod needed. At a recent seminar during an IAEI meeting in North Jersey, a representative from a manufacture of invertors did a great presentation showing how adding an additional electrode can affect the invertor's capability to change the sine wave from DC to AC. It is always a great idea to ask for specifics on the grounding and bonding of individual systems and not categorize all as needing additional bonding or grounding.

The last and most controversial issue is bonding the grounded conductor at the disconnect. The typical utility-interactive roof mounted system is not considered a service nor does it require the neutral to be bonded. These are not separately derived, and when normal power is lost, the systems shut down. The neutral coming from the service panel is for voltage sensing to the invertor only. The neutral allows the invertor to sense the available incoming voltage with range parameters and shuts the invertor down at a loss or reduction of voltage of loss of a phase. Requiring someone to treat the hot tap or back feed to a disconnect as a service, could adversely affect the operation of the system.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Dave Greenhill
Code Assistance Unit

Certificate of Occupancy Relation to Hotels/Motels and Rooming/Boarding Houses

Just a friendly reminder—At N.J.A.C. 5:23-2.24(e), Conditions of certificate of occupancy, the rules require that the owner supply a photocopy of the certificate of registration issued by the Bureau of Housing Inspection for any hotel or multiple dwelling (defined as three dwelling units or more) before issuance of a certificate of occupancy. The Bureau of Housing Inspection recently moved to a new computer system. Soon, it will be possible for owners to apply for a certificate of registration online.

Similarly, no certificate of occupancy should be issued for any rooming or boarding house unless the owner provides the construction official with a copy of a license to own a rooming or boarding house issued by the Bureau of Rooming and Boarding House Standards. (See N.J.A.C. 5:23-2.24(d))

Please be sure that no certificate of occupancy is issued for a hotel, motel, multiple dwelling, rooming or boarding house unless this requirement is met. Should you have any questions, please feel free to contact the Bureau of Housing Inspection at (609) 633-6216 or the Bureau of Rooming and Boarding House Standards at (609) 984-1704.

Source: Code Assistance Unit
(609) 984-7609

Optional Stand-by Generators

Since Super Storm Sandy, the number of stand-by generators being installed has been rapidly increasing and some common misconceptions need to be addressed. The first is the transfer switch and wiring to the transfer switch. There are manufacturers who install a 100 amp breaker in the generator, but because of the fuel selection, the wire size only needs to be rated at 90 amps. The code states that conductors are to be sized based on the overcurrent device they will be terminated to after all correction factors are applied. Table 310.15(B)(16) is used for final selection. Most believe that Table 310.15(B)(7) can be used which is an allowance for a reduction of wire size for 120/240-volt 3-wire dwelling services. This is not correct because the optional generator feed to the transfer switch does not fall under the parameters for this reduction allowance. This means that, for a generator that contains a 100 amp breaker, the wire size from the generator to the line side of the transfer switch will be #3 AWG Copper or #1 AWG Aluminum. A recent inquiry made to NFPA confirms this.

Next is the transfer switch itself and whether or not it needs to be service rated and if the neutral needs to be bonded. If the transfer switch and generator are sized to pick up the entire load and the transfer is ahead of the main disconnecting means, it now becomes the service disconnect and the panel being fed from the transfer switch is a remote panel board. This now requires an insulated grounded conductor and an equipment grounding conductor; the "SE" is no longer compliant. Also, the grounding electrode system will be moved from the existing service panel to the service-rated transfer switch. The Main Power feeder (from transfer to panel board) can be sized based on table 310.15(B)(7) because it falls under the parameters of the 310.15(B)7 allowance. In addition, the grounds and neutrals must be separated and isolated from one another.

Finally, the existing branch circuits and feeders which are allowed to be fed by an SE cable come into play. The code allows SE to be used with an uninsulated "grounded" conductor, where it terminates in "service" equipment. By definition, the remote panel is no longer considered "service" equipment, and if the range or dryer requires a neutral, the wiring to these appliances may need to be changed. If the equipment is straight 240 volts requiring only an equipment grounding conductor, the "SE" may remain.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Dave Greenhill
Code Assistance Unit

Contractors Being on Site for Inspections, Not Required

It has come to the Department's attention that a number of inspectors are placing what reasonable people might consider *unreasonable* demands on contractors. Specifically, the Department is receiving complaints of inspectors asking that contractors be on site for inspections without giving specifics as to when or where an inspection might take place. The regulations do not contain a requirement that the contractor be present for the inspection. If assistance is needed to perform the inspection or there is some other basis for asking the contractor to be there, then every effort should be made to set up a time. Both the contractor and the inspector have work to do. Let's be respectful of one another's time. And please, let's be reasonable.

Source: Office of Regulatory Affairs
(609) 984-7672

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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.

…and a special thanks to the…

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Volume 27, Number 3 **Fall 2015**

Annual Permits - Refresher

Our office has gotten many questions over the past few months about the procedure, conditions and extent of annual permits, so it seems now may be a good time to give everyone a brief refresher. This article is just a summary- the requirements are fairly detailed and can be found in the UCC at N.J.A.C. 5:23-2.14(d) and 5:23-4.18(a)4. and 5.

Many municipal building departments issue annual permits. These permits are usually issued to hospitals and corporate entities with campus-style facilities that perform small construction or maintenance work on a frequent, if not continuous basis. It is important to note that the work performed must be done by qualified, full time employees of the facility, not contracted work for a specific project or projects.

Under these conditions, a local enforcing agency can issue an annual permit for the mutual benefit of the agency and the facility. In other words, the facility does not need to obtain a permit for every single job, but rather, for all the allowable jobs for a given year. They may also apply for an annual permit for just part of the work. The areas for which an annual permit may be granted are: building/fire (those areas are combined for this type of permit), electrical and plumbing. It is important to note that the applicant may apply for only a building/fire annual permit, but elect to apply for a "regular" electrical permit each time one is required. Of course, they may apply for an annual permit that covers all work of a minor nature for the year.

Does that mean that the permit holder gets a "pass" on the work they do? No. As alluded to above, there are conditions of having this special type of permit. First, the permit applicant must name at least one person (but no more than three) responsible for the work in any one given area and name all the people that will be performing the work. The applicant would need to provide some type of documentation to the local enforcing agency that person(s)

(*continued next page*)

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(*Annual Permits – Refresher*)

named are qualified to perform the work in a code compliant manner; the decision to accept those names is up to the authority having jurisdiction. Also, a log of all work performed under the annual permit must be maintained on site and available for inspection with at least 24 hours' notice. The local enforcing agency issuing the permit must inspect the work at least twice per year with no more than six months between inspections. There are also limits on the type of work that can be performed under the annual permit which would exclude the construction of a new building or any work that would impact life safety systems, as well as lead or asbestos abatement. That list is illustrative, not exhaustive. Please refer to the UCC for the complete list.

So you've gotten a request for an annual permit. What now? The Construction Official would issue the annual permit after first receiving both the annual permit fee, established by the municipality, and the appropriate training fee that must be forwarded to the Licensing & Education office here at DCA. The training fee for these annual permits should not be confused with the permit surcharge fee. It is specific to the issuance of an annual permit. The fee is $140.00 per subcode area. The Construction Official must also review the scope of work and qualifications of the workers. He or she would then forward a copy of the permit showing the term of the permit and the subcodes for which the permit was issued to both the applicant and to the Licensing & Education office. We would then issue training identification numbers to the individuals named in the permit and they would be required to take at least 5 hours of code training relevant to the area in which they are named in the permit; i.e., carpenters take building, electrical workers take electrical, etc. The workers would complete the training through our code enforcement seminar programs as would any of our inspectors and officials.

The annual permit can be renewed each year. In order to do this, an application, accompanied by the payment of the permit and training fees for the following year, must be submitted to the Construction Official at least 60 days prior to expiration. When that request is received, the Construction Official should contact our office to ensure that the training requirement has been met. If it has and all other conditions of the permit have been met, it can be renewed. If the training has not been met, the permit cannot be re-issued.

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

One- and Two-Family Dwelling Subcode Coastal A Flood Zones Clarification

As you may already know, with the adoption of the 2015 International Residential Code (IRC), Coastal A zone flood hazard requirements now mimic V zone. However, the wording within the IRC can cause some confusion.

Item #1 in Section R322.2.1 (Elevation requirements) states, "Buildings and structures in flood hazard areas, including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot, or the design flood elevation, whichever is higher."

This implies that Coastal A zone still only requires elevation to the floor level. This is not the case as the charging text, R322.2 (Flood hazard areas--including A Zones) states that Coastal A Zones are subject to the requirements of Section R322.3 (Coastal high-hazard areas--including V Zones and Coastal A Zones, where designated). Therefore, the more restrictive of the section requirements applies.

Section R322.3, as amended by NJAC 5:23-3.21, states, "Buildings and structures constructed in whole or in part in coastal high-hazard areas and coastal A Zones, where designated, shall be designed and constructed in accordance with Section R322.3.1 and ASCE 24."

Lastly, Section 4.4 of the 2014 ASCE 24 states that the lowest floor shall be elevated in conformance with the minimum requirements of Table 4-1. This is where it states that Coastal A zone (along with V zone) is required to have the bottom of the lowest supporting horizontal structural member elevated to base flood elevation + 1 foot or design flood elevation, whichever is higher.

Therefore, even though R322.2.1 states "lowest floor," the charging text of R322.2 sends the user to R322.3 for Coastal A flood hazard zone and the required elevation to bottom of the lowest supporting horizontal member applies.

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

Corrections to the New Jersey Editions of the 2015 International Building and Residential Codes

IBC/2015

1 – *Limited Area Sprinkler Systems at Section 903.3.8*

Please be advised that there is an error in the New Jersey edition of the 2015 International Building Code (IBC.) The Uniform Construction Code, at N.J.A.C. 5:23-3.14(b)8.xii., indicates that Section 903.3.8, Limited Area Sprinkler Systems, is to be deleted and replaced. The subsections of 903.3.8, which should have been deleted, remain in the printed version of the New Jersey edition. Subsections 903.3.8.1 through 903.3.8.5 should be deleted. These subsections are not included in the IBC as adopted for use in New Jersey.

2 - *LULAs, 3,000 sf and Chapter 11 of the IBC/2015*

It has come to our attention that there is an error in the text of the recently-adopted amendments to N.J.A.C. 5:23-3.14. Specifically, at N.J.A.C. 5:23-3.14(b)10.vi., the text that we inserted reads as follows:

> 1104.4.2. Large buildings. Large buildings, defined as those with a total gross enclosed floor area of 10,000 square feet or more, shall provide the accessible building features required of small buildings in Section 1104.4.1. In addition, large buildings shall be required to have an elevator(s) to provide a vertical accessible route between floors; however, in such buildings, floors that are less than 3,000 square feet or floors with only mechanical equipment shall not be required to be served by an elevator.

A subordinate section, 1104.4.2.2, as adopted, would allow the use of a limited use/limited application (LULA) elevator in a large building without restriction. This is contrary to the enabling statute, N.J.S.A. 52:32-5, which sets a 3,000 square feet threshold for providing access, and contradicts the adopted text at N.J.A.C. 5:23-3.14(b)10.xli. which would limit the use of such elevators in large buildings to floors of less than 3,000 square feet. (See Section 1109.7, Exception 2.3 within N.J.A.C. 5:23-3.14(b)10.xli.)

To eliminate this internal contradiction in the adopted rules, and for consistency with the statute, we should have added the 3,000 square feet restriction to Section 1104.4.2.2, as adopted at N.J.A.C. 5:23-3.14(b)10.vi. as follows:

> 1104.4.2.2 A limited use limited application elevator that complies with ANSI/ASME A17.1 adopted by reference in the building subcode may be used to provide a vertical accessible route to [the] **a** floor or mezzanine**, of less than 3,000 square feet,** provided that the travel distance does not exceed 25 feet.

With the two conflicting rules, the one that limits the use of LULAs to floors or mezzanines of less than 3,000 square feet will govern. We will be submitting a proposed rule amendment to the Office of Administrative Law to clean up this language. In the meantime, code officials should restrict the use of LULAs in large buildings (10,000 sq ft or more) to floors of less than 3,000 sq ft in accordance with Section 1109.7, Exception 2.3 of the New Jersey edition.

IRC/2015

3 – *Swimming Pools, Spas and Hot Tubs, Section R326*

The amendment at NJAC 5:23-3.21(c)xlvi contain two typographical errors. More specifically, item 5.3 regarding Aquatic Recreation Faculties should read as follows:

> 5.3 Sections 609.2, Number of fixtures, 609.3, Showers, 609.4, Soap dispensers, [606.5] **609.5**, Toilet tissue holder, 609.6, Lavatory mirror, [606.7] **609.7**, Sanitary napkin receptacles, 609.8, Sanitary napkin dispensers, and 609.9, Infant Care, shall be deleted.

This correction appeared in the November 16, 2015 edition of the *New Jersey Register* [47 N.J.R. 2753(a)]; updated pages within the One- and Two-Family Dwelling Subcode, NJAC 5:23-3.21, will be sent as part of your next update.

All corrections listed above are available on the Division's website. The replacement pages for your loose-leaf NJ IBC and IRC can be found at http://www.nj.gov/dca/divisions/codes/codreg as "Corrected pages" under the Building and One- and Two-Family Dwelling Subcodes, respectively.

Source: Code Assistance Unit
(609) 984-7609

2015 IECC Residential Update

So how effective is the move from the 2009 International Energy Conservation Code (IECC) to the 2015 IECC going to be in relation to homes? The short answer per Pacific Northwest National Laboratories (PNNL) is that it'll provide a simple payback of 3.6 years for Zone 4 and just 2.6 years for Zone 5. Of course, there are many assumptions made and many variables considered. For the full report, please visit http://www.pnnl.gov/main/publications/external/technical_reports/PNNL-23940.pdf.

These paybacks are a result of the many updates from the 2009 IECC to the 2012 IECC and again to the 2015 IECC. The following chart demonstrates the major changes in mostly insulation upgrades, but you will also see more controls and tighter homes.

Table 2.1. Comparison of Insulation Requirements Analyzed for the 2009 and the 2015 IECC

Climate Zone	IECC	Ceiling (R-value)	Skylight (U-factor)	Fenestration (Windows and Doors)		Wood Frame Wall (R-value)	Floor (R-value)	Basement Wall (R-value)	Slab* (R-value and depth)
				U-factor	SHGC				
4	2009	38	0.6	0.35	NR	13	19	10/13	10, 2 ft
	2015	49	0.55	0.35	0.40	20	19	10/13	10, 2 ft
5	2009	38	0.6	0.35	NR	20	30	10/13	10, 2 ft
	2015	49	0.55	0.32	NR	20	30	15/19	10, 2 ft

*The first number is R-value. The second value refers to the vertical depth of the insulation around the perimeter.
NR = not required
SHGC = solar heat gain coefficient

Table 2.2. Comparison of Additional Code Requirements Analyzed for the 2009 and the 2015 IECC

Measure Description	2009 IECC	2015 IECC
Insulation Requirements for Return Ducts in Attics	R6	R8
Supply ducts in attics	R-8	R-8
Building envelope sealing	Caulked and sealed, verified by visual inspection against a more detailed checklist	Caulked and sealed, verified by visual inspection and a pressure test against a leakage requirement
Ducts and air handlers	Sealed, verified by visual inspection, and pressure tested, or all ducts must be inside building envelope	Sealed, verified by visual inspection, and pressure tested against a leakage requirement, or all ducts must be inside building envelope
DHW Pipe Insulation Requirements	No pipe insulation	R-3 except where pipe run length is below a diameter-dependent threshold Insulated 3/4" pipes Uninsulated 1/2" and kitchen pipes
Demand-Activated Control for Recirculating Systems	No DHW recirculation system	DHW recirculation system included
Outdoor Air Temperature Setback Control for Hot Water Boilers	No setback	Temperature setback based on Outdoor Air Temperature
Certificate of insulation levels and other energy efficiency measures	Yes	Yes
Tested Max Air Leakage Rate (ACH50)	NR	3

Source: PNNL-23940, Battelle

(*continued next page*)

(*2015 IECC Residential Update*)

A more specific, but still general, overview of the differences between the editions of the IECC follows:

General Requirements

- Section R401.2 (2009 and 2012) are essentially the same with regard to compliance paths. 2015 adds the energy rating index (ERI) as a third option for compliance that will be found under a brand-new section for 2015: Section R406.
- R402.1 (2009 and 2012) have essentially the same text pertaining to the sections for thermal envelope compliance; however, 2015 allows for the separation of low-energy buildings.
- Sections R402.1.1 through R402.1.5 have been renumbered; there is also a new section and some new text.
- Section R402.1.1 (2009 and 2012) have essentially the same reference to complying with the thermal envelope requirements of Table 402.1.1. This section is replaced in 2015 with new text addressing vapor retarders via Section R702.7 of the International Residential Code or Section 1405.3 of the International Building Code, if applicable. The original text for Section R402.1.1, found in 2009 and 2012, has been shifted to Section R402.1.2 in the 2015.
- Table 402.1.1 “Insulation and Fenestration Requirements by Component” appears in all versions, except that in 2015 it is now labeled Table R402.1.2. The R-value and U-factor requirements have changed between versions, but were not being analyzed as a part of this study.

Specific Insulation Requirements

- Section R402.2 is just a heading in 2009, but in 2012 and 2015 this section addresses insulation requirements.
- R402.2.1: 2009, 2012 and 2015 all include text that addresses exceptions for uncompressed insulation that allows for a reduction in R-value. However, 2015 incorporates a caveat based on a percentage of ceiling area requiring insulation and still allows for a reduction from R-49 insulation level requirements to R-38 if the full height of uncompressed insulation extends over the wall top plate at the eaves. This reduction still does not apply to the U-factor alternative approach.
- Section R402.2.3 (2009) has the same text as Section R402.2.4 in 2012 and 2015 and addresses access hatches and doors from conditioned spaces to unconditioned spaces. For 2015, there is an exception for vertical doors to meet fenestration requirements.
- Section R402.2.3 (2012 and 2015) addresses air permeable insulation. This concept is completely missing from the 2009.
- Section R402.2.4 2009 addresses mass walls much in the same way Section R402.2.5 does for 2012 and 2015. 2015 does add the flexibility of any other wall types that have a specific heating capacity.
- R402.2.5 (2009) and Section R402.2.6 (2012 and 2015) all have similar text regarding steel-framed walls. The label for Table R402.1.3 (U-factor requirements) in 2012 changes to Table R402.1.4 in 2015.
- Section R402.2.6 (2009), Section R402.2.7 (2012) and Section R402.2.8 (2015) are essentially the same text; they pertain to floor insulation being installed to maintain permanent contact with the underside of subfloor decking. However, the 2015 provides an exception depending on assembly.
- Section R402.2.7 (2009) addresses basement wall insulation requirements and is connected to Section R402.2.8 (2012) and Section R402.2.9 (2015).
- For 2015, Section R402.2.7 is new text that addresses continuous insulation and exterior walls.
- Section R402.2.8 (2009) addresses slab-on-grade floor insulation requirements and is connected to Section R402.2.9 (2012) and Section R402.2.10 (2015).
- Section R402.2.9 (2009) addresses crawlspace insulation and sealing. It shifts to Section R402.2.10 (2012) and then to Section R402.2.11 (2015).
- Section R402.2.10 (2009) provides an exception for the horizontal portion of the foundation that supports masonry veneer. This corresponds to Section R402.2.11 (2012) and Section R402.2.12 (2015).
- Section R402.2.11 (2009) pertains to ceiling and wall insulation for thermally-isolated sunrooms. Section R402.2.12 (2012) and Section R402.2.13 (2015) have exceptions that were introduced in the 2012 version.

(*continued next page*)

(*2015 IECC Residential Update*)

Fenestration

- Section R402.3 is just a heading in 2009, but in 2012 and 2015 new text has been added to list specific fenestration requirements and sections of the code. This section remains the same across the board except for:
    - Section R402.3.2 (Glazed fenestration SHGC): 2009 and 2012 have the same text; for 2015, dynamic glazing is now included as part of the section.
    - Section R402.3.5 (Thermally isolated sunroom U-factor): All three versions address sunrooms, but with subtle differences across the board.

Air Leakage

- This section is just a heading in 2009, but in 2012 and 2015, new text has been added to list specific code sections that address air leakage reduction requirements. 2009 does not have sections labeled 402.4.1.1 or 402.4.1.2. NJ maintains the 2009 allowance to do a visual inspection, testing method or a combination of the two.
- Section/Table 402.4.1.1 (2012 and 2015) pertains to visual inspection of air sealing, air barriers and insulation installation corresponds to Section/Table R402.4.2.2 (2009) with minor differences.
- Section 402.4.1.2 (2012 and 2015) pertains to envelope testing. There is a subtle difference between 2012 and 2015 in that 2015 specifically states that, if testing is conducted, it should be in accordance with ASTM E779 or E1827.
- The major differences between Section 402.4.2.1 (2009) and Section 402.4.1.2 (2012 and 2015) are the decreases in ACH50 from a base of 7ACH50 for all climate zones in 2009 to 3ACH50 for zones for NJ in 2012 when the testing option is chosen. 2015 is the same as 2012.
- Section R402.4.2 (2009) is just a heading that outlines compliance to either Section 402.4.2.1 (2009) or 402.4.2.2 (2009), which then are shifted to new sections in 2012.
- Section R402.4.3 (2009) addresses wood-burning fireplaces, as does Section 402.4.2 (2012 and 2015); however, gasketed doors are required in 2009, but they are not mentioned in 2012. Fireplace doors reappear in 2015 as an option.
- Section R402.4.4 (2009), which addresses fenestration air leakage, corresponds to Section R402.4.3 (2012 and 2015).
- Section R402.4.5 (2009), which addresses air leakage at recessed lighting installed in the building thermal envelope, corresponds to Section R402.4.4 (2012) and Section R402.4.5 (2015), although some text ("air movement from the conditioned space to the ceiling cavity") was removed from 2009 to 2012.

The above also applies to the application of the 2015 International Residential Code (IRC) now that Chapter 11 of this code mimics the IECC (each section in the IRC cross references the IECC).

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

Violations Found in Work that Does Not Require a Permit

A question has arisen as to how to handle a violation of the Uniform Construction Code (UCC) when the work itself does not require a permit. As many will remember from their rehab subcode training, the fact that no permit is required does not eliminate the need for a project, however small, to comply with the applicable requirements of the UCC. (See N.J.A.C. 5:23-2.2(b)) The replacement of a toilet in a residence does not require a permit, but the new toilet must be a 1.6 gallon per flush toilet. On a recent trip around town, a code official observed replacement steps being built at the front of a house. This project is considered ordinary maintenance and does not require a permit. But the new steps did not conform to the applicable requirements of the UCC.

(*continued next page*)

(*Violations in Work that Does Not Require a Permit*)

How should this be handled administratively? A Notice of Violation and Order to Terminate should be issued to the homeowner. An inspection should be performed to confirm that the violation has been abated within the timeframe specified in the Notice. If the violation has not been abated, then a Notice and Order of Penalty should be issued. If the violation has been abated, then a Certificate of Approval should be issued. A note should be written in the "Description of Work/Use" area on the form describing the work inspected and recording the fact that this Certificate is issued to document the abatement of a violation in work that did not require a permit. Because there is no permit, and the UCC does not contemplate issuance of a certificate unless it is to close out a permit, this is somewhat contrived. But it creates evidence, for the files, of the existence of a violation and its abatement.

Source: Code Assistance Unit
(609) 984-7609

Quarterly State Training Fee Report Information

Most of you know me because I call about monthly building permit reports. You may now get a call from me about training fee (a.k.a. surcharge) reports as well. These reports are submitted quarterly to the DCA along with a check. The report contains the volume of work for new construction and addition permits as well as the dollar amount for alteration permits. The quarterly report should also clearly show the amount of activity exempted from fees.

Here are some tips regarding the quarterly reports:

- The quarterly report and check are due on the 10th of the month after the quarter ends. I will call after a few weeks and a letter will be sent a few weeks after that.
  - The first letter to the Construction Official goes out 45-60 days after the quarter ends.
  - The second letter to the Construction Official and the Mayor goes out about 30 days after the first letter.
- You must send the quarterly report ***and*** the check. If either one is missing, you are delinquent.
- The report must be signed and dated or it will not be accepted.
- ***Do not*** staple the check to the report.
- You can fax or email the report. Make sure you include my attention on the fax.
- ***Do not*** send vouchers. We ***do not*** accept them. They will be returned.
- Current Training Fee Rates:
  - .00371 per cubic foot volume for new construction and addition permits.
  - .0019 per dollar of construction for alteration permits.
  - Demolition permits do not get charged a training fee.
- Check the report before you send it. Do the math. If you have questions, call me. I can explain it to you.
- Try not to combine other things with the quarterly checks. If payments are combined, document them on the check stub.
- Even though the fiscal office may send the check, it is the responsibility of the Construction Official to make sure that the numbers add up and the DCA receives the report and check in a timely manner.
- I am here to help. If you have problems, questions or concerns, then please do not hesitate to call.

Please send the quarterly reports and checks to:

State of New Jersey
Department of Community Affairs
101 S. Broad St.
PO Box 802
Trenton, NJ. 08625
Attn: Charles Pierson Jr.

Source: Charles Pierson Jr.
Division of Codes and Standards, Director's Office
Phone: (609) 292-7899; Fax: (609) 633-6729; Email: Charles.Pierson@dca.nj.gov

Independent Means of Egress for Group R-5 Buildings

The Department has received numerous inquiries regarding the means of egress requirements for Group R-5 buildings. Specifically, the question that arises is: "Can a detached two-family dwelling with a shared common entry foyer as its only means of egress be a Group R-5 occupancy constructed in accordance with the one- and two-family dwelling subcode?"

The answer is: No. If the detached two-family dwelling has a shared common entry foyer as its only means of egress, the occupancy classification is Group R-3; it must comply with the building subcode (N.J.A.C. 5:23-3.14).

In accordance with N.J.A.C. 5:23-3.21(b), the provisions of this subcode shall apply to detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height **with a separate means of egress serving each dwelling unit and their accessory structures**. Furthermore, in Section 310.1 of the 2015 International Building Code (New Jersey Edition), entitled "Residential Group R", a Group R-5 building is defined as "Detached one- and two-family dwellings not more than three stories in height ***with a separate means of egress*** and multiple single-family townhouses not more than three stories in height ***with a separate means of egress*** designed ***and*** constructed in accordance with the one- and two-family dwelling subcode." (emphasis added) Therefore, in order to be a Group R-5 occupancy, each dwelling unit must be provided with an egress door directly to the exterior of the building.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

Customer Owned Propane Tanks

The propane industry has reported that they have noticed more customer-owned propane tanks. This trend has some code implications. The general case for structures that are supplied with propane is that the propane supplier owns the tank. However, there seem to be three trends that are driving more customers to purchase their own tanks.

The first reason is that, because propane prices have climbed in recent years, customers are more interested in doing comparison shopping. Under New Jersey Law, a propane supplier may not fill a tank that is owned by another supplier. In an effort to be able to buy propane from whomever they want, many consumers are choosing to buy their own tanks. A second trend is the emergence of home generators. In areas without natural gas, generators are often fueled with propane. A third trend is that some of the bigger box stores are now selling propane tanks. This has given consumers more direct access to the product. Up until now, most propane tanks were sold to the customer through the supplier. In many cases, the supplier would then outline the benefits and drawbacks to customer-owned tanks allowing consumers to make a more informed decision about container ownership.

Customer-owned propane tanks are subject to the same code requirements that supplier-owned tanks are subject to. This means that the tank must be marked with "propane" and, for tanks that have a capacity of over 250 gallons, they should also have an emergency contact number on the tank. For underground tanks, the tank must have cathodic protection with a means for periodically testing the system.

In addition, when a customer chooses to own a container, the customer bears the maintenance responsibility for that container. For above ground containers, this means that the container must be properly painted to protect it from external corrosion. Portable containers, which are constructed to the Federal Department of Transportation specifications, must be periodically tested and recertified. Other items that often need to be periodically maintained are the rain cap for the relief valve outlet (this is usually a rubber cap that goes over the relief valve to keep ice and debris from clogging the relief valve outlet), and the foundation for the container (for smaller containers these foundations do not extend below the frost line and may settle over time). Underground tanks, as mentioned above, must have a cathodic protection system which is subject to periodic testing requirements. Therefore, the customer must arrange for the containers cathodic protection system to be periodically tested. Customer-owned tanks must also comply with the placement requirements of the code and must be the proper distance from buildings, building openings and ignition sources such as air conditioners, electric meters, etc.

Questions that consumers have about their responsibilities for the LPG tank that they own can be directed to the Department of Community Affairs LP-Gas Safety Unit at (609) 633-6224.

Source: LP-Gas Safety Unit
Bureau of Codes Services

Accessible and Type A Dwelling Units

How many Type A dwellings units are required in a building with four or more dwelling units? What features may be adaptable within the Type A dwelling unit? These questions continue to be asked of the Code Assistance Unit. Let me take this opportunity to straighten out the requirements for accessible and Type A dwelling units.

New code, new code references.

With the adoption of the International Building Code/2015 (IBC/2015), Chapter 11 has become the Barrier Free Subcode. The previous amendments at NJAC 5:23-7.1 through 7.14 have now been incorporated into NJAC 5:23-3.14 to complete New Jersey's accessibility requirements with Chapter 11 of the IBC/2015 (minus the recreation portions in NJAC 5:23-7.16 through 7.32).

What is the difference between accessible and Type A?

A Type A dwelling unit is a dwelling unit that meets Section 1003 of the ICC/ANSI A117.1-2009 (ANSI/2009), as amended by Chapter 11 of the IBC/2015 at NJAC 5:23-3.14(b)10. This unit is a dwelling unit with an accessible entrance, accessible clear floor space, and accessible route into and through the dwelling unit, and adaptable features in the kitchen and bathroom. A combination of Chapter 11 of the IBC/2015 and the ANSI/2009 specify that a Type A dwelling unit must have (1) an accessible entrance, (2) an accessible interior route throughout the dwelling unit, (3) one full adaptable bath on an accessible route, (4) maneuvering space at all doors, and (5) adaptable features in the kitchen and bathroom.

An accessible dwelling unit is a dwelling unit that meets Section 1002 of ANSI/2009. As with a Type A dwelling unit, an accessible dwelling unit must have an accessible entrance and an accessible route into and throughout the dwelling unit. In an accessible dwelling unit, however, the toilet and bathing facilities must comply with general requirements for toilet room and bathing facilities that are in ANSI/2009, Section 603 through Section 610 inclusive. Similarly, kitchens are required to comply with the general requirements in ANSI/2009 at Section 804, kitchens and kitchenettes, and must also provide one 30-inch long work surface that meets the requirements of Section 902, dining surfaces and work surfaces, regarding clear floor space and height. Finally, storage facilities must also meet the general requirements in ANSI/2009, which are at Section 905, for clear floor space, height and operable controls.

Which dwelling units are required to be adaptable?

1. In a building with four or more dwelling units, if the building has an elevator, all (100 percent) of the dwelling units must be Type A. [IBC/2015, Sections 1107.6.2, 3 and 4]
2. In a building with four or more dwelling units, if there is no elevator, all (100 percent) of the ground-floor dwelling units must be Type A. [IBC/2015, Sections 1107.6.2, 3 and 4]
3. Ground-floor dwelling units: In a building with dwelling units, the first floor containing dwelling units must be accessible and must contain Type A dwelling units, regardless of whether that floor is at grade. [IBC/2015, Sections 1107.6.2, 3 and 4] Keep in mind, a building may have more than one ground floor due to sloping grade.
4. Generally speaking, townhouses are exempt from Chapter 11 of IBC/2015. There is one exception: Townhouses for which credit as a low or moderate income unit (COAH credit) is awarded are required to comply—and are discussed below. A townhouse is a single dwelling unit with two or more stories of dwelling space, exclusive of basement or attic, where each dwelling unit extends from foundation to roof. This dwelling unit is to have an independent entrance that serves one dwelling unit only and that is at or near grade; most or all of the sleeping rooms are on one story; and most or all of the remaining habitable space, such as kitchen, living, and dining areas, are on another story. [IBC/2015, Sections 1103.2.3.1 and 1107.6.5]
5. What level of accessibility is required for a townhouse that has "COAH credit?" When a townhouse, or a multistory dwelling with fewer than four dwelling units in a single structure, is being constructed with credit as low or moderate income housing, the dwelling unit must comply with the Chapter 11 of IBC/2015. There are two unique requirements that apply to these buildings: each dwelling unit must have a room that could be used as a bedroom

(continued next page)

(*Accessible and Type A Dwelling Units*)

on the entry level; and they may have either an accessible or an adaptable entrance. If an adaptable entrance is provided, the plans for making the adaptation to an accessible dwelling unit must be submitted and released through the standard plan review process. The funds to effect the adaptation of 10% of the entrances that are not accessible must be escrowed with the municipality. *Note: COAH is part of the Fair Housing Act Administration and can be reached by visiting http://www.nj.gov/dca/services/lps/hss, phone at (609) 292-3000 or email at LPSmail@dca.state.nj.us.*

What features in the kitchen may be adaptable?

1. Adaptable work surface: There must be a 30-inch length of counter that is either set at 34 inches or that can be adjusted to an accessible height. The base cabinets in this section must be removable and the floor must be finished all the way to the wall. The 30-inch section of the counter does not have to be precut; it can be "replaceable as a unit." This means that it must be able to be cut and either lowered or replaced. [ANSI/2009, Sections 1003.12.3.1 and 1003.12.3.2, as amended at IBC/2015, Section 1101.2, items 15 & 16]
2. Kitchen cabinets: Exempt as per the exception at ANSI/2009, Section 1003.14.
3. Kitchen sink: This is almost a combination of the above two. The cabinets below the sink must be removable and the floor must be finished all the way to the wall. Also, the sink and the counter are required to be adjustable or replaceable as a unit to an accessible height provided; rough-in plumbing that allows connections of supply and drain piping for sinks mounted at heights of 29 inches must be provided. [ANSI/2009, Sections 1003.12.4.1 and 1003.12.4.2, as amended at IBC/2015, Section 1101.2, items 17 & 18]

What features in the bathroom may be adaptable?

1. At least one bathroom on the accessible route is to comply with ANSI/2009, Section 1003.11.2. In all bathrooms, grab bars do not have to be installed, but the wall must be reinforced to permit their later installation as per ANSI/2009, Section 1003.11.1; this applies to shower seat reinforcement also.
2. The threshold in a transfer shower may be adaptable as long as the adaptation can be made easily without undertaking a construction project. [ANSI/2009, Sections 1003.11.2.5.2, as amended at IBC/2015, Section 1102.1, item 14.2]
3. The mirror may be installed at a standard height as long as it is attached in such a way that it can be lowered without damaging the wall. Since the words "accessible lavatory" are used. The 40" maximum is not required until the lavatory is made accessible. [ANSI/2009, Section 1003.11.2.3]
4. A vanity may be installed underneath the lavatory as long as it can be removed without requiring the removal or replacement of the lavatory. [ANSI/2009, Section 1003.11.2.2]

Maneuvering Space at Doors.

There have been some projects that have been brought to the Department of Community Affairs' attention in which no maneuvering space has been provided at doors. Maneuvering space is critical to the usability of the dwelling unit. The requirements can be found in Section 1003.5, which requires compliance with Section 404, minus six exceptions.

In short, only those features that are provided with adaptive options may be adapted.

Lastly, please note that there is no reference to Type B dwelling units within this article. This is because the allowance of this type of dwelling unit is not permitted by NJAC 5:23.

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

Foundations in Coastal A Flood Zones

The adoption of the 2015 International Residential Code (IRC) has aligned the requirements for Coastal A flood hazard zones with V flood hazard zones. This was already the case for International Building Code (IBC) structures prior to the adoption of the 2015 edition. In either code, the ASCE 24-2014 should be used in the design of the structure's foundation.

Typical foundations in Coastal A and V flood hazard zones will result in piles being installed. This will always be the case in V flood hazard zones since the National Flood Insurance Program (NFIP) rules require the foundation to be open (minus breakaway walls). The NFIP rules, however, do not require a foundation in the Coastal A flood hazard zone to be open. This means that, if someone wanted a shallow foundation constructed of masonry in lieu of a pile foundation, it is still possible per Section 4.5.1.2 of the ASCE 24-2014.

Whether or not a shallow masonry foundation in a Coastal A flood hazard zone is cost effective (versus a pile foundation) is not a code question. But if this type of shallow foundation is chosen, it must have sufficient strength to resist the anticipated combination of flood loads, including the hydrostatic, hydrodynamic, wave and debris loads.

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

Lateral Deck Connection: Reminder – UPDATE

It has come to the Department's attention that there has been some confusion as to when lateral deck load connections, like the ones illustrated in Figures R507.2.3(1) and R507.2.3(2) of the International Residential Code/2015 (IRC/2015), are required.

The specific deck attachments for lateral loads demonstrated in these figures, as referenced by Section R507.2, Deck ledger connection to band joist, of the IRC/2015, are not required. These figures are rooted in Federal Emergency Management Agency (FEMA) Publication 232, entitled "Homebuilders' Guide to Earthquake Resistant Design and Construction," and are linked to a seismic requirement. As amended by NJAC 5:23-3.21, Section R301.2.2, Seismic provisions, of the IRC/2009, states "Detached one- and two- family dwellings and attached single family townhouses are exempt from the seismic requirements of this code."

Based on this, these lateral deck attachments 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/2015. However, decks supported by attachment to an exterior wall must be positively anchored to the primary structure and designed for both vertical and lateral loads as per the Section R507.2, Decks. The specific details from R507.2.3(1) and R507.2.3(2) are one means to comply with this requirement, but they are not the only option.

Source: Marcel Iglesias
Code Assistance Unit
(609) 984-7609

Buildings/Structures Subject to Wind-Borne Debris & Hurricane-Prone Regions Requirements

As reported in the Spring 2015 edition of the Construction Code Communicator, the adoption of the 2015 International Building Code (IBC) and International Residential Code (IRC) has placed New Jersey outside the zone(s) for needing opening protection in accordance with Sections 1609.1.2 and R301.2.1.2, respectively. This is true for all residential and general use commercial buildings. However, the opening protection requirements of Section 1609.1.2 still apply to buildings/structures listed in Table 1604.5. Health care facilities in "Risk Category III" and all buildings in "Risk Category IV" within one mile of the mean high water line of the Atlantic Ocean and having an ultimate design wind speed of 130 miles per hour or greater are required to have openings that are protected from wind-borne debris. These buildings are typically hospitals, emergency management facilities, etc.

Source: Code Assistance Unit
(609) 984-7609

Enclosed Space Beneath One- and Two-Family Dwellings

A new requirement is now in place in the one-and two-family dwelling subcode at Section R302.13, "Fire Protection of Floors," of the International Residential Code/2015 (IRC/2015). Where floor assemblies are not required to be fire-resistance rated elsewhere in the code, they must be protected in accordance with this new section. In short, these floors must be protected with 1/2-inch gypsum wallboard, 5/8-inch wood structural panels or an equivalent that is attached to the underside of the floor framing member.

The code allows many different penetrations or openings. See Section R302.13 for a full list.
The following are four conditions that would not require protection on these floor assemblies:
1. When the space underneath is protected with Section P2904, NFPA 13D or an equivalent fire sprinkler system.
2. Spaces located directly over a crawl space not intended for storage or fuel-fired appliances.
3. Portions can be unprotected where the aggregate area of the unprotected portions does not exceed 80 square feet per story or when fireblocking is installed in accordance with Section R302.11.1 along the perimeter of the unprotected portion to separate it from the rest of the floor.
4. When dimensional lumber or structural composite lumber that is at least 2-inch by 10-inch nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance are installed.

Historically, the floor-types that this really applies to are located above basements and crawlspaces. Based on this, a situation has come to our attention with homes that are requiring elevation due to flood plain requirements (homes constructed on piles). What happens when walls are constructed, solid or breakaway type (both with flood vents)? The same protection of the floor assembly addressed above is required when any area is fully enclosed and the area is over 80 square feet. Only the area of the fully- enclosed space (inside the four (4) walls) is required to be protected, not the entire space below the elevated home. When the space under the house is completely enclosed, the entire floor assembly will require this membrane protection. When the entire area under the elevated home is open, no protection is required per this section.

What if the space created constitutes a garage or carport?

We already know from above that fully-enclosed spaces require protection pursuant to R302.13 unless one of the exceptions above is met. But when this space is used for parking, we need to take another look at the code requirements.

Diving in further, we must look at Section R302.6, Dwelling-garage fire separation, and Section R309, Garages and carports. As per Section R309.2, a carport is a parking area for automobiles or other vehicles, including watercraft, enclosed by two or fewer walls; when a third wall is proposed, the parking area is now a garage. In new construction, this garage would no longer need to meet R302.13. As stated above, R302.13 applies to assemblies that are not required to be fire-resistance rated elsewhere in the code. The garage would be subject to the requirements of Section R302.6 and would require a one-hour floor/ceiling rating created by a listed assembly or by compliance with Formal Technical Opinion (FTO)-13. Those existing homes being elevated to a mean height over 35 feet would also have to meet the one-hour rating or FTO-13 per Bulletin 13-1A.

Links to references above:

- *IRC/2015 (R302, R309, P2904) -- http://codes.iccsafe.org/app/book/toc/2015/New_Jersey/residential/index.html*
- *NFPA 13D -- http://www.nfpa.org/codes-and-standards/free-access*
- *FTO-13 -- http://www.nj.gov/dca/divisions/codes/publications/pdf_fto/fto_13.pdf*
- *Bulletin 13-1A -- http://www.nj.gov/dca/divisions/codes/publications/pdf_bulletins/b13_1A.pdf*

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Bulletin/FTO Update

With the adoption of the 2015 I-Codes and the 2014 NEC, we currently are in the process of reviewing all the UCC Bulletins and Formal Technical Opinions (FTO) and updating them, as needed. The newest and revised bulletins are:

- 15-4 -- Energy Subcode Compliance
- 15-3 -- Group Designations for Residential & Institutional Occupancies
- 15-2 -- Adopted Codes, Standards and Recommended Practices Referenced Under Informational Notes of the National Electrical Code 2014
- 05-2 -- Seismic Hazard Maps
- 03-5 -- Special Inspections
- 03-4 -- Wind Speed Maps
- 94-8 -- Ground Snow Loads

These are just the ones we know for sure are new or are being revised. There may be more, but only time/review will tell.

NOTE: Bulletins and FTOs that have updated code references will not be republished and will be posted on our web site only. Bulletins and FTOs that are new or need extensive revisions will be mailed as part of your update package through the subscription service at a later date and placed on our web site.

As always, each bulletin and FTO will been placed on the Internet, complete with up-to-date code references and new revised dates or updated code reference dates, so you can tell what is old, what is new, or what was updated to reflect current model codes. So please visit http://www.nj.gov/dca/divisions/codes/resources and view, print, download, etc. the revised/updated bulletins and FTOs to update your UCC.

Source: Code Assistance Unit
(609) 984-7609

Chimney Liner Requirement – Rehab

The Code Assistance Unit has received many questions regarding whether a chimney liner is required when a furnace, boiler or water heater is replaced in a one- or two-family dwelling.

Replacing a furnace, boiler or water heater in an existing one- and two- family dwelling falls under the Rehabilitation Subcode, NJAC 5:23-6; this work is typically classified as “Renovation” by definition. More specifically, NJAC 5:23-6.5(h) refers you to NJAC 5:23-6.8, the Residential Materials and Methods. Here, you find that NJAC 5:23-6.8(h)14 requires compliance with all portions of Chapter 24 from the 2009 International Residential Code (IRC) that pertains to gas equipment and there are many sections that refer to resizing chimneys when equipment is replaced or removed.

A specific example from the IRC is Section G2425.15.1. Here it states, “The chimney or vent shall be resized as necessary to control flue gas condensation in the interior of the chimney or vent and to provide the appliance or appliances served with the required draft.”

The problem is there are no chimney or vent sizing tables that deal with exterior chimneys in the IRC. Luckily, the International Code Council was smart enough to link the IRC to the 2009 International Fuel Gas Code (IFGC) in this manner. Here, Section G2401.1 of the IRC states in the third paragraph, “The omission from this chapter of any material or method of installation provided for in the International Fuel Gas Code shall not be constructed as prohibiting the use of such material or method of installation. Fuel-gas piping systems, fuel-gas appliances and related accessories, venting systems and combustion air configurations not specifically covered in these chapters shall comply with the applicable provisions of the International Fuel Gas Code.” Therefore, in order to resize the exterior chimney, Tables 504.3(6a) (6b) or 504.3 (7a) or (7b) in the IFGC should be used.

When the contractor signs the “Chimney Verification” form, he/she is indicating that the existing chimney is in good physical condition and is appropriately sized. When this form is submitted to the construction office and the form indicates that there is an existing exterior chimney, that should raise a flag that a chimney liner would be required.

Liner resizing is important due to equipment today being more efficient when it comes to exterior chimneys. Less heat and draft up the chimney tend to cause a condensation problem.

Note that an interior chimney generally does not lead to a condensation problem because it is located in a conditioned area.

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

New Jersey Code Adoptions -- Elevator Safety Subcode

The following chart gives the adoption dates and the editions of the codes and standards used in connection with the Elevator Safety Subcode. Most recently, the International Building Code/2015 has been adopted as of September 21, 2015 and the newest elevator, dumbwaiter and conveyor standards may be used as shown in the table below. As with any code adoption, a six-month grace period starts the day of the adoption allowing the old codes to be used as long as a complete permit application is submitted before the grace period ends (i.e. March 20, 2015 is the last day for submittal under the old codes).

Edition Date for Building Subcode	Effective Date for Model Codes	BOCA/IBC Number for Elevators, Dumbwaiters, and Conveyor Equipment	ANSI A17 Safety Standard for Elevators and Escalators	ANSI A90.1 Safety Standard for Belt Manlifts	ASME A18.1 and A18.1a Safety Standard for Platform Lifts and Stairway Chairlifts
1975	01/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973	A90.1-1969	
1976/S	12/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1978	10/01/78	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1981	05/07/81	21	A17.1 - 1978	A90.1 - 1976	
1983/AS	02/22/83*	21	A17.1 - 1981	A90.1 - 1976	
1984	08/06/84	21	A17.1 - 1981; A17.1a - 1982	A90.1 - 1976	
1985/S	04/01/85	21	A17.1 - 1984	A90.1 - 1976	
1986/AS	09/22/86	21	A17.1 - 1984	A90.1 - 1976	
1987	04/01/87	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1988/S	06/20/88	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1989/AS	11/01/89	26	A17.1 - 1987	A90.1 - 1985	
1990	07/01/90	26	A17.1 - 1987	A90.1 - 1985	
1991/S	03/04/91	26	A17.1 - 1987		
1993	05/01/93	Chapter 30	A17.1 - 1990	A90.1 - 1985	
1996	07/06/98	Chapter 30	A17.1 - 1993 and 1994, 1995 Supplements	A90.1 - 1992	
IBC-2000 NJ Edition	05/05/03	Chapter 30	A17.1 - 1996 and 1997, 1998 Supplements	A90.1 - 1997	A18.1 - 1999 and A18.1a - 2001
IBC-2006 NJ Edition	02/20/07	Chapter 30	A17.1-(2004-2005), including A17.1.S-2005	A90.1-2003	A18.1-2003
IBC-2009 NJ Edition	09/07/10	Chapter 30	A17.1-2007	A90.1-2003	A18.1-2005
IBC-2015 NJ Edition	09/21/15	Chapter 30	A17.1-2013	A90.1-2009	A18.1-2008

S = Supplement AS = Accumulative Supplement * = Operative date

(*continued next page*)

(*New Jersey Code Adoptions -- Elevator Safety Subcode*)

Note: The grace period is covered at N.J.A.C. 5:23-1.6(a).

1) Consult construction files to determine under which elevator or building code the permit was issued;
2) The following provides guidance on how to determine the applicable ASME A17.1 or ASME A90.1 codes (editions/supplements) when this information is not available for existing elevator devices. When performing cyclical inspections, if the permit — or installation — date precedes or is within the grace period, apply the code edition immediately preceding the adoption of the new subcode. Example: A permit was issued on May 15, 1987. If the construction file does not have the information about the edition of the standard used, then ANSI A17.1 - 1984 is enforced. If the permit was issued on November 16, 1987, ANSI A17.1 - 1984 with the 1985 supplement applies.

Source: Paulina Caploon
Elevator Safety Unit
(609) 984-7833

Guide to Free Electronic Downloads of Steel Standards Referenced in IBC and IRC

This guide is designed to help an individual or jurisdiction obtain free electronic downloads of the various steel standards that are referenced in the International Building Code (IBC) and International Residential Code (IRC). Listed below are the standards developing organizations (SDOs) that have their standards referenced in the IBC or IRC, along with a link to their documents. Please note that some SDOs may require the individual or jurisdiction to provide information prior to being able to download standards. Also, some SDO web pages provide errata and other useful information. Please take advantage of this opportunity. *Note: Not all standards are available for free download at this time.*

AISC

American Institute of Steel Construction
One East Wacker Drive, Suite 700
Chicago, IL 60601-18021
www.aisc.org

www.aisc.org/specifications

RMI

Rack Manufacturers Institute
8720 Red Oak Boulevard, Suite 201
Charlotte, NC 28217
www.mhi.org

www.mhi.org/publications

AISI

American Iron and Steel Institute
25 Massachusetts Avenue, NW, Suite 800
Washington, DC 20001
www.steel.org

www.aisistandards.org

SDI

Steel Deck Institute
P. O. Box 426
Glenshaw, PA 15116
www.sdi.org

www.sdi.org/publications-2/standards

NAAMM

National Association of Architectural Metal Manufacturers
800 Roosevelt Road, Bldg. C, Suite 312
Glen Ellyn, IL 60137
www.naamm.org

www.naamm.org/amp/amp_technical_literature.aspx

SJI

Steel Joist Institute
234 W. Cheves Street
Florence, SC 29501
www.steeljoist.org

www.steeljoist.org/ansi

Source: American Iron and Steel Institute, www.steel.org

Updated: October 29, 2015

2015 I-Code Flood Hazard Construction

Previous editions of the International Building Code and Residential Code (IBC and IRC, respectively) adopted by New Jersey differed in flood resistant standards regarding Coastal A flood zones. With the adoption of the 2015 edition of these codes on September 21, 2015, the Coastal A flood zone is one and the same regardless of whether the project is under the IBC or the IRC. The 2015 IRC has now aligned its Coastal A flood zone requirements with the V flood zone requirements (this was already the case in previous editions of the IBC). In short, whether using the 2015 IBC or IRC, a foundation in a Coastal A flood zone is required to meet the same requirements as a V zone.

The rule applies to new construction and those property owners whose properties were "substantially damaged." A structure is considered substantially damaged if the cost of restoration equals or exceeds 50 percent of the market value of the structure prior to the damage; this determination is made by the local floodplain administrator.

Keeping in mind that DEP's existing rules already contain a mandatory 1-foot freeboard*, which is maintained within NJAC 7:13, and applies to the lowest floor of the home or building, the question remains, how does this interface with the Uniform Construction Code (UCC), NJAC 5:23? The quick answer is to see your local floodplain administrator as he or she will let you know the elevation and the flood zone applicable to the home or building in question. Under the UCC, this is handled through the prior approval process. However, you should know that the DEP rules only use "lowest floor" and the UCC, by means of referenced model codes and standards, uses this term and "lowest supporting horizontal structural member". This may seem confusing, but hopefully, this boiled-down version of the interaction between rules is helpful.

* Note – Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. (http://www.fema.gov/freeboard)

Combining DEP's rules and the UCC's existing requirements essentially means you are looking at the more stringent requirements of the two to determine the Design Flood Elevation (DFE). Therefore, the breakdown of the elevation requirements in a flood zone per the 2015 IBC and IRC is as below.

		IRC[a]	IBC[b]			
			Cat 1	Cat 2	Cat 3	Cat 4
A zone	Elevation of the lowest floor[c]	BFE +1 ft	BFE +1 ft	BFE +1 ft	BFE +1 ft	BFE +2 ft
Coastal A zone and V zone	Elevation of the bottom of lowest supporting horizontal structural member of lowest floor[c]	BFE +2ft[d]	BFE +1ft[d]	BFE +2 ft[d]	BFE +3 ft[d]	BFE +3 ft[d]

a – Per Sections R309.3/IRC and R322.2.2/IRC and Section 1.5.2/ASCE 24 , attached and detached enclosed areas used solely for parking of vehicles, building access or storage may be below the BFE.
b – Category classifications are from Table 1-1 of the ASCE 24-14 (see following page).
c – Minimum elevations are based on the model codes adopted by NJAC 5:23, in combination with NJAC 7:13; municipalities may adopt local ordinances for greater freeboard which increases the DFE.
d – If the lowest horizontal structural member is at least 1 ft in height, a reduction of 1 ft in freeboard is permitted (DEP's rules only spec out "lowest floor + 1ft" & do not speak to lowest horizontal member).

There actually are three entities involved in the enforcement of requirements for elevation of structures in identified flood hazard areas:

- The local floodplain administrator is responsible for the enforcement of the municipal flood ordinance. These ordinances are adopted as a condition of the municipality's participation in the National Flood Insurance Program. (It should be noted that municipalities may choose to adopt requirements for higher elevations.) DEP provides a model flood ordinance at: http://www.nj.gov/dep/floodcontrol/modelord.htm.
- DEP is responsible for enforcement of the State's Flood Hazard Area Control Act rules, NJAC 7:13. Under NJAC 7:13, if a home or building is being raised or reconstructed in the original footprint, DEP's "permit by rule" allows construction to proceed without a separate review or approval from DEP. This same rule allows for an increase in the footprint of up to 300 square feet under the permit by rule provisions, which is helpful In terms of additional steps or ramps necessary to access elevated buildings. Other construction in a flood hazard area requires approval from DEP.

(continued next page)

(2015 I-Code Flood Hazard Construction)

- The local construction official is responsible for enforcement of the UCC, including the elevation requirements described above.

ASCE 24-14 Table 1-1, Flood Design Class of Buildings and Structures	
Flood Design Class	Use or Occupancy of Buildings and Structures
1	Buildings and structures that normally are unoccupied and pose minimal risk to the public or minimal disruption to the community should they be damaged or fail due to flooding. Flood Design Class 1 includes: (1) temporary structures that are in place for less than 180 days; (2) accessory storage buildings and minor storage facilities (does not include commercial storage facilities); (3) small structures used for parking of vehicles; and (4) certain agricultural structures. [Note (a)]
2	Buildings and structures that pose a moderate risk to the public or moderate disruption to the community should they be damaged or fail due to flooding, except those listed as Flood Design Classes 1, 3, and 4. Flood Design Class 2 includes the vast majority of buildings and structures that are not specifically assigned another Flood Design Class, including most residential, commercial, and industrial buildings
3	Buildings and structures that pose a high risk to the public or significant disruption to the community should they be damaged, be unable to perform their intended functions after flooding, or fail due to flooding. Flood Design Class 3 includes: (1) buildings and structures in which a large number of persons may assemble in one place, such as theaters, lecture halls, concert halls, and religious institutions with large areas used for worship; (2) museums; (3) community centers and other recreational facilities; (4) athletic facilities with seating for spectators; (5) elementary schools, secondary schools, and buildings with college or adult education classrooms; (6) jails, correctional facilities, and detention facilities; (7) healthcare facilities not having surgery or emergency treatment capabilities; (8) care facilities where residents have limited mobility or ability, including nursing homes but not including care facilities for five or fewer persons; (9) preschool and child care facilities not located in one- and two-family dwellings; (10) buildings and structures associated with power generating stations, water and sewage treatment plants, telecommunication facilities, and other utilities which, if their operations were interrupted by a flood, would cause significant disruption in day-to-day life or significant economic losses in a community; and (11) buildings and other structures not included in Flood Design Class 4 (including but not limited to facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, hazardous waste, or explosives) containing toxic or explosive substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released. [Note (b)]
4	Buildings and structures that contain essential facilities and services necessary for emergency response and recovery, or that pose a substantial risk to the community at large in the event of failure, disruption of function, or damage by flooding. Flood Design Class 4 includes: (1) hospitals and health care facilities having surgery or emergency treatment facilities; (2) fire, rescue, ambulance, and police stations and emergency vehicle garages; (3) designated emergency shelters; (4) designated emergency preparedness, communication, and operation centers and other facilities required for emergency response; (5) power generating stations and other public utility facilities required in emergencies; (6) critical aviation facilities such as control towers, air traffic control centers, and hangars for aircraft used in emergency response; (7) ancillary structures such as communication towers, electrical substations, fuel or water storage tanks, or other structures necessary to allow continued functioning of a Flood Design Class 4 facility during and after an emergency; and (8) buildings and other structures (including, but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, or hazardous waste) containing sufficient quantities of highly toxic substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released. [Note (b)]
Note (a) - Certain agricultural structures may be exempt from some of the provisions of this standard; see ASCE 24-14 Section C1.4.3. Note (b) - Buildings and other structures containing toxic, highly toxic, or explosive substances shall be eligible for assignment to a lower Flood Design Class if it can be demonstrated to the satisfaction of the authority having jurisdiction by a hazard assessment as described in ASCE 7-10 Section 1.5.3 of Minimum Design Loads for Buildings and Other Structures that a release of the substances is commensurate with the risk associated with that Flood Design Class.	

If you have any questions, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

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.

Non-Cooktop Type Kitchens in Commercial Settings

Well, no one is perfect. With the adoption of the 2015 I-Codes, it looks as if we may have missed a few items. Regarding kitchens and kitchenettes in a commercial setting, NJAC 5:23-7.2(b)21 used to state: "In section 804.4, entitled "Sinks," add the following: "Exception: In spaces that do not provide a cooktop or conventional height of 36 inches; a parallel approach must be provided."
It has been brought to our attention that this exception did not make it into the amendments listed at NJAC 5:23-3.14(b)10ii for the changes to Chapter 11 of the International Building Code/2015 and the ICC/ANSI A117.1-2009. This will most likely affect, for example, break room kitchenettes and the like.

We plan to move a proposal to restore this exception. In the interim once the grace period has expired (March 21, 2016), applicants may wish to request a variation based on the old exception and the Department's intent to continue it.

This correction will be added to the list of corrections seen earlier on page 3. Once it is finalized, replacement pages for your loose-leaf NJ IBC will be available at http://www.nj.gov/dca/divisions/codes/codreg as "Corrected pages" under the Building Subcode.

Source: Code Assistance Unit
(609) 984-7609



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Division of Codes and Standards
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Volume 27, Number 4 **Winter 2015**

The Winter Communicator: A Reminder

The final (Winter) issue of the *Construction Code Communicator* each year now consists of a collection of Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year. This year, we are including articles that were printed in earlier editions of the *Construction Code Communicator* on topics that continue to generate questions. As noted on the last page, once this edition of the *Construction Code Communicator* has been posted, these individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from those sections of Division's website. There is one exception: the materials related to Superstorm Sandy will remain in place. In short, there are no new articles in this issue.

Please note that, although the documents will be removed from the Alerts and Hot Topics, it will still be possible to access them through Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

Also, the indices for all issues of the *Construction Code Communicator* 2014 and 2015 are included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain new articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year with previously printed articles where the topic continues the generate questions.

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at Emily.Templeton@dca.nj.gov.

Source: Emily W. Templeton
Division of Codes and Standards

In This Issue

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National Standard Plumbing Code/2015 Adoption

Originally proposed August 17, 2015, the pluming subcode, NJAC 5:23-3.15, adopted the 2015 edition of the National Standard Plumbing Code (NSPC) on January 4, 2016. Not unlike any other model code adoption, the 2009 NSPC will have a 6-month grace period. Consistent with projects utilizing the 2009 I-Codes having March 20, 2015 as the last day to submit a complete permit application to the local enforcing agency, the same will be in effect for the 2009 NSPC with July 3, 2016 being its last day. Otherwise, permit applications not stipulating that the previous code is chosen, the local enforcing agency should assume the new code is being used during the grace period(s).

This and all other proposals/adoptions can be found at http://www.nj.gov/dca/divisions/codes/codreg/ by scrolling to "Rule Proposals and Adoptions."

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

Permit Extension Act—Time is Up

The extension period under the Permit Extension Act ended on December 31, 2015. Please note that the adoption of the 2015 International Codes on September 21, 2015 affects the "shelf life" of released prototype plans. All plans submitted in support of a permit application after the end of the six month grace period (March 21, 2016) should be based on the 2015 editions of the model codes. Hardships should be dealt with by the construction official on a case by case basis.

Previous information regarding the Permit Extension Acts can be found at http://www.nj.gov/dca/divisions/codes/topics/ by scrolling to "Permit Extension Act" under the letter P.

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

Digital Signatures and Seals for NJ Engineers

Effective November 16, 2015, the State Board of Professional Engineers and Land Surveyors amended NJAC 13:40 to allow digital signatures and seals for digitally-transmitted plans. As it affects the Uniform Construction Code, this is an acceptable practice for plan submittal by a licensed NJ engineer in order to comply with NJAC 5:23-2.15.

The specific language for this change can be found at NJAC 13:40-8.1 and 8.1A by going to http://www.njconsumeraffairs.gov/pels/Pages/regulations.aspx and clicking on "Chapter 40 State Board of Professional Engineers and Land Surveyors Regulations" within the "Laws and Regulations" heading.

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

Acceptance of Electronic Permit Applications

(Memorandum to Construction Officials – November 21, 2014)

A number of local code officials have asked whether electronic permit applications may be accepted. This memo is to advise that electronic permit applications may be accepted provided that no plans or seal, either from a licensed design professional or licensed contractor, is required. This limits the ability to submit an electronic permit application for the time being. It is our hope that the licensing boards will work to make it possible to seal applications electronically at some point in the not-too-distant future. Until then, only applications that do not require any seal may be accepted electronically.

For electronic applications, please use the following language, together with a check box, above what would be the signature on the application: *I hereby certify by checking this box that the foregoing statements made by me on this application are true. I understand that if any of the above statements is willfully false, I am subject to punishment*.

Source: Edward M. Smith
Director, Division of Codes and Standards

Summary of Rule Changes for 2015 and 2014

September 21, 2015 New Jersey Register

- **N.J.A.C. 5:23-3.14, 3.16, 3.17, 3.18, 3.20, 3.21 and 3.22 (amended) -- Building Subcode, Electrical Subcode, Fire Protection Subcode, Energy Subcode Mechanical Subcode, One- and Two-family Dwelling Subcode and Fuel Gas Subcode:** The 2015 International Codes and the 2014 National Electrical Code are adopted by reference as the subcodes of the UCC.
  N.J.A.C. 5:23-7.1 through 7.14 and 7.20 (repealed) -- Barrier Free Subcode: With the adoption of Chapter 11 of the 2015 International Building Code, and its reference standard, ICC/ANSI A117.1-2009, these sections of the Barrier Free subcode are repealed.
- **Bulletin 15-2 -- Adopted Codes, Standards and Recommended Practices Referenced Under Informational Notes of the National Electrical Code 2014:** This bulletin contains a list of those specific codes, standards and recommended practices referenced in the Informational Notes of the Electrical Subcode (2014 National Electrical Code). This bulletin replaces Bulletin No. 12-1, which will be withdrawn after the 6-month grace period.

August 17, 2015 New Jersey Register

- **N.J.A.C. 5:23-10 -- Radon Hazard Subcode:** Recently, the list of municipalities in Tier 1, issued by the New Jersey Department of Environmental Protection (DEP) and incorporated into the Radon Hazard Subcode as Appendix 10-A of the Uniform Construction Code, has been amended by the DEP. The following municipalities have been added and incorporated into this Appendix: Lawnside Borough (Camden County), Lawrence Township (Cumberland County), Upper Deerfield Township (Cumberland County), South Harrison Township (Gloucester County), Kingwood Township (Hunterdon County), Millstone Township (Monmouth County), Kinnelon Borough (Morris County), Mannington Township (Salem County) and Bridgewater Township (Somerset County).
- **Bulletin 15-1 -- Liquid Carbon Dioxide (CO2) Carbonated Beverage Systems:** This bulletin is being issued by the Divisions of Fire Safety and Codes and Standards to provide information on how to address installations of CO2 carbonated beverage systems.
- **Bulletin 13-1B -- Pile foundation design issues in flood hazard areas for one and two-family dwellings:** This bulletin is revised to reflect the changes that went into effect 5-18-15 regarding foundations in a V zone.
- **Bulletin 07-3 -- Ice Dam Membrane/Ice Barrier:** This bulletin is updated to revise the language so that its application is made more clear.

May 18, 2015 New Jersey Register

- **N.J.S.A. 52:27D-123.14 -- The dimensional requirements for certain elevators:** The Uniform Construction Code Act was modified by P.L.2015, c.21. This new statute supersedes the rule at N.J.A.C. 5:23-3.14(b)21v. and calls for the Commissioner to amend the code to reflect this change. (This amendment will be included with the adoption of the 2015 International Codes.) The amendment to the Act narrows the requirement for elevators to accommodate stretchers to those elevators serving residential buildings four or more stories above or below grade. The change brings the scoping for and dimensions of the elevator required by New Jersey law into conformance with the International Building Code.
- **N.J.A.C. 5:23-2.15, 2.18, 2.37 and 3.21 -- Home elevations:** As described in the November, 2014 transmittal, requirements for home elevations were established through a special adoption. This special adoption included a concurrent proposal. The concurrent proposal has now been finalized and adopted with a minor modification. At N.J.A.C. 5:23-2.18, “professional engineer” has been changed to “design professional” to reflect the fact that the pile log and certification may be prepared by either an engineer or an architect.
- **N.J.A.C. 5:23-3.2(d) -- Commercial farm buildings:** Under this adopted amendment, the covering for hoophouses no longer is required to conform to the fire propagation criteria of National Fire Protection Association (NFPA) 701, Standard Method of Fire Tests for Flame-propagation of Textiles and Films.

(continued next page)

February 17, 2015 New Jersey Register

- **N.J.A.C. 5:23-3.4(d)** is amended regarding the enforcement responsibilities for the installation and replacement of mechanical equipment in existing residential buildings of Group R-3, R-4, or R-5 in that the plumbing subcode official is assigned in cases where no mechanical inspector is employed. By doing so, only one technical section would be required for the mechanical portions of the performed work. If electrical work is part of the installation, an electrical technical section would also be required.
- **N.J.A.C. 5:23-3.11(a)8** is amended to assign plan review authority for residential health care facilities to the Department's health care facilities plan review unit.
- **N.J.A.C. 5:23-3.11A(a)1 and (b)** are amended regarding the process for review of plans for projects at schools. No Department of Community Affairs approval is required for local review of plans for projects to be undertaken at schools (with the exception of the construction of new schools which still must be submitted to the Department for review.) This also eliminates the use of Department of Education Form DOE-124.
- **N.J.A.C. 5:23-4.5(j)** is amended regarding conflict of interest for construction or subcode officials, assistants to the construction or subcode official, trainees, inspectors, or plan reviewers in that it removes the prohibition from undertaking any construction-related activity in a municipality adjacent to any municipality in which they are employed.
- **N.J.A.C. 5:23-5.2 through 5.5, 5.21, 5.22, and 5.25** are amended regarding special inspectors making the rules for imposing sanctions on licensed code officials also applicable to certified special inspectors.

November 3, 2014 New Jersey Register

- **N.J.A.C. 5:23-2.15, 2.18, 2.37 and 3.21 -- Home Elevations:** Even though published in the November 3, 2014 issue of the New Jersey Register, the special adoption of these rules took effect on October 1, 2014, the date of filing with the Office of Administrative Law. The concurrent proposal has a comment period which will end on January 2, after which the Department must act to adopt the rules anew. This rulemaking stems from the enactment of P.L. 2014, c. 34 on August 15, 2014. This statute calls for the Division of Consumer Affairs, in the Department of Law and Public Safety, to adopt rules for the registration of home elevation contractors. And the Department of Community Affairs is charged with the adoption of rules governing the methods, procedures and other requirements that must be followed in performing home elevations.
- Bulletin 14-3, Jurisdiction Over Site Work - This bulletin offers guidance regarding the jurisdiction over site work performed in complexes, office or industrial parks or other "campus style" settings.

On October 1, 2014 (emergency rule proposal/adoption that appeared in the November 3, 2014 New Jersey Register), the Uniform Construction Code was amended to establish **standards for the elevation of existing buildings**:

- N.J.A.C. 5:23-2.15 is amended to require that a permit application to elevate an existing home include the registration number of the home elevation contractor.

- N.J.A.C. 5:23-2.18 is amended to state that a pile log and certification, prepared by a licensed professional engineer, takes the place of an inspection for pile foundations. The amendments include a description of what the certification must include and a requirement that the certification be based on the engineer's personal observations. (Please note that the State Board of Architects has pointed out that an architect may design and/or certify pilings under State law. The rule will be corrected to say "design professional.")

- A new rule, N.J.A.C. 5:23-2.37, contains the technical requirements for elevation, including addressing utility service connections, methods and equipment required, and protection of adjoining property.

- N.J.A.C. 5:23-3.21 is amended to require the use of American Society of Civil Engineers (ASCE) Standard 24 for foundation design and construction for one-or two-family homes on piles. Currently, the use of ASCE 24 is required for buildings other than one- or two-family homes and is listed as an alternative in the one- and two-family dwelling subcode. Because ASCE 24 is recognized as the industry standard for construction on piles, it is being adopted, and concurrently proposed. Alternate designs that do not conform to ASCE 24 may still be

(continued next page)

used through application for and granting of a variation. It should be noted that, because this is an amendment to an adopted subcode of the Uniform Construction Code, the six month grace period provided at N.J.A.C 5:23-1.6 will apply.

October 6, 2014 New Jersey Register

- **N.J.A.C. 5:23-4.19, 4.20, 5.21, 5.22, 8.4, 8.9, 8.10, 8.11, 12.5, and 12.6 -- Fee Increases:** The Department raised fees for various programs that the Division of Codes and Standards administers. The fees charged by the Division are intended to generate sufficient income to cover program costs.

July 21, 2014 New Jersey Register

- **N.J.A.C. 5:23-2.15, 2.18 and 6.3A -- Flood-Resistant Construction:** For projects involving new construction, additions, or buildings that are deemed to be a substantial improvement, the amendments to N.J.A.C. 5:23-2.18(b)1ii(2) require the submittal of the lowest floor elevation and as-built elevation documentation for buildings located in a flood hazard area, in addition to the existing requirement for the foundation location survey. New N.J.A.C. 5:23-6.3A provides that, for buildings in designated flood hazard areas, any work that constitutes a substantial improvement of the existing building, as determined by the local floodplain administrator, must comply with the applicable flood-resistant construction requirements in the appropriate sections of the building subcode or of the one- and two-family dwelling subcode referenced in the rule.

May 5, 2014 New Jersey Register

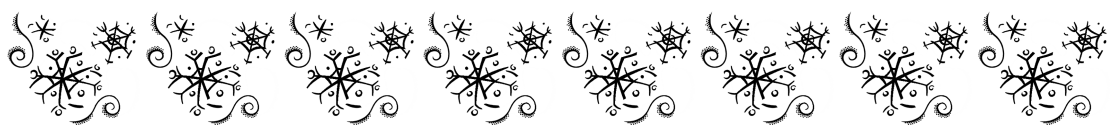
- **N.J.A.C. 5:23-9.6 -- Interpretations: Construction requirements for new and existing casinos:** The adopted amendments address slot stools, slot machine heights and items related to emergency egress from the gaming areas.
- **Bulletin 14-1 – New One- or Two-Family Dwellings Installing NFPA 13D or P2904 Instead of NFPA 13R Sprinkler Systems:** New bulletin that provides guidance on allowing the construction of three story structures when either NFPA 13D or IRC Section P2904 fire sprinkler system is installed.
- **Bulletin 14-2 – Use of NFPA14 Manual Wet Fire Standpipes:** New bulletin that provides guidance on allowing the installation of a NFPA 14, Class I, manual wet standpipe system or other listed type standpipe systems in buildings that have either a NFPA 13 or 13R sprinkler system installed.

January 6, 2014 (including December 2, 2013) New Jersey Register

- **N.J.S.A. 52:27D-130 and 130.8 –** These amendments are companions to changes to the Municipal Land Use Law. The new provisions state that that, when there is a transfer of ownership of a project with an open permit, the new owner should file a permit update to reflect the change in ownership. And if the municipality has adopted an ordinance requiring the new developer to provide a new performance guarantee, then that performance guarantee must be in place before work proceeds. This would be handled as a prior approval.
- **N.J.A.C. 5:23-3.14(b)17 –** This administrative correction, new N.J.A.C. 5:23-3.14(b)17vii, is added to reflect the replacement of “registered design professional” with “person” in Section 1704.1.1 of the building subcode.
- **N.J.A.C. 5:23-6.8(b)** – This administrative correction addresses a typographical error appearing in the original notice of proposal. The corrected reference is Section 708.10.
- **Bulletin 98-3 -- Health Care Facilities Plan Review**: Residential health care facilities added to list of facilities to be reviewed by the Department.
- **Bulletin 00-3 -- Public Schools - Plan Review Procedure, Facility Planning Standards, and UCC Enhancements** *(replace pages 1-6, keep remaining):* Review procedures updated.
- **Bulletin 03-4 -- Wind Speed Map:** Information regarding an additional tool for determining wind speed and example provided.
- **Bulletin 03-5 -- Special Inspections:** Building subcode references updated.
- **Bulletin 05-2 -- Seismic Hazard Maps:** Information regarding an additional tool for determining seismic hazard category and example provided.
- **Bulletin 13-1B -- Pile foundation design issues in flood hazard areas for one and two-family dwellings:** New bulletin regarding the design and construction of pile foundations.

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Volume 26, Number 1 **Spring/Summer 2014**

Citing the Code

Having been with the Code Assistance Unit for some time now, I have noted one issue that continually crops up. Some officials have not been citing code sections when they provide an applicant with a list of code violations. Please keep in mind, in terms of a Notice of Violation, code citations must be provided and after an inspection, provided upon request.

As code officials, we understand the codes and sometimes provide the applicant in "short hand," what is needed to comply with code. However, the applicant does not always understand the letter of the code, especially when it is presented in shorthand. As public servants, we need to assist the layperson in understanding what section of the code has been violated. The only way this can be done correctly is by providing the code cite as required at N.J.A.C. 5:23-4.5(a)3ii.

By citing the exact code sections, we can often speed the process, because when the applicant is informed, correction of the plans, or construction, can be undertaken without the arguments which often result from incomplete information.

That being said, we all know we can't recite code verse from the top of our heads at all times and sometimes have to refresh our memories. And this is why we always provide code citations for a Notice of Violation and provide code citations upon request after an inspection.

Lastly, if any municipality has "counter documents" that they provide to permit applicants regarding frequently violated code sections/citations, please feel free to share them with the Department. We all know having shared resources can help, especially when it comes to enforcing the Uniform Construction Code. The easiest way to share is by email at codeassist@dca.state.nj.us or mail at NJ-DCA, PO Box 802, Trenton, NJ 08625.

Source: Rob Austin
Code Assistance Unit

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Demolition Permits Again

There are few sources of information from every municipality every month. Building permits are one. Many rely on them for economic indicators and to follow development and settlement patterns. In 2013, New Jersey technical assistants and code officials sent information on over 487,000 building permits. More than 22,000 were for demolitions, authorizing the removal of buildings, underground tanks, and other structures. Construction officials authorized demolitions for about 7,300 dwellings in 2013. Many were in Ocean and Monmouth County, as shown in the table below. Demolition permits are an important measure of the effects of Super Storm Sandy.

Housing Demolitions: New Jersey and Ocean and Monmouth County

Period	New Jersey	Ocean County	Monmouth County	Ocean & Monmouth as % of NJ
Jan – Dec 2013	7,288	3,343	940	58.8
2012	3,222	416	443	26.7
2011	3,067	433	335	25.0
2010	4,415	477	343	18.6
2009	3,040	436	292	23.9
2008	4,455	571	396	21.7
2007	5,022	595	398	19.8
2006	6,460	696	450	17.7
2005	6,926	783	445	17.7

Source: N.J. Department of Community Affairs, 2/7/14

This article is on demolition basics. It discusses how we see demolition permits and pitfalls to avoid for better, more accurate data.

Demolition Essentials: A demolition permit has information on many things. Four items stand out.

1. What is being demolished?
2. The cost of removal.
3. Is there a loss of housing?
4. If so, how many dwellings?

What is being demolished: No item of information is more critical than the use of the structure. Make a mistake here and more follow. If you issue a demolition permit to remove an oil tank and call it a house, the reporting software requires information on dwelling(s) lost. An oil tank, of course, is not a house; don't call it that. It is an accessory structure (U).

Entering the right use is not always simple and straightforward. One reason is poor software design. Some reporting applications ask for both present and proposed uses. This should only apply to the change of use of an existing building, for example, the conversion of an office building (B) to multifamily housing (R-2).

While proposed uses do not matter for demolitions, some software applications ask anyway. This can trip up code officials and technical assistants. Some enter "U" because they don't know what the proposed use will be and see this as a "safe," catch-all response. Don't do this. If asked, enter the present use again. If the building is an old harness factory, enter "F." If it is a storage tank, enter "U." If it is a single-family house or duplex, enter "R-3" or "R-5." Again, if the reporting software for the demolition asks for both the present and proposed uses, enter the current use of the structure for both responses.

(article continued on next page)

Sometimes it is hard for us to know what's going on from the monthly activity reports we see. This problem is on our end. We have a blind spot with mixed-use buildings. Code officials and technical assistants are trained to enter the predominant use first, followed by secondary use(s). We only see the first use entered. So, when you issue a permit for a mixed-use building, and it has housing, enter the residential use first. If you demolish a building with multifamily housing (R-2), retail (M), and office space (B), enter the residential use first (R-2). This helps us identify the housing impact of the permit, which is especially important.

Demolition dollars: Another item of information on demolition permits is a dollar amount. There is little to say about this, but dollar amount is the cost of the removal. It is not the value of what will be torn down. That's all there is to say about dollars and demolitions.

Dwelling units lost: The primary reason we look at demolitions is to count lost housing. This is a key indicator. It is important for housing and population trends. Some confuse buildings with dwellings. A building is a structure that may have housing. We want to know about dwellings. A dwelling is a house, apartment, or condominium. It can be for sale or rent. If you issue a demolition permit for a single-family house, the number of dwellings lost is one. If you authorize a tear down of a duplex, the number of dwellings lost is two. If you demolish a multifamily building with 100 apartments, then 100 for-rent units are lost. If you are unsure whether the units are for sale or rent and you enter 100 in each field, we see 200 units lost. Make your best guess on tenure, but don't count dwellings twice.

If you have questions, call (609) 292-7898 or e-mail John.Lago@dca.state.nj.us. We appreciate your professional and dedicated work. We are pleased to respond to questions, comments, and concerns.

Building permit data appears in the New Jersey Construction Reporter at http://www.nj.gov/dca/divisions/codes/reporter/.

Source: John Lago
Director's Office

Gas Utilities Residential Gas Load Data Inquiry

The Department has become aware that gas utility companies have been requiring a "Residential Gas Load Data Inquiry" form to be completed when adding new loads or making changes to the existing gas load for a single family or multi-family (up to three residential dwelling units).

The reason for this is that the gas utility company needs to verify whether the existing gas service and meter are of adequate size for the additional gas load when a new gas emergency generator or new tankless water heater that increases the gas load is installed.

Because the Uniform Construction Code (UCC) does not require this form to be approved by the utility company as a prior approval before a permit is issued, the contractor or homeowner must notify utility company of any gas loads that would be added to their gas system. Code officials should inform the permit applicant of the utility company's requirement.

There have been cases in which a permit has been issued for a new residential gas generator and the installation was completed, but when the gas utility company became aware of the installation, it made a determination that the gas service and meter were undersized and had to be replaced at an additional cost to the owner. Owners have been very upset that this utility company requirement was not brought to their attention before the permit was issued.

Although this is not a required prior approval, in the interest of providing complete information to the permit applicant, the code enforcement office should inform the homeowner or contractor that they should contact their gas utility company and advise them of the proposed additional gas load before the permit is issued and the installation begins.

Should you have any questions, you may contact me at 609-984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Heat Tracing Systems and Aboveground Water Filled Fire Sprinkler Piping

Recently the Department has been receiving inquiries on whether all heat tracing systems need to be listed for fire protection sprinkler system piping. The simple answer is NO.

The National Fire Protection Association (NFPA) 13/07, Section 8.16.4.1, Protection of Piping Against Freezing, allows listed heat tracing systems to be installed on feed mains or any type of riser piping. It requires only that the system be listed; it does not require that it be specifically listed for fire protection.

NFPA 13, Section 8.16.4.1.4, requires these systems to be monitored to ensure the piping does not freeze. It does not require the monitoring to be connected to the fire alarm system. NFPA 13 allows other forms of monitoring, such as a stand-alone system.

NFPA 13, Section 8.16.4.1.5, requires heat tracing systems that are used on branch lines be specifically listed for fire protection use. All other heat tracing systems for other portions or components of a fire protection system are required to be listed, but are not required to be specifically listed for fire protection.

If you have any questions on protection of piping against freezing, please call the Code Assistance Unit at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Insulating Spaces Under Floors

When completing the building thermal envelope in new low-rise residential construction, Sections 402.2.7, Basement walls, and 402.2.9, Crawl space walls, of the International Energy Conservation Code (IECC)/2009 require floors over unconditioned spaces to be insulated. Examples of this are naturally-ventilated crawl spaces and non-heated/cooled basements.

However, a design professional may decide not to insulate the floor above these spaces. In the case of a basement, conditioned or unconditioned, Section 402.2.7 would require the basement walls to be insulated to complete the thermal envelope (a conditioned basement will always have insulation on the walls). In the case of a crawl space, Section 402.2.9 would require the walls of the non-naturally ventilated crawl space to be insulated and mechanically ventilated or conditioned in accordance with Section R408.3, Unvented crawl space, of the International Residential Code (IRC)/2009, the walls of a basement, conditioned or un-conditioned, are required to be insulated to complete the thermal envelope (a conditioned basement will always have insulation on the walls).

For required insulation levels, please see Table 402.1.1, Insulation and Fenestration Requirements by Component, of the IECC/2009 and revisit Bulletin 11-1, Energy Subcode Compliance, which may be found at http://www.nj.gov/dca/divisions/codes/publications/pdf_bulletins/b_11_1.pdf.

Should you have any questions, you may contact me at 609-984-7609.

Source: Rob Austin
Code Assistance Unit

Issuing Notices for Existing Buildings & Homes

The Department is getting word that there may be some confusion as to when to issue a Notice of Violation pursuant to N.J.A.C. 5:23-2.30 in regard to existing homes. Typically, issues like this arise when an inspector is in a home for a rehabilitation project. There are a few things to consider, and hopefully, the following helps sort things out:

(article continued on next page)

* Rehabilitation Projects *
Let me start by saying, focus on N.J.A.C. 5:23-6.2(b). This section is entitled "Scope" telling you as a code official why you are on the job site and specifying what you are to be inspecting. This means, if the project has been completed with no violations within the scope, you are to pass it regardless of other violations you may have found elsewhere. And if violations are found outside the scope of the job, please use N.J.A.C. 5:23-2.32, Unsafe Structures, as to whether a violation notice is truly justified. In other words, confine your inspection(s) to the owner's scope of work unless something else rises to the level of an "unsafe structure" as defined in the rules. (Note that this is not just limited to "structural" issues).

* Recently Constructed Homes only *
Here, the home is technically "existing" but it was recently constructed (defined as within the last ten years) and in this case, N.J.A.C. 5:23-2.35 can be cited but within certain limitations. As many of you may recall, this section of the Uniform Construction Code was adopted in the wake of the DKM decision to provide a process for code officials to follow in investigating and acting on complaints in residential developments. More specifically, N.J.A.C. 5:23-2.35(b)1 states that this section is applies to violations in a residential structure in a development, other than Group R-1, subsequent to the issuance of a certificate of occupancy. These violations are limited to the adopted subcodes of the UCC in effect at the time of permit application. This means that, if you are in called to a home and a potential violation is observed, you must keep in mind that the violation is supposed to be based on the code in effect at the time of construction or at the time the work was performed.

Some inspectors have expressed concerns about liability for things they see, but don't cite. Under the Tort Claims Act, both the municipality and its employees are immune from suit for negligent inspections or failure to inspect. If you have further questions or concerns regarding this, please speak to your municipal attorney.

Should you have any questions, you may contact me at 609-984-7609.

Source: Rob Austin
Code Assistance Unit

Modular Construction Permits: What Needs to be Submitted?

Regardless of the number of articles that have been published on this topic, there still seems to be some confusion regarding exactly what must be submitted for the placement of modular construction on a site.

As I am sure you are all aware, as Construction Officials and sub-code officials, we have no jurisdiction over the "box". The "box" is that which is constructed in the factory and delivered to the site. All that is required to be submitted for the "box" is a set of schematics, that is, floor plans and elevations that are NOT required to be signed and sealed by a design professional but are required to be stamped by the third party inspection company.

Additionally, a set of installation instructions for the "box" is also required to be submitted. As with the schematics, these documents are NOT required to be signed and sealed by a design professional, but, they too are required to be stamped by the third party inspection company.

Lastly, all site work that is NOT included in the installation instructions needs to be submitted. This is where it gets tricky! Typical site work includes the foundation system and utility hook-ups. However, any other work that is being performed on-site that is not included in the installation instructions must also be submitted. This could include garages, porches, and decks. Unlike the other documents, the site work documents MUST be signed and sealed by a NJ licensed design professional.

Should you have any questions, please feel free to contact the Code Assistance Unit at codeassist@dca.state.nj.us or by phone at (609) 984-7609 or Melinda Reisner in the Bureau of Code Services at melinda.reisner@dca.state.nj.us or by phone (609) 633-6728.

Source: John N. Terry
Code Assistance Unit

NFPA 13R - When it's Appropriate/When it's Not – Revisited and Updated

In both the International Building Code (IBC) and the National Fire Protection Association (NFPA) standards, scoping limits the use of a NFPA 13R sprinkler system to residential occupancies up to and including four stories in height. What happens when another group is located below a residential occupancy? Is a mixed system appropriate: NFPA 13 for the nonresidential use and NFPA 13R for the residential portion?

Example #1: A grade-level, nonresidential space is appropriately separated (per Section 508.4, Separated Occupancies, of the IBC/2009) from three residential stories above (a four-story building). The grade level (nonresidential) is protected with an NFPA 13 system. Can the three residential stories be protected with a 13R system? The answer is yes.

The IBC, Section 903.3.1.2, NFPA 13R Sprinkler Systems, (IBC/2000, 2006, and 2009) allows an NFPA 13R system for Group R occupancy buildings that are up to and including four stories in height. Therefore, in the example above, it would be permissible to install an NFPA 13 system on the first (nonresidential) floor and an NFPA 13R system in the three stories of Group R above. This is because the total building does not exceed four stories in height.

Example #2: A grade-level, nonresidential space is appropriately separated (per Section 508.4, Separated Occupancies, of the IBC/2009) from four residential stories above (a five-story building). The grade level is protected with an NFPA 13 system. Can the four residential stories be protected with a 13R system? The answer is no.

Based on the same code sections cited above, the required fire-sprinkler system for the entire building, including the residential portion, is NFPA 13. This is because the total building is greater than four stories in height.

Example #3: A four-story residential occupancy is situated above a grade-level parking garage (S-2) and is appropriately separated (per Section 509.2, Horizontal Building Separation Allowance, of the IBC/2009). Can an NFPA 13 system be installed in the S-2 portion and can the residential portion be protected with an NFPA 13R sprinkler system? The answer is yes.

The IBC allows a three hour fire resistance rated horizontal assembly to be used to create a separate building when the building below the horizontal assembly is at grade level and of Type I construction, with appropriate shaft enclosures. Historically, Sections 508.2, Group S-2 Enclosed Parking Garage with Group A, B, M, or R Above, (IBC/2000) and 509.2, Group S-2 Enclosed or Open Parking Garage with Group A, B, M, R or S Above, (IBC/2006) allowed only Group S-2 enclosed or open parking garages on grade level. Now, Section 509.2, Horizontal Building Separation Allowance, (IBC/2009) allows Groups A, B, M, R, S-2 parking garages or incidental uses such as lobbies, storage areas and mechanical rooms to be below the horizontal assembly. Because the separate building above the horizontal assembly does not exceed four stories in height, the residential occupancy can be protected with an NFPA 13R system.

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

Source: Michael Whalen
Code Assistance Unit

Placement of Houses on Pilings

As the Sandy rebuild continues, many communities are seeing a large number of houses being elevated on pilings. There are two areas of concern that require the attention of local code officials.

Pile Certification: The pile certification must be in hand before construction of a new house or placement of an existing house proceeds. Pursuant to N.J.A.C. 5:23-2.18(b)1.i. and ii., the inspections for which construction must cease include the bottom of footing trenches and foundations and walls up to grade. In the case of a house or other building on a pile foundation, the pile certification takes the place of this inspection.

Connections: After the house is placed on the pilings, inspections must be performed to ensure that all connections are done properly. It does little good to know that the pilings were installed properly if the house is not tied to the pilings. Pursuant to N.J.A.C. 5:23-2.18(b)1.iv(1), structural framing and connections also are listed as items for which construction must cease until an inspection is made.

Vigilance in getting the proper documentation and performing the required inspections is essential to the success of the rebuilding effort. Should you have any questions or need any further information, please feel free to contact the Code Assistance Unit via telephone at (609) 984-7607 or via e-mail at codeassist@dca.state.nj.us.

Source: Code Assistance Unit

Process Equipment and Electrical Requirements

The Code Assistance Unit has received many questions about process equipment and local jurisdiction. At N.J.A.C. 5:23-2.2(a)1, the Uniform Construction Code (UCC) says that manufacturing, production and process equipment is not under the jurisdiction of the UCC. "Electrically speaking," if the equipment is not pre-wired, then wiring between pieces of equipment for the process **is** under the jurisdiction of the UCC. This means that, if three panels come from overseas with no listing or labeling, but are for a specific process (as defined in the UCC at N.J.A.C. 5:23-1.4), the wiring methods between each cabinet are required to be inspected. In addition, the raceways and supports must be inspected. If the panels or drawings show #12-gauge wire where normally #10-gauge would be required, there would be no failure. The installation should comply with the design and not with the electrical subcode requirements that would apply to non-process type equipment.

In the Uniform Construction Code's definitions, N.J.A.C. 5:23-1.4, under "manufacturing, production and process equipment," many items are listed that could be considered process equipment. In item number 16, it states:

> 16. Electrical work which forms a part of the power or control system of industrial process equipment, up to the point where that work connects to the plant electrical distribution system. Such a point shall be considered a suitable junction box, panel board, disconnect switch, or a terminal box which constitutes the final connection to the factory-installed equipment wiring. ***Where these items are not supplied as a part of the equipment; they shall be subject to local enforcing agency jurisdiction*** (emphasis added).

So, although the switch gear, motor control center, variable frequency drives, pumps, conveyors, cable tray, conduit and wire are all part of the process, when the methods for connecting all the pieces together did not come as pre-wired assemblies, all methods required to wire the units together fall under the UCC. If, however, the wiring to all the components came pre-manufactured, then only the first point of connection from the panel must be inspected.

I hope this helps clarify how process equipment should be handled and what we need to review and inspect. If there are further questions feel free to call me at 609-984-7609

Source: Dave Greenhill
Code Assistance Unit

Proper Disposal of Construction Materials and Debris – Revisited

In the *Construction Code Communicator* in 1996, Volume 8, Number 3, page 4, I wrote an article regarding the Department of Environmental Protection's (DEP) requirements for the proper disposal of construction debris generated on site.

Since that time, there has been much discussion and debate regarding the contents of this article. Well, the debate is over! We have been informed that the Department of Environmental Protection, Bureau of Transfer Stations and Recycling Facilities does not take a position on the removal of below-ground concrete supports (foundations) as it is not considered solid waste or recyclable material until such time as it is removed. DEP has informed us that there have no regulations mandating the removal of below grade concrete.

With that said, the property owner will decide whether to remove the foundations or other below grade concrete.

Should you have any questions regarding this article, please feel free to contact me at 609-984-7609 or email at john.terry@dca.state.nj.us.

Source: John N. Terry
Manager, Construction Code Enforcement

The Statewide Non-Residential Development Fee – Another Moratorium?

The non-residential development fee was established by P.L. 2008, c. 46. The first moratorium was contained in P.L. 2009, c. 90. That moratorium ended July 1, 2010. The second moratorium was found in P.L. 2011, c. 122. This extended the moratorium to July 1, 2013.

As of July 1, 2013, the suspension of the Non-Residential Development Fee Act had again expired and municipalities were again required to impose a non-residential development fee of 2.5 percent of the equalized assessed value pursuant to the Statewide Non-Residential Development Fee Act on developments seeking approval subsequent to July 1, 2013. The fee was not to be collected on projects that received site plan approval prior to that date provided that the construction permit was issued by July 1, 2015.

The NRDF Certification/Exemption Form (Form N-RDF rev/ 6-28-10) was updated and can be found at http://www.state.nj.us/treasury/taxation/pdf/other_forms/lpt/nrdf.pdf.

So towns are to collect the fee now, right? Well, yes, that is what the law says, but ….As of this writing, a bill to extend the moratorium has passed both houses of the Legislature and is awaiting the Governor's signature. Under the terms of this bill, towns are to refund any monies collected since July 1, 2013 unless those funds have already been committed to affordable housing projects. We will send out a notice as soon as we receive word that the Governor has taken action on this bill.

Questions concerning the Non-Residential Development Fee or municipal development fee ordinances should be directed to the Department of Community Affairs, Council on Affordable Housing at (609) 633-6186 or (609) 292-3000.

Source: Code Assistance Unit

Flood Resistant Materials Usage 

R322.1.8 (Flood-resistant materials) of the 2009 International Residential Code (IRC) states, "Building materials used below the elevation required in Section R322.2 (flood hazard areas including A Zones) or R322.3 (coastal high-hazard areas including V Zones) shall comply" with the two listed provisions. Following the references of R322.1.8 and incorporating NJ DEP's rules at NJAC 7:13, the elevation requirements are as follows:

A zone and Coastal A zone (R322.2.1 and N.J.A.C. 7:13)
- The lowest floor must be elevated to or above the best available data (BAD) plus one foot [formerly, advisory base flood elevation (ABFE) plus one foot].

V zone (R322.3.2 and N.J.A.C. 7:13)
- If the lowest horizontal structural member is parallel to the wave action, the bottom of the lowest horizontal structural member must be elevated to or above the BAD [formerly ABFE];
- If the lowest horizontal structural member is perpendicular to wave action, the bottom of the lowest horizontal structural member must be elevated to BAD plus one foot [ABFE plus one foot].

(The above information was published in the Department's Construction Code Communicator: ABFE info published Spring 2013 edition and can be found at http://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/ccc_2013_spring.pdf and BAD info published Fall 2013 and can be found at http://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/ccc_2013_fall.pdf.)

In an A Zone, the "design flood elevation" for the use of flood resistant materials required by Section R322.1.8 of the 2009 IRC is determined as follows:
- Section R322.1.8 of the 2009 IRC requires the use of flood resistant materials below the elevations required by R322.2 (A-zones).
- Section R322.2.1 #1 requires buildings in the A zone to be elevated such that the lowest floor is at or above the design flood elevation.
- Section R322.2.1 #2 requires buildings in the Coastal A zone to be elevated such that the lowest floor is at or above the base flood elevation plus one foot or the design flood elevation, whichever is higher.

Based on these code requirements, it is clear that, as used in the 2009 IRC, the design flood elevation and base flood elevations are not synonymous and may be at two separate and distinct points. Therefore, the elevation required by the DEP, the BAD plus one foot, is the design flood elevation for New Jersey and when applying R322.1.8 and R322.2, this then is the design flood elevation that must be used to scope the flood resistant materials requirement.

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

Source: Rob Austin
Code Assistance Unit

When is it Appropriate to Have a Non-Sprinklered Child Care Facility?

It appears that there is some confusion as to when a fire sprinkler system is required for a child care facility. Recently, the Department has calls from supervisors at the Department of Children and Families, the agency that licenses child care facilities, advising me that new facilities have received Certificates of Occupancy in Type VB buildings without fire sprinkler systems being installed.

The International Building Code/2009 (IBC) at Section 903.2.6, Group I, requires the installation of National Fire Protection Association (NFPA) 13 fire sprinkler systems in all Group I fire areas. There are two exceptions to this rule. The first exception is for Group I-1 facilities, which may have a NFPA 13R system installed. The second exception deals with Group I-4 facilities, child care facilities. NFPA 13 systems must be installed in all child care facilities of Type IIIB or Type VB construction. In all other types of construction, a fire sprinkler system is not required when the occupant load is 100 or fewer children and each child care room has an exit door that goes directly to the outside of the building.

The confusion appears to come from the wording of the first part of the second exception. "For other than buildings of construction Types IIIB or VB, an automatic fire sprinkler system shall not be required for Group I-4 child care facilities." That means all Type IIIB or VB buildings must have fire sprinkler systems installed. When a portion of the building is being changed to a Group I-4 child care facility, a fire sprinkler system would be required only in that fire area when appropriately separated from other areas of the building by fire barriers or horizontal assemblies in accordance with IBC Section 707.3.9, Fire Areas.

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

Source: Michael Whalen
Code Assistance Unit

Wireless Systems and Permits

With the advances in technology, the ability to protect your home or business has become very easy with wireless devices. A question that typically asked is, "Do I need a permit for the installation of a wireless security or supplemental wireless fire alarm system?" The answer is: It depends on the answers to the following questions:

(1) Will the power supply require running a low voltage wire(s) from a transformer to the control panel?
(2) Are the key pads or annunciators also wireless or do they require a low voltage, hard-wired connection?
(3) If using a low voltage wire(s) from a remote power supply or to key pads, will they penetrate a fire rated assembly?

If the answer to any of these questions is yes, then a permit is required for a wireless installation.

Also, if a control panel has an attachment plug, or modular plug (one resembling that which comes with a computer or coffee pot), and no wire is run for the keypads, no permit is required.

However, if the attachment plug is not plugged directly into an existing receptacle (in other words, if an extension cord is used), a permit is required because extension cords are not a permanent wiring method.

For example, I have seen an installation in an existing garage where the nearest available receptacle was the one on the ceiling supplying the garage door opener. After carefully stapling two extension cords neatly from the control panel to the existing ceiling receptacle, the installer thought that the job was complete. Not so. This is not acceptable because the Article 400.8 of the National Electrical Code (NEC), which applies to flexible cords, states that extension cords are not to be used as a substitute for the fixed wiring of a structure. Therefore, when there is an existing receptacle that the manufactured supplied power cord can reach, no permit is required. When there is no receptacle within reach, a new receptacle must be installed and a permit is required (N.J.A.C. 5:23-2.17A, minor work).

I hope this helps clarify the permit requirements. If further questions arise, feel free to contact me at (609) 984-7609.

Source: Dave Greenhill
Code Assistance Unit

The 33rd Annual Building Safety Conference of New Jersey

The 33rd Annual Building Safety Conference was held May 7th through 9th at Bally's in Atlantic City. Our focus this year was on the continued rebuilding effort in New Jersey. We had a successful conference this year with over 500 people in attendance.

The kickoff event for the Conference, as always, was the "Crackerbarrel." This very popular event gives our guests the opportunity to hear from a variety of presenters in a short format style that focuses on new items of particular interest to the code enforcement community. The topics this year ranged from the elevation of residential structures in a flood zone to a review of available online tools to determine site specific information for wind speeds and seismic design.

The centerpiece of the Building Safety Conference was the opportunity to recognize and honor those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year. We were honored to once again have Commissioner Richard E. Constable, III join Director Edward Smith and the Presidents of the respective associations in making the award presentations at the annual luncheon.

The following awards were presented:



New Jersey Building Officials Association
Building Inspector of the Year - James Zaconie



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year - Frank G. Speranza



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year - Robert Ferrara



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year - George W. Selah, Jr.





New Jersey Association of Technical Assistants
Technical Assistant of the Year- Kathy Newcomb

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

The Building Safety Conference is a terrific opportunity to broaden your knowledge of cutting-edge code enforcement and building construction techniques. It also provides an opportunity to meet with officials from throughout the State to share ideas and promote camaraderie and collegiality among the code enforcement community.

We hope to see you all next year at Bally's in Atlantic City May 6th through 8th, 2015. Please save the date!

Source: John Delesandro
Supervisor, Education and Licensing Units

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.

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Volume 26, Number 2 Fall/Winter 2014

The Winter Communicator: A Reminder (& More)

The final (Winter) issue of the *Construction Code Communicator* each year typically consists of a collection of Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year. This year, we are including articles that were printed in earlier editions of the *Construction Code Communicator* on topics that continue to generate questions. *This issue also commemorates the 40th anniversary of the signing of the Uniform Construction Code Act into law.*

Also, the Index for all four issues of the *Construction Code Communicator* 2014 is included in this issue as a handy reference.

Prospectively, we plan to have the *Construction Code Communicator* follow this format: three issues, Spring, Summer, and Fall, that contain new articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year with previously printed articles where the topic continues the generate questions.

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at Emily.Templeton@dca.nj.gov.

Source: Emily W. Templeton
Division of Codes and Standards

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The UCC Act at 40

On October 7, 1975, then Governor Brendan Byrne signed the Uniform Construction Code Act into law.

The Uniform Construction Code itself was brought into existence through the visionary work of two people: Bill Connolly and Chuck Decker. Both were architects by training. Their creative work was not in the design of a building, but in the design of a code enforcement system. This code enforcement system has met the test of time. The passing years have brought new challenges and many changes, but the basic structure of New Jersey's code enforcement system has remained intact.

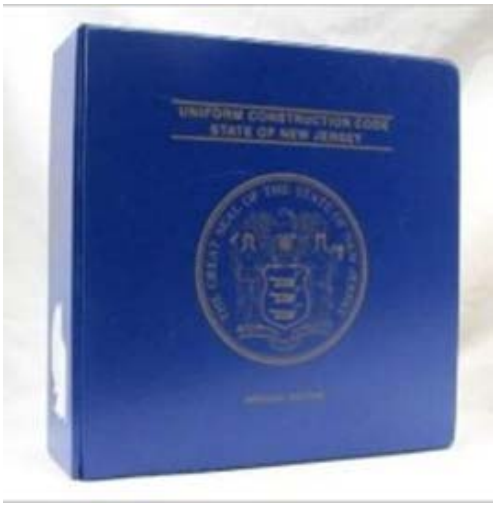
On the following pages, Chuck's handwritten timeline for implementation of the Uniform Construction Code, beginning from passage of the Act in 1975, is reprinted. It is followed by his hand-drawn flow chart—a depiction of the code enforcement process which continues to be remarkably accurate. These documents truly are the blueprints for the Uniform Construction Code enforcement system.

Our code enforcement system is straightforward and logical. From our vantage point, 40 years later, it is easy to say "of course." There are few still working in code enforcement who remember what existed before the adoption of the UCC. In 1975, each town adopted its own construction requirements. Some were outdated. Some were non-existent. Some were specification codes rather than performance codes. Some did not provide even minimal protection to the public. Enforcement of these requirements was scattered and uneven. Property owners went to the local fire prevention bureau for approval to install or to replace oil burners or tanks; the plumbing inspectors were under the local board of health and electrical inspectors worked through a third party agency under the jurisdiction of the Board of Public Utility Commissioners (now the Board of Public Utilities.) At the State level, there were 22 different agencies or authorities regulating some aspect of construction. It seems crazy now to think about each municipality having different requirements and permit applicants running from one desk to another in town hall to obtain approvals. The idea of a single set of requirements adopted at the State level and enforced at the municipal level by a single administrative unit, headed by a construction official, became law in New Jersey with that bill signing. The plans were laid for the creation of a body of well trained professionals to enforce the new rules. And New Jersey went on to become recognized as a national leader in code enforcement.

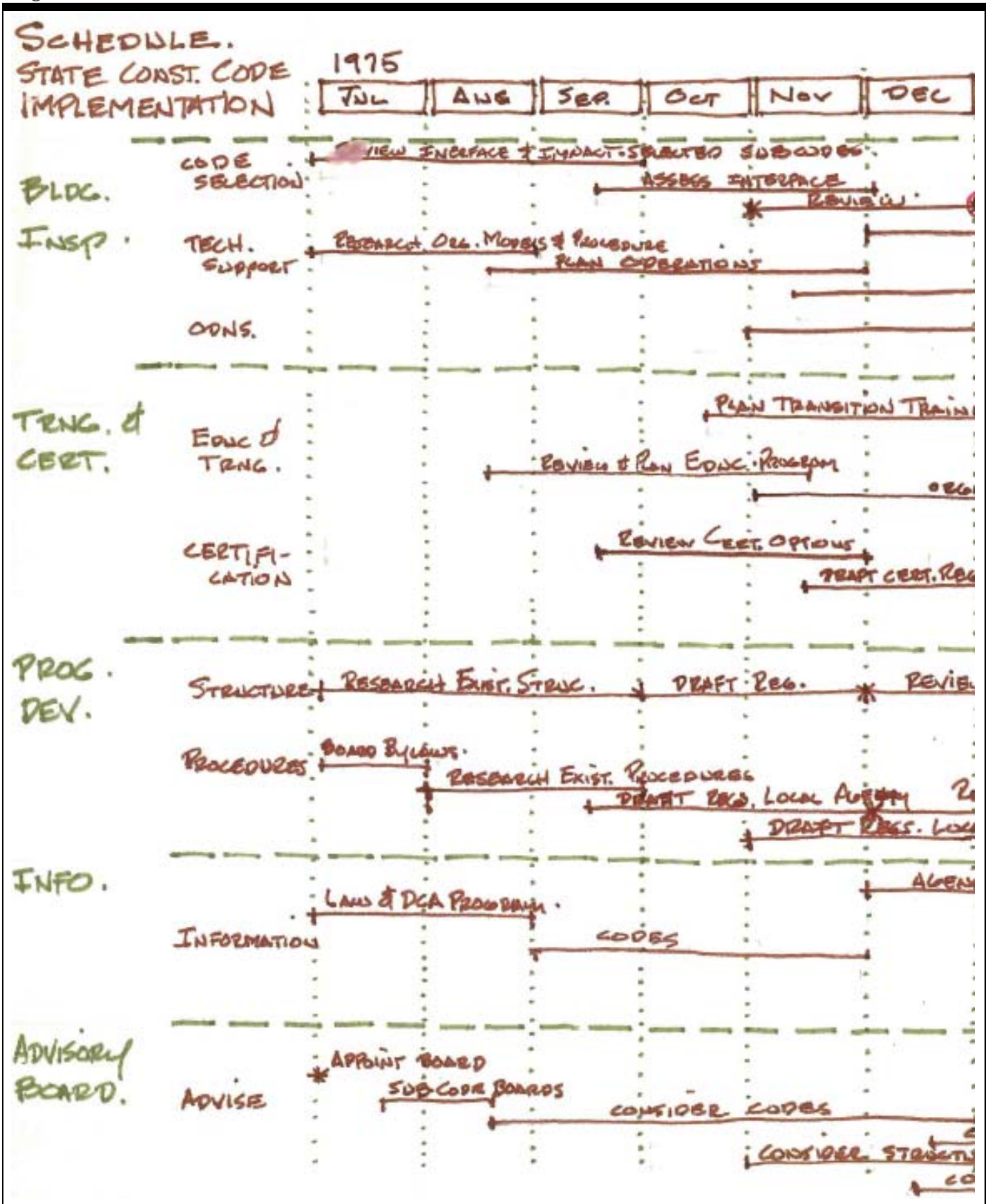
As we mark this milestone, we are also looking to the future of code enforcement in New Jersey. How do we attract qualified people to this field? How should code enforcement be organized so that it continues to serve the citizens of New Jersey well? It is incumbent on us to ensure that this highly effective system of code enforcement is adapted to continue for the next 40 years.

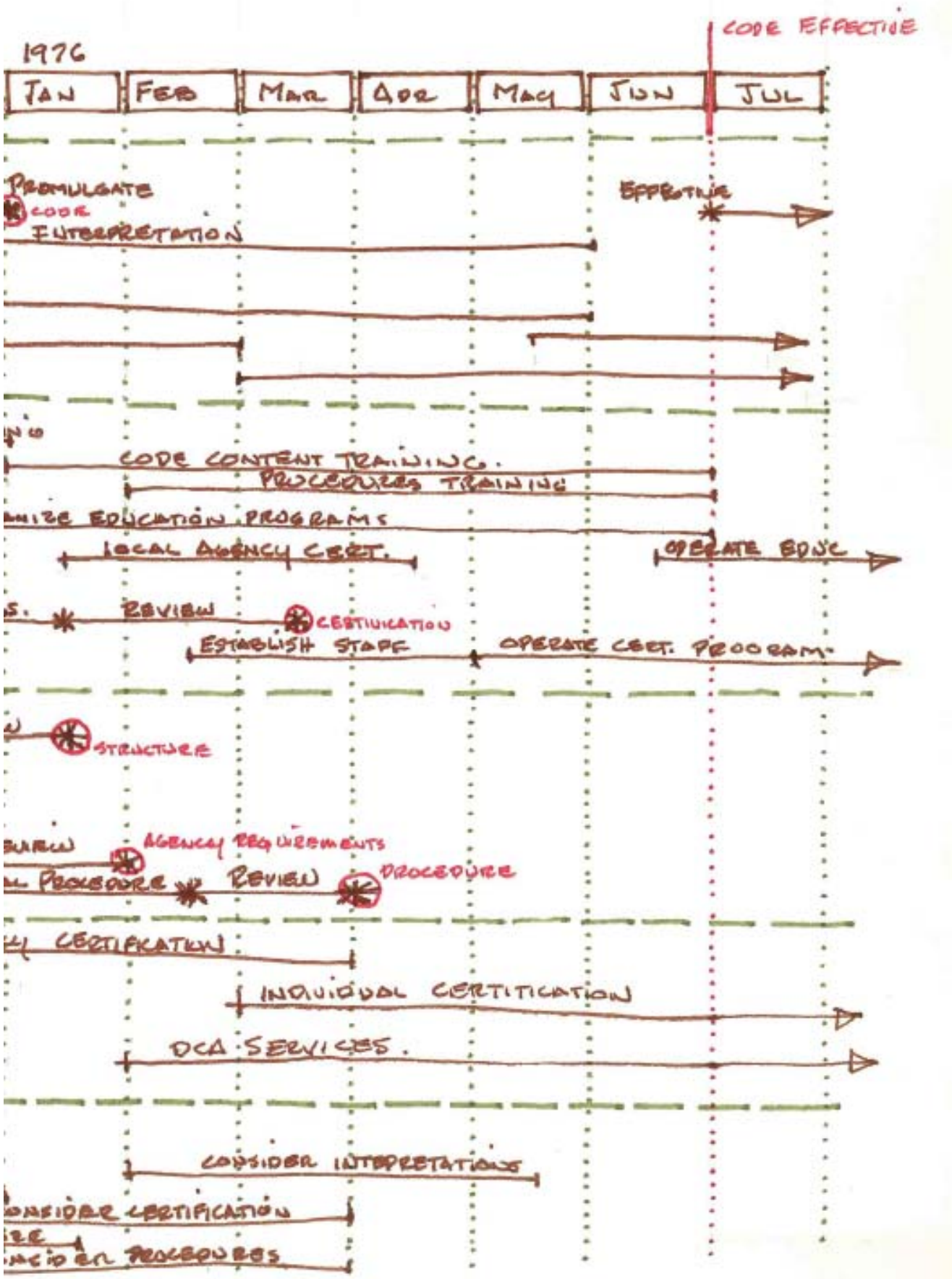
Source: Amy Fenwick Frank
Division of Codes and Standards

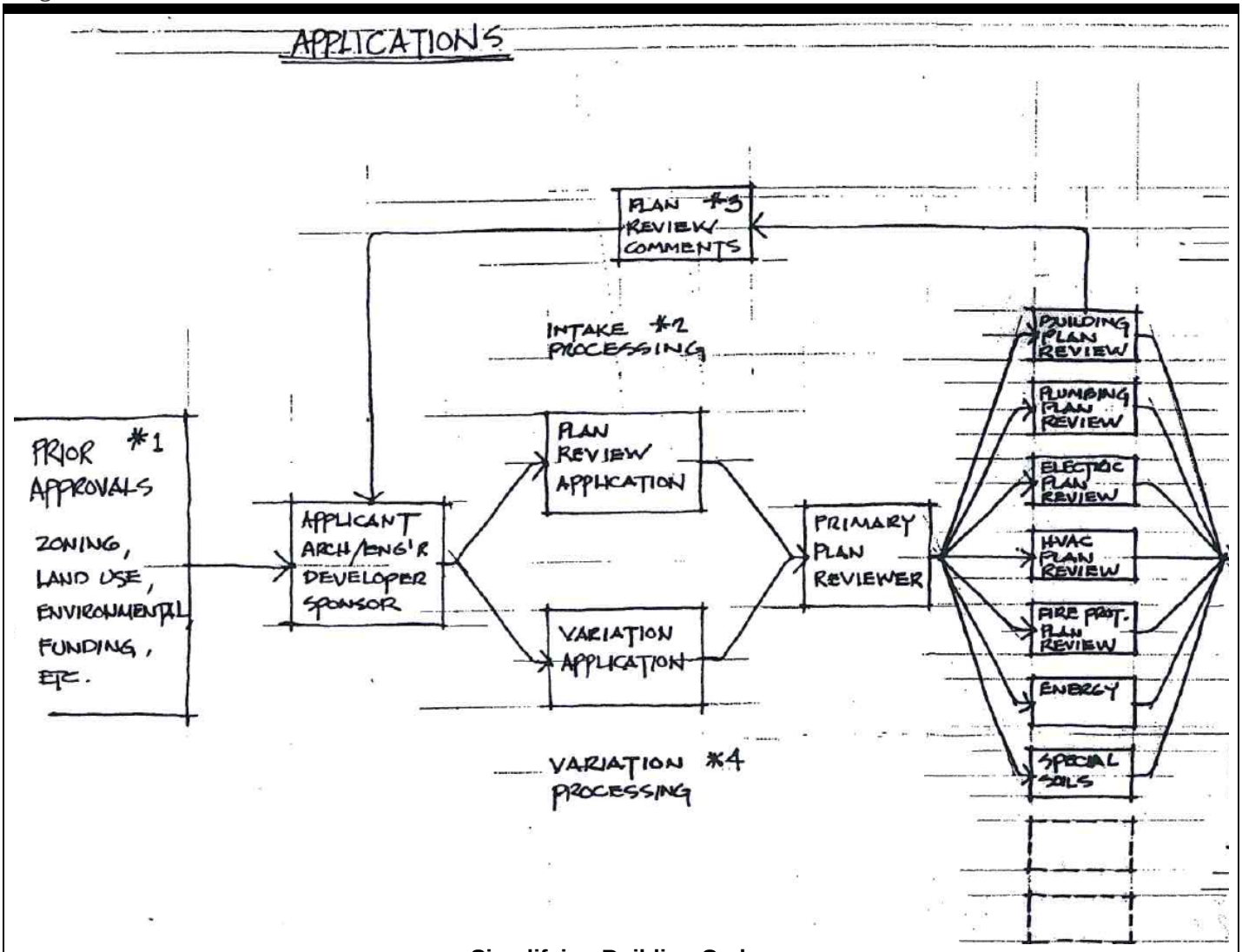







SCHEDULE.
STATE CONST. CODE IMPLEMENTATION
1975
JUL
AUG
SEP.
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NOV
DEC
BLDG. INSP.
CODE SELECTION
REVIEW INTERFACE & IMPACT - SELECTED SUBCODES
ASSESS INTERFACE
TECH. SUPPORT
RESEARCH ORG. MODELS & PROCEDURE
PLAN OPERATIONS
ODNS.
TRNG. & CERT.
EDUC & TRNG.
PLAN TRANSITION TRAIN
REVIEW & PLAN EDUC. PROGRAM
CERTIFICATION
REVIEW CERT. OPTIONS
DRAFT CERT. REG
PROC. DEV.
STRUCTURES
RESEARCH EXIST. STRUC.
DRAFT REG.
PROCEDURES
BOARD BYLAWS
RESEARCH EXIST. PROCEDURES
DRAFT REG. LOCAL AGENCY
DRAFT REGS. LOC
INFO.
LAWS & DCA PROGRAM
INFORMATION
CODES
ADVISORY BOARD.
APPOINT BOARD
ADVISE
SUBCODE BOARDS
CONSIDER CODES
CONSIDER STRUCTU


CODE EFFECTIVE
1976
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JUL
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CODE
INTERPRETATION
EFFECTIVE
CODE CONTENT TRAINING.
PROCEDURES TRAINING
LOCAL AGENCY CERT.
OPERATE EDUC
REVIEW
CERTIFICATION
ESTABLISH STAFF
OPERATE CERT. PROGRAM
STRUCTURE
AGENCY REQUIREMENTS
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INDIVIDUAL CERTIFICATION
DCA SERVICES.
CONSIDER INTERPRETATIONS



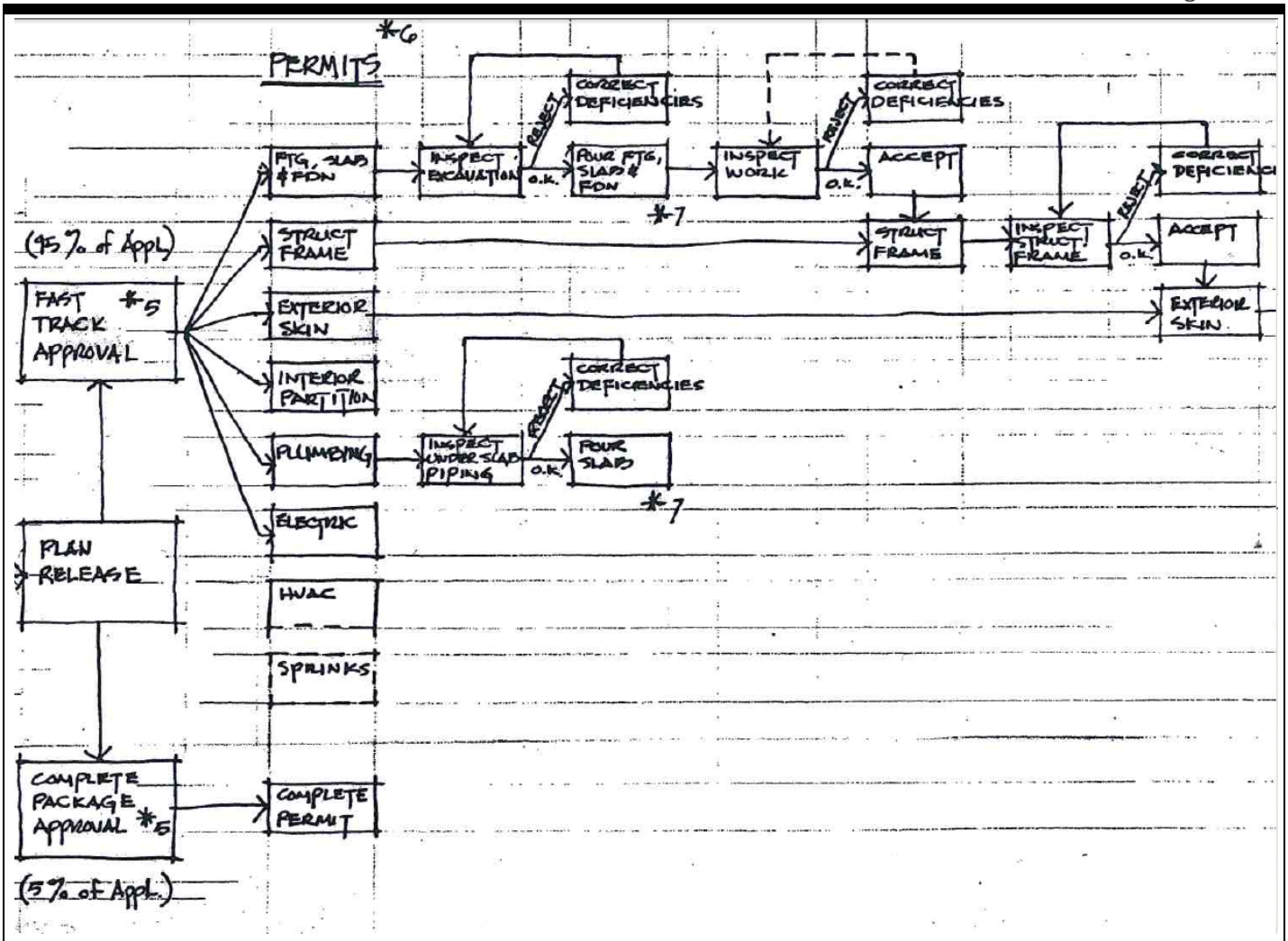
Simplifying Building Codes
Why New Jersey Scrapped Local and State Codes in favor of National Model Codes

(The below is an abridged and edited version of an article William M. Connolly wrote more than 20 years ago. It was published in a construction industry magazine to describe New Jersey's code enforcement system for a national audience.)

Locally written building codes, by their nature, promote duplication and non-uniformity and detract from timeliness and predictability. A better choice is based on national model codes and a strong working partnership between levels of government. In New Jersey, local and State officials have formed a partnership that has gone a long way toward providing an open, responsive, timely, predictable and effective regulatory system.

Reliance on national model codes establishes a framework that makes possible several desirable characteristics, beginning with timeliness and predictability. Because the model codes are the product of associations of public sector enforcement experts working in conjunction with private sector standards and testing systems, they also serve as valuable referees on maintaining a fair balance between public health and safety on one hand and costs on the other. The organizations promulgating these codes provide the soundest of technical and safety foundations for a building regulatory program. No state, county or local government can sustain, or as a practical matter will sustain, comparable code research and writing for very long. Even where the effort can be sustained, the wisdom of expending taxpayers' money to develop what is already available is questionable. Adopting national model codes has an additional benefit. With an accessible, reliable national organization handling codes and standards, local officials can devote their attention to implementation issues, such as efficient administration, effective enforcement and continuing education.

(continued on page 7)



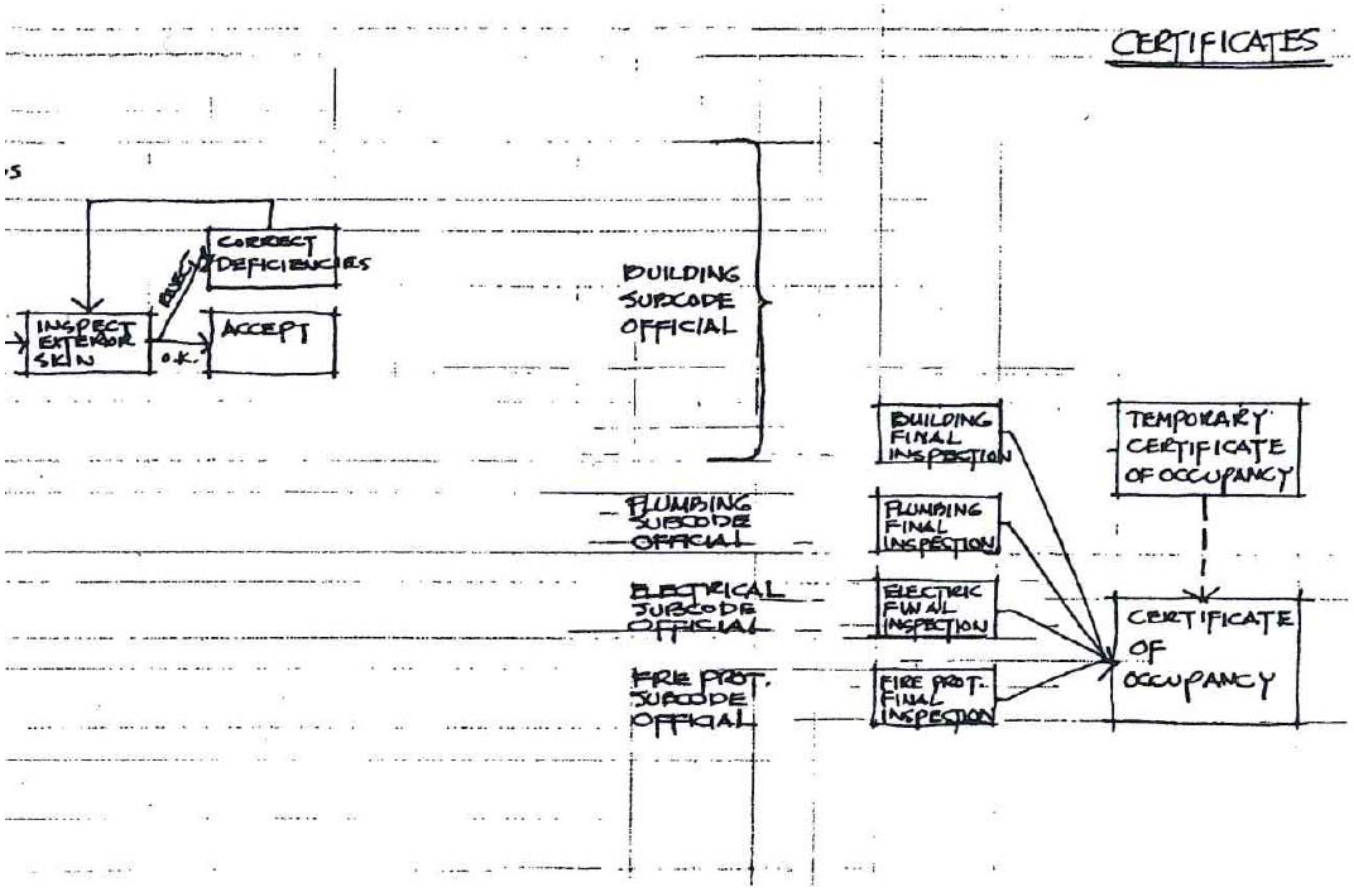
(Simplifying Building Codes – continued from page 7)

No public agency in New Jersey writes the technical provisions of construction codes. Instead, New Jersey adopts national model codes by reference. We do not amend these codes at the State or local level. We have adhered to this policy without exception since January 1, 1977. On that day, New Jersey swept away a web of confusion and duplication and implemented the Uniform Construction Code (UCC.) There is no question in my mind that the citizens of New Jersey are safer today because of it.

Because no code or code enforcement system is any better than the professionals who administer it, we seek to promote the technical competence and ethical integrity of the profession through the following enforcement principles:

- **Licensing of code enforcement professionals.** Every construction official, subcode official and inspector must be licensed the Department of Community Affairs. The UCC provides for separate technical licenses for each discipline.
- **Plan review system.** The UCC provides for levels of licensure. If a project is proposed in a municipality without adequate licensing, the plans are reviewed by the State. When released, the plans then serve as the basis for inspections by local officials.
- **Tenure of officials.** While New Jersey has a strong tradition of civil service protection for public employees, include code enforcement employees, about half of our towns do not offer civil service protection. In those towns, code officials are appointed for four year terms. A second appointment brings tenure. This kind of protection is necessary if we expect code officials to carry out their responsibilities professionally.
- **Professional accountability.** When technical incompetence, dishonest conduct or failure to maintain adequate public records are found, New Jersey takes action, include the ability to suspend or to revoke the license of the official involved.

(continued on page 8)



(Simplifying Building Codes – continued from page 8)

- **Conflict of interest.** One cannot be involved in the construction industry and properly regulate it. The UCC contains strong provisions limiting the outside employment of code officials.
- **Code variations.** Literal application of even the best code will sometimes prove impractical. Rather than relying on variance boards, the UCC empowers subcode officials to judge written variation requests on life-safety equivalence criteria.
- **Professional Responsibility.** Each of the subcode disciplines has clear and distinct responsibilities. All necessary enforcement activities must be approved by officials with appropriate licenses.
- **Administrative civil penalties.** In some situations, traditional enforcement resources, such as stop-work orders or withholding a certificate, become inadequate. Uncorrected violations are civil matters, with violators subject to administrative assessment of civil penalties. Unpaid penalties are subject to summary civil collections proceedings just as any other debt would be.
- **Fee-supported enforcement.** The Uniform Construction Code requires that enforcement be self-supporting through user fees. The construction industry in New Jersey has acknowledged that it is far better to pay realistic fees than to suffer the financial consequences of delay and confusion resulting from inadequately funded enforcement.
- **Education and training.** The education and training that support the design professions and the construction industry do not provide satisfactory background in codes, standards o code enforcement. New Jersey created extensive education and training programs. These include: approved courses which provide the prerequisite instruction for licensing test and continuing education required during each cycle to meet license renewal criteria. This extensive education and training effort is supported by a small surcharge levied on most permits.

This, then, is the “state of the art” regarding construction code enforcement in New Jersey. Our approach has been based on national model codes and a strong working partnership between the State and local officials. I am convinced that we have made our State safer through this system characterized by timeliness, predictability and professionalism.

Home Elevation Contractor Registration and Home Elevation Standards

(In a memorandum to Construction Officials dated October 3, 2014, Director Smith wrote…)

P.L. 2014, c. 34, signed into law by Governor Christie on August 15, 2014, calls for the Division of Consumer Affairs, in the Department of Law and Public Safety, to adopt rules for the registration of home elevation contractors. The Department of Community Affairs is charged with the adoption of rules governing the methods, procedures and other requirements that must be followed in performing home elevations. The statute authorized the two agencies to adopt special rules to implement these new requirements as quickly as possible. The rules are a special adoption and concurrent proposal. What does this mean? It means that the rules became effective on October 1, 2014 when they were filed with the Office of Administrative Law. And they have been proposed for public comment at the same time. The Notice of special adoption and concurrent proposal is posted on the Division's webpage and is attached for your review. It will appear in the New Jersey Register on November 3. The public comment period will extend until January 2, 2015. But the rules are on the books and must be enforced now.

The rules adopted (and concurrently proposed) by the Division of Consumer Affairs require a registered home elevation contractor for contracts to elevate entered into on or after October 1, 2014. (A copy of a notice on the new rules sent out by the Division of Consumer Affairs is attached. These rules include experience and insurance requirements for home elevation contractors.)

The following is a summary of the amendments to the Uniform Construction Code to establish standards for the elevation of existing buildings.

PERMIT APPLICATION – These requirements apply to permit applications submitted on or after October 1, 2014. N.J.A.C. 5:23-2.15 is amended to require that a permit application to elevate an existing home include the registration number of the home elevation contractor—or home improvement contractor if the contract was entered into prior to October 1.

Certification – The permit application must be accompanied by a certification signed by the contractor. A form to use for this purpose is attached. (Please note that this requirement is statutory.) When issuing permits for home elevations, it will be necessary to ask whether the contract was entered into before October 1. In every case, have the contractor complete the certification indicating that he/she is in compliance with the applicable provisions of the new laws. Those with contracts signed before October 1 may be home improvement contractors. Those with contracts signed on or after October 1 must be home elevation contractors.

INSPECTIONS – N.J.A.C. 5:23-2.18 is amended to state that a pile certification, prepared by a licensed professional engineer, takes the place of an inspection for pile foundations. The amendments include a description of what the certification must include and a requirement that the certification be based on the engineer's personal observations. (The person on site may be an employee of the engineer.)

REQUIREMENTS FOR HOME ELEVATIONS – A new rule, N.J.A.C. 5:23-2.37, contains the requirements for elevation, including addressing utility service connections, methods and equipment required, and protection of adjoining property. This is similar to the requirements contained at N.J.A.C. 5:23-2.17 for demolitions.

AMENDMENT TO THE ONE- AND TWO-FAMILY DWELLING SUBCODE FOR CONSTRUCTION ON PILES – N.J.A.C. 5:23-3.21 is amended to require the use of American Society of Civil Engineers (ASCE) Standard 24 for the construction of one-or two-family homes on piles. Previously, the use of ASCE 24 was required for buildings other than one- or two-family homes, but was listed as an alternative in the one- and two-family dwelling subcode. ASCE 24 is recognized as the industry standard for construction on piles. Its use is now required for all construction on piles. Alternate designs that do not conform to ASCE 24 may still be used through application for and granting of a variation. Because this is an amendment to an adopted subcode of the Uniform Construction Code, the six month grace period provided at N.J.A.C 5:23-1.6 will apply.

Up until this point, the Uniform Construction Code has not contained requirements specifically applicable to the elevation of an existing house. All of us have witnessed incidents of unscrupulous or incompetent contractors taking advantage of homeowners in the Sandy-affected communities. The intent of these new rules is to protect homeowners and to provide local code enforcement agencies with regulatory tools to be used for this purpose. Should you have any questions or concerns, please feel free to contact the Code Assistance Unit at (609) 984-7607 or codeassist@dca.nj.gov.

No DCA Approval Required for Local Review of Plans for Projects Undertaken at Schools

(In a letter to Construction Officials dated September 3, 2013, Director Smith wrote…)

September 3, 2013 Dear Construction Official: I am writing to inform you of a change in the process for review of plans for projects at schools. Effective immediately, no Department of Community Affairs approval will be required for local review of plans for projects to be undertaken at schools. The use of Department of Education Form DOE-124 is being discontinued. If a local code enforcement agency is classified at the appropriate level to review the project in question, as with all other types of construction projects, that agency may accept the project. If a local code enforcement agency declines to perform plan review for a school project or is not classified at the appropriate level for the project in question, then the project may go to an appropriately classified local code enforcement agency in a neighboring town or to the Department for review. Because of the added security requirements, plans and specifications for the construction of new schools will continue to be reviewed by the Department. Projects involving a change of use or an addition may be reviewed by a local enforcing agency classified at the appropriate level for the project. All Schools Development Authority (SDA) projects will continue to be reviewed by the Department.

Please note that, in addition to plan review for compliance with all applicable provisions of the adopted subcodes of the Uniform Construction Code, the local code enforcement agency also has responsibility to ensure compliance with N.J.A.C. 5:23-3.11A(c) and with the Department of Education's public school facility requirements enumerated in Bulletin 00-3.

Approval from the Department of Education is still required pursuant to the Educational Facilities Construction and Financing Act, P.L. 2000, c. 72. The Department of Education also performs a review for compliance with the educational adequacy requirements set forth in N.J.A.C. 6A:26-5. As before, the approval of the Department of Education must be in place before a plan review is undertaken pursuant to the Uniform Construction Code.

Should you have any questions about this letter or enforcement of the requirements of the Uniform Construction Code applicable to schools, please contact John Terry at john.terry@dca.nj.gov or (609) 984-7609. Should you have questions about the Department of Education approval, please contact Frank LoDolce in the Department of Education's Office of School Facilities at frank.lodolce@doe.nj.gov or (609) 292-7078.

Private Garages Below Living Spaces

(updated from Volume 13, Number 1, Spring 2001)

Recently, the Department has received a number of inquiries regarding the requirements for floor/ceiling separation assemblies between the dwelling unit and a private garage located beneath living spaces in single-family homes. According to Section 406.1.4 of the 2009 International Building Code (Building Subcode) and Section R302.6 of the 2009 International Residential Code (One- and Two-family Dwelling Subcode), fire partitions and floor/ceiling assemblies that have a minimum one-hour fire-resistance rating shall separate private garages located beneath habitable rooms from adjacent interior spaces.

In Formal Technical Opinion (FTO)-13, the Department has provided some working examples of construction practices that meet the intent of the Building Subcode and One- and Two-family Dwelling Subcode and which are considered acceptable methods of providing a one-hour fire-resistance-rated assembly. FTO-13 does not, however, supersede the Building Subcode and One- and Two-family Dwelling Subcode. FTO-13 provides examples of acceptable ways to meet the requirements of the Building Subcode and One- and Two-family Dwelling Subcode. Designs other than those included in FTO-13 are possible. Therefore, it is up to the design professional to decide which resource to use.

If you have any questions, please contact me at (609) 984-7609.

Source: Marcelino Iglesias
Code Assistance Unit

Permit Extension Act 2008

(In a letter the Construction Officials dated January 15, 2015, Director Smith wrote…)

P.L. 2014, c. 84, signed into law by the Governor on December 26, 2014, amends the "Permit Extension Act of 2008," P.L. 2008, c.78, and again extends the expiration date of certain permits. Under this new law, only the dates have changed. All of the other terms and conditions of the Permit Extension Act remain as they were. Below please find updated guidance on the application of the Permit Extension Act which has been revised to reflect the new expiration dates.

As code officials, you will continue to deal with this law on two levels: its impact on permits issued under the UCC and its impact on prior approvals. The Act stops the clock on the running of approvals during the "extension period," which is now defined as January 1, 2007 through December 31, 2015. This means that any UCC permit that was valid as of January 1, 2007 will still be valid on December 31, 2015. On December 31, 2015, when the clock starts again, the permit is valid for an additional six months or for the time that would have remained on January 1, 2007, whichever is shorter. Any permit issued during the extension period (between January 1, 2007 and December 31, 2015) will be valid until June 30, 2016 (six months beyond the end of the extension period,) or until the date when it would have expired if the Permit Extension Act had not been passed, whichever is longer. (Some examples of how to apply the Permit Extension Act to UCC permits are enclosed.)

There continues to be an exclusion in the Act for permits issued for projects in environmentally sensitive areas. To determine whether your municipality or any portion of your municipality is an "environmentally sensitive area" as that term is defined in the Act, please refer to the enclosed attachment.

In order to determine whether a prior approval qualifies for extension under this Act, construction officials should check with the agencies and officials responsible for issuing those prior approvals to make sure that those prior approvals remain in effect. A list of the approvals included and of those excluded by the Act is enclosed.

In those cases where plan review was done by DCA, any plan release that was valid on or after
January 1, 2007 may be used to support issuance of a permit through June 30, 2016. The same would be true of released prototypes. Once again, before issuing a permit, it is necessary to check with the agencies or officials involved to ensure that any required prior approvals remain valid.

Information, including this letter and the full text of the Act, is posted on the Division's website for your use. http://www.nj.gov/dca/divisions/codes/topics/#pea

Should you have any questions about the application of the Permit Extension Act, please feel free to call the Code Assistance Unit at (609) 984-7607.

Code Citations Decoded

(reprinted from Volume 10, Number 1, Spring 1998)

I can't tell you how many times I get calls from architects and contractors asking if a code official is required to provide a code citation for a plan review rejection comment. The answer simply is YES.

N.J.A.C. 5:23-2.16(a), Construction permits-procedure, states, "If the application is denied in whole or in part, the enforcing agency shall set forth the reasons therefor in writing." An applicant has a due process right to question a rejected item. The applicant's due process right entitles him/her to know what specifically has been violated. Therefore, written comments MUST be accompanied by the appropriate code citation. This provides the applicant the ability to appeal a rejection. Also, remember the code citation must be accurate and complete. If you can't find an applicable code section, you can't cite the item as a violation.

Source: Gerald Grayce *(Retired)*
Bureau of Regulatory Affairs

Lead-Free Fixtures and Piping

(In a memorandum to Plumbing Subcode Officials dated February 24, 2014, Director Smith wrote…)

The Reduction of Lead in Drinking Water Act (P.L. 111-380) is a federal law, enacted on January 4, 2011, that amends the Safe Drinking Water Act (42 USC 300g-6) by setting new, lower standards for the amount of lead allowed in plumbing products that come into contact with potable (drinkable) water. This change reduces the permissible levels of lead in the wetted surfaces of pipe, pipe fittings, plumbing fittings and fixtures to a weighted average of not more than 0.25 percent. For solder and flux, the limit remains 0.2 percent lead. The amendments also address the method for calculating lead content. Products that meet this standard are defined in the law as "lead free."

This law became effective on January 4, 2014. It is anticipated that the 2015 edition of the National Standard Plumbing Code will address this issue. However, since the federal law is in effect, local code officials should begin enforcing this requirement now. All pipe, pipe fittings, plumbing fittings and fixtures used in potable water systems should comply with this new requirement.

There are resources available on the International Code Council website that may be helpful in the identification of compliant fixtures and piping. The links are provided below for your convenience. Should you have any questions, please feel free to contact Thomas Pitcherello in our Code Assistance Unit at (609) 984-7607.

This site has examples of product markings: http://www.iccsafe.org/cs/PMG/Documents/GetTheLeadOut.pdf

Under "Lead in Plumbing Products," this site has information on the new federal requirements: http://www.iccsafe.org/cs/PMG/Pages/default.aspx

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Vapor Retarders

(updated from Volume 23, Number 3, Fall 2011)

The requirements --and the exceptions--for vapor retarders in the International Residential Code (IRC)/2006 have been distributed throughout the text of IRC/2009 regarding the building thermal envelope. The Department has received many questions on the application and installation of vapor retarders, so, in this article, we are providing the IRC/2006 text, footnoted, to help you find the requirements in the IRC/2009; keep in mind that climate zone 4 is exempt for framed assemblies, so the following applies to climate zone 5, unless otherwise noted.

IRC/2006
R318.1 Moisture control.
In all framed walls[a], floors[b] and roof/ceilings[c] comprising elements of the building thermal envelope, a vapor retarder shall be installed on the warm- in-winter side of the insulation.
Exceptions:
1. In construction where moisture or freezing will not damage the materials.
2. Where the framed cavity or space is ventilated to allow moisture to escape.
3. In counties identified as in climate zones 1 through 4.

IRC/2009
a – R601.3, General wall construction
b – R408.1 and R408.2, Naturally ventilated underfloor spaces; R408.3, Unvented under-floor spaces; R506.2.3, Concrete floors on ground (not a framed assembly and contains its own exceptions)
c – R806.4, Unvented attic assemblies

If you have questions, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

When is a Demolition Permit Required?

(updated from Volume 13, Number 3, Fall 2001)

The Department of Community Affairs has become aware of some confusion in the field about when permits are required for demolition. As a general rule of thumb, a true demolition permit is required when the entire building is being demolished. Under the Rehabilitation Subcode, when a portion of a building is being demolished, this type of work is considered an alteration or reconstruction. In an alteration or reconstruction project, a permit may be issued for the portion of the building being demolished in conjunction with a construction permit.

The exception to this rule is that, when a building or structure is going to be demolished and the foundation left in place, a full demolition permit is required. Any portion of the new structure built on the existing foundation is treated as new construction and is required to comply with the Building Subcode; the existing foundation is required to comply with the Rehabilitation Subcode.

If you have any questions, you may contact me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Owners Doing Work In Their Own Homes

(reprinted from Volume 21, Number 1, Spring/Summer 2009)

This article intends to help clear up some confusion between home improvement contractors (HIC) and homeowners preparing their own plans.

The HIC requirements, as they pertain to the Uniform Construction Code (UCC), can be found at N.J.A.C. 5:23-2.15(b)8. The exception for single-family homeowners preparing their own plans can be found at N.J.A.C. 5:23-2.15(f)1ix.

Please keep in mind that the UCC references above have distinct differences. N.J.A.C. 5:23-2.15(f)1ix. allows the construction official to waive the requirement for signed/sealed plans in the case of a single family homeowner who has ***prepared*** construction plans to a detached structure used or intended to be used exclusively as his or her private residence. As per N.J.A.C. 5:23-2.15(b)8ii, a HIC registration is not required for any person ***performing*** a home improvement upon a building or structure in Group R-2, R-3, R-4 or R-5 owned by that person, or by a member of that person's immediate family.

As you can see from the bolded/italicized words above, N.J.A.C. 5:23-2.15(f)1ix deals with the ***preparation of the plans***, while N.J.A.C. 5:23-2.15(b)8ii deals with ***construction work being performed***. As an example, a single family homeowner owns two homes; one is his residence, the other is a rental property. The homeowner has decided to build an attached deck at his home and also to build an attached deck at the rental property. The homeowner is allowed to draw the deck plans for the home he lives in, but may not draw the deck plans for the rental property; the plans for the rental property must be drawn by a design professional. However, the homeowner may construct the deck his home and may also construct the deck at the rental property without being registered as a HIC.

If you have any questions on this matter, you may contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

The Natural Nuisance - Mold

(updated from Volume 13, Number 4, Winter 2004)

What's green, black, or a variety of other colors; is sometimes hairy and smelly; and oftentimes hides in the dark, or can be found in places where water is present? Drum roll, please ... MOLD.

Recently, there has been much in the media about the effects mold has on health. Understandably, the media's sometimes sensational approach to informing the public has caused some uneasiness among New Jersey's homeowners. The Department of Community Affairs has received inquiries about mold in homes. The most fundamental question is whether the Uniform Construction Code has jurisdiction over this problem -- as a construction issue-- or whether jurisdiction lies with the Department of Health (DoH) as a health problem.

Before we jump to conclusions, what do we know about mold? Molds are fungi. They can be found everywhere - indoors and outdoors - and they grow anywhere, and I mean anywhere, moisture is present. Approximately 1,000 of the 10,000 species of mold are found in the United States, with the most commonly found being Cladosporium, Penicillium, and Aspergillus.

Molds play a saprophytic role, which means that they derive their nourishment from metabolizing or breaking down carbon surfaces, examples of which are cellulose, carpet, wood, dirt, asbestos, insulation, and wallboard. As a result of this metabolic process, molds release millions upon millions of spores containing proteins.

Now, let's consider how molds might affect a person's health. Imagine you are a person with an a1lergy to pollen. When the air contains pollen, your allergies act up. Your nose might get stuffy, your eyes might be itchy, your chest might be a little congested, and you probably sneeze a lot. Common sense would tell us then that when spores from a certain species of mold are released into the air and are free floating, a person's allergy to that particular species of mold might be triggered, much as it would were he or she allergic to pollen. Similarly, persons with compromised immune systems might be sensitive to molds. Here's an important rule of thumb: the lower your immunity, the greater the chance of being susceptible to allergy and illness.

Through investigation, it has become clear that this is not a construction issue. However, if water/moisture is a problem in the building and is code related, then code officials should address this. Otherwise, medical problems resulting from exposure to molds in buildings or homes are due to an indoor air quality problem, which is a health issue. Jurisdiction for addressing complaints lies with DoH.

Code Officials: If homeowners have questions about mold or general indoor air quality problems, you may direct them to the DoH Indoor Environments Program at (609) 826-4950. Also, information may be obtained from the DoH website at https://www.nj.gov/health/ceohs/environmental-occupational/mold/.

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

Source: Megan Sullivan Cyz
Code Development Unit

What Is the Meaning Behind the Issuance of a Certificate of Occupancy?

(reprinted from Volume 10, Number 1, Spring 1998)

The Uniform Construction Code Act itself states that "the Certificate of Occupancy shall certify that the building or structure has been constructed in accordance with the provisions of the construction permit, the code, and other applicable laws and 'ordinances." There are three important concepts related to Certificates of Occupancy (C.O.'s) which need to be understood:

1. The law states that the "certificate of occupancy shall certify." This does not mean that the construction official or subcode officials are certifying that the structure complies. Rather, those officials issue or approve the issuance of the C.O. based on the applicant's certification that the work complies and their own inspections which are intended to check on, rather than substitute for, the owner's certification. The certification is called for at N.J.A.C. 5:23-2.23(h)4. It should be a part of the application for a C.O.
2. The C.O. is to be issued only if the requirements of all other applicable laws and ordinances are met. An example would tie conditions imposed by a municipal planning board as a part of site plan approval. It is important to understand that the authority to decide whether or not the requirements of other laws and ordinances have been met rests with the construction official and no one else. If the other law or ordinance is enforced by some other municipal,' county, or state official, then the Construction Official will ordinarily rely on the advice of that other official as to whether or not the other law or ordinance has been complied with. Final decision-making authority, however, rests with the Construction Official. Similarly, the authority to issue a Temporary Certificate of Occupancy (T.C.O.) when work required under some other law or ordinance is not fully complete rests with the Construction Official. The Construction Official should use the guidelines for TCO's established in the regulations at N.J.A. C. 5:23-2.23(g).
3. The Certificate of Occupancy constitutes permission to occupy a building for a specific use -arid no more. The requirement for a C.O. was established because some control on when the use of a new building or the changed use of an existing one may legally commence. This permission is granted by the Construction Official and it can be withdrawn by the Construction Official because the C.O. is conditional. There are conditions which have to be met in order for a building to qualify for a certificate of occupancy. They are listed in the regulations at N.J.A.C. 5:23-2.24. There are also conditions which have to be met in order for a building to keep its certificate of occupancy. They are set forth at N.J.A.C. 5:23-2.23(i). The regulations provide that a C.O. may be revoked if the condition for obtaining it or the conditions for keeping it are no longer met. For example, if it is found that a serious violation of the code is present which was not picked up during construction or if it is found that a required system such as a fire alarm is no longer operable, then the C.O. can be revoked. The revocation of a C.O. is a serious matter since the owner Ioses use of the building. It is a remedy which should not be invoked lightly, but it is important to understand that it is there.

There is one final principal related to Certificate of Occupancy which is important. It is quite common for Temporary Certificates of Occupancy (T.C.O.) to be issued. These T.C.O.'s should only be issued for a fixed period of time. It is expected that any · remaining work will be completed before the T.C.O. expires. A T.C.O. can, of course, be extended for good cause. If a T.C.O. expires without all remaining work being done, then the building is being occupied without a C.O. in violation of the code. The construction official is obliged to assess penalties and take any other step as may be necessary to terminate the illegal occupancy. This holds true whether the remaining work is required by the code or required by one of the other laws or ordinances referred to by law.

The certificate of occupancy is not a certification, but a powerful enforcement tool which is there for the Construction Official to use to compel compliance with the law.

Source: William M. Connolly, AIA *(Retired)*
Director, Division of Codes and Standards

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Volume 25, Number 1 Spring 2013

Flood Hazard Construction

On January 25, 2013, the State adopted emergency amendments to New Jersey's Flood Hazard Area Control Act rules (within the Department of Environmental Protection regulations at NJAC 7:13.) Among other changes, these amendments establish minimum elevation standards based on the Advisory Base Flood Elevations (ABFE's) issued by FEMA for Atlantic, Bergen, Burlington, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean, and Union Counties. The rule applies to new construction and those property owners whose properties were "substantially damaged" or are starting new construction. A structure is considered substantially damaged if the cost of restoration equals or exceeds 50 percent of the market value of the structure prior to the damage; this determination is made by the local floodplain administrator.

Keeping in mind that DEP's existing rules already contained a mandatory 1-foot freeboard*, which is maintained within this emergency adoption, and applies to the lowest floor of the home or building, the question remains, how does this interface with the Uniform Construction Code (UCC), NJAC 5:23? The quick answer is to see your local floodplain administrator as he or she will let you know the ABFE and the flood zone applicable to home or building in question. Under

See Flood Hazard Construction - page 2

Installation of Standby Power Generators at Single-family Dwellings

The Department has received several questions concerning the installation of standby generators at single family dwellings: Who is responsible for plan review and inspection? and Where does the generator need to be located?

The Uniform Construction Code (UCC) and the one- and two-family dwelling subcode do not have specific requirements for these installations. However, the International Residential Code/2009 (IRC), Section M1301.1, Scope, requires compliance with the International Mechanical Code (IMC) and International Fuel Gas Code (IFGC) when installations are not specifically covered by the IRC. IMC, Section 915, Engine and Gas Turbine-Powered Equipment and Appliances, and IFGC, Section 616, Engine and Gas Turbine-Powered Equipment, both reference National Fire Protection Association (NFPA) 37-2006, Installation and Use of Stationary Combustion Engines and Gas Turbines, and both require that the requirements of UL 2200, Stationary Engine Generator Assemblies are met.

NFPA 37, Section 4.1.4, Engines Located Outdoors, has specific information on the location of the generator

See Standby Power Generators - page 3

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Flood Hazard Construction *continued from page 1*

the UCC, this is handled through the prior approval process. However, you should know that the DEP rules only use "lowest floor" and the UCC, by means of referenced model codes and standards, uses this term and "lowest horizontal structural member". This may seem confusing, but hopefully, this boiled-down version of the interaction between rules is helpful.

> * Note – Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. (http://www.fema.gov/national-flood-insurance-program-2/freeboard)

Combining DEP's new rules and the UCC's existing requirements essentially means you are looking at the more stringent requirements of the two. Therefore, the breakdown of the elevation requirements in a flood zone per the 2009 International Building Code (IBC) and the 2009 International Residential Code (IRC) is as below, with detailed reasoning after.

		IRC[a]	IBC[b]			
			Cat I	Cat II	Cat III	Cat IV
Elevation of the lowest floor (IRC A zone and Coastal A zone and IBC A zone)	elevation to lowest floor	ABFE +1 ft	ABFE +1 ft	ABFE +1 ft	ABFE +1 ft	ABFE +2 ft
Elevation of bottom of lowest horizontal structural member (IRC V zone and IBC Coastal A zone and V zone)	where the lowest horizontal structural member[c] is parallel to direction of wave approach	ABFE	ABFE	ABFE	ABFE +1 ft	ABFE +1 ft
	where the lowest horizontal structural member[c] is perpendicular to direction of wave approach	ABFE +1 ft	ABFE	ABFE +1 ft	ABFE +2 ft	ABFE +2 ft

a – Per Sections R322.2.2, R322.3.5 and R309.3, attached and detached enclosed areas used solely for parking of vehicles, building access or storage may be below the ABFE.
b – Category classifications are from Table 1-1 of the ASCE 24-05.
c – Assuming lowest horizontal structural member is at least 1 ft in height.

IRC, Section R322 (One- and two-family detached dwellings and attached single-family townhouses, all 3 stories or less)

A zone and Coastal A zone (R322.2.1 and N.J.A.C. 7:13)

- The lowest floor must be elevated to or above the ABFE plus one foot.

V zone (R322.3.2 and N.J.A.C. 7:13)

- *If the lowest horizontal structural member is parallel to the wave action, the bottom of the lowest horizontal structural member must be elevated to or above ABFE*;
- If the lowest horizontal structural member is perpendicular to wave action, the bottom of the lowest horizontal structural member must be elevated to ABFE plus one foot.

Please note that, as per Sections R322.2.2, R322.3.5 and R309.3, attached and detached enclosed areas used solely for parking of vehicles, building access or storage may be below the ABFE.

IBC, Section 1612 and ASCE 24-05 (non-IRC buildings)

A zone (Section 2.3 and Table 2-1 of ASCE 24 and N.J.A.C. 7:13)

- The lowest floor must be elevated to or above the ABFE plus one foot, except that a Category IV building elevation is ABFE plus two feet.

See Flood Hazard Construction –page 3

Standby Power Generators *Continued from page 1*

for engine-driven generators located outside. The generators must be installed a minimum of five feet from any opening into the structure and at least five feet from structures that have combustible walls. There are two exceptions to the five foot separation:

(1) No minimum separation is required when the wall adjacent to the generator has a fire resistance rating of at least one hour; and

(2) A distance of less than five feet is acceptable when documentation is provided showing that a fire located inside the noncombustible weatherproof enclosure did not ignite combustible materials location outside. This exception applies because some generator manufacturers have performed burn tests and have proven their units can be within 18 inches of combustible materials without ignition. The subcode official who performs the review must make sure the applicant supplies documentation from the manufacturer indicating that the unit proposed to be installed closer than five feet has been tested and approved in accordance with the standard for clearance to combustibles. The documentation must include the model and size of the unit being installed. NFPA 37 requires the generator be supported on a foundation or secured to noncombustible framework. NFPA 37 also provides information on generators that are installed inside and those installed on top of structures.

See Standby Power Generators –at right

Standby Power Generators *Continued from left*

The review and inspection responsibilities are assigned to the building subcode official and fire protection subcode official, as follows:

- IMC requires building and fire review with building final inspection;
- IFGC requires building and fire review with fire final inspection.

When generators are being installed at Group R-3, R-4 or R-5 structures, the UCC (at N.J.A.C. 5:23-3.4(d)), allows a construction official to assign these responsibilities to the mechanical inspector when there is one employed by the enforcing agency.

In addition, the plumbing subcode official and electrical subcode official have inspection responsibilities for the connection of the gas line and the installation of electric wiring and sizing of the generator, respectively. The National Electrical Code (NEC), Article 702.4, Capacity and Rating, also requires that standby sources have the capacity to supply all the loads connected to them, unless an automatic load management system is used to ensure that the transferred loads do not overload the source. This requirement applies only to systems where the switching between power sources occurs automatically.

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Flood Hazard Construction *Continued from page 2*

V zone and Coastal A zone (Section 4.4 and table 4-1 of ASCE 24 and N.J.A.C. 7:13)

- *If the lowest horizontal structural member is parallel to the wave action, the bottom of the lowest horizontal structural member must be elevated to or above ABFE*, except that Category III and IV buildings elevations are ABFE plus one foot;
- *If the lowest horizontal structural member is perpendicular to wave action, the bottom of the lowest horizontal structural member must be elevated to or above ABFE*, except that a Category II building elevation is ABFE plus one foot and Category III and IV buildings are ABFE plus 2 feet.

Note that the italicized portions from above are assuming the lowest horizontal structural member is at least one foot in height to meet the "plus one foot" of the lowest floor requirement from N.J.A.C. 7:13.

There actually are three entities involved in the enforcement of requirements for elevation of structures in identified flood hazard areas:

- The local floodplain administrator is responsible for the enforcement of the municipal flood ordinance. These ordinances are adopted as a condition of the municipality's participation in the National Flood Insurance Program. (It should be noted that municipalities may choose to adopt requirements for higher elevations.) DEP provides a model flood ordinance at: http://www.nj.gov/dep/floodcontrol/modelord.htm.
- DEP is responsible for enforcement of the State's Flood Hazard Area Control Act rules, N.J.A.C. 7:13. Under the emergency rule just adopted, if a home or building is being raised or reconstructed in the original footprint, DEP's "permit by rule" allows construction to proceed without a separate review or approval from DEP. This same rule allows for an increase in the footprint of up to 300 square feet under the permit by rule provisions, which is helpful in terms of additional steps or ramps necessary to access elevated buildings. Other construction in a flood hazard area requires approval from DEP.
- The local construction official is responsible for enforcement of the UCC, including the elevation requirements described above.

See Flood Hazard Construction –page 4

Flood Hazard Construction *Continued from page 3*

TABLE 1-1. Classification of Structures for Flood-Resistant Design and Construction (Classification same as ASCE 7, Ref. [1])

Nature of Occupancy	Category
Structures that represent a low hazard to human life in the event of failure including, but not limited to: ▪ Agricultural facilities[a] ▪ Certain temporary facilities ▪ Minor storage facilities[b]	I
All structures except those listed in Categories I, III and IV	II
Structures that represent a substantial hazard to human life in the event of failure including, but not limited to: ▪ Buildings and other structures where more than 300 people congregate in one area ▪ Buildings and other structures with day-care facilities with capacity greater than 150 ▪ Buildings and other structures with elementary school or secondary school facilities with capacity greater than 250 ▪ Buildings and other structures with a capacity greater than 500 for colleges or adult education facilities ▪ Health care facilities with a capacity of 50 or more resident patients but not having surgery or emergency treatment facilities ▪ Jails and detention facilities ▪ Power generating stations and other public utility facilities not included in Category IV Buildings and other structures not included in Category IV (including, but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, hazardous waste, or explosives) containing sufficient quantities of hazardous materials considered to be dangerous to the public if released. Buildings and other structures containing hazardous materials shall be eligible for classification as Category II structures if it can be demonstrated to the satisfaction of the authority having jurisdiction by a hazard assessment as described in Section 1.5.2[c] that a release of the hazardous material does not pose a threat to the public.	III
Structures designated as essential facilities including but not limited to ▪ Hospitals and other health-care facilities having surgery or emergency treatment facilities ▪ Fire, rescue, ambulance, and police stations and emergency vehicle garages ▪ Designated earthquake, hurricane, or other emergency shelters ▪ Designated emergency preparedness, communication, and operation centers and other facilities required for emergency response ▪ Power generating stations and other public utility facilities required in an emergency ▪ Ancillary structures (including, but not limited to, communication towers, fuel storage tanks, cooling towers, electrical substation structures, fire water storage tanks or other structures housing or supporting water, or other fire-suppression material or equipment) required for operation of Category IV structures during an emergency ▪ Aviation control towers, air traffic control centers, and emergency aircraft hangars ▪ Water storage facilities and pump structures required to maintain water pressure for fire suppression ▪ Buildings and other structures having critical national defense functions Buildings and other structures (including but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, hazardous waste, or explosives) containing extremely hazardous materials where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction. Buildings and other structures containing extremely hazardous materials shall be eligible for classification as Category II structures if it can be demonstrated to the satisfaction of the authority having jurisdiction by a hazard assessment as described in Section 1.5.2[c] that the extremely hazardous material does not pose a threat to the public. This reduced classification shall not be permitted if the buildings or structures also function as essential facilities	IV

[a]Certain agricultural structures may be exempt from some of the provisions of this Standard – see section C..4.3.
[b]For the purposes of this standard, minor storage facilities do not include commercial storage facilities.
[c]Section 1.5.2 reference is made to ASCE Standard 7-05, not this standard.

If you have any questions, please contact me at (609) 984-7609.

Source: Robert Austin
Code Assistance Unit

Electrical Systems Guidance – November 2012

The Department has issued the following guidance for use in addressing electrical systems in the immediate aftermath of Superstorm Sandy.

- Panel underwater:
  - Pull the meter;
  - Clean and dry all breakers and bus bar;
  - Reinstall breakers necessary for temporary occupancy and restoration;
  - Within 90 days, all breakers and bus bar must be replaced. In lieu of replacement, the bus bar may be certified by a licensed electrical contractor.
- Wiring underwater:
  - If undamaged, no replacement is necessary.
- Other equipment and outlets (receptacles, lighting, switches, alarms, etc.) underwater:

Within 90 days, all other equipment and outlets must be replaced.

Landlords and Tenants Affected by Superstorm Sandy: An Important Message Concerning Security Deposits

In a November 2012 Alert, the Division of Codes and Standards advised:

The following information concerns security deposits.

Under the Security Deposit Law, N.J.S.A. 46:8-19 through 26, within five (5) business days after a tenant is displaced due to fire, flood, condemnation, or evacuation, the landlord must return the security deposit.

The law requires the return when either an authorized public official has posted the premises with a notice prohibiting occupancy, or any building inspector, in consultation with a relocation officer, where applicable, has certified within 48 hours that displacement is expected to continue longer than seven (7) days and has notified the owner or lessee in writing. The landlord must return to the tenant, upon his/her request, the security deposit and the tenant's portion of interest, less any charges expended in accordance with the contract, lease or agreement, and less any rent due and owning at the time of displacement.

Within three (3) business days after receiving notification of the displacement, the landlord shall provide written notice to a displaced tenant, by personal delivery or mail to the tenant's last known address, indicating when and where the tenant's security deposit

See Security Deposits at right

Mechanical/Plumbing Guidance for Code Officials

In a November 2012 Alert, the Division of Codes and Standards advised:

- Gas piping in a residential structure that has been totally or partially submerged should be blown out and pressure tested with a pressure of not less than 3 psi for a period of 10 minutes.
- Gas piping in a commercial structure that has been totally or partially submerged should be blown out and pressure tested with a pressure of one and one-half times the working pressure, but not less than 3 psi for a period of 30 minutes for each 5,000 cubic feet of pipe volume.
- Where the gas piping has not been submerged, but, the appliance has been partially or completely submerged, the existing gas pipe joints should be tested to determine if leaks exist. This can be accomplished by any acceptable method including but not limited to a "soap-test".
- Gas-fired or oil-fired appliances that have been partially or completely submerged should be repaired or replaced. Manufacturer's instructions for repairs should be followed if available.
- Electrical components that have been partially or completely submerged should be repaired or replaced prior to energizing.

Should you have any questions or need any further information, please feel free to contact our Code Assistance Unit at (609) 292-7899 or codeassist@dca.state.nj.us.

Security Deposits *Continued from left*

will be available for return. If the last known address for the tenant is at the property that is no longer habitable, the landlord shall post notices at each exterior entrance of the property. The landlord may make arrangements to have the municipal clerk hold the security deposit so that the tenant may collect it at the clerk's office. If the tenant does not collect the security deposit within 30 days, it shall be re-deposited or reinvested by the landlord in the same bank from which it was withdrawn.

If the tenant does collect the security deposit and then reoccupies the property, the tenant is required to repay the security deposit. The tenant must immediately redeliver one-third of the security deposit, one-third more in 30 days and the final one-third in 60 days.

The Security Deposit Law applies to most residential rental properties, including mobile homes. The exception is owner-occupied two- or three-family dwellings.

For more information on landlord tenant issues, please visit our website at: www.state.nj.us/dca and follow the Highlights link for "landlord tenant information."

Disposing of Asbestos-containing Materials from Structures Impacted by Superstorm Sandy

In a February 2013 Alert, the Division of Codes and Standards advised:

ISSUE

Reports have been received that homes are being demolished without testing for or removing asbestos.

HAZARD

Asbestos is hazardous to human health and was a common building material prior to 1980, but can also be present in post-1980 structures. Asbestos can cause respiratory illness years after exposure. Consequently, all persons who are removing walls or other parts of homes damaged by Hurricane Sandy should be cautious and determine if asbestos is present prior to removal.

SUMMARY

Removal of any asbestos, or demolition of a home that potentially contains asbestos, must be done in accordance with local, state, and federal rules. There are more stringent requirements for friable asbestos, which can more readily become airborne. See requirements and attachments below. If anyone but the homeowner removes the asbestos, they must be licensed by the Department of Labor. This includes volunteers. Extensive training is required, including how to use personal protection equipment. While a homeowner is not required to be licensed, we recommend that only licensed professionals remove asbestos.

REQUIREMENTS

Prior to the demolition of any structure, the owner or owner's agent must provide documentation, a letter suffices, to the local construction department that all friable asbestos or asbestos-containing material that will become friable during demolition or removal has been or will be properly abated prior to demolition. Pursuant to NJAC 5:23-8, "Friable" means any material applied to ceilings, walls, piping, duct work, etc., which when dry may be crumbled, pulverized, or reduced to a powder by hand pressure. This documentation is needed to obtain a municipal demolition permit. Under current New Jersey Department of Health (NJDOH) and New Jersey Department of Labor and Workforce Development (NJDOL), there is nothing that prohibits the homeowner from removing, packaging and disposing of asbestos roofing, siding and insulation from his personal residence. However, anyone but the homeowner removing the asbestos from a residence must have a license issued by the NJDOL. This includes volunteers who are assisting in Hurricane Sandy clean-up efforts.

See Disposing of Asbestos – at right

NJDOL regulations can be found at N.J.A.C. 12:120, Asbestos Licenses and Permits.

The asbestos packaging and disposal procedures issued by the NJDEP, NJDOL and the appropriate local and county entities apply to everyone, including the homeowner. NJ Department of Environmental Protection, Division of Solid and Hazardous Waste regulates the disposal of asbestos containing waste. Information on disposal requirements can be found at:

http://www.nj.gov/dep/dshw/rrtp/asbestos.htm

The following is a list of attachments which provide additional information:

1. Attachment I is "Asbestos Guidance for Sandy Home Demolition"
2. Attachment II is an article "Dept. of Labor: The Removal of Asbestos Containing Material" from Volume 24, Number 2, *Construction Code Communicator.* The *Construction Code Communicator* can be found at the following website:

http://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/ccc_2012_vol_24_no2_summer.pdf

3. Attachment III is a list of some Frequently Asked Questions about asbestos. More Frequently Asked Questions can be found at:

http://www.state.nj.us/health/iep/asbestos_faq.shtml

ATTACHMENT I

Asbestos Guidance for Sandy Home Demolition

1. Obtain a demolition permit from the local construction department. Before a demolition permit can be issued, the owner or owner's agent must document to the local enforcing agency that all friable asbestos or asbestos-containing material that will become friable during demolition or removal has been or will be properly abated prior to demolition. Pursuant to N.J.A.C. 5:23-8, "Friable" means any material applied to ceilings, walls, piping, duct work, etc., which when dry may be crumbled, pulverized, or reduced to a powder by hand pressure. Removing asbestos improperly or conducting demolition activities without complying with all State and Federal asbestos regulatory requirements may jeopardize FEMA reimbursement, if applicable.
2. Demolition of homes as a result of Hurricane Sandy is subject to the same regulations as demolition under any other circumstance.
3. Demolition of multiple homes may also be subject to the Asbestos National Emission Standard for Hazardous Air Pollutants (Asbestos NESHAP).
4. The State of New Jersey Department of Health (DOH) provides comprehensive **General Information** for asbestos detection, removal, management and disposal activities at the following website:

http://www.nj.gov/health/iep/asbestos_faq.shtml%23Training_and_Permitting_in_NJ

You may contact the DOH office at 609-826-4950, for assistance.

See Disposing of Asbestos- page 7

Disposing of Asbestos *continued from page 6*

5. Demolition of homes involving asbestos must be conducted by a contractor licensed by the State of New Jersey Department of Labor and Workforce Development (DLWD). Additionally, the contractor must submit a notification of the work 10 days prior to date of demolition. Information regarding licensing of contractors and DLWD requirements can be found at the following website:
   http://lwd.dol.state.nj.us/labor/lsse/employee/asbestos_control_and_licensing.html
   You may contact DLWD at 609-633-2159, for assistance.
6. Asbestos Containing Waste must be disposed of as ID 27A Solid Waste in New Jersey. Guidance for asbestos waste disposal is available at the following New Jersey Department of Environmental Protection (NJDEP) website:
   http://www.nj.gov/dep/dshw/rrtp/asbestos.htm
   You may contact the NJDEP's Bureau of Landfill and Hazardous Waste Permitting at telephone number: 609-984-6985, for assistance.
7. Sections of the DOH Asbestos General Information website are excerpted in Attachment III. Note that there may be other sections of the DOH Asbestos General Information website document that are relevant for and/or can inform persons of relevant aspects of asbestos detection, removal, management, and disposal activity, so please review the entire document which can be downloaded at:
   http://www.state.nj.us/health/iep/asbestos_faq.shtml

ATTACHMENT II

From The Construction Code Communicator -Volume 24, Number 2 Summer 2012

Dept. of Labor: The Removal of Asbestos Containing Material

It has come to the attention of the Department of Labor that there is some misinformation surrounding renovations and demolitions involving asbestos containing materials (ACM). Navigating the maze of federal and state asbestos regulations can leave even the most conscientious contractor dazed and confused. In order to avoid problems, for each project, the contractor should answer some basic questions in order to determine which regulations are applicable.

It is the ***contractor's responsibility*** to determine whether the project involves the disturbance of asbestos containing material (ACM) before proceeding with work. Any material containing more than 1% asbestos meets the regulatory definition of ACM. If the contractor is working with more than 3 linear feet or 3 square feet of ACM, then the project falls within the jurisdiction of the New Jersey Department of Labor and Workforce Development (DOL). The removal or repair of ACM during such projects must be completed by a licensed asbestos abatement contractor. The demolition of a structure containing ACM also falls within the jurisdiction of DOL since the ACM is disturbed during the demolition process.

DOL regulations focus on the quantity, not the quality, of ACM. There is no distinction between friable and non-friable ACM in determining whether DOL regulations apply. The DOL regulates both friable ACM and non-friable ACM.

There are a few very limited exceptions to the DOL licensing requirement. One of those exceptions involves asbestos containing roofing and siding materials in renovation projects. The removal of asbestos containing roofing or siding in a ***rehabilitation project*** is not regulated by DOL and, therefore, does not require a licensed asbestos abatement contractor. However, it is important to note that the removal of asbestos containing roofing or siding ***must be completed by a licensed asbestos abatement contractor if the structure will be demolished***.

In addition to DOL regulations, a contractor must be concerned with federal regulations (National Emission Standards for Hazardous Air Pollutants, which applies to residential buildings with 5 or more dwelling units and commercial buildings involving the stripping or removal of at least 160 square feet or 260 linear feet of regulated ACM), Occupational Safety and Health Administration (OSHA) requirements, New Jersey regulations for asbestos projects in educational facilities and public buildings (Asbestos Hazard Abatement Subcode of the Uniform Construction Code) and New Jersey Department of Environmental Protection regulations pertaining to the transport and disposal of ACM. DOL regulations can be found at N.J.A.C. 12:120, Asbestos Licenses and Permits. (Exceptions and exemptions can be found at N.J.A.C. 12:120-1.4 and N.J.A.C. 12:120-4.2).

Code enforcement officials should be aware that at N.J.A.C. 5:23-8.6, the Asbestos Hazard Abatement Subcode, requires that before work may be undertaken in an existing building or before a building may be demolished, a certification must be provided by the architect, engineer, or contractor specifying the extent to which ACM will be disturbed. If ACM will be disturbed, an assessment by the New Jersey Department of Health (DOH), local or county health department, or a private business authorized by DOH to perform an assessment is required before a permit may be issued for the rehabilitation or demolition project. Obtaining the DOH assessment and ensuring that, where required, the work will be performed by a licensed DOL contractor is a prior approval before a permit may be issued for a rehabilitation or demolition project in which ACM will be disturbed.

For further assistance on the DOL contractor licensing requirements, please call DOL at (609) 633-2159. For assistance on code enforcement, please contact Jim Amici of the Bureau of Code Services at (609) 633-6224.

Source: Tom Voorhees
Department of Labor

James Amici
Bureau of Code Services

See Disposing of Asbestos- page 8

Disposing of Asbestos *continued from page 7*

ATTACHMENT III

DOH Asbestos General Information Website Excerpt: Testing for Asbestos

Q: How can I find out if I have asbestos in my home or not?

A: It is recommended that you hire a professional asbestos inspector certified by the U.S. Environmental Protection Agency to conduct an inspection and take samples of any suspect asbestos-containing material. If you can't afford to hire an inspector, you can contact an accredited laboratory to find out how much it would cost to analyze a sample and how they prefer it to be submitted.

Q: What types of testing methods are available?

A: There are a number of recognized testing methods for asbestos. Samples are typically analyzed by three main methods: Polarized Light Microscopy (PLM), Transmission Electron Microscopy (TEM), and Phase Contrast Microscopy (PCM). Not all techniques can be used for all sample types. Below is a description of each:

PLM -Typically fast and inexpensive; can distinguish asbestos fibers from other fibers such as fiberglass and cellulose; most common procedure for bulk samples; TEM recommended for accurate determination for samples such as floor tiles.

TEM -More expensive; state-of-the-science; magnification of at least 25,000X; accurately identifies fibers which PLM and PCM cannot confidently identify as asbestos or non-asbestos; recommended for dust wipe samples so that asbestos fibers are accurately identified; can be used for both bulk and air samples.

PCM - Typically fast and inexpensive; cannot identify asbestos directly; for lower detection limits or confirmation of asbestos, TEM is recommended; common analytical technique used for analysis of air samples. Following is a chart indicating the type of sample and appropriate testing methodologies for that sample:

Sample Type Method of Analysis

Bulk Sample
- Polarized Light Microscopy (PLM)
- Transmission Electron Microscopy (TEM)
- Surface/Wipe Sample Transmission Electron Microscopy (TEM)

Air Sample
- Phase Contrast Microscopy (PCM)
- Transmission Electron Microscopy (TEM)

Q: How do I know for sure whether or not something contains asbestos?

A: Unless the insulation is labeled as asbestos you cannot tell if it is asbestos-containing by merely examining it. To determine the presence of asbestos, a sample of the material must be analyzed by a laboratory that is

See Disposing of Asbestos – at right

Disposing of Asbestos *continued from left*

accredited for analyzing asbestos. We recommend using a laboratory accredited by one of these two following organizations:

- *American Industrial Hygiene Association (AIHA)* Asbestos Analysts Registry
- *National Voluntary Laboratory Accreditation Program (NVLAP)* Directory of Accredited Laboratories

Q:What is the proper way to take an asbestos sample so that it doesn't contaminate the area?

A: We recommend that a professional take the sample, however, homeowners/building occupants should be informed about the proper procedures to make sure the area isn't contaminated during the sampling process. Following are the steps that should be taken:

- Lightly wet the area with a fine water mist where the sample is to be taken. A small amount of detergent should be added to the water to help it penetrate the asbestos fibers better.
- A small sample of no more than one square inch of material is necessary (the laboratory where the sample will be taken will generally have guidelines on the size of the sample they need).
- The sample should be placed in two zip lock bags (one inside the other) or some other type of air tight container.
- The container should then be labeled with a description of the material, where it was taken and the date the sample was taken.
- To seal any loose asbestos around the sample area, clear spray lacquer can be used. Make sure the nozzle is far enough away to mist the exposed area before applying a heavier coat. If there is any asbestos dust it should be wiped up with a wet disposable cloth or paper towel. Any towels or cloth used for this purpose should be disposed of immediately.

What to Do if You Have Asbestos

Q: How can I protect my health?

A: Do not sand, cut or break any asbestos containing materials (ACM). Even if materials are non-friable they may release fibers if they are disturbed in this manner.

If you must work in an area where asbestos dust may be present, wet the area down thoroughly with a garden sprayer (or a regular spray bottle) filled with water and a few drops dish detergent. The detergent reduces the surface tension of the water and allows it to penetrate any asbestos fibers more readily, thus keeping them from becoming airborne. Dispose of any rags used to clean up ACM dust.

Never use a regular household vacuum on asbestos containing dust. Even if the vacuum is equipped with a High Efficiency (HEPA) filter, you will not be able to decontaminate it properly once you have vacuumed

See Disposing of Asbestos- page 9

Disposing of Asbestos *continued from page 8*

up the asbestos dust. Special vacuums are used on asbestos containing dust. They are equipped with a HEPA filter and are specifically designed to filter out asbestos fibers and be easily decontaminated after use.

Q: Do I have to remove asbestos if I have it?

A: Yes. Before a structure can be demolished or removed, the owner or owner's agent shall document that the requirements of USEPA 40 CFR 61 subpart M have been or shall be met. A permit to demolish or remove the structure shall not be issued until the owner or agent notifies the enforcing agency that all friable asbestos or asbestos-containing material that will become friable during demolition or removal has been or will be properly abated prior to demolition.

Q: I've heard that vermiculite might contain asbestos, is that true?

A: Vermiculite is a naturally occurring mineral which may contain asbestos. The uses of vermiculite vary. It has been used in potting soil for aeration purposes as well as in attics for insulation. The US Environmental Protection Agency has a considerable amount of information on their website regarding this topic. Click on the following links for more information:

Asbestos and Vermiculite

Zonolite, Hamilton Township, Mercer County, New Jersey

Q: Can I remove the asbestos in my home myself?

A: Technically, there are no regulations that forbid a homeowner from removing asbestos in their own home themselves, but we strongly advise against it for a number of reasons:

- Asbestos is a known human carcinogen. If it is removed improperly, it can cause your home to be seriously contaminated. Professional cleanup of the contamination could be more costly than if the abatement had originally been performed by professionals.
- Children are particularly susceptible to asbestos related disease. The normal latency period for an asbestos related disease in adults can be anywhere from 20 to 50 years after exposure. However, among children, the latency period can be much shorter, striking them very early in life.
- Asbestos is difficult to control without the proper equipment. Special equipment has been designed for abating asbestos properly. This equipment must be used and cleaned in a proper manner to ensure that little or no exposure to asbestos fibers occurs during or after abatement.
- Asbestos fibers can be too small for the human eye to detect. Professional asbestos abatement contractors use specialized cleaning equipment and confinement techniques to remove and contain asbestos materials and fibers. Once complete, air samples should be taken to ensure that there are no asbestos fibers remaining.

See Disposing of Asbestos - at right

Disposing of Asbestos *continued from left*

Q: How can I find someone who is qualified to remove asbestos?

A: NJ requires all contractors who abate asbestos-containing materials, to have a NJ Department of Labor and Workplace Development (DOLWD) license. In addition, all of the contractor's employees (who conduct the abatement) must possess either a DOLWD worker or supervisor permit. For information on how to contact the DOLWD to request a list of contractors or check to see of a contractor is licensed, please refer to the Indoor Environments Contacts page. Please Note: The only exception to licensing requirements for the removal of asbestos containing materials is if the contractor has acquired an exemption for certain types of non-friable asbestos materials such as floor tile. For more information regarding exemption requirements, you should contact the Compliance Assistance Project within Indoor Environments Program. For more information on how to contact this project, please refer to the Indoor Environments Contacts.

Q: What can I do to make sure the contractor I hire is competent?

A: To be sure you are hiring a contractor who will do a safe and satisfactory job, you may want to do the following:

- Call the NJ Department of Labor and Workplace Development at 609-633-2158 to ensure that the contractor is licensed and reputable.
- Ask the contractor about their abatement history and for references from similar projects.
- Obtain a detailed estimate of the exact services to be provided, including monitoring, design, replacement, damages, etc.
- Ask about their liability insurance, including the type, what it covers and the amount.
- Obtain numerous estimates, they can vary significantly. Make sure all estimates are based on the same job requirements and specifications.
- Consider hiring a monitoring firm (which has no financial relationship to the abatement contractor) to oversee the removal. Generally these projects are done better, but can be more costly.
- Most importantly, talk to each contractor, learn exactly what they will do for you. Check your comfort level with each contractor and then hire one based upon an overall evaluation of services, not just cost.
- Educate yourself regarding what occurs during an asbestos abatement so you know what to expect and can understand what must be done.

See Disposing of Asbestos - page 10

Disposing of Asbestos *continued from page 9*

Q: What steps take place during an asbestos abatement?

A: Following are the primary steps of an asbestos abatement project:

1. All movable objects should be moved out of the area. All of these objects should be wiped down and/or vacuumed off (the only vacuum to be used for this purpose is one specifically designed to filter out asbestos fibers) prior to being removed. Any objects remaining in the area as well as the area itself should also be wet wiped and vacuumed.
2. Any vents or other portals (doors, windows, outlets, etc.) leading to the area should be sealed with plastic. These are referred to "critical barriers" and should be given special attention when sealing, because they are the most likely areas where asbestos fibers would escape during an abatement. Filters (such as from the HVAC system) which may have been contaminated, should be removed and disposed of. In addition, all nonremovable objects, which are not part of the structural components to be abated, should also be covered with plastic. Finally, the remaining area should then be covered with plastic to protect all surfaces which are not involved in the abatement. Please Note: At this point, depending on what type of material is to be removed, a three stage decontamination chamber may be set up. That chamber should consist of a series of three rooms. The three rooms are a "clean room", a "shower room", and a "dirty room" (in that order). Workers entering the work area should always change out of their street clothes and into disposable overalls, don appropriate respiratory protection, and then enter the work area through the decontamination unit. When leaving the work area, workers must leave the disposable overalls in the dirty room and take a shower, at which time they will also decontaminate their respirator. Additionally, there may be a filtration unit set up to create a "negative pressure" environment within the containment. This simply means that a specially designed air filtration unit will exhaust, through a High Efficiency Particulate Air (HEPA) filter (which is 99.9 % efficient in filtering asbestos fibers down to .3 microns in size), air from the contained area to the outside. This will prevent air from "back drafting" through decontamination unit into other areas of the building. If the material to be abated is pipe material, there may be general isolation of the work area (with plastic) and then they will use something called a glovebag to remove the ACM pipe lagging.
3. The ACM will be removed.
4. The area will be cleaned by wet wiping and HEPA vacuuming all surfaces within the containment area.
5. A visual inspection should be conducted to insure all visible asbestos has been removed. If any material is found is should be removed and the area should be recleaned.
6. A sealant should be applied to all surfaces to "lock down" any remaining microscopic fibers.
7. Non-critical barriers are removed and the entire area should be cleaned again.
8. Air sampling should be conducted to ensure that fibers which cannot be seen, or have not been "locked down" by the sealant, are not present. This sampling should be conducted in a fashion to simulate occupancy (often conducted with fans running). The acceptable limit for these air samples are anything below 0.01 fibers per cubic centimeter (f/cc) of air. If the air sample is above this, the area should be re-cleaned and re-sampled.
9. Once acceptable air levels are reached, the remaining plastic barriers can be removed and the area can be re-occupied.

See Disposing of Asbestos - at right

Disposing of Asbestos *continued from left*

Q: Where can asbestos-containing waste be disposed of?

A: The transportation and disposal of asbestos-containing waste in NJ is regulated by the Department of Environmental Protection (DEP). For more information contact the DEP.

Regulations

Q. Who regulates Asbestos Containing Materials (ACM)?:

A:

Federal Regulatory Agencies:

The U.S. Environmental Protection Agency (USEPA) is responsible for developing and enforcing regulations necessary to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health.

The Occupational Safety and Health Administration(OSHA) is responsible for the health and safety of workers who may be exposed to asbestos in their work place, or in connection to their jobs.

NJ State Regulatory Agencies:

Department of Health. The NJ Department of Health (DOH) is the lead agency for the asbestos and environmental health information in NJ.

The Indoor Environments Program administers the Asbestos Hazard Emergency Response Act (AHERA), provides site audits and a Quality Assurance/Quality Control program for asbestos abatement in schools. The DOH also provides training and accreditation for asbestos training providers and conducts studies to evaluate asbestos abatement and management methods.

The Public Employee Safety and Health Program regulates asbestos exposures among public employees.

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Disposing of Asbestos *continued from page 10*

Department of Environmental Protection. The NJ Department of Environmental Protection (DEP) regulates, the management, transportation and disposal of ACM. In concert with county health departments, the DEP investigates reports of unregistered transporters, illegal disposal and oversees the review of the 10-day notification submissions.

Department of Community Affairs. The NJ Department of Community Affairs (DCA) regulates asbestos remediation in schools and buildings in which public employees are located and regulates the air monitoring firms for asbestos abatement projects. The DCA Bureau of Code Services, Asbestos Safety Unit can be reached at (609)633-6224.

Department of Labor and Workplace Development. The NJ Department of Labor and Workplace Development (DOLWD) licenses abatement contractors, permits abatement workers and supervisors, and investigates complaints of improper abatements in private homes and commercial buildings. For more information on how to contact the DOLWD, please refer to the Indoor Environments Contacts page.

Advisory Base Flood Elevations and Construction Requirements

In a January 2013 memorandum to Construction Officials the Division advised:

As many of you know, FEMA has issued Advisory Base Flood Elevations for Atlantic, Bergen, Burlington, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean and Union Counties. These new numbers impact new construction and the restoration of buildings determined by the floodplain administrator to be substantially damaged as defined in federal rules. The new flood maps also impact the boundaries of the A zone, including the creation of a coastal A zone, and the V zone, a change which also affects the associated construction requirements. This applies to both residential and nonresidential structures.

As construction officials, you are not responsible for making substantial damage or building elevation determinations. However, residents, contractors and business owners in your towns expect that you will be knowledgeable and be able to answer their questions. For now, please make everyone aware of these new Advisory Base Flood Elevations. Do not issue any permits without the required prior approval to be

See ABFEs -at right

ABFEs *continued from left*

supplied by the local floodplain administrator. The substantial damage determination must be made by the floodplain administrator and disseminated to the applicant using forms to be determined by the town so that the attendant requirements are known. The base flood elevation and zone to be used also must be known. We are in constant contact with DEP and with FEMA. **As soon as we have further information, we will share it with you.**

For floodplain administrators and code officials who act as floodplain administrators: FEMA is gearing up to provide training in the use of its substantial damage estimating tool and technical assistance to collect data for up to 7,000 structures. Teams will be ready to go right after the first of January. Local floodplain administrators should call Nancy Mikoda at 225-910-4592. She is with the Hazard Mitigation-Floodplain Management & Insurance Group at the Joint Field Office in Lincroft. **If you are not also serving as the floodplain administrator, please pass the above information along.**

Construction Permits Associated with the Repair of Storm-damaged Single-family Homes

In a November 2012 Alert, the Division of Codes and Standards advised:

The Department of Community Affairs urges you to use extreme caution when reentering any residence that has been submerged or water damaged during the storm. Do NOT enter any building that displays an order to vacate or unsafe structure placard.

When Construction Permits are **NOT** Required:

Construction permits will not be required when the repair work includes only cosmetic work, such as roof shingle repair or replacement, flashing repair or replacement, siding, gutter repair or replacement, window repair or replacement and any other exterior or interior non-structural repairs, including the repair or replacement of plaster or gypsum board walls or ceilings, bathroom tiles, etc.

When Construction Permits **ARE** Required:

All repairs that require structural work, including the repair or replacement of the following:

- Roof rafters
- Roof ridge beams
- Structural window headers

See Storm Repair –Single-family Dwelling - page 12

Storm Repair –Single-family Dwelling *continued from page 11*

- Interior doorway headers
- Ceiling and floor beams
- Main girders
- Exterior wall framing
- Interior bearing walls
- Foundation walls
- Chimneys
- Retaining walls
- Accessory structures, such as detached garages or sheds

ELECTRICAL & PLUMBING WORK

Notify the local construction code enforcement agency of all electrical and plumbing work undertaken and apply for necessary construction permits as soon as it is practical to do so. In the event that the interior was damaged by water or the basement was flooded and the wiring, receptacles, switches or panels were compromised, it is recommended that a New Jersey licensed electrical contractor be contacted to inspect, evaluate and make necessary repairs or replacements. Similarly, in the event that the water heater or heating or cooling equipment was submerged, it is recommended that a New Jersey licensed plumber or mechanical contractor inspect, evaluate and make necessary repairs or replacements. All work should be inspected by the local code enforcement agency *before* final payment is made to the contractor.

If you have questions, please contact the local construction official or the Department of Community Affairs, Division of Codes and Standards at (609) 292-7899.

Waiving Permit Fees in the Wake of the Storm

In a letter dated November 2, 2012, Director Smith wrote:

Dear Construction Official:

I am writing to remind everyone that municipalities may waive fees for permits for work made necessary by hurricane damage. Pursuant to N.J.A.C. 5:23-4.19(b)5., if the municipality is waiving its fees, then the State permit surcharge fee also is waived.

Should you have any questions, please feel free to contact the Office of Regulatory Affairs at (609) 984-7672.

Sincerely,

Edward M. Smith
Director
Division of Codes and Standards

Flood Elevation FAQs: NJ's Emergency Flood Elevation Rule

In order to better protect lives and property following Superstorm Sandy and other major recent flooding events, the state has adopted emergency amendments to New Jersey's Flood Hazard Area Control Act rules that establish minimum elevation standards for the reconstruction of houses and buildings in areas that are in danger of flooding. The following FAQs answer some of the most common questions and will help you determine if you need to elevate and get you started if you need to do so. If your property was not substantially damaged, you do not need to take any action now. Municipal floodplain administrators make "substantial damage" determinations. The rule applies to new construction and those property owners whose properties were substantially damaged or are starting new construction. A structure is considered substantially damaged if the cost of restoration equals or exceeds 50 percent of the market value of the structure prior to the damage. Recent congressional action resulted in significant changes to National Flood Insurance Program rates. Flood insurance costs, which are outside the control of the state, are likely to be much lower for those who elevate using the state's elevation standards.

Q: What does the flood hazard area emergency rule do?

A: The rule, adopted by emergency action on Jan. 24, requires new and reconstructed buildings to be elevated in accordance with the best available flood mapping. This will help protect people and property during future floods. The emergency rule also adopts a new permit-by-rule so that people reconstructing and elevating buildings utilizing the state's elevation standard will not need to secure a permit from the Department of Environmental Protection, nor pay the fee typically charged for a Flood Hazard Area permit. This will save them time and money while spurring quicker recovery from Sandy.

Q: What are the new elevation standards?

A: The Department of Environmental Protection (DEP) has determined that the Federal Emergency Management Agency's (FEMA) recently released Advisory Base Flood Elevation (ABFE) maps provide the best elevations to be protective of lives and property and has incorporated them as the new elevation standard for the state. Property owners who have to rebuild because their property is substantially damaged will have to build to the highest available state or FEMA elevation level. In most cases, this will be the ABFE. In addition, Flood Hazard Area Act rules, in effect since 2007, require the lowest floor of each building in flood hazard areas to be constructed at least one foot above this elevation.

See Flood Elevation FAQs –page 13

Flood Elevation FAQs *continued from page 12*

Q: What are ABFEs?

A: FEMA had been remapping the floodplain along New Jersey's coastline for two years when Sandy hit. FEMA's previous maps were outdated and did not always accurately show the potential for flooding. In order to support and guide New Jersey's recovery efforts, FEMA released its new mapping in December on an advisory basis. The ABFEs use the most accurate modeling, topographic maps and scientific data available. To learn more about ABFEs and to view the maps for New Jersey, visit:

http://www.region2coastal.com/sandy/abfe

Q: Will the ABFEs change?

A: FEMA anticipates some changes to these maps for both elevations and zones. The ABFEs currently reflect the most accurate modeling, topographic maps and scientific data available. FEMA plans to release updated flood maps over the next six to seven months, which will further fine-tune coastal flood elevations. The regulatory process to finalize the maps could take up to two years. DEP will continue to work with FEMA to provide input on these maps.

Q: If the ABFEs are only advisory, why is the state incorporating the use of these maps now as the basis for elevation standards?

A: In many cases, existing FEMA flood maps were significantly outdated. Many were more than two decades old. The ABFE maps, which are the precursor to final flood maps, will better protect property and lives and provide consistency and predictability during rebuilding. They will make coastal areas stronger and more resilient. Consistency and predictability will allow rebuilding to occur much more quickly so lives affected by Sandy can return to normal. Without this action, residents may have reconstructed with inadequate safety standards, exposing them to substantially higher flood insurance rates when FEMA adopts its final maps.

Q: Do I have to elevate my home and/or build to new construction standards?

A: You are required to elevate and/or meet new construction standards if your house is located in a flood zone and was declared substantially damaged by your local floodplain administrator or is new construction. You have no legal obligation to elevate if your home was not substantially damaged.

Q: What is the definition of substantial damage?

A: Substantial damage means damage of any origin

See Flood Elevation FAQs –at right

Flood Elevation FAQs *continued from left*

sustained by a structure in which the cost of restoration of the structure to its condition before damage would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Q: If I have to elevate my house, will the state or federal governments help finance the work?

A: Yes. FEMA can provide up to $30,000 to cover the Increased Cost of Compliance (ICC) with federal, state and local regulations if you have federal flood insurance. In addition, the Christie Administration intends to provide grants to homeowners with substantially damaged homes to help them offset some of the costs of elevation, mitigation and renovation, and intends to announce in the spring the mechanism for such grants. In order to access any additional funding, FEMA requires property owners reconstruct using the best available data.

Q: Can I get Increased Cost of Compliance assistance to elevate my home even if it was not determined to be substantially damaged?

A: This FEMA assistance is only available to those who had National Flood Insurance Program protection for structures that have sustained substantial damage and were below the current base flood elevations. It is available to anyone with flood insurance, regardless of whether the house is a primary place of residence or not. The state is exploring other options to assist property owners who want to elevate but did not meet the threshold for a determination of substantial damage.

Q: Will the emergency regulation affect my flood insurance rates?

A: The ABFEs do not affect insurance rates. Your rates could increase when FEMA adopts its final flood maps. If you do not meet its elevation standards, which are likely to be close to the ABFES, your rates could increase even more significantly.

Q: Are there benefits to elevating?

A: Yes. You will better protect your house and its contents and you will likely pay lower flood insurance rates in the future than if you do not elevate. Some people may find that the long-term insurance savings alone can offset the cost of raising a house.

Q: If my home is determined to be substantially damaged, can I still live in it until I elevate?

A: Homeowners may live in structures that are deemed substantially damaged for up to four years before needing to elevate if they can take temporary measures to make their homes habitable. The determination of habitability must be made by the local construction official.

See Flood Elevation FAQs –page 14

Flood Elevation FAQs *continued from page 13*

Q: Am I eligible for Increased Cost of Compliance funding if I take up to four years to elevate my house?

A: Yes, provided you were insured under the National Flood Insurance Program and you elevate in accordance with applicable standards and FEMA regulations.

Q: Do I have to elevate my house and/or build to new construction standards if my municipality does not pass an ordinance adopting the ABFEs?

A: Yes, if your municipality declares your house substantially damaged and it is located in a flood hazard area, you are required to elevate and/or build to new construction standards and may begin doing so right away. The DEP, however, is encouraging municipalities to pass an ordinance adopting the ABFEs because this will make your town eligible for Increased Cost of Compliance assistance and other federal mitigation aid. The DEP will be providing municipal officials with a model ordinance so they can adopt the ABFEs as the new elevation standard.

Q: If I have to rebuild, when should I get started and what should I do?

A: You can begin immediately. The emergency rule provides people who must rebuild and elevate a high level of confidence that they will be in compliance with the flood elevation standards that FEMA will be adopting. There is no need to wait for FEMA to formally propose flood insurance rate maps. You can get started by talking to your municipal floodplain administrator to see if your house is substantially damaged. You should also contact your municipality to see what kind of local approval you may need and what construction standards you have to build to. In addition to the DEP's elevation standards, buildings in flood zones must meet Uniform Construction Code standards that are regulated by the New Jersey Department of Community Affairs (DCA) and implemented at the local level.

Q: Will I need a state permit to reconstruct or elevate my building?

A: The DEP regulates building elevations through its Flood Hazard Area Control Act rules. Under the emergency Flood Hazard Area Control Act rule just adopted, you are eligible for what is known as a permit by rule (effectively an automatic permit) as long as the lowest floor is elevated to at least one foot above the state's design flood elevation and provided the building stays within its original footprint. Slight variations in size and location can

See Flood Elevation FAQs –page 15

Transfer Switch Issues for Newly Installed Generators

With the influx of generator installations taking place as a result of Superstorm Sandy, questions have arisen regarding the correct location of the transfer switch. Specifically, one question is: Can a transfer switch for a standby power system be located between the meter and existing service equipment? Another question follows: Does the grounding electrode conductor and the main bonding jumper need to be relocated?

Standby power systems that supply power to the service conductors are allowed to be connected ahead of an existing service disconnecting means only if such systems are provided with a separate disconnecting means and overcurrent protection. The means of disconnect are considered service equipment and must be installed in accordance with requirements for service entrance conductors. Therefore, based on the requirement to provide service equipment, the transfer switch must comply with Section 230.90, Service Equipment, Overcurrent Protection, Where Required, which ***requires*** that each ungrounded service conductor ***have overcurrent protection.*** Section 230.70, Service Equipment, Disconnecting Means, General, ***requires*** a means of disconnecting all conductors in a building or other structure from the service entrance conductors. Also, Section 230.66, Service Equipment, General, Markings, requires service equipment rated 600 volts or less to be marked and identified as being ***"suitable for use as service equipment"*** (service rated). Since the disconnecting means and overcurrent protection is part of the transfer switch it becomes the service disconnect, the provisions of Article 250, Grounding and Bonding, require that the system grounding specified in Section 250.24, Grounding Service-Supplied Alternating Current Systems, be done at any accessible point from the load end of the service drop to the service disconnecting means which is now in the transfer switch. The connection of the grounded service conductor to the grounding electrode conductor is required to be relocated from the existing service equipment and installed in the transfer switch enclosure that is identified as "suitable for use as service equipment", based on Section 250.24. If the grounding connection is made within the existing service enclosure, such an arrangement would not comply with Section 250.24(A)(5), Load-side Grounding Connections

To summarize, a transfer switch cannot be placed ahead of the service main unless it becomes the service main (with service disconnect and overcurrent protection).

Another acceptable option is to add a new service-rated

See Transfer Switch Issues -page 15

Transfer Switch Issues *continued from page 14*

disconnect with overcurrent protection installed ahead of a transfer switch.

With either option, the existing service equipment becomes distribution equipment requiring separation of neutrals and grounding conductors, and the service bonding and grounding needs to be relocated to the new service equipment.

If you have any questions regarding this, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: Ken Verbos
Office of Regulatory Affairs

DEP Prior Approvals and Other Issues, Guidance for Code Officials

DEP Flood Rules - On January 24, the Governor announced an emergency rule amending DEP's Flood Hazard Area Control Act Rules, N.J.A.C. 7:13. Here is some very basic information on what these rules do and do not say.

- They effectively require use of the Advisory Base Flood Elevations (ABFE's) for anyone seeking to construct or to elevate a house right now.
- Elevation above base flood is required for new construction and for homes determined by the local floodplain administrator to be substantially damaged; these rules do not require the elevation of all existing buildings as they stand.
- In the case of homes determined to be substantially damaged, owners have up to four years to elevate the house. Owners are allowed to undertake work to render the house habitable in the meantime. As always, this work is subject to the requirements of the Uniform Construction Code, including the issuance of permits for any work undertaken to make a house habitable and inspections of this work. It is important to track these occupied houses to ensure that the requirement to elevate (a condition of the floodplain administrator's prior approval) ultimately is met.
- The DEP rules allow owners to elevate an existing house under a "permit by rule" (an automatic permit) as long as the building footprint is not increased by more than 300 square feet. Owners do not need to go to DEP to obtain a permit for a house that legally existed before Sandy.
- The rules DO NOT impact the need to obtain UCC permits.

See DEP Prior Approvals at right

Flood Elevation FAQs *continued from page 14*

sometimes be allowed. You will still need to secure local construction permits. A state Coastal Area Facility Review Act (CAFRA) permit is not needed if you reconstruct in place.

Q: What should I know before rebuilding?
A: It is very important that you carefully document any repair or reconstruction project to ensure you have a record of all activities from inception to completion. Photographs and other forms of documentation should be kept before, during, and after construction. Retain all receipts, bills, surveys and construction plans. These items will help document the history of your project should you need to do so for FEMA assistance or insurance reimbursement.

Q: What's the difference between FEMA's Zone A and Zone V? Can I appeal a V-Zone designation?
A: Both zones lie within FEMA's 100-year floodplain. Zone V applies only in tidal floodplains and denotes hazards associated with storm-induced waves of at least three feet in height. Construction standards in the V-zone are more stringent in order to account for the increased risk of damage from storm surges. While there is no appeal process for the ABFEs, you may appeal to FEMA after the agency formally proposes flood maps later this year.

A more detailed version of the FAQs and additional information on working with the DEP to recover from Sandy is available on the DEP web site at: http://www.nj.gov/dep/landuse/SandyFAQ.html.

DEP Prior Approvals *continued from left*

- Below are links to a question and answer document posted on the DEP website and to the full text of the emergency rule itself:

http://www.state.nj.us/dep/special/hurricane-sandy/docs/abfes-faq-20130207.pdf

http://www.nj.gov/dep/docs/20130124flood-hazard-emergency-rule.pdf

A note on "reconstruction" *- The DEP rules use the term "reconstruct," but the definition used in the DEP rules is different from the definition found in the Uniform Construction Code (UCC.) The DEP definition, as amended by the emergency rule, appears below for your information. It includes some of the definition of substantial improvement/substantial damage from the National Flood Insurance Program rules. Reconstruction requires elevation, but it is allowed under the "permit by rule" provisions and does not require a separate DEP approval or permit.*

"Reconstruct" means to patch, mend, replace, rebuild and/or restore a lawfully existing structure to a usable condition after decay or damage has occurred, in which 50 percent or greater of the structure is replaced

See DEP Prior Approvals – page 16

Helpful Links Provided by FEMA

National Flood Insurance Program (NFIP) Technical Bulletins:
http://www.fema.gov/national-flood-insurance-program-2/nfip-technical-bulletins

Substantial Improvement/Substantial Damage Desk Reference (FEMA P-758):
http://www.fema.gov/library/viewRecord.do?id=4160

FEMA Building Code Resources:
http://www.fema.gov/building-science/building-code-resources

- Flood Provisions of the 2009 I-Codes (basis for NJ state codes)
- Highlights of ASCE 24 (referenced by the building code)
- Quick Reference Guide: Visual Comparison of NFIP and Building Code Requirements for Special Flood Hazard Areas

FEMA Hurricane Sandy Recovery Advisories (series of 7; in development):
http://www.fema.gov/library/viewRecord.do?id=6994

- Improving Connections in Elevated Coastal Residential Buildings (RA 1);
- Reducing Flood Effects in Critical Facilities (RA 2);
- Restoring Mechanical, Electrical, and Plumbing Systems in Non-Substantially Damaged Residential Buildings (RA 3);
- Reducing Operational Interruptions to Mid- and High-Rise Buildings During Floods (RA 4);
- Designing for Flood Levels Above the Base Flood Elevation After Hurricane Sandy (RA 5);
- Protecting Building Fuel Supplies from Flood Damage (RA 6); and
- Reducing Flood Risk and Flood Insurance Premiums for Existing Buildings (RA 7).

Local Official's Guide to Coastal Construction (FEMA P-762):
http://www.fema.gov/library/viewRecord.do?id=3647

Homebuilder's Guide to Coastal Construction (FEMA P-499):
http://www.fema.gov/library/viewRecord.do? id=2138

Homeowner's Guide to Retrofitting (FEMA P-312):
http://www.fema.gov/library/viewRecord.do?id=1420

Coastal Construction Manual (FEMA P-55):
http://www.fema.gov/library/viewRecord.do?id=1671

Engineering Principles and Practices of Retrofitting Floodprone Structures (FEMA P-259):
http://www.fema.gov/library/viewRecord.do?id=1645

Source: John N. Terry
Code Assistance

DEP Prior Approvals *continued from page 15*

and/or the size, shape or location of the structure is altered. For habitable buildings, the percentage of replacement shall be determined by comparing the cost of the reconstruction to the market value of the building as determined before the start of construction; where the percentage of replacement is 50 percent or greater, such reconstruction shall also constitute a substantial improvement as defined in this section. For all other structures, the percentage of replacement shall be determined by comparing the area of the structure being reconstructed to the total area of the structure.

DEP Coastal Area Facility Review Act (CAFRA) – A State Coastal Area Facility Review Act (CAFRA)

See DEP Prior Approvals at right

DEP Prior Approvals *continued from left*

permit is not needed to reconstruct in place in the CAFRA area. A person may request a written determination from the DEP, which includes the submittal of an application, fee and specific information. A relocation of the footprint of the development laterally or landward which does not enlarge the footprint may also be exempt from CAFRA if the DEP determines that such relocation will result in less environmental impact than the in place reconstruction of the development. In this case, written approval from the DEP is required. (The full text of the CAFRA exemption for the reconstruction of a development damaged or destroyed in whole or in part, by fire, storm, natural hazard or act of God (N.J.A.C. 7:7-2.1(c)3), is included at the bottom of this document for your information. "Development" is defined very broadly in the DEP rules.)

See DEP Prior Approvals –page 18

BULLETIN 13-1A: Elevating existing houses

In the aftermath of Superstorm Sandy, there have been a number of inquiries about elevating existing houses. The following is intended to offer guidance on some of the technical issues associated with elevating existing houses in flood hazard areas. This guidance is limited to existing houses with no increase in the habitable space. As always, new construction, even if it is to replace storm-damaged structures, must meet all of the applicable requirements of the adopted subcodes.

An elevation is an addition: Elevating an existing house is categorized as an addition under the rehabilitation subcode because it brings about an increase in the mean height of the highest roof of the structure. The addition itself must comply with the requirements for new construction. In the case of elevating an existing house, this would be the new foundation system, and associated work, including pilings.

Increase in height to greater than 35 feet: The rehab subcode prohibits an increase in height beyond that which would be permitted for new construction. Under the one- and two-family dwelling subcode, buildings of unprotected wood-framed (VB) construction are limited to two stories and 35 feet in height. Buildings with a mean roof height of greater than 35 feet or greater than two stories in height must be of VA construction or must have a fire sprinkler system. While these are reasonable requirements when applied to new construction, these requirements become punitive when applied to an existing house being elevated. (Note that “any unfinished flood-resistant enclosure that is useable solely for vehicle parking, building access, or limited storage” is not counted as a story. See Section R322.1.5 of the one- and two-family dwelling subcode.)

Clearly, the primary concern here is fire safety, specifically, the ability of the occupants to evacuate safely in the event of a fire. For this reason, a variation is appropriate for increases in height that bring the mean height of the highest roof surface to greater than 35 feet provided that (1) a smoke alarm system or a household fire alarm system is installed in accordance with the one- and two-family dwelling subcode Section R314; and (2) the dwelling unit is separated by a one hour, fire-rated assembly from any parking area or other area underneath the dwelling unit where motor vehicles or water craft or other gas-fired engines may be stored. (See FTO-13)

Wind load: An increase in height also necessitates consideration of any increased wind load.

- International Residential Code (IRC) Houses elevated up to a maximum of 42 feet - For houses constructed in compliance with any edition of the International Residential Code (or the International Building Code) with an elevation of the existing house that brings the mean height of the highest roof surface up to, but not above, 42 feet, no additional analysis of the existing building is required. The factors of safety incorporated into the structural requirements of the International Codes are sufficient.
- "Pre-IRC" Houses elevated up to a maximum of 42 feet– Roof Connections - There is some concern with the ability of roof connections to withstand uplift forces for houses constructed prior to adoption of the International Codes. This is because earlier national model codes allowed toe nailing and did not include the requirements for strapping found in the International Residential Code. Toe nails have low capacity to resist uplift forces; therefore, an engineering analysis should be required to demonstrate that the connections will resist the predicted wind forces.
- Houses elevated to greater than 42 feet - For all houses (whether built under the IRC or not) where the mean height of the highest roof surface resulting from elevating the existing house will be greater than 42 feet, an engineering analysis should be required to demonstrate that all of the connections (not limited to the roof) will resist the predicted wind forces.

DEP Prior Approvals *continued from page 16*

UCC Fees for Elevating an Existing House - The elevation of an existing house is categorized as an addition under the rehabilitation subcode because it brings about an increase in the mean height of the highest roof of the structure. For additions, the fee typically is calculated based on volume. This does

not necessarily make sense when the "addition" consists of pilings. For purposes of doing the fee calculation, the elevation of an existing house should be treated the same as the site construction associated with premanufactured construction and should be computed as a unit rate per $1,000 based on the estimated cost of the work. In this case, the cost of the work should be limited to the construction of the pilings and should exclude the cost of lifting the house and placing it on the pilings. Again, this is similar to what is done for a premanufactured unit. The cost does not include the cost of moving the unit into place.

Historic Preservation - Projects receiving FEMA Public Assistance and Hazard Mitigation Grant Program funds will require review under Section 106 of the National Historic Preservation Act. The review will be conducted by FEMA in consultation with the New Jersey Historic Preservation Office. This review is a condition of the receipt of federal funding. It is NOT a Uniform Construction Code prior approval, however, it is useful for code officials to know something about this in order to inform the owners of historic buildings in the community. FEMA's rules (the National Flood Insurance Program rules) provide some flexibility on projects that affect buildings that are listed on, or eligible for listing on, the National Register of Historic Places. Online maps of New Jersey's historic resources are available at:

http://depnet/gis/geoweb2.htm

For help in using the online mapping, or for questions about the Section 106 review process, contact the Historic Preservation Office at 609-292-0061.

Excerpt from DEP CAFRA Rules:
N.J.A.C. 7:7-2.1(c)3. The reconstruction of any development which was legally existing on and damaged subsequent to July 19, 1994 that is

See DEP Prior Approvals –at right

DEP Prior Approvals *continued from left*

damaged or destroyed, in whole or in part, by fire, storm, natural hazard or act of God, provided that such reconstruction is in compliance with existing requirements or codes of municipal, State and Federal law; and further provided that such reconstruction does not result in:

i. The enlargement or relocation of the footprint of the development; or

ii. An increase in the number of dwelling units or parking spaces within the development.

iii. A relocation landward or laterally may qualify for the exemption at (c)3 above if the Department determines, in writing, that such a relocation would result in less environmental impact than the in place reconstruction of damaged or destroyed development.

iv. Any person requesting a determination concerning relocation landward shall follow the procedures for an exemption determination at (f)2 below.

v. An increase in the area covered by buildings and/or asphalt or concrete pavement.

The Construction Code Communicator is an online publication of the New Jersey Department of Community Affairs' Division of Codes and Standards. It is 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.

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Division of Codes and Standards
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Volume 25, Number 2 Summer 2013

The 32nd Building Safety Conference of New Jersey "Rebuilding New Jersey-Together"

The 32nd Annual Building Safety Conference was held May 1st through 3rd at Bally's Atlantic City. The focus was on Rebuilding New Jersey- Together. With that in mind, a special training opportunity - Superstorm Sandy, Lessons Learned - was held. We had a very successful conference this year with about 600 people in attendance to attend classes and to honor the inspectors and technical assistant of the year.

The kickoff event for the Conference was the "Crackerbarrel." This event gives the attendees the opportunity to hear presentations of a variety of topics in a short format that focuses on new codes and standards and items of particular interest to the code enforcement community. The topics this year ranged from several topics concerning the rebuilding effort in New Jersey to a preview, given by Steve Jones, International Code Council (ICC) Vice President, of the upcoming ICC Conference later this year in Atlantic City.

The centerpiece of the Conference was the recognition and honoring of those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year. Division of Codes and Standards' Director Edward Smith and the Presidents of the respective

See Building Safety Conference- page 3

Subcode References in the Rehabilitation Subcode

As you may have noticed, rule proposals and adoptions have slowed to a somewhat glacial pace. This is something out of the Department's hands, and unfortunately creates some issues when companion changes are required throughout the Uniform Construction Code (UCC) when a model code is updated. This is a particular problem in the Rehabilitation Subcode, N.J.A.C. 5:23-6, as it is filled with cross references to other subcodes of the UCC. Please note that this is not the first time this subject has been tackled in the *Construction Code Communicator* (see Fall 2009 and Fall 2010 editions). This is the most recent word on this subject.

Normally, when a newer edition of a model code is adopted through amendment to Subchapter 3, a proposal is presented to update the Rehabilitation Subcode. So the question arises, what does the code user do when a newer edition of a model code is adopted, but the companion change has not yet occurred in the Rehabilitation Subcode? Which edition of the model code is supposed to be used in existing buildings undergoing a construction project? The short answer is that the most recently-adopted model code may be used, but only for sections that existed

See Rehab Subcode - page 4

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Building Safety Conference *continued from page 1*

associations made the award presentations this year at the annual luncheon.

The following awards were presented:

Building Officials Association of New Jersey
Building Inspector of the Year- Thomas J. Pinand

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year- Anthony F. Gargani, Jr.

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year- Paul Allen

Municipal Electrical Inspectors Association of New Jersey Electrical Inspector of the Year- Ernest J. Sisco

New Jersey Association of Technical Assistants
Technical Assistant of the Year- Valerie A. Figueiredo

Congratulations to all for your hard work and dedication to the betterment of code enforcement here in New Jersey!

The Building Safety Conference is a terrific opportunity not only to broaden your knowledge of cutting edge code enforcement and building construction techniques, but also to meet with officials from throughout the state to share ideas and promote collegiality among our community. We hope to see you all next year at Bally's Atlantic City May 7th through 9th, 2014. Please save the date!

Source: John Delesandro
Bureau of Code Services



Above, NJPIA's 2013 honoree Anthony F. Gargani, Jr.(left), accompanied by NJPIA President Michael G. Baker (right).



Above, NJFP&PA's 2013 honoree Paul Allen (center), accompanied by NJFP&PA President Stanley Sickels (right), and Codes and Standards Director Edward M. Smith (left).



Above, BOANJ's 2013 honoree Thomas J. Pinand (left), accompanied by BOANJ President James Zaconie (right).



Above, MEIA's 2013 honoree Ernest J. Sisco (left), accompanied by MEIA President Ed Reed (right).



Above, NJATA's 2013 honoree Valerie A. Figueiredo (left), accompanied by NJATA President Linda Aiello (right).



Above, Director Smith and all 2013 honorees.

Prototypes and the EXTENDED Permits Extension Act

(Essentially a reprint of the Spring 2011 article, but with new dates)

Prototype releases that might otherwise have expired are still valid. Why? As you may recall, the Permit Extension Act (PEA) extends all permits that were open and valid as of January 1, 2007. This Act overrides the rules of the Uniform Construction Code (at N.J.A.C. 5:23-2.16(b)) regarding the suspension of a construction permit. (As a reminder, the UCC provides that a permit lapses if (1) no work is done for a year or (2) work, having been started, is discontinued for six months.) However, every beginning must have an ending and the PEA ends December 31, 2014, with exceptions that may allow the permit to continue to June 30, 2015.

In general, the PEA provided that a UCC permit issued before January 1, 2007 would be valid for an additional six months beyond December 31, 2014 or for the time

See Prototypes- page 4

Arc-Fault Circuit Protection for PV Systems –Limited Availability! What do I do?

Section 690.11 of the 2011 National Electrical Code (NEC), titled "Arc-Fault Circuit Protection (Direct Current)," requires photovoltaic systems with dc circuits, dc output circuits, or both, on or penetrating a building operating at a PV system maximum system voltage of 80 volts or greater, to be protected by a listed (dc) arc-fault circuit interpreter, PV type, or other system components listed to provide equivalent protection. The problem is this requirement and the technology are so new that very few inverter manufacturers have even started manufacturing inverters with arc fault protection inside them. So, as the electrical subcode official responsible for enforcing these provisions, what do you do?

Section 90.4 of the 2011 NEC, titled "Enforcement," acknowledges that the NEC may require new products, constructions or materials that may not be available at the time of the NEC publication. In such event, the authority having jurisdiction (AHJ) is authorized to allow the use of the products, constructions or materials that comply with the most recent previous Code edition.

Because the NEC is on the cutting edge of technology, it is difficult to establish a viable future effective date within each section of the NEC because the time needed to change existing products and standards, as well as to develop new materials and test methods. This information usually is not known at the time the Code is adopted. In this case, manufacturers have been slow to have products meeting the requirements developed. That's why this section exists. The Department is advising electrical subcode officials to waive new requirements of Section 690.11 from the 2011 NEC and use the 2008 provisions while products that meet the new requirements are developed, manufactured and become commercially available.

Should a variation be issued? No, a variation is not required since Section 90.4 allows the AHJ to approve the PV-DC system without arc fault protection. However, a written record should be kept with the inspection file.

If you have any questions regarding this, please contact the Code Assistance Unit at 609-984-7609.

Source: Ken Verbos
Office of Regulatory Affairs

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Rehab Subcode *Continued from page 1*

previously and were included by reference in the Rehabilitation Subcode (even if sections moved).

Sections deleted from the State's adoption of the model code as part of the amendments made in N.J.A.C. 5:23-3.14 through 3.22 would not be cited under the rehab subcode. Similarly, sections of the model code not picked up as part of the rehab subcode (see N.J.A.C. 6.8, Materials and methods) should not be cited. These sections were deliberately identified as being outside the scope of the rehab subcode. This remains true when moving to a newer edition. The section numbers may have changed; code officials should match the content. Brand new sections included in a model code (content that did not exist in the previous edition) should not be cited under the rehab subcode until and unless the Department has acted on them through a rule proposal and adoption.

The best way to explain this is through an example. In the electrical subcode, Section 406.3 is currently referenced in the repair, renovation, alteration and reconstruction sections of the Rehabilitation Subcode. This reference is to the 2008 edition and previous editions of the National Electrical Code (NEC). With the adoption of the NEC/2011, this text was moved to Section 406.4. Section 406.4 of the NEC/2011 may be referenced in place of Section 406.3 of the NEC/2008. To further explain, tamper resistant receptacles in dwelling units was Section 406.11, which was the last requirement in Section 406 for 2008; it is now Section 406.12. As you will see, the sections have moved, but the text is, for the most part, the same. Section 406.12 added one hyphenated word for clarity and provided exceptions. It would be acceptable to use the exceptions in this case. However, the new sections that follow, Tamper Resistant Receptacles in Guest Rooms (406.13) and Child Care Facilities (406.14) should not be cited because no rule has been published to include these new requirements as part of the Rehabilitation Subcode.

In a perfect world, the references would be updated automatically the day the NEC/2011 was adopted as the Electrical Subcode. However, we live in an imperfect world. That being said, the day that the NEC/2011 was adopted as the electrical subcode, May 7, 2012, the NEC/2011 became the effective referenced code, even without the 2008 code references having been specifically updated. Therefore, while an update of the code references in the Rehabilitation Subcode is pending, the 2008 references within the Rehabilitation Subcode may be treated as 2011 references as discussed above. Yes, this does mean you will occasionally have to check to be sure that a referenced section has not been changed, but diligence ensures that we stay aware of the changes to the most recently-adopted national model codes.

See Rehab Subcode at right

Prototypes *Continued from page 3*

that would have remained on January 1, 2007, whichever is shorter. Any permit issued during the extension period (between January 1, 2007 and December 31, 2014) would be valid until June 30, 2015 (six months beyond the end of the extension period,) or until the date when it would have expired if the PEA had not been passed, whichever is longer.
The Department has provided guidance on this issue (September 23, 2008, January 25, 2010 and December 10, 2012 correspondence to code officials, most recent located at:
http://www.nj.gov/dca/divisions/codes/alerts/pdfs/PEA_of_2012a.pdf

However, another question has arisen: How does the PEA affect prototype plans? The answer is: If a prototype plan release was valid on January 1, 2007, it remains valid until June 30, 2015. The reasoning is provided below: The PEA stopped the clock for releases that were in place on January 1, 2007. It also extended the "useful life" of any releases issued between January 1, 2007 and December 31, 2014. This means that the adoption of subsequent editions of the model codes, and the end of their associated grace periods, does not affect the validity of prototype releases issued during timeframe delineated in the PEA. All of these prototype releases remain valid until June 30, 2015.

NOTE: Prototype plan releases based on the 2012 editions of the national model codes (yet to be adopted) will remain valid until the end of the grace period following the adoption of a subsequent edition(s) of the model code(s). Remember that the PEA says June 30, 2015 *or the date when the release would otherwise expire*, whichever is longer.

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

Source: John N. Terry
Manager, Construction Code Enforcement

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Rehab Subcode *Continued from left*

In short, when you see a reference to a subcode, you may use the corresponding section of the most currently adopted model code. This also applies to the grace period, meaning that if a subcode is in a grace period time, so is the Rehabilitation Subcode.

Questions should be addressed to the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Heating, Ventilating, Air Conditioning and Refrigeration (HVACR) Contractors License Update

This article is an update to the HVACR license. On December 20, 2007, legislation was signed into law establishing a new State Board of Examiners of Heating, Ventilating, Air Conditioning and Refrigeration (HVACR) Contractors and requiring licensure to work in New Jersey as a Master HVACR contractor.

At N.J.S.A. 45:16A-26, the law includes a "grandfather" provision, which authorizes the Board to issue a Master HVACR license based on experience without examination for a limited time.

A six-month "Grandfather" period, during which individuals currently practicing as HVACR contractors may obtain licensure without meeting education or examination requirements, will begin to run on the effective date of regulations to be adopted by the State HVACR Contractors Board. The regulations will prescribe the application procedure and application fee.

The adoption date was April 15, 2013 with an effective date of October 15, 2013. In the July 1, 2013 *New Jersey Register* (NJR), the effective date was extended from October 15, 2013 to January 1, 2014. This extension will give the Board sufficient time to develop its licensing examination prior to implementing the license. January 1, 2014 the Board will begin to accept applications for the HVACR license. January 1, 2014 will start the "grandfather" period. The applications will be able to be filed online only.

Further information concerning licensure of HVACR contractors, including the application process, will be posted on the Board's website at:

www.nj.gov/lps/ca/HVACR/

as it becomes available.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Air Barrier, What Is It?

The term "air barrier" is used in the energy subcode for limiting air infiltration of the building thermal envelope in accordance with Section 402.4.1 of the International Energy Conservation Code/2009 (IECC/2009). It is defined as "Material(s) assembled and joined together to provide a barrier to air leakage through the building envelope. An air barrier may be a single material or a combination of materials." For those of you that think this

See Air Barrier at right

definition needs work, especially in determining what materials may be used…well, it doesn't get better in the IECC/2012.

When reviewing the commercial side of the energy subcode, the ASHRAE Standard 90.1-2007 did not offer much help either. However, unlike the IECC/2012, ASHRAE 90.1- 2010 does offer help! The ASHRAE 90.1-2010 is not yet adopted, but is being proposed as part of the 2012 national model code proposal. Therefore, in an attempt to provide some guidance, Section 5.4.3.1.3, Acceptable Materials and assemblies, of ASHRAE Standard 90.1-2010 is provided below:

5.4.3.1.3 Acceptable Materials and Assemblies.

Continuous air barrier materials and assemblies for the opaque building envelope shall comply with one of the following requirements:

a. Materials that have an air permeance not exceeding 0.004 cfm/ft2 under a pressure differential of 0.3" w.g. (1.57psf) when tested in accordance with ASTM E 2178. The following materials meet the requirements of 5.4.3.1.3 a:
   1. Plywood—minimum 3/8 in.
   2. Oriented strand board—minimum 3/8 in.
   3. Extruded polystyrene insulation board—minimum 1/2 in.
   4. Foil-faced urethane insulation board—minimum 1/2in.
   5. Exterior gypsum sheathing or interior gypsum board—minimum 1/2 in.
   6. Cement board—minimum 1/2 in.
   7. Built up roofing membrane
   8. Modified bituminous roof membrane
   9. Fully adhered single-ply roof membrane
   10. A Portland cement/sand parge, stucco, or gypsum plaster minimum 1/2 in. thick
   11. Cast-in-place and precast concrete.
   12. Sheet metal.
   13. Closed cell 2 lb/ft3 nominal density spray polyurethane foam—minimum 1 in.

b. Assemblies of materials and components (sealants, tapes, etc.) that have an average air leakage not to exceed 0.04 cfm/ft2 under a pressure differential of 0.3" w.g. (1.57psf) when tested in accordance with ASTM E 2357 ASTM E 1677, ASTM E 1680 or ASTM E283; The following assemblies meet the requirements of 5.4.3.1.3 b.
   1. Concrete masonry walls that are:
      i. Fully grouted, or
      ii. Painted to fill the pores.

Although this is not yet adopted as part of the Uniform Construction Code (UCC), it does provide clear guidance on what the intended reference to what an air barrier may be composed of.

Source: Rob Austin
Code Assistance Unit

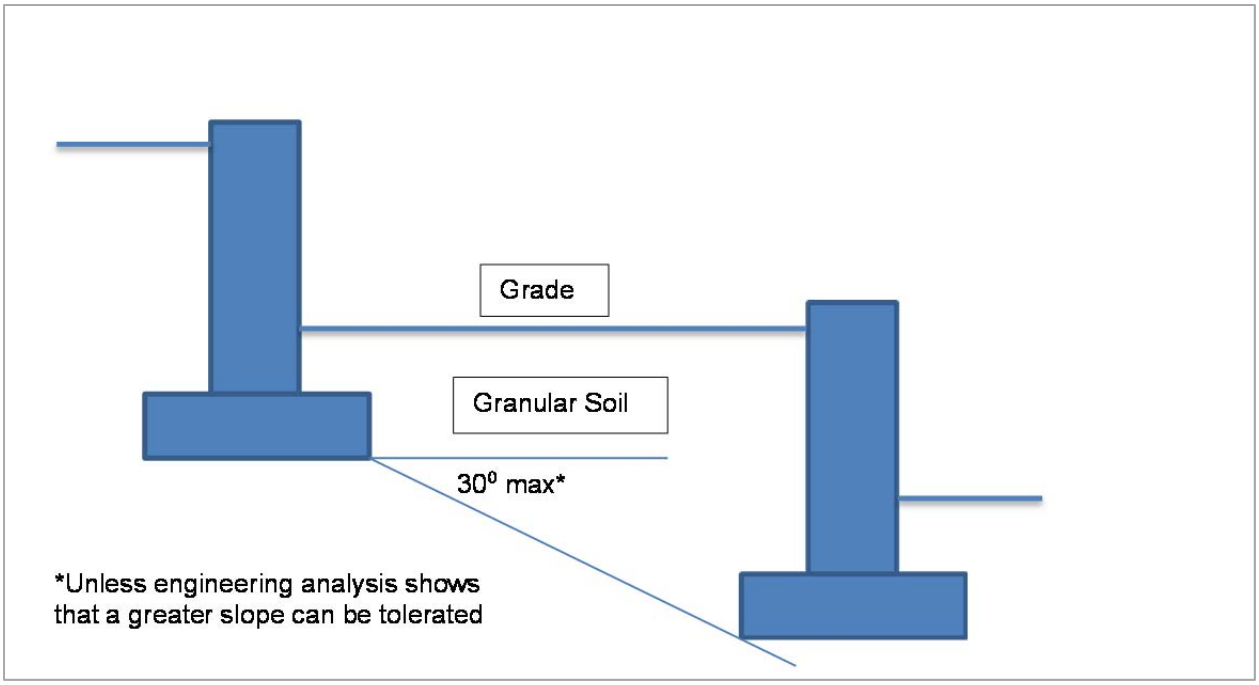
Retaining Walls in Series, or Not

Recently, the Department has received a number of inquiries regarding retaining walls that are in series that measure a total height of 4 feet or greater. More specifically, the question asked is: At what horizontal distance can a series of retaining walls no longer be considered in series? That is, what horizontal distance between the walls 2 feet, 5 feet, 10 feet, 25 feet, etc. is no longer to be considered in series?

The Uniform Construction Code (UCC) does not provide an exact number. N.J.A.C. 5:23-2.14(g) states that no person shall construct, enlarge, alter, reconstruct, or demolish a retaining wall or series of retaining walls having a total height four feet or greater, or a retaining wall less than four feet having a negative impact on a foundation, without first obtaining a construction permit. The height of a retaining wall shall be the sum of the heights of all retaining walls on the same slope.

In order to determine where the upper retaining wall no longer has a negative impact on a lower retaining wall**,** one must start by measuring a 30 degree angle from the horizontal plane at the bottom of the upper foundation of the retaining wall to the bottom of the foundation of the lower retaining wall. If the line clears the lower retaining wall footing, then the upper retaining wall has no influence on the lower. Therefore, for analysis purpose**s,** the walls are not considered in series.

See below:



If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Fire Protection Equipment Contractor, NJ Division of Fire Safety Permit/Certification Numbers

It has come to the attention of the Department that some Fire Protection Subcode Officials are not verifying the New Jersey Division of Fire Safety (DFS) fire protection business permit contractor number being used on the Fire Protection Subcode Technical Form F140. These numbers must be verified to ensure the contractor performing the work is a valid contractor. The simple solution to this issue is to have the contractor supply a copy of their business permit when they submit form F140. When a licensed electrical contractor or licensed alarm contractor is installing fire alarms a copy of the identification card for licensed fire alarm contractor or a sealed application from a licensed electrical contractor must be provided.

N.J.A.C. 5:23-2.15(b)5. When the work involves fire protection equipment, any contractor performing such work shall have the appropriate business permit and certification issued pursuant to N.J.S.A. 52:27D-25q et seq and N.J.A.C. 5:74-2.1 Business permits. The business permit number of the contractor shall appear on the permit application. This law and rule requires that all fire protection contractors obtain a business permit from the New Jersey Division of Fire Safety.
There are some exceptions to these provisions and they are as follows;
i. Certification shall not be required for licensed electrical contractors or for licensed alarm contractors installing fire alarms.
ii. Certification shall not be required for homeowners performing work within their residences. iii. Certification shall not be required for in-house employees performing routine maintenance work such as monthly, weekly or

See DFS Permit/Certification Numbers at right

daily inspections, or testing of fire protection equipment.
iv. Certification shall not be required for contractors who install water supply lines outside a building.

When you think that a false copy of a business permit has been submitted, the contractor number can be verified by going to the NJ Division of Fire Safety website at:

http://www.nj.gov/dca/divisions/dfs/pdf/fpe_contractor_list.pdf

The Contractor Certification Unit issues permits to businesses and certifies individuals involved in the installation, service, repair, inspection or maintenance of fire protection equipment. The above website lists the six certification categories as follows; ALL=All Fire Protection Equipment Contractor, FS=Fire Sprinkler System Contractor, SH=Special Hazard Fire Suppression System Contractor, FA=Fire Alarm System Contractor, PF=Portable Fire Extinguisher Contractor and KF=Kitchen Fire Suppression System Contractor. When contractors are not listed call/email the Contractor Certification Unit, Chris Michallis, Phone (609) 984-7860, Chris.Michallis@dca.state.nj.us.

When a contractor falsifies an application with an improper number or business name, the DFS contractor certification unit will investigate those individuals. The construction official may also issue a penalty pursuant to N.J.A.C. 5:23-2.31(e)4. for falsifying the permit application.

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

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

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Volume 25, Number 3 Fall 2013

Base Flood Elevations: ABFEs, Preliminary, etc.

There are two sets of regulations governing the elevation of structures in designated flood zones: the State's Flood Hazard Area Control Act rules, N.J.A.C. 7:13, and the National Flood Insurance Program (NFIP) rules. As discussed below, these two sets of regulations may now be relying on different maps.

As some of you may recall, with the emergency adoption of changes to the Department of Environmental Protection's (DEP) Flood Hazard Control regulations, FEMA's advisory base flood elevations (ABFE) plus freeboard became the height for new construction and substantially damaged/improved buildings to meet. To refresh your memory, please feel free to visit the adoption at:

http://www.nj.gov/dep/docs/20130124flood-hazard-emergency-rule.pdf.

As stated in the proposal/adoption, the amendments were enacted "to enable the use of the **best available flood elevation data** to determine the flood hazard area design flood elevation for a given site, including FEMA's recently released advisory flood maps for New Jersey's coast." I bring this to your attention as the ABFE's may not be the best available data now. Most of the Jersey

See ABFEs - page 2

The Definition of a Basement: UCC, DEP and FEMA/NFIP

As we all know, when applying rules and regulations, one must apply the definitions associated with those rules separately. So please note, the definition of a basement per the Uniform Construction Code (UCC) is not same as the definition in the Department of Environmental Protection (DEP) or the Federal Emergency Management Agency (FEMA) and National Flood Insurance Program (NFIP) rules.

The UCC defines the term basement for one- and two-family detached dwellings through the referenced edition of the International Residential Code. However, the term basement in the DEP and FEMA/NFIP regulations is not used in the same way we as code officials use it. Why do I mention this? It's because, regardless of what the UCC says, through the prior approval process, the term "basement" is applied as that term is defined in these other rules.

FEMA/NFIP: A newly constructed or substantially improved (SI) home must have the lowest floor (including basements) elevated to or above the BFE. The NFIP regulations define a basement as "***any area of the building having its floor subgrade (below ground level) on all sides.***" If a local

See Basements - page 3

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ABFEs *continued from page 1*

coast now has "preliminary work maps" which supersede ABFE mapping, as the ultimate goal is to get to finalized maps. For additional information on the applicability of preliminary work maps, please visit FEMA's website at:

http://www.region2coastal.com/faqs/work_map_faq.

Therefore, if preliminary work maps are available, they are required to be used, plus freeboard, for State flood hazard area permitting. However, as a minimum under the NFIP, municipalities are required by FEMA to regulate to the currently effective Flood Insurance Rate Map (FIRM) or a higher regulatory standard. Therefore, in communities that have adopted either the ABFE maps or the Preliminary Work Maps, if those elevations are lower or zones are less restrictive than the currently effective FIRM map, then local ordinances regulating to the effective map are still required.

This could be an issue with some municipalities and their adopted FIRM, as the effective FIRM is the official map that shows Special Flood Hazard Areas (SFHA) and the risk premium zones that are applicable to a community. These effective map risk zones indicated on FIRMs provide a basis for establishing flood insurance coverage premium rates offered through the NFIP. The preliminary work maps give an indication of the basis for future flood insurance premiums. Building to a higher standard will help to mitigate for future flood risk and future flood insurance premium rates.

Even with the ongoing challenges to the preliminary work maps, in areas where the preliminary work maps indicate a higher flood elevation or more restrictive flood zone, the best available data need to be used, regardless of the local adopted ordinance, so that building owners are rebuilding to the proper heights and allowing municipalities to continue to participate in the NFIP.

If you have further questions about proper elevation levels, please contact the State of NJ NFIP Coordinators Office at DEP (609) 292-2296. If you have questions regarding construction in the flood hazard areas, please contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

New One- or Two-Family Dwellings Installing NFPA 13D or P2904 Instead of NFPA 13R Sprinkler Systems

This article provides guidance on allowing the construction of three-story International Residential Code (IRC) structures with the use of a National Fire Protection Association (NFPA) 13D or IRC Section P2904 fire sprinkler system. It has become clear that these systems, which are designed specifically for use in one- or two-family dwellings, should be allowed to be used in new construction and in rebuilds. That the Uniform Construction Code (UCC) does not currently provide for their use is the result of amendments made to the International Residential Code (IRC)/2000 when it was adopted in 2003. An explanation of the technical reasoning follows.

To build a new dwelling or rebuild a demolished one- or two-family dwelling, the One-and Two-Family Dwelling Subcode of the Uniform Construction Code (UCC) needs to be followed. Currently, new homes of Type VB construction are limited to two stories, a maximum height of 35 feet and 4,800 square feet in floor area. (Type VB construction is wood frame without a fire resistance rating). In some cases, people rebuilding two story homes are required to elevate their homes to a height greater than 35 feet. In these instances, Type VB construction cannot be used unless a fire sprinkler system is installed. These homes are currently required to have a NFPA 13R fire sprinkler system installed or to be built of Type VA construction. (Type VA construction requires a one hour fire resistance rating on all load-bearing walls and floor/ceiling assemblies). *NOTE: This article addresses new construction and rebuilds. For elevating existing houses to greater than 35 ft., see Bulletin 13-1A.*

In 2003, when the Department proposed the adoption of the IRC/2000 with amendments, the unamended IRC/2000 allowed three story unlimited area dwellings without sprinkler protection. There were valid concerns about fire fighter safety in such a large dwelling. The Department agreed with these concerns and modified the proposal to maintain the suppression requirements of the Building Officials and Code Administrators (BOCA) National Building Code/1996. For Type VB construction, the thresholds of 4,800 sq. ft. in area and not more than two stories, 35 feet in height were retained; for Type VA construction, 10,200 sq. ft. in area and not more than three stories, 40 feet in height were retained. In addition, to address the concerns of the fire service, the height increase section of the BOCA National Building Code/1996 was also retained. The height of a building could be increased one story, up to three stories or 55 feet, when a National Fire Protection Association (NFPA) 13 or 13R system was installed.

See 13D or P2904 - page 3

Basements *continued from page 1*

floodplain administrator determines that work constitutes SI of any building that has a basement, the building must be brought into compliance, which includes eliminating the below-grade area if that area constitutes a basement as defined in the NFIP regulations.

Measures to eliminate basements below the BFE will, in part, depend on the basement and surrounding ground elevations. Below are examples of measures that can be taken to meet the requirement:
- Fill in below-grade areas. This option is effective only if the elevation of the floor above the below-grade area is at or above the BFE. Compliance is achieved by filling in the below-grade area and converting the remaining space to a compliant enclosure.
- Convert walkout basements to compliant enclosures. Section 6.3.1 describes how a walkout basement can be modified to become a compliant enclosure (A zone only).

(The info above comes from Section 6.3.3, Basements, of FEMA P758 which can be viewed at:

http://www.fema.gov/media-library-data/20130726-1734-25045-3528/p758_ch6_r2.pdf.)

DEP: If the existing home is not substantially damaged and the owner chooses to elevate the home, please note that basements are not permitted under the DEP flood hazard area rules. ***A basement is an enclosed area having a floor that lies below ground on all sides.*** When elevating a building, the owner must fill in the basement so that its floor at a minimum matches the ground on at least one side. However, a building can have a crawl space or other enclosure beneath the lowest floor, provided it is useable solely for building access, storage and/or parking, and provided the enclosure is constructed in compliance with N.J.A.C. 7:13-11.5(n), (o) and (p).

(The info above comes from item #29 of a Frequently Asked Questions document posted on the DEP's website -- If I elevate my building, can I keep my basement?, which can be viewed at:

http://www.nj.gov/dep/landuse/SandyFAQ.html)

Additional information related to the above is available in FEMA's "Foundation Requirements and Recommendations for Elevated Homes," which may be viewed through the link below:

http://www.fema.gov/media-library-data/20130726-1916-25045-1195/fema_tarc_factsheet_open_foundation_final_508.pdf.

In short, homes that are newly constructed, substantially improved or those that are being elevated cannot have a basement, but can have an enclosure (which may be called a crawl space as there are no height requirements for this

See Basements -continued at right

Basements *continued from left*

space) under the first floor of living space provided this enclosure has a floor matching the grade outside and is used solely for building access, storage and/or parking.

Source: Rob Austin
Code Assistance Unit

13D or P2904 *continued from page 2*

It has become clear that requiring the installation of a NFPA 13 or 13R system, rather than allowing the installation of a NFPA13D or IRC P2904 system, means that extra components are provided that do not result in an extra benefit for the evacuation of the occupants. The Department believes that the requirement to install NFPA 13 or 13R systems, with the associated higher costs, may actually discourage the installation of residential sprinkler systems.

The NFPA 13R and the 13D/P2904 systems essentially provide the same level of life safety protection for the occupants and they also provide some property protection for the building. None of the combustible concealed spaces are required to be protected unless they contain fuel-fired equipment, then only the area above the equipment needs sprinkler protection. While sprinklers are not required in garages of a dwelling with a NFPA 13D system, they are required with the use of a NFPA 13R system. However, the same residential-style sprinkler heads that were used inside the dwelling can be used in the garage. In Phoenix, Arizona and Prince Georges County, Maryland, the effectiveness of the installation of NFPA 13D systems in the protection of life and property has been demonstrated for over 20 years: There have been no deaths in those jurisdictions from accidental fires in dwellings with 13D systems installed, and, in many cases, the sprinklers extinguished the fires before the fire department arrived.

See 13D or P2904 - page 5

Construction Reporter: September 2013 Highlights

- $936.6 million of construction was authorized in September based on building permits issued by 544 of New Jersey's 565 municipalities.
- New homes and home repair totaled $506.0 million. This was 54 percent of all authorized construction.
- Office, retail, and other nonresidential work accounted for $430.6 million (46 percent).
- Jersey City had the most work in September. Over one-third of the $23.6 million of authorized construction was for an alteration of an existing warehouse.
- Robbinsville (Mercer County) had $17.9 million of work. An addition to a public elementary school accounted for $14.5 million.
- North Brunswick in Middlesex County reported $17.4 million; the largest permit was for a Costco that will generate 152,000 square feet of new retail space.
- State buildings accounted for $62.2 million of construction in September. The largest permit authorized was for $47.7 million of construction for a new business school at Montclair State University. The new building will have total floor area of 144,000 square feet.

Year to Date

- With nine months of building permits, several things can be said about New Jersey's construction industry in 2013.
- The dollar amount of work should be significantly higher in 2013 than in previous years. Between January and September, municipalities issued building permits with an estimated dollar amount of work at $9.784 billion. This is $1.456 billion more than the same time last year, an increase of 17.5 percent. The last year with more activity was 2008.
- New houses play a key role in the construction industry's strong performance. The number of new dwellings authorized between January and September 2013 was 14,123. This is 2,954 more than the same time last year, an increase of 26.4 percent. The last year with more new housing was 2007.
- Jersey City continues to build more new houses than any other locality. Between January and September, the City's construction office issued building permits for 1,150 new dwellings. Since 2001, no other municipality has built more.

Major Construction Indicators, New Jersey: Nine-Month Comparison

Period	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jan – Sept 2013	$9,783,747,987	14,123	3,892,759	1,628,143
Jan – Sept 2012	8,328,001,736	11,169	5,592,167	1,767,287
Jan – Sept 2011	8,262,435,231	8,304	4,145,208	1,296,264
Jan – Sept 2010	7,213,619,571	8,602	3,798,816	1,635,869
Jan – Sept 2009	7,180,090,779	7,750	3,023,110	1,833,320
Jan – Sept 2008	11,083,588,256	13,048	5,983,442	4,978,343
Jan – Sept 2007	11,195,090,903	19,219	6,670,238	3,238,879
Jan – Sept 2006	11,882,033,473	24,842	8,777,597	4,527,828
Jan – Sept 2005	11,366,934,642	28,887	8,563,380	5,380,197
Jan – Sept 2004	10,128,167,925	28,703	8,280,276	4,086,071
Jan – Sept 2003	8,513,886,239	25,405	7,200,118	4,379,191

See Highlights- page 6

13D or P2904 *continued from page 3*

The following is a list of differences between a NFPA 13 or 13R and a 13D/P2904 system:

	NFPA 13 and NFPA 13D	NFPA 13D/P2904
1	Fire Department Connection (FDC)	No FDC
2	Separate Water Supply Connection	Allowance for a Combined Plumbing and Sprinkler Water Supply
3	Four Sprinkler Head Design	Two Head Design
4	30 Minute Water Supply	10 Minute Water Supply
5	Monitored	No Monitoring

NOTE: Installers of fire sprinklers need Division of Fire Safety certification.

The unamended IRC/2009 requires the installation of a NFPA 13D or P2904 fire sprinkler system in a one- or two-family dwelling that is limited to three stories in height and may be unlimited in area. Under the current One- and Two-Family Dwelling Subcode of the UCC, the construction of a new dwelling or increase the height of an existing Type VB dwelling beyond 35 feet, requires the installation of a monitored NFPA 13 or 13R system. Since, with the adoption of both the IRC/2006 and IRC/2009, the UCC retained the sprinkler system requirements of the BOCA National Building Code/1996 and did not include scoping for the use of the NFPA 13D/IRC P2904, many new dwellings are not being built with fire sprinkler systems. It is possible that the higher cost of the NFPA 13R system may be discouraging people from installing sprinkler systems; in fact, many of these newly constructed or rebuilt homes are moving to Type VA construction despite the higher level of life safety provided by the sprinkler system

The Department recommends granting a variation to allow the construction of dwellings in accordance with the unamended IRC/2009; the Department recommends that a NFPA 13D or IRC/P2904 sprinkler system be allowed in a one- or two-family dwelling that is limited to a maximum height of three stories and may be unlimited in area.

If you have any questions, please contact me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Use of NFPA 14 Manual Wet Fire Standpipes

This article provides guidance on allowing the installation of an NFPA 14, Class I, manual wet standpipe system in a building when either a NFPA 13, (Installation of SprinklerSystems), or 13R, (Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height), sprinkler system is installed. Currently, through modifications that were made in the

See Standpipes -continued at right

Standpipes *continued from left*

International Building Code (IBC)/2000, Section 905, (Standpipe Systems), requirements were adopted for the residual water pressure required at the topmost outlet when a Class I standpipe is allowed to be installed. This happened when the requirements for automatic water supplies from the Building Officials and Code Administrators (BOCA) National Building Code/1996 were adopted as part of the IBC/2000. Section 905.2.2.1, (Automatic Water Supply), requires an automatic water supply to the standpipe that complies with Section 905.2.1, (Piping Design), when the building is not equipped with a NFPA 13 fire sprinkler system. A 65 psi residual pressure is required at the topmost outlet while flowing the required gpm for the specific occupancy, ranging from 750 gpm to 1250 gpm. Only buildings with NFPA 13 fire sprinkler systems installed are exempt from the 65 psi residual requirement due to the modification made in the IBC/2000. This modification has been brought forward in the adoptions of the IBC/2006 and the IBC/2009.

IBC, Section 905.3.1, (Building Height), requires a Class III system to be installed when a building has a floor located 30 feet or more above or below the level of fire department vehicle access. When NFPA 13 or 13R fire sprinkler systems are installed, a Class I fire standpipe system can be installed. When a Class I system is installed, there are no requirements for fire hose to be installed; only 2½ inch hose valves for the fire department to use are required.

The unamended IBC has a requirement to install standpipe systems in accordance with IBC Section 905, (Standpipe Systems), and NFPA 14. The currently referenced NFPA 14, 2007 edition, defines six different types of standpipes at Section 3.3.12, (Standpipe Systems). Section 3.3.15.1, (Class I System) defines Class I standpipes as providing 2 ½ inch valves for fire department use. Section 5.4.1.1 allows a Class I standpipe to be any one of the five listed in Section 5.2. Section 5.2.5 manual wet standpipes are very similar to our current requirement in Section 905.2.1 that only applies to NFPA 13 systems. Manual wet standpipes are required to have the water pressure available only for the sprinkler system and are not required to supply the gpm demand of the standpipe. Simply put, once the fire department arrives, they can tie into the fire department connection and supply the standpipe with the required pressure to meet the demand of the hose they will be bringing to connect to the 2½ inch hose valves.

As such, the Department recommends the granting of variations to allow the use of NFPA 14 Class I manual wet standpipes when a building is equipped with a NFPA 13R fire sprinkler system.

Source: Mike Whalen
Code Assistance Unit

Highlights *continued from page 4*

Major Construction Indicators, New Jersey: Nine-Month Comparison

Period	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jan – Sept 2002	8,999,773,233	25,351	7,727,817	6,286,676
Jan – Sept 2001	9,342,508,663	25,419	15,411,962	5,382,939
Jan – Sept 2000	7,903,432,878	26,486	9,917,532	3,838,654
Jan – Sept 1999	7,914,223,933	27,654	9,297,792	5,115,191
Jan – Sept 1998	6,678,258,864	24,609	8,647,701	5,745,808
difference between 2012 and 2013				
2012 – 2013	$1,455,746,251	2,954	-1,699,408	-139,144
Percent Change	17.5%	26.4%	-30.4%	-7.9%
difference between 2011 and 2012				
2011 – 2012	$65,566,505	2,865	1,446,959	471,023
Percent Change	0.8%	34.5%	34.9%	36.3%
difference between 2010 and 2011				
2010 – 2011	1,048,815,660	-298	346,392	-339,605
Percent Change	14.5%	-3.5%	9.1%	-20.8%

Source: N.J. Department of Community Affairs, 11/7/13

- Not every sector of the building industry showed signs of recovery. Office and retail development in 2013 is down. Nearly 3.9 million square feet of new office space was authorized between January and September 2013. This is 30.4 percent less than last year at this time. Newark accounted for 748,000 square feet of all new office space authorized between January and September 2013. Almost all of this is for the new headquarters for Prudential Insurance, which broke ground in February.
- Just over 1.6 million square feet of new retail space was authorized between January and September 2013. This is 7.9 percent below last year at this time.
- Super Storm Sandy had severe and measureable effects on New Jersey's construction industry, especially for homebuilders and remodelers.
- The storm's early impact was disruptive. Some of the sharpest drops in monthly building activity in recent years came in November 2012, the first month immediately after the storm.
- Sharp increases in home repairs and housing demolitions didn't begin to appear until 2013.

Housing Demolitions, January – September 2005-13: New Jersey and Ocean and Monmouth County

Period	New Jersey	Ocean County	Monmouth County	Ocean & Monmouth as % of NJ
Jan – Sep 2013	5,382	2,544	631	59.0%
Jan – Sep 2012	2,278	279	244	23.0%
Jan – Sep 2011	2,118	290	228	24.5%
Jan – Sep 2010	3,216	312	238	17.1%
Jan – Sep 2009	1,995	245	171	20.9%
Jan – Sep 2008	3,441	428	300	21.2%
Jan – Sep 2007	3,528	362	283	18.3%
Jan – Sep 2006	4,758	468	339	17.0%
Jan – Sep 2005	4,882	501	301	16.4%

Source: N.J. Department of Community Affairs, 11/7/13

See Highlights - page 7

Highlights *continued from page 6*

- 5,382 housing demolitions were authorized between January and September 2013. This was 3,104 more than this time last year, an *increase of more than one and one-third (136.3 percent)*.
- Ocean County had 2,544 authorized demolitions, 47.3 percent of the total for the entire State. Toms River in Ocean County had 900 authorized demolitions, 16.7 of New Jersey's total.
- 57.9 percent of all the authorized house demolitions between January and September 2013 were in twenty municipalities. Eleven of them were in Ocean County. Five more were in Monmouth or Atlantic Counties.
- Nine counties were designated disaster areas: Atlantic; Bergen; Cape May; Essex; Hudson; Middlesex; Monmouth; Ocean; and Union. The dollar amount of construction for home additions and alterations in "Sandy" counties was $1.88 billion between January and September 2013. For the same time in 2012, it was $1.44 billion. Home repairs grew by 30.3 percent in these nine counties.

Housing Units Demolished, Top Municipalities, January-September 2013

Municipality	County	Total	1&2 family	Multifamily	Mixed use
Toms River Township	Ocean	900	892	5	3
Stafford Township	Ocean	356	317	0	39
Little Egg Harbor Twp.	Ocean	242	242	0	0
Ocean City	Cape May	194	172	22	0
Brick Township	Ocean	190	190	0	0
Union Beach Borough	Monmouth	185	185	0	0
Long Beach Township	Ocean	167	167	0	0
Lavallette Borough	Ocean	107	107	0	0
Camden City	Camden	100	100	0	0
Manasquan Borough	Monmouth	83	83	0	0
Berkeley Township	Ocean	79	79	0	0
Jersey City	Hudson	74	60	14	0
Mantoloking Borough	Ocean	69	69	0	0
Point Pleasant Beach	Ocean	65	65	0	0
Lakewood Township	Ocean	64	64	0	0
Wayne Township	Passaic	55	55	0	0
Margate City	Atlantic	48	48	0	0
Brigantine City	Atlantic	47	47	0	0
Lacey Township	Ocean	47	47	0	0
Rumson Borough	Monmouth	46	46	0	0
Top Municipalities		3,118	3,035	41	42
New Jersey		5,382	5,138	156	88
Top as a % of State		57.9%	59.1%	26.3%	47.7%

N.J. Department of Community Affairs, 11/7/13

See Highlights - page 8

Welcome Dave Greenhill

The Code Assistance Unit has a new electrical subcode official. Dave Greenhill joined us recently and is responsible for all things electrical. He is also responsible for solar and wind power matters.

Dave joins us after many years as a union electrician. Additionally, he has worked as an electrical inspector at the local level. While an electrical subcode official for

See Welcome -continued at right

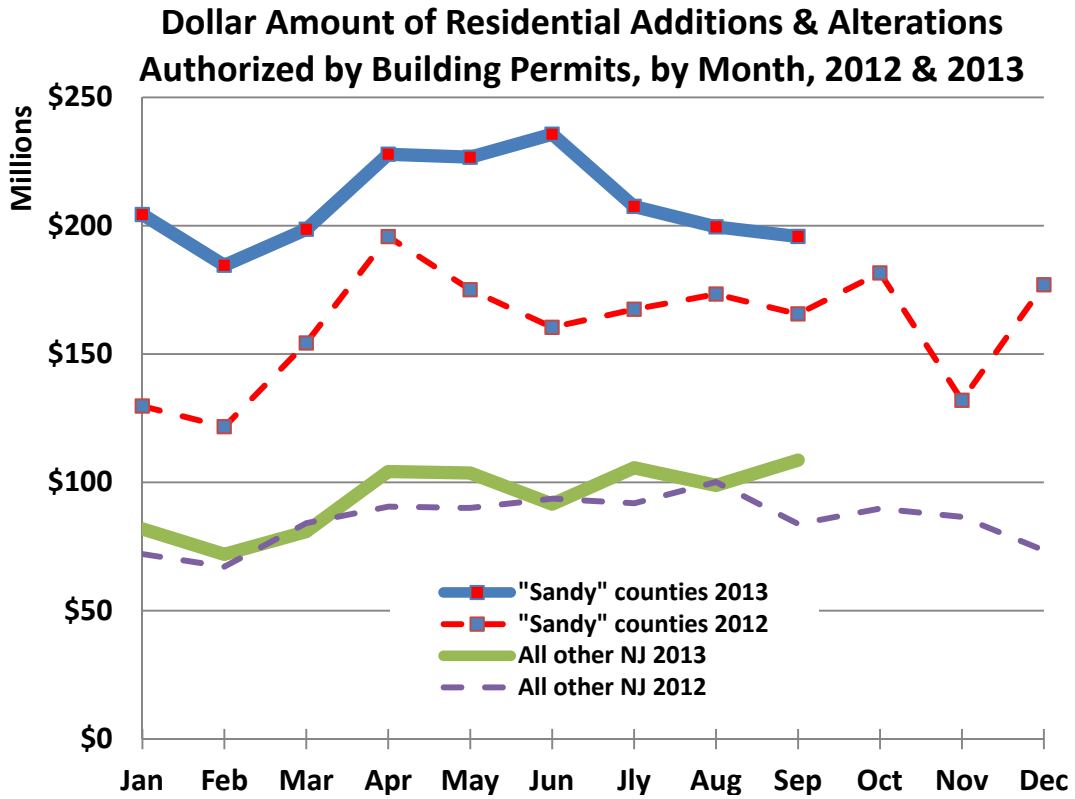
Welcome *continued from left*

the State, Dave worked on the new MetLife Stadium, and he worked in several municipalities for Superstorm Sandy recovery.

Feel free to reach out to Dave with any of your electrical questions.

Source: John N. Terry
Code Assistance Unit

Highlights *continued from page 7*



- For the rest of New Jersey, home renovations also grew between 2012 and 2013, but only by 9.5 percent.

New House Prices

- It got more expensive to buy a new house according to third quarter data provided by the new home warranty companies that do business in New Jersey.
- Most new, for-sale houses built in the State must have a new home warranty. The exceptions are rental units and those dwellings where the homeowners acted as their own general contractor.
- 1,811 new houses were built and began enrollment in a new home warranty program in July, August, or September 2013. Half of them cost more than $407,794. This median sales price was 1.4 percent more than the median price for the second quarter of 2013.
- The counties with the highest priced new houses were Morris, Somerset, Bergen, and Hudson.

New House Prices, by Quarter

Period	Number of New Houses	Median Sale Price	% Change in Price
3rd Quarter 2013(p)	1,811	$407,794	1.4
2nd Quarter 2013(p)	1,781	402,000	1.8
1st Quarter 2013(p)	1,277	395,000	2.6
4th Quarter 2012	1,746	384,845	-3.7
3rd Quarter 2012	1,899	399,699	-6.4
2nd Quarter 2012	2,089	427,000	10.9
1st Quarter 2012	1,431	385,000	0.1
4th Quarter 2011	1,718	384,500	-3.7
3rd Quarter 2011	1,765	399,100	-0.5

See Highlights- page 9

Highlights *continued from page 8*

New House Prices, by Quarter

Period	Number of New Houses	Median Sale Price	% Change in Price
2nd Quarter 2011	1,955	400,972	7.7
1st Quarter 2011	1,401	372,350	-2.9
4th Quarter 2010	1,976	383,642	-2.9
3rd Quarter 2010	2,105	395,000	3.8
2nd Quarter 2010	2,811	380,360	0.5
1st Quarter 2010	1,820	378,442	8.5
4th Quarter 2009	2,476	348,721	-6.0
3rd Quarter 2009	2,494	370,873	-3.0
2nd Quarter 2009	2,375	382,382	3.6
1st Quarter 2009	1,816	369,150	-2.9
4th Quarter 2008	2,760	380,000	-6.2
3rd Quarter 2008	3,204	405,000	-14.7
2nd Quarter 2008	4,240	475,000	25.0
1st Quarter 2008	2,760	380,000	-7.3
4th Quarter 2007	4,155	410,000	

Note: 2013 quarterly figures are preliminary.

Source: N.J. Department of Community Affairs, 11/7/13

New House Prices, by Year

Period	Number of New Houses	Median Sale Price	Change in Sale Price	Median Sale Price in Adjusted 1996 $	Change in Adjusted Sale Price
2012	7,165	$399,900	2.5%	$273,284	0.5%
2011	6,839	390,000	1.3%	272,034	-1.8%
2010	8,712	384,899	4.4%	276,950	2.8%
2009	9,161	368,512	-13.3%	269,508	-13.0%
2008	13,841	425,000	0.1%	309,715	-3.6%
2007	18,397	424,570	2.6%	321,281	-0.2%
2006	22,697	413,825	9.2%	322,069	5.8%
2005	24,571	378,992	8.3%	304,474	4.8%
2004	23,844	349,900	13.9%	290,626	11.0%
2003	22,226	307,168	11.8%	261,927	9.3%
2002	23,647	274,705	8.3%	239,584	6.6%
2001	23,372	253,670	9.5%	224,736	6.4%
2000	25,058	231,728	3.2%	211,139	-0.1%
1999	24,479	224,496	6.9%	211,425	4.6%
1998	23,884	209,980	10.5%	202,122	8.8%
1997	21,640	190,000	3.7%	185,738	1.3%
1996	20,903	183,300		183,300	

N.J. Department of Community Affairs, 5/7/13

These highlights are from the September issue of the New Jersey Construction Reporter, an on-line publication from the New Jersey Department of Community Affairs. Data from monthly building permits and certificates are available at http://www.nj.gov/dca/divisions/codes/reporter.

Heating, Ventilating, Air Conditioning and Refrigeration (HVACR) Contractors License Update

This article is an update on the HVACR license. On December 20, 2007, legislation was signed into law establishing a new State Board of Examiners of Heating, Ventilating, Air Conditioning and Refrigeration (HVACR) Contractors and requiring licensure to work in New Jersey as a Master HVACR contractor.

The law includes a "grandfathering" provision, N.J.S.A. 45:16A-26, authorizing the Board to issue a Master HVACR license based on experience without examination for a limited time.

A six-month "Grandfathering" period, during which individuals currently practicing as HVACR contractors may obtain licensure without meeting education or examination requirements, will begin to run on the effective date of regulations adopted by the State HVACR Contractors Board. The regulations prescribe the application procedure and application fee.

The adoption date was April 15, 2013 with an effective date of October 15, 2013. In the July 1, 2013 *New Jersey Register* (NJR), the effective date was extended from October 15, 2013 to January 1, 2014. This extension was to allow the Board the time necessary to develop its licensing examination prior to implementing the license.

In the December 16 issue of the *New Jersey Register*, the Board published a Notice extending the operative date to March 1, 2014. The deadline for those wishing to apply under the "grandfathering" provision has been extended to September 1, 2014. The applications will be required to be filed online. According to the HVACR Board website, applications will not be accepted until the operative date, March 1.

Further information concerning licensure of HVACR contractors, including the application process, will be posted on the Board website at: www.nj.gov/lps/ca/HVACR/ as it becomes available.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Should I purchase the 2012 Codes?

This is a recurring question being asked of the Code Assistance Unit. Simply put, no. At this point, the Division has yet to be authorized to propose the 2012 Code package. If and when we get authorization to propose, you will have plenty of time to purchase the documents you need. We will keep you all updated on the status of the code adoption over the next few months. In the meantime, be patient and continue to use your 2009's.

Source: John N. Terry
Code Assistance Unit

Residential Health Care Facilities: Plan Review by Department

This article is to inform you that the article that appeared in the Summer/Fall 2005 edition of the *Construction Code Communicator*, entitled "Plan Review Authority for Residential Health Care Facilities," is hereby rescinded.

Plans for residential health care facilities must be submitted to the Department's Bureau of Construction Project Review. The regulations under which these facilities are licensed, N.J.A.C. 5:27A, reflect this requirement for State review of the plans. More importantly, the licensing regulations contain physical facility requirements which must be met.

Bulletin 98-3 is being updated to reflect the need for State review of these plans the fact that these are no longer licensed by the Department of Health notwithstanding.

Please direct any questions to the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Manager, Code Assistance Unit

Lowest Floor Level in Flood-resistant Construction

(reprint from Volume 21 Number 1, Spring/Summer 2009 with updated references)

Question: How does R300 of the International Residential Code/2009 (IRC/2009) apply to the lowest floor level of a home to be constructed in a flood zone that has vehicle parking only on the first level, two levels of living space above and a habitable attic above that?

Background: Section R322.1.5 of the IRC/2009 states that the lowest floor is the floor of the lowest enclosed area, including basement, but excluding any unfinished flood-resistant enclosure that is usable solely for vehicle parking, building access, or limited storage.

Answer: If the 1st level is truly an unfinished flood-resistant enclosure that is usable solely for vehicle parking, building access, or limited storage, then, as per Section R322.1.5 of the IRC/2009, that level does not count as a story. Therefore, Section R300 may still be used to design this residence. Remember that

See Lowest Floor Level -continued at right

when the design is VB construction without a sprinkler system, the height limitation of 35 feet of Section R300 still applies. However, if a higher height were desired, 40 feet is allowable by using VA construction (Section R300.3) or 55 feet can be obtained by using VB construction in conjunction with a sprinkler system (Section R300.1).

If you have any questions on this matter, you may contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

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Division of Codes and Standards
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Volume 25, Number 4 **Winter 2013**

The Winter Communicator: A Reminder

The final (Winter) issue of the *Construction Code Communicator* each year now consists of a collection of Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year. This year, we are including articles that were printed in earlier editions of the *Construction Code Communicator* on topics that continue to generate questions. As noted on the last page, once this edition of the *Construction Code Communicator* has been posted, these individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from those sections of Division's website. There is one exception: the materials related to Superstorm Sandy will remain in place. In short, there are no new articles in this issue.

Please note that, although the documents will be removed from the Alerts and Hot Topics, it will still be possible to access them through Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

Also, the Index for all four issues of the *Construction Code Communicator* 2013 is included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain new articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year with previously printed articles where the topic continues the generate questions.

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at Emily.Templeton@dca.state.nj.us.

Source: Emily W. Templeton
Division of Codes and Standards

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Shop Drawing Revisited

(Reprint with updated references -- Volume 17 Number 2 Summer/Fall 2005)

Over the past few years, code officials have handled the submittal of documents for engineered lumber in a multitude of ways. The following are three separate scenarios that are intended to provide direction as to how design documents or shop drawings should be handled.

In the first scenario, the design professional of record has provided sufficient detail on the original design documents to determine compliance with the requirements of the code for the engineered wood product. If the design professional provides sufficient specification and detail (depth, width, joist series, on-center spacing), there is no need for a shop drawing to be submitted by the manufacturer. Any additional information that is needed to determine compliance with the code should be requested of, and provided by, the design professional of record.

In the second scenario, the design professional of record does not provide sufficient information on the design documents to determine compliance with the requirements of the code. When the design professional of record does not include detail on the original design documents, signed and sealed shop drawings are required. As per *N.J.A.C.* 5:23-2.15(f)1xi, any deferred submittal must be reviewed and accepted by the design professional of record.

In the third scenario, engineered wood products are used in place of other specified products. In this instance, the documents submitted by the engineered wood product manufacturer are required to be signed and sealed. This is a deviation from the original design and must be approved by the design professional of record.

These three scenarios should guide you in determining the need for your documents to be signed and sealed, as well as by whom. If you have further questions on this matter, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

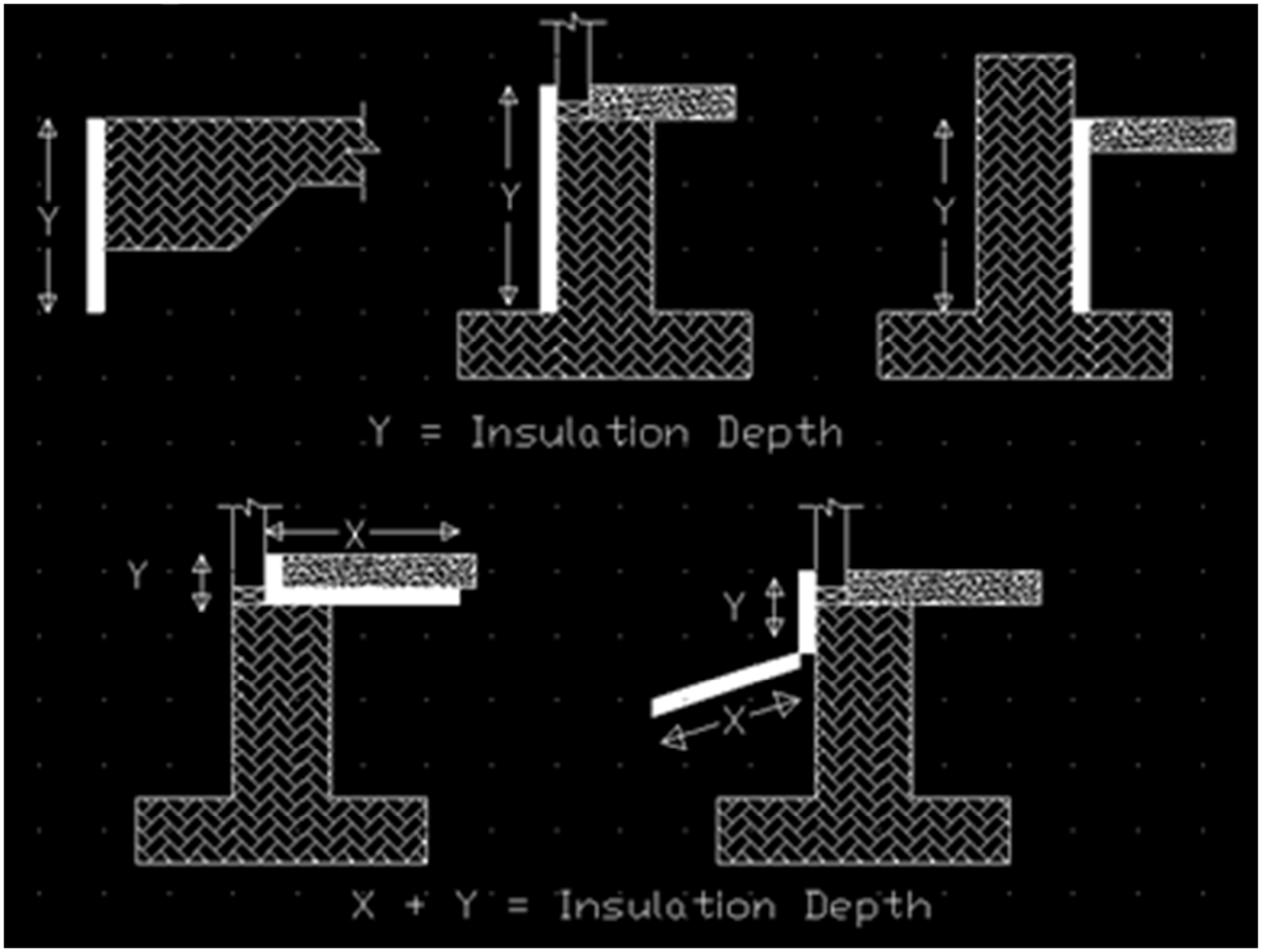
Slab-on-Grade Floors – Perimeter Insulation

(Reprint with updated references -- Volume 17 Number 1 Spring 2005)

When a design utilizes slab-perimeter insulation based on the International Energy Conservation Code/2009, Section 402.2.8 and Table 402.1.1, entitled "Slab-on-Grade Floors" and "Insulation And Fenestration Requirements by Component" respectively, the insulation may be placed on the outside OR on the inside of the foundation wall. Since the State of New Jersey is in Zones 4 and 5, all slab-perimeter insulation is required either to (1) extend downward from the elevation of the top of the slab for a minimum distance of 24 inches, OR (2) extend downward to at least the bottom of the slab and then horizontally to the interior or exterior for a minimum total distance of 24 inches. Also, the horizontal insulation extending outside of the foundation wall must be covered with a minimum of 10 inches in thickness of pavement and/or soil. Lastly, the top edge of the insulation installed between the exterior wall and the edge of the interior slab shall be permitted to be cut at a 45-degree angle away from the exterior wall. NOTE: All insulation shall be of an approved type.

Since the International Energy Conservation Code/2009 does not pictorial guidance, the attached drawing should be helpful in checking for the installation of slab-perimeter insulation.

Source: Rob Austin
Code Assistance Unit



Backflow Preventers – What Type is Required?

(Reprint with updated references -- Volume 20 Number 2 Summer/Fall 2008)

The Department of Community Affairs has become aware of questions concerning the type of backflow preventer that is required by water utilities or authorities to be installed on a water service that serves either a combination domestic and fire-protection system or a dedicated fire-protection system.

Some water utilities are requiring, at a minimum, a reduced pressure zone backflow preventer on the water services supplying water to any fire-protection system when the system is supplied from a public water main. This brings up two questions: First, what does the Plumbing Subcode require? Second, can a water utility or authority be more stringent than the Plumbing Subcode?

What does the Plumbing Subcode require? The 2009 National Standard Plumbing Code (NSPC) requires a reduced pressure zone backflow preventer on any fire protection system that has a fire-department siamese connection.

Can a water utility or authority be more stringent than the Plumbing Subcode? This requires a lengthy response because there are two laws that apply. The adopted Plumbing Subcode states the type of backflow preventer required and the location. But, the Safe Drinking Water Act regulates water utilities and authorities, and requires them to protect the potable water from any backflow into the public water supply.

N.J.A.C. 5:23-3.15(b)10.iii amends Section 10.4.3 of the NSPC/2009 as follows: "Section 10.4.3 is amended to read: "potable water supplies shall be protected in accordance with the provisions of this code *and, where applicable,* the Safe Drinking Water Regulations (*N.J.A.C.* 7:10). The requirements of this code shall establish requirements for individual outlet protection. The requirements of the Safe Drinking Water Act shall establish the requirements for containment." (Emphasis added.)

So, the answer to the second question is: Yes, the water utility or authority can be more stringent than the Plumbing Subcode. Therefore, as stated in the amendment to the Plumbing Subcode, the containment backflow preventer on the incoming water service is regulated by the water utility or authority, which would have the final decision as to what type of backflow preventer is required.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Foundation Drains in Residential Crawl Spaces: Are They Needed?

(Reprint with updated references -- Volume 17 Number 2 Summer/Fall 2005)

Section 406.1 of the New Jersey Edition of the 2009 International Residential Code requires walls or portions thereof that retain earth, and that enclose interior spaces and floors below grade, to be waterproofed or dampproofed in accordance with Section 406. This applies only when the floor of the crawl space is below the adjacent grade. Assuming there is no hydrostatic pressure condition, Section 406.4 requires dampproofing and also requires a drain to be installed around the foundation perimeter. The requirements for the drain are found in Section 406.4.2. Remember, the drain does not always require a pipe.

So, the short answer to the question "Are foundation drains needed in residential crawl spaces?" is yes. If you have any questions regarding this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Determining the Fixture Count

(Reprint with updated references -- Volume 19 Number 1 Spring 2007)

Determining the population for the plumbing fixture requirement is one of the most frequently asked questions the Code Assistance Unit receives from architects, engineers, and code officials. This article is an effort to try to clear up some of the confusion there seems to be with determining the population count and the number of plumbing fixtures required by the National Standard Plumbing Code (NSPC). [NOTE: See accompanying article on "use group" designations in the NSPC 2009 and the International Building Code (IBC) 2009.]

➔ NSPC 2009, Section 7.21.2, Occupant Load, states that "The minimum number of plumbing fixtures shall be based on the number of persons to be served by the fixtures, as determined by the person responsible for the design of the plumbing system."

This section makes it clear that the design professional is responsible for determining the number of persons to be served by the fixtures. If the design professional knows the actual number of persons that will occupy the building, that number can be used to determine the number of plumbing fixtures.

➔ NSPC 2009, Section 7.21.2.b states that "Where the occupant load is not established and is based on the egress requirements of a building code, the number of occupants for plumbing purposes shall be permitted to be reduced to two-thirds of that for fire- or life-safety purposes."

Paragraph b states that, if the occupant load is based on the building code egress calculations of the number of persons per square foot permitted for that use, the egress number can be reduced by two-thirds for the purpose of determining the plumbing fixture count.

➔ NSPC 2009, Section 7.21.2.c states that "Whenever both sexes are present in approximately equal numbers, the total occupant load shall be multiplied by 50 percent (changed from 60 percent in the 2003 NSPC) to determine the number of persons of each sex to be provided for, unless specific information concerning the percentage of male and female occupants is available."

As paragraph c states, if the percentage of male and female occupants is NOT known, the 50 percent rule applies.

➔ NSPC 2009, Section 7.21.4, Separate Facilities, includes Exceptions (2), (3), and (4). Exception (2) states that "In occupancies serving 15 or fewer people (changed from 10 in the 2003 NSPC), one toilet facility, designed for use by no more than one person at a time, shall be permitted for use by both sexes." Exception (3) states that "In business occupancies with a total floor area of 1500 square feet or less, one toilet facility, designed for use by no more than one person at a time, shall satisfy the requirements for servicing customers and employees of both sexes." Exception (4) is the same as Exception (3) and applies to mercantile occupancies.

Exception (2) is very clear. If you have 15 or fewer people, one unisex toilet facility is permitted. Questions remain pertaining to Exceptions (3) and (4). If you have a business use that is more than 1500 square feet and the known population 15 or fewer employees or customers, can you provide only one unisex toilet facility? The answer is YES. This is because the population complies with Exception (2) – there are 15 or fewer people. However, when the actual population is not known, and the occupancy is based on the building code egress calculations and the occupant load and exceeds 15 people, after the two-thirds reduction, then separate toilet facilities for each sex are required.

Another frequently asked question is how to perform the calculations when the male/female ratio is not known. When the population calculations are based on the building code egress, the total egress population is permitted to be reduced by two-thirds, and that population is then multiplied by 50 percent to determine the male/female population numbers for purposes of determining the fixture count. There has been some confusion that the two-thirds reduction and the 50 percent ratio could not be used together. They must be used together to correctly calculate the fixture requirement using the building code egress calculations. Refer to NSPC, Section 7.21.2.b and c.

An example is provided on the following page…

EXAMPLE
Use Group: Business
Floor Area: 2575 square feet, single story
Population: Based on building egress calculations
(IBC/2009, Table 1004.1.1, Business Use; 100 square feet per occupant, gross floor area)
2575 | 100 = 25.75, rounded to 26 persons
26 persons x .67 (two-thirds reduction) = 17.42, rounded to 18 persons total

Because there are more than 15 persons, separate male and female toilet facilities are required (based on the 18-person total).

NEXT: To determine the male/female fixture requirement:
18 x .5 (50%) = 9 male and 9 female

Plumbing fixtures required are based on NSPC 2009, Table 7.21.1, Business Use. Therefore, the fixtures required are:
Male: 1 water closet and 1 lavatory
Female: 1 water closet and 1 lavatory
NOTE: 1 drinking water facility and 1 service sink are also required.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Use Group Classifications: Building Subcode and Plumbing Subcode

(Reprint with updated references -- Volume 19 Number 1 Spring 2007)

The following is based on the 2009 edition of the National Standard Plumbing Code (NSPC), New Jersey's adopted Plumbing Subcode.

First, let's touch base on the issue of the proper group classification. In the Spring 2005 *Construction Code Communicator*, I wrote an article addressing the different group classifications in the International Building Code (IBC) and the NSPC. The Department of Community Affairs is still receiving many calls from architects, engineers, and code officials as to the proper group to use for determining the required number of plumbing fixtures. A couple of examples might help: Restaurants are Group A-2 in the IBC, but are Group A-3 in the NSPC; higher education facilities are Group B in the IBC, but are Group E in the NSPC.

I would like to emphasize that the descriptions of the building use (as set forth in the Building and Plumbing Subcodes), and NOT simply the group classification, must be used.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Use of a Backflow Preventer in Boiler Applications

(Reprint with updated references -- Volume 19 Number 1 Spring 2007)

The Department of Community Affairs (DCA) has been receiving many calls pertaining to the requirement for a check valve in the domestic water supply for the boiler water makeup, in addition to the backflow preventer as required by the Plumbing Subcode. The check valve violation is being issued by an insurance company's inspector or by an inspector from the New Jersey Department of Labor and Workforce Development, Bureau of Boiler and Pressure Vessel Compliance (BB&PVC.)

A check valve and stop valve or cock are required by the American Society of Mechanical Engineers (ASME) standard, which is referenced through *N.J.A.C.* 12:90, Boilers, Pressure Vessels, and Refrigeration Compliance Regulations. ASME Section IV, HG-705(a) and (b), states that a check valve must be installed in the boiler water makeup system supply line. Also, a stop valve or cock must be installed between the check valve and the boiler. The ASME standard is enforced by the BB&PVC.

The BB&PVC has determined that a standard backflow preventer, as required by the Plumbing Subcode, would not prevent the backflow of water from a boiler into the potable water system due to the fact that the seats on the backflow preventer check valves would not be able to withstand the high-temperature hot water from the boiler should there be a break in the water supply system which would cause a back siphonage from the boiler into the potable water system. Typically, backflow preventers are rated at 140 degrees to 180 degrees Fahrenheit. Check valves are rated at 250 degrees Fahrenheit. The ratings of the backflow preventers and check valves were verified through the manufacturer of the devices.

Also, with the use of a reduced-pressure backflow preventer assembly, should the check valve in the backflow preventer fail due to the high-temperature water backflow from the boiler, the backflow would discharge through the relief vent, which puts the boiler at risk for a dry-firing condition and could result in a catastrophic failure or a boiler explosion. This would also apply to a double check valve assembly should the assembly check valves fail due to the high-temperature water which would backflow into the potable water supply.

DCA-licensed plumbing subcode officials are to ensure that the proper required backflow preventer is installed on the potable water supply for a boiler water makeup, per the Plumbing Subcode. The plumbing subcode official should not approve the installation unless the proper additional check valve and stop valve or cock are installed in the boiler water makeup supply, as required by *N.J.A.C.* 12:90 through ASME, which is enforced by the BB&PVC. During the plan review stage and during your inspection of a boiler which would be regulated by the BB&PVC, you should bring to the attention of the contractor that an additional check valve and stop valve or cock will be required per the *N.J.A.C.* 12:90 regulations in order to pass the BB&PVC inspection.

If you notice any problems, please report them to Milton Washington, Chief of the BB&PVC, at (609) 292-2921.

To help DCA inspectors, the following is the text of the scope of the BB&PVC regulations, which are found at *N.J.A.C.* 12:90-4: *N.J.A.C.* 12:90-4.1(b) This subchapter shall not apply to:

1. Steam boilers having adequate relief devices set to discharge at a pressure not greater than 15 psig when such boilers serve buildings of less than six dwelling units or other dwellings with accommodations for less than 25 persons;
2. Hot-water boilers having relief devices set to discharge at a pressure not greater than 160 psig and hot-water boilers limited to temperatures not exceeding 250 degrees Fahrenheit when such boilers serve buildings of less than six dwelling units or other dwellings with accommodations for less than 25 persons;
3. Any steam or hot-water boiler having less than 10 square feet of surface;
4. Any steam or hot-water boiler having a heat input of less than 10 kilowatts or less than 40,000 BTU per hour;
5. Any steam or hot-water boiler under the jurisdiction and control of the United States Government when actively regulated by a federal agency; and
6. Any steam or hot-water boiler used solely for the propulsion of a motor vehicle regulated by the Motor Vehicle Act, Title 39 of the Revised Statutes.

As stated above, these regulations do not apply to boilers in buildings with fewer than six dwelling units.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

What is a Commercial Farm Building?

(Reprint with updated references -- Volume 20 Number 2 Summer/Fall 2008)

At N.J.A.C. 5:23-3.2(d), the Uniform Construction Code (UCC) has regulations that apply to commercial farm buildings. At N.J.A.C. 5:23-3.2(d)1, a commercial farm building is defined as "any building located on a commercial farm which produces not less than $2,500 worth of agricultural or horticultural products annually, which building's main use or intended use is related to the production of agricultural or horticultural products produced on that farm."

Commercial farm buildings do not fit into any group pursuant to the Building Subcode; they are themselves a classification. At N.J.A.C. 5:23-3.2(d)2, the UCC states buildings that meet the definition of commercial farm building "shall be classified as commercial farm buildings." The UCC further states, "For those provisions not covered by this section, commercial farm buildings shall comply with the construction code provisions applicable to Group S-2." The UCC does not say that commercial farm buildings are designated as Group S-2. It says that, with certain specific exceptions, commercial farm buildings meet the requirements for Group S-2.

To ensure that the classification of commercial farm buildings is well understood, the UCC contains exceptions for specific aspects of commercial farm buildings. These include provisions for pre-engineered grain bins and other storage equipment used on the farm [N.J.A.C. 5:23-3.2(d)3], and temporary greenhouses, also called "hoophouses" [N.J.A.C. 5:23-3.2(d)4]. In addition, the UCC provides standards for the amount of hazardous materials that may be stored in a commercial farm building [N.J.A.C. 5:23-3.2(d)7] and sets limitations on the use of commercial farm buildings as places of public assembly [N.J.A.C. 5:23-3.2(d)8].

If you have questions about commercial farm buildings, their classification, or specific exceptions, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development Unit

Garden-Type Utility Sheds and Similar Structures – Clarification

(Reprint with updated references -- Volume 21 Number 1 Spring/Summer 2009)

On April 20, 2009, the Department repealed N.J.A.C. 5:23-9.9, Foundation systems for garden type utility sheds and similar structures. The provisions of this section were moved within the applicable chapters of the building and one-and two-family dwelling subcodes. Therefore, the exceptions in Section 1809.4 of the International Building Code/2009 (IBC/2009) and Section R403.1.4 of the International Residential Code/2009 (IRC/2009) have been modified to reflect old N.J.A.C. 5:23-9.9. Both the IBC/2009 and IRC/2009 allow free standing storage-type buildings to be built without a foundation to frost-depth as long as the building meets the following three conditions:

1) The building presents a low hazard to human life in the event of failure; these include, but are not limited to, agricultural buildings, temporary buildings, and minor storage facilities;
2) The building has an area of 600 square feet or less for light framed construction (LFC), or 400 square feet or less for other than light-framed construction (OTLFC); and
3) The building has an eave height of 10 feet or less. However, unlike old N.J.A.C. 5:23-9.9, footings were required in all cases to be at least 12 inches in depth. A brief summary follows (all 10 feet or less in height):
   - 100 ft2 or less – footings of 12 inches deep not required provided the structures do not contain utility connections and are of sufficient weight to remain in place or be anchored to the ground (like old N.J.A.C. 5:23-9.9(a))
   - More than 100 ft2 up to 200 ft2 – footings of 12 inches deep not required provided the structures are dimensionally stable without the foundation system and do not contain utility connections. A structure shall be considered dimensionally stable if it is provided with a floor system that is tied to the walls of the structure such that it reacts to loads as a unit. These structures shall be of sufficient weight to remain in place or shall be anchored to the ground (like old N.J.A.C. 5:23- 9.9(b))
   - Buildings of more than 200 ft2 up to 600 ft2 LFC or 400 ft2 OTLFC – Footings of 12 inches deep required
   - Buildings of more than 600 ft2 LFC or 400 ft2 OTLFC – Footings to frost required

(continued on next page)

Garden-type utility sheds require a construction permit for building work unless the structure is 100 square feet or less in area, and 10 feet or less in height, and accessory to buildings of Group R-2, R-3, R-4, or R-5, and does not contain a water, gas, oil or sewer connection. A construction permit for electrical work shall be required, when applicable (N.J.A.C. 5:23-2.14(b)8).

For commercial farm buildings, the permit requirements are slightly different. As per N.J.A.C. 5:23-3.2(d)6, Garden-type utility sheds and similar structures are exempt from permit requirements provided the structure is 200 square feet or less in area, 10 feet or less in height, has no utility (water, gas, oil, sewer or electric) connections and the shed is dimensionally stable without the foundation system. A shed is to be considered dimensionally stable if it is provided with a floor system that is tied to the walls of the structure such that it reacts to loads as a unit. Also, as per N.J.A.C. 5:23-3.2(d)5, a three-sided turn-out shed used to shelter livestock is exempt from permit requirements provided there is no permanent foundation or floor and provided the structure is 250 square feet or less in area, and 14 feet or less in height, and has no utility (water, gas, oil, sewer or electric) connections. In both cases, the structure has to be of sufficient weight to remain in place or has to be anchored to the ground (concrete is not be required for anchoring).

Source: Rob Austin
Code Assistance Unit

Requirement for Overflow Roof Drains

(Reprint with updated references -- Volume 19 Number 2)

The Department of Community Affairs has been receiving many telephone calls asking where to find the requirement for overflow roof drains.

With the adoption of the 2009 National Standard Plumbing Code (NSPC) (and the previous editions of the NSPC dating back to the adoption of the NSPC/1996), Section 13.1.10.2, Secondary Roof Drainage, has been deleted in *N.J.A.C.* 5:23-3.15(b)13.iii.

Section 13.1.10.2, Secondary Roof Drainage, required an independent secondary roof drainage system. Despite the deletion of the section, some type of relief would still be required should the primary roof drains become blocked. To clarify, even with the deletion of the independent secondary roof drainage system requirement from the NSPC, a secondary relief system is still required.

The 2009 International Building Code, Section 1611, Rain Loads, requires that relief be provided should the primary roof drains become blocked. The building code also mentions a secondary drainage system.

Relief would be required where parapet walls or other construction extend above the roof where stormwater would become trapped. Relief could be scuppers or overflow drains. The overflow drains are permitted to be connected to the primary system. This may be considered a relief drainage system.

An independent secondary drainage system can be installed, but it would be a redundant system and is not required by code.

There are no code requirements that would prohibit the overflow drains from connecting to the primary roof drainage system.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

For your information, Alerts and Issues listed at http://www.nj.gov/dca/divisions/codes/alerts/ will be periodically moved to the Division's "Topics A-Z" at http://www.nj.gov/dca/divisions/codes/topics/. The current list is as follows:

Superstorm Sandy Information

• For Plan Review or Inspection Assistance with SANDY-related permitting Please have the local Construction Official contact:

Toms River DCA Codes Field Office
236 Main Street, 2nd Floor
Toms River, NJ 08753
Hours: Monday-Friday 8:30-4:00
732-736-7108 or 7109
FAX 732-736-7112
TomsRiverCodesOffice@dca.state.nj.us

• Protection of Adjoining Property
• Guidance for 1&2 Family Homes Sprinkler Systems Options [pdf 71kB]
• Breakaway Walls in the V Zone
• "Mold Guidelines for New Jersey Residents" pamphlet and upcoming training dates
• Foundation Guidance [pdf 8.52kB]
• DEP Flood Elevation Rule FAQs [pdf 153kB]
• Elevating existing homes, Guidance to code officials [pdf 29kB]
• Disposing of Asbestos from Sandy-Impacted Structures [pdf 198kB]
• Temporary Employment (building, electrical and plumbing) [pdf 179kB]
• Storm Recovery Information [pdf 31kB]
• Permit Fees [pdf 79kB]
• Electrical Systems Guidance [pdf 66kB]
• Mechanical.Plumbing Guidance for Code Officials [pdf 74kB]
• Boilers, Pressure Vessels, Refrigeration Systems or other Appliances [pdf 126kB}
• Landlords And Tenants [pdf 46kB]
• 01-02-2013(Advisory Base Flood Elevations and Construction Req.) [pdf 45kB]
• Accessing Flood Zone maps through FEMA's website(s) [pdf 196kB]
• DEP Emergency Rule.Prior Approvals Misc Info [pdf165kB]
• DEP Frequently Asked Land Use Permitting Questions

Press Release on need for recovery workers to wear protective gear and protect themselves while working with mold: http://nj.gov/health/news/2013/approved/20130213a.html

•Flyer on Mold/Asbestos Safety: http://nj.gov/health/er/documents/prepare_before_cleanup_flyer.pdf

•Temporary Use of Buildings to House Sandy Volunteers
Buildings housing volunteers CO-FO Doc Final
Buildings housing volunteers Host Site Final
Buildings housing volunteers cover memo signed

Other
Lead Free Fixtures & Piping Memo 2/24/14
Avalon Parking notice of receipt of application
Local Review of School Plans
Amusement Ride Safety Tips
Flood Permit Surcharge Fee
The Flood Hit! Now what
Permit Extension Act Updated Guidance 2012
PL2012,C.48 Permit Extension Act
Child Care Centers
Infill Development Standards and Policy Guidance
Recreational Park Trailers, A Guidance Document
School Construction, Best Practices Standards
(continued on next page)

Carnival & Amusement Rides
Model Letter for adding a serial number to the type certification
Model Letter for adding a serial number to the type certification (inflatable)
Model Fabrication (manufacturing) Certification
Model Testing Certification
Model Erection/Assembly Certification
Model Design Certification
Model Cert Oper-Trng Template

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Volume 24, Number 1 Spring 2012

ADA, BFSC, and Swimming Pools: A Brief Explanation

It has come to the Department's attention that there is information being disseminated by the Department of Health and Senior Services (DHSS) concerning the requirements from the Americans with Disabilities Act (ADA) that public swimming pools be accessible. The guidance from DHSS states that the Department of Community Affairs (DCA) is responsible for enforcing this Federal retrofit requirement. This is not the case. A brief explanation could be helpful.

The ADA is Federal civil rights law. As such, it requires that people with disabilities have access to public accommodations and to State and local governments' "programs, services, and activities." On September 15, 2011, the Department of Justice (DOJ) adopted a rule requiring swimming pools that are public accommodations or owned by a public entity be accessible to people with disabilities. This is a retrofit requirement. Swimming pools that are not accessible are required to be made accessible. The original effective date for this requirement was March 15, 2012; the DOJ has recently extended the effective date to May 19, 2012. The ADA is enforced by DOJ. It does not provide for the delegation of enforcement authority to State or local governments, so code enforcement officials are not "deputized" to enforce these requirements.

That said, since 1986, the Barrier Free Subcode (BFSC) has required that public or common use swimming pools be accessible. Therefore, public or common use swimming pools in New Jersey built after 1986 should comply with the accessibility requirement.

In addition, when the ADA was passed in 1990 and the Americans with Disabilities Act Accessibility Guidelines (ADAAG) were published in 1991, there was a requirement for Title II entities (State and Local Governments) that all "programs, services, and activities" be available to all citizens. At that time, to comply with the broad brush requirements of the ADA, many swimming pools owned and operated by local governments that had not been accessible were made accessible through municipal initiatives. Similarly, the ADA required that entities subject to Title III (Public Accommodations and Commercial Facilities) improve accessibility insofar as doing so was "readily

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ADA, BFSC & Pools *continued from page 1*

achievable." Again, accessibility to swimming pools was one of the "readily achievable" improvements undertaken by many public accommodations in response to their ADA obligation.

State law preceded Federal law in requiring accessible swimming pools. The statement by DHSS that these accessibility requirements of the ADA are enforceable by the code enforcement officials is inaccurate. Code officials enforce the Barrier Free Subcode. The ADA is enforced by complaint; questions about the complaint process should be addressed to the DOJ in Washington, D.C.

Please do not hesitate to contact me at (609) 984-7609 if you have questions on the scoping requirements of the BFSC; questions on the technical requirements of the BFSC should be addressed to the Code Assistance Unit at the same telephone number.

Source: Emily W. Templeton
Division of Codes and Standards

Single Means (Sole Path) Fire Alarm Transmission

Recently, the Department received phone calls about contractors installing single means (sole path) communications equipment for fire alarm transmission. The most common question is: Can a fire alarm signal be transmitted by a single means (sole path)? The answer is: Yes.

National Fire Protection Association (NFPA) 72/2007, Section 8.6.4, "Other Transmission Technologies," allows for the installation of means other than those that the standard covers. These other technologies must meet the requirements of Section 8.6.4.4, "Communication Integrity." The following is a list of the items that must be verified when a single transmission means (sole path) is used:

(1) Any failure shall be annunciated at the supervising station within 5 minutes of the failure.

(2) If communications cannot be established with the supervising station, an indication of this failure to communicate shall be annunciated at the protected premises.

(3) If a portion of the communications path cannot be monitored for integrity, a redundant communications path shall be provided.

(4) Provision shall be made to monitor the integrity of the redundant communications path.

See Fire Alarm Transmission at right

Fire Alarm Transmission *Continued from left*

(5) Failure of both the primary and redundant communications paths shall be annunciated at the supervising station within not more than 24 hours of the failure.

(6) System units at the supervising station shall be restored to service within 30 minutes of a failure.

(7) The transmission technology shall be designed so that, upon failure of a transmission channel serving a system unit at the supervising station, the loss of the ability to monitor shall not affect more than 3000 transmitters.

Single means (Sole Path) communications is typically found in Radio Frequency (RF) and Internet Protocol (IP) Fire Alarm Communications Equipment; however any listed fire communications equipment that meets the performance criteria of NFPA 72 can be used as Single Means (Sole Path).

Code Officials should pay particular attention to the UL864 listing of communications equipment to ensure that the equipment is installed, configured and used in accordance with its listing, including, but not limited to, sole path communications.

Source: Michael E. Whalen
Code Assistance Unit

UCCARS Users Be Aware

A few offices are still using the original DOS-based UCCARS program for managing construction permits and there are many more offices that keep UCCARS for the purposes of looking up historical data.

These offices need to know that the original UCCARS program is a "16 Bit, DOS-Based Program." The "64 Bit, Windows 7" operating system does not support 16 Bit, DOS-Based Programs, so UCCARS will not run on a computer running the "64 Bit, Windows 7" operating system.

If your office needs to purchase new equipment to run UCCARS, you need to specify on your computer purchase order, or to your municipal IT staff, that your new computer must be set up with the "**32 Bit**, Windows 7" operating system, which will support a "16 Bit, DOS Based Program."

Questions may be directed to Richard Byrne at (609) 292-7899.

Source: Richard Byrne
Division of Codes and Standards

Rehab and Energy Subcode Update

The first provisions of the Energy Subcode entered the Rehabilitation Subcode on May 7, 2007. A *Construction Code Communicator article* was published in the Spring, 2007 edition on how to apply these provisions; until now, it has provided definitive guidance.

The Rehabilitation Subcode was updated on November 7, 2011; this update included an expansion of the provisions of the Energy Subcode. In this article, I would like to call attention to some of these amendments:

- Definitions – N.J.A.C. 5:23-6.3
  - o "Commercial energy code" means the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) standard 90.1 adopted at N.J.A.C. 5:23-3.18 and applicable to all buildings other than residential buildings as defined at "residential energy code."
  - o "Residential energy code" means the International Energy Conservation Code adopted at N.J.A.C. 5:23-3.18 and applicable to residential buildings, defined as R-3 and R-5 buildings, as well as R-2 and R-4 buildings three stories or less in height above grade.
- Renovation – N.J.A.C. 5:23-6.5(e)9 through 12;
- Alteration – N.J.A.C. 5:23-6.6(e)15 through 18;
- Reconstruction – N.J.A.C. 5:23-6.7(e)11 through 14;
- Materials and Methods – N.J.A.C. 5:23-6.8(l); and
- New Building Elements – N.J.A.C. 5:23-6.9(a)26 through 37

Taking the most extensive project, a reconstruction project, the following would apply to a building subject to the residential or commercial energy code:

1. Work that creates or exposes the roof decking/sheathing or the framing of any wall, floor, ceiling, or roof assembly that is part of the building thermal envelope (encloses conditioned space) is required to have any accessible voids in insulation filled using insulation meeting the minimum R-values in Table 402.1.1 of the residential energy code for wood framing and Table 402.2.5 of the residential energy code for metal framing equivalents or Table 5.5-4 or 5.5-5 of the commercial energy code, as applicable. However, if insulation meeting the R-values above cannot be installed due to space constraints, insulation that fills the cavities of the framed assembly must be installed instead.

See Update at right

Update *Continued from left*

2. Newly installed and replacement fenestration (windows, skylights or doors) is required to meet the maximum U-factor in Table 402.1.1 of the residential energy code or of Table 5.5-4 or 5.5-5 of the commercial energy code, as applicable.
3. Newly installed and replacement ducts must be insulated to meet the minimum R-values of Section 403.2.1 of the residential energy code or Section 6.4.4.1.2 of the commercial energy code, as applicable.
4. Unless exempted by Section 9.2.2.3 of the commercial energy code, the total replacement of a building lighting system or a newly installed building lighting system must meet the following sections of the commercial energy code, as applicable: Section 9.4.1 for controls and Sections 9.5 and 9.6 for lighting power densities. (A "lighting system" is defined by the commercial energy code as "a group of luminaires circuited or controlled to perform a specific function.") The exception to this is the replacement of a lighting system within a room, space, or tenancy, which is then only required to meet Sections 9.4.1.2 and 9.4.1.4a, b, e, and f for controls and Section 9.6 for lighting power densities.

If the building owner decides to install new building elements in a building subject to the residential or commercial energy code, the following applies regardless of whether the project is a reconstruction:

1. Newly created access hatches and doors from conditioned spaces to unconditioned spaces (for example, attics and crawl spaces) are required in accordance with Section 402.2.3 of the residential energy code. For commercial buildings, newly created access hatches and doors are required to have a minimum R-value equivalent to that of the assembly penetrated and they must meet Sections 5.4.3.1 and 5.8.1.7.1 of the commercial energy code.
2. Newly created thermally isolated sunrooms are required to meet the minimum R-value and maximum U-factor requirements of Sections 402.2.11 and 402.3.5 of the residential energy code.
3. Newly installed wood burning fire places are required to meet Section 402.4.3 of the residential energy code or Section 5.4.3.1 of the commercial energy code and Section 2111.13 of the building subcode, as applicable, with regard to sealing the building thermal envelope.
4. Newly installed forced-air furnace heating systems are required to have controls meeting Section 403.1 of the residential energy code.

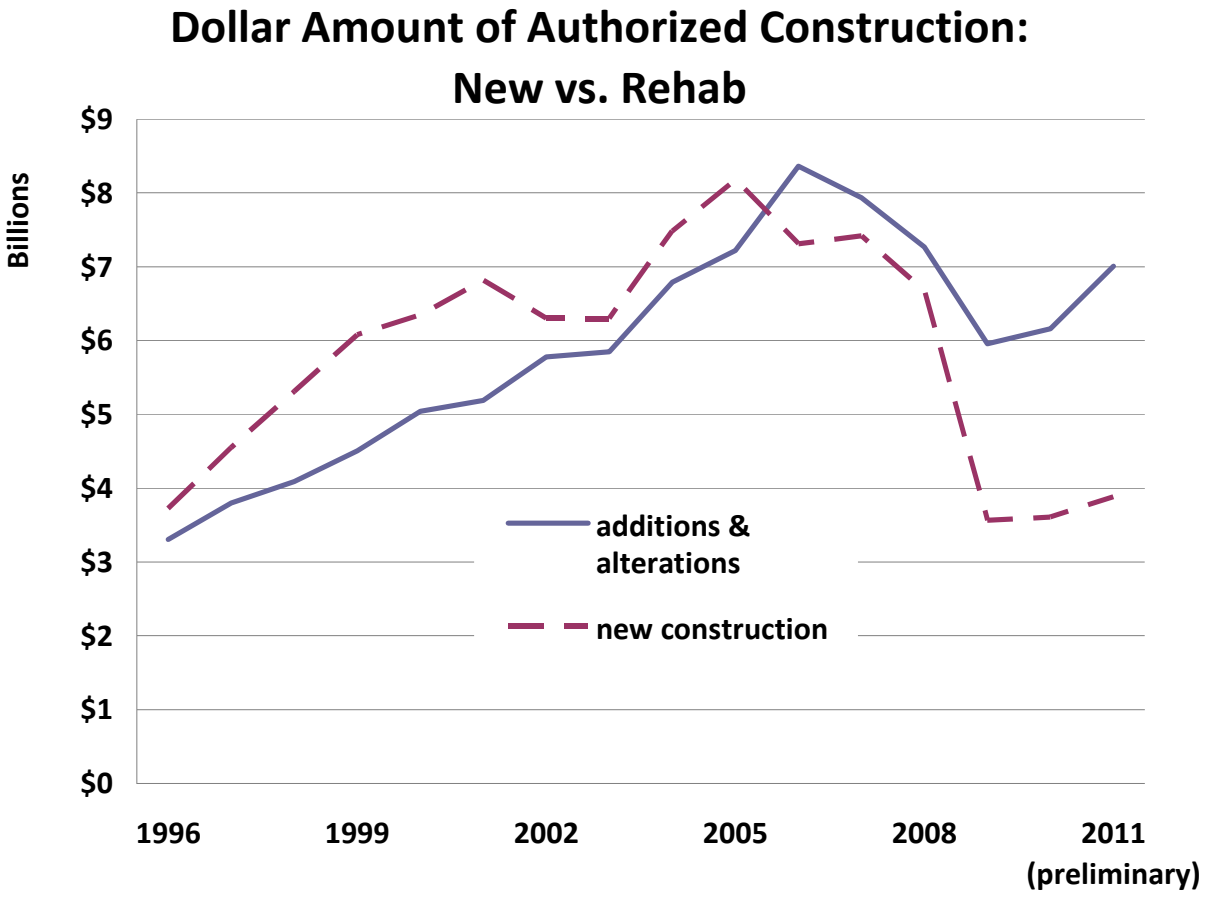
See Update -page 10

December 2011 Construction Highlights

- 1,329 new houses were authorized by building permits in December. This is the highest level of production in forty months.
- Much of the new housing was apartments. Hackensack in Bergen County had 225 new dwellings in December, more than any other locality. A new apartment complex, Avalon Bay, accounted for all of this development.
- Jersey City in Hudson County had 153 authorized units. A large urban renewal development broke ground on Warren and York streets with 139 rental units. Jersey City had $40 million of work in December, more than any other municipality.
- Authorized construction for the entire State was $768.8 million. New homes and housing rehab accounted for $403.1 million (52.4 percent). Office, retail, and other nonresidential work were $365.5 million (47.6 percent).
- 562 of New Jersey's 566 municipalities reported.

Year to Date

- Construction data for the year are still preliminary, as not all reports are in. The dollar amount for 2011 thus far is $10.9 billion. This is $1.1 billion more than last year.
- Nearly 65 cents of every dollar of construction was for existing structures. Additions and alterations, either tenant fit ups or renovations to existing houses and commercial buildings, was over $7 billion. The estimated dollar amount of work for new buildings was $3.9 billion.
- The number of new homes authorized by building permits is about what it was last year. There were 11,822 new dwellings authorized between January and December 2011. In 2010, there were 11,885.



See Construction Highlights -page 6

Ceiling Height Oversight

At N.J.A.C. 5:23-3.14(b)10iii, ceiling height for the general means of egress in the International Building Code/2009 (IBC/2009), Section 1003.2 is amended from "7 feet 6 inches (2286 mm)" dimension to "7 feet (2134 mm)".

There is a correlating section that is not referenced directly that should also have been amended upon adoption of the IBC/2009 for consistency: The minimum ceiling heights within the interior space dimensions at Section 1208.2 should have included the same change and the "7 feet 6 inches (2286 mm)" dimension should be "7 feet (2134 mm)" for occupiable spaces, habitable spaces, and corridors (also a means of egress component like Section 1003.2).

These sections should have been reconciled when the original modification was made. The Department recommends that local construction officials allow for the smaller dimension for components listed in Section 1208.2; a variation should not be required.

In the upcoming proposal to adopt the IBC/2012, Section 1208.2 will be proposed for amendment to match the amendment to Section 1003.2.

If you have any questions, please contact the Code Assistance Unit at (609) 98407609.

Source: Code Assistance Unit

Independent Means of Egress for Group R-5 Buildings

The Department has received numerous inquiries regarding the means of egress requirements for Group R-5 buildings.

Specifically, the question that arises is: “Can a detached two-family dwelling with a shared common entry foyer as its only means of egress be a Group R-5 occupancy constructed in accordance with the one- and two-family dwelling subcode?”

The answer is: No. If the detached two-family dwelling has a shared common entry foyer as its only means of egress, the occupancy classification is Group R-3; it must comply with the building subcode (N.J.A.C. 5:23-3.14).

In accordance with N.J.A.C. 5:23-3.21(b), the provisions of the one- and two-family dwelling subcode apply to Group R-5 occupancies that are not more than three stories in height. In Section 310.1 of the 2009 International Building Code (New Jersey Edition), entitled “Residential Group R”, a Group R-5 building is

See Egress at right

Energy Subcode-compliant 2x4 Walls for Zone 5

(Reprinted courtesy of the U.S. Department of Energy’s Building Energy Codes Program, http://www.energycodes.gov/help/notes.stm)

1 – Background

Using 2x4 studs in an exterior wall has gotten more challenging for Zone 5 in New Jersey. The 2009 International Energy Conservation Code (IECC) does not permit trade-offs for installing high-efficiency HVAC equipment. The more permanent building insulation and sealing features now take precedence. However, there still remain optional strategies allowing 2x4 exterior stud walls.

2a – Prescriptive Compliance Approach

Insulation Requirements

IECC Section 402.1.1 and Table 402.1.1 establish insulation and fenestration requirements by component, based on the climate zone specified in Chapter 3, for prescriptive compliance with the residential energy code. The table specifically accommodates 2x4 studs in wood frame walls in Zone 5 by footnote "h" which allows compliance by R-13 cavity insulation layered with R-5 insulative sheathing. The following prescriptive compliance approaches for 2x4 stud frame exterior walls are allowed in the code.

- For Zone 5, the IECC requires R-20 or "13+5" wood frame walls. The "13+5" means R-13 stud cavity insulation plus R-5 insulating sheathing (see below)
  - o If structural sheathing covers 25 percent (25%) or less of exterior, insulating sheathing is not required where structural sheathing is used (R-5 insulating sheathing is required where structural sheathing is not used)
  - o If structural sheathing covers more than 25%, structural sheathing shall be supplemented with insulated sheathing of at least R-2.

See Zone 5 Walls -page 15

Egress *Continued from left*

defined as “Detached one- and two-family dwellings not more than three stories in height *with a separate means of egress* and multiple single-family townhouses not more than three stories in height *with a separate means of egress* designed ***and*** constructed in accordance with the one- and two-family dwelling subcode.” (emphasis added)

Therefore, in order to be a Group R-5 occupancy, each dwelling unit must be provided with an egress door directly to the exterior of the building.

If you have any questions, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Construction Highlights *continued from page 4*

- Office construction is down by 11 percent, and new retail space declined by 25 percent.
- Jersey City had the most construction. The City also issued permits for 700 new houses, more than any other locality. The dollar amount of all construction was $246.3 million, and about 38 percent was for new houses. Jersey City has led the State with the most new housing in eight of the past 11 years.
- Newark in Essex County had $209.2 million of construction. This was the second highest total among municipalities. Newark had 180 new dwellings in 2011 (13th among all localities) and several big, nonresidential developments, including a new police precinct building and a Marriott Courtyard hotel.
- Atlantic City in Atlantic County had $198.1 million of work. Much of this was for Revel Entertainment's casino-hotel-parking complex. Other big projects were a new school and renovations at the Golden Nugget casino.

Major Construction Indicators, New Jersey
December Year-to-Date Figures Compared to Annual Totals

Period	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Year-to-Date Figures (January to December)				
Jan–Dec 2011	$10,890,224,961	11,822	4,889,841	1,649,925
Jan–Dec 2010	$9,657,851,990	11,578	5,192,205	2,135,558
Jan–Dec 2009	$9,454,767,714	11,067	4,035,812	2,417,629
Jan–Dec. 2008	$13,834,284,685	16,203	7,869,822	5,459,374
Jan–Dec 2007	$14,907,746,308	25,472	8,875,968	4,993,848
Annual Figures				
2010	$9,768,642,343	11,885	5,496,579	2,192,231
2009	$9,517,725,396	11,145	4,253,888	2,248,935
2008	13,944,534,578	16,338	7,962,998	5,557,101
2007	15,356,572,820	25,948	9,569,501	5,423,889
2006	15,675,107,955	32,050	11,113,555	5,186,662
2005	15,397,507,147	39,688	11,038,132	5,965,258
2004	14,274,331,850	39,254	12,219,068	4,911,257
2003	12,148,747,807	35,171	9,744,146	6,038,428
2002	12,079,942,099	34,589	9,261,054	7,560,913
2001	12,007,456,630	35,680	19,134,533	7,244,833
2000	11,387,683,514	38,065	15,531,039	6,063,412
Jan–Dec 2010 vs. 2009 & 2008				
Jan–Dec 2011 vs. 2010	$1,121,582,618	-63	-606,738	-542,306
Percent Change	11.5%	-0.5%	-11.0%	-24.7%
Jan–Dec 2011 vs. 2009	$1,372,499,565	677	635,953	-599,010
Percent Change	14.4%	6.1%	14.9%	-26.6%

Source: N.J. Department of Community Affairs, 2/8/12

See Construction Highlights -page 7

Construction Highlights *continued from page 6*

- State Buildings includes permits to New Jersey State agencies and their instrumentalities. The estimated cost of work authorized by building permits was $339.9 million. Public colleges and universities accounted for much of this. Major developments were a new medical college for Rowan University and renovations and new construction for Montclair State University. The figure also includes a new terminal for Atlantic City International Airport.

Authorized Housing in Newark and Jersey City, 2001-2011(preliminary)

	Newark		Jersey City		All New Jersey
Year	Authorized Units	Rank	Authorized Units	Rank	Authorized Units
2001	1,066	2	2,009	1	35,680
2002	1,223	1	907	2	34,589
2003	1,730	1	969	2	35,171
2004	1,702	2	2,156	1	39,254
2005	2,611	2	3,778	1	39,688
2006	2,125	2	2,578	1	31,709
2007	927	2	2,765	1	25,948
2008	289	6	1,468	1	16,338
2009	285	4	1,132	1	11,145
2010	169	18	249	11	11,885
2011 (preliminary)	180	13	700	1	11,822

Source: N.J. Department of Community Affairs, 2/8/12

- Three of the top six municipalities with the most work in 2011 are in Hudson County: Jersey City ($246.3 million); Secaucus ($157.2 million); and Hoboken ($131.3 million).
- These three municipalities also had nearly 10 percent of all the new dwellings in the State.

Dollar Amount of Authorized Construction
Top Performers, 2011(preliminary)

Municipality	County	Estimated Cost of Construction (dollars)	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jersey City	Hudson	$246,347,233	700	43,159	28,712
Newark City	Essex	209,235,098	180	11,703	100,735
Atlantic City	Atlantic	198,080,732	26	0	0
Secaucus Town	Hudson	157,226,724	128	3,750	0
Toms River	Ocean	156,093,065	122	157,578	137,409
Hoboken City	Hudson	131,323,633	308	0	0
Livingston	Essex	127,648,866	25	6,478	0
Franklin	Somerset	122,513,488	156	42,403	17,125
Woodbridge	Middlesex	122,213,704	45	13,498	31,184
East Hanover	Morris	120,215,814	5	681,602	2,880
State Buildings		$339,889,844	0	59,524	0
New Jersey		$10,890,224,961	11,822	4,889,841	1,649,925

Source: N.J. Department of Community Affairs, 2/8/12

See Construction Highlights -page 8

Construction Highlights *continued from page 7*

New Home Prices

- New home prices dropped at the end of 2011.
- A total of 1,478 new houses began enrollment in a new home warranty program in October, November, and December 2011. Half of these houses cost more than $394,688. This was 5.3 percent lower than the median sales price in the third quarter of 2011.
- Essex and Bergen Counties had the most expensive new houses. The median sales price in Essex was $696,693. The median sales price in Bergen County was $630,931.

New House Prices

Period	Number of New Houses	Median Sales Price	Percent Change in Sales Price
1996	20,903	$183,300	
1997	21,640	$190,000	3.7%
1998	23,884	$209,980	10.5%
1999	24,479	$224,496	6.9%
2000	25,058	$231,728	3.2%
2001	23,372	$253,670	9.5%
2002	23,647	$274,705	8.3%
2003	22,226	$307,168	11.8%
2004	23,844	$349,900	13.9%
2005	24,571	$378,992	8.3%
2006	22,697	$413,825	9.2%
2007	18,397	$424,570	2.6%
2008	13,841	$425,000	0.1%
2009	9,161	$368,512	-13.3%
2010	8,712	$384,899	4.4%
1st Quarter 2010	1,820	$378,442	
2nd Quarter 2010	2,811	$380,360	0.5%
3rd Quarter 2010	2,105	$395,000	3.8%
4th Quarter 2010	1,976	$383,642	-2.9%
1st QTR 2011 (p)	1,198	$372,425	-2.9%
2nd QTR 2011 (p)	1,644	$406,485	9.1%
3rd QTR 2011 (p)	1,473	$416,825	2.5%
4th QTR 2011 (p)	1,478	$394,688	-5.3%

Note: (p) means preliminary

Source: N.J. Department of Community Affairs, 2/8/12

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Chimney Verification, UCC-F370 Questions and Answers

As you should be aware, the new UCC F370 Form (rev.01/12), "Chimney Verification for Replacement of Fuel-Fired Equipment," is now on the Division's website and can be downloaded and used. The updated form has additional information for the contractor to fill out. It replaces the Chimney Certification form and is used for replacement equipment only.

Many code officials suggested that additional information be included when the old form was updated; this expanded and revised form incorporates those suggestions.

N.J.A.C. 5:23-2.20 (d) states:

"In lieu of requiring the removal and reinstallation of the chimney vent connector for purposes of inspection of the chimney or vent as per N.J.A.C. 5:23-2:18, the construction official may accept a Chimney Verification for Replacement of Fuel-Fired Equipment (Form F-370), signed by the contractor who installed the replacement fuel-fired equipment. Verification from homeowners shall not be accepted in lieu of the required inspection.

1. A permit application using the Chimney Verification for Replacement of Fuel-Fired Equipment Form (Form F-370) for minor or emergency work must provide this form along with the permit application."

The following are some examples of projects with direction as to who is responsible for completing this form:

1. When a contractor applies for a permit to replace a water heater or furnace or boiler connected to an existing chimney, Chimney Verification Form F370 must be filled out and signed by the contractor doing the work and submitted to the code official.

2. When a contractor applies for a permit to replace a water heater or furnace or boiler and a new chimney liner is to be installed by the same contractor, Chimney Verification Form F370 must be filled out and signed by the contractor doing the work and submitted to the code official.

3. When a contractor applies for a permit to replace a water heater or furnace or boiler and a chimney liner is being installed by another contractor under a separate permit, a Chimney Verification Form is not required to be submitted by the contractor who is replacing the equipment. (NOTE: See #4 below for replacement of the chimney liner.)

See Chimney Verification at right

Chimney Verification *continued from left*

4. When a contractor applies for a permit for a chimney liner only and no equipment is being replaced by this contractor, no Chimney Verification Form F370 is required. The chimney liner contractor is required to submit, with the permit application, all the necessary information about the liner: material, size, calculations, and BTU/HR of all the equipment connected to the new chimney liner. A code official may require a separate form with the information needed for a proper review. This would not be Form F370.

It is important to note that the contractor also has the option of signing the form stating that he chooses not to submit verification and acknowledging that he will be required to be present for the inspection to remove and reinstall the chimney vent connector.

If you have questions, please contact me at (609) 984-7609 and I will try to address your concerns.

Source: Thomas C. Pitcherello
Code Assistance Unit

Local Planning Services

In the summer of 2011, the Christie administration eliminated the Council on Affordable Housing (COAH) and replaced it with Local Planning Services in the New Jersey Department of Community Affairs. The aim was to re-write affordable housing rules, reduce the span between statewide housing policy and local enforcement, and simplify and make faster the process by which local housing plans and development fees are approved and administered.

Local Planning Services proposed new rules on how need is measured, met, and paid for. In March 2012, the Appellate Division of the Superior Court of New Jersey overturned the Governor's reorganization plan and ruled only the Legislature could eliminate COAH. While affordable housing rules are in flux, technical assistants and construction officials should remember:

1. New Jersey's commitment to fair housing is constant. Municipalities must have and enforce land-use and development rules that are fair and provide realistic opportunities for everyone.

2. No municipality may assess or collect fees on nonresidential development. Don't collect the fee; don't do the paperwork. This moratorium extends through July 1, 2013. More about this is on the Governor's website: http://www.state.nj.us/governor/news/news/552011/approved/2011824a.html.

See Local Planning Services -page 12

Update *continued from page 3*

5. Newly installed heating, cooling and ventilation systems are required to have controls meeting Sections 6.4.3, 6.5, 7.4.1, 7.4.4 and 7.4.6 of the commercial energy code, as applicable. Systems include, but are not limited to, the heating and cooling of air or liquids and the ventilation or exhausting of spaces.
6. Newly installed systems that include piping carrying fluids are required to have insulation meeting Sections 403.3 and 403.4 of the residential energy code or Sections 6.4.4.1.3 or Section 7.4.3 of the commercial energy code and Section 1204 of the mechanical subcode, as applicable.
7. Newly installed mechanical ventilation is required to have dampers meeting Section 403.5 of the residential energy code.
8. Newly installed heating and cooling equipment is required to be sized in accordance with Section 403.6 of the residential energy code or Section 6.4.2 and 7.4.1 of the commercial energy code, as applicable.
9. Newly installed snow and ice melting systems are required to be installed in accordance with Section 403.8 of the residential energy code or Section 6.4.3.8 of the commercial energy code, as applicable.
10. Newly installed pool heaters are required to meet Section 403.9 of the residential energy code or Section 7.4.5 of the commercial energy code, as applicable.
11. Newly installed recessed equipment and lighting is required to meet Section 5.8.1.6 of the commercial energy code with regard to maintaining insulation thickness.

Currently, N.J.A.C. 5:23-2.15(f)1vi requires energy subcode compliance documentation only for brand new buildings and additions. However, per N.J.A.C. 5:23-2.15(f)1vii, engineering details may be required for calculating the light power densities for a new lighting system. For this, the lighting portion of COMcheck for the building or space could be used.

If you have any questions, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

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Residential Heating and Cooling Load Calculation Requirements

(Reprinted courtesy of the U.S. Department of Energy's Building Energy Codes Program, http://www.energycodes.gov/help/notes.stm)

Mechanical systems in residential construction are commonly oversized, which increases installation costs, wastes energy, and reduces comfort and moisture control. Properly sized equipment will last longer, provide greater comfort, reduce noise, and save homeowners money. Yet builders and code officials are uncertain as to how to evaluate such calculations to make sure they meet the intent of the code and the sizing methodology approved in the Air Conditioning Contractors of America (ACCA) Manual J (or equivalent).

The 2009 International Energy Code (IECC) require sizing calculations be performed on every home by referencing Section M1401.3 of the 2009 International Residential Code (IRC). Section M1401.3 requires heating and cooling systems be sized to ACCA Manual J - Eighth Edition- or other approved heating and cooling load calculations. The ACCA sizing methodology has sufficient built-in safety factors to accommodate most conditioning needs. Therefore, it is important to follow all instructions in Manual J, use precise area measurements, and specific data.

Heating and cooling loads can be determined using a whole-house approach, or by performing a room-by-room load calculation. The room-by-room approach provides the information needed to determine the number of cubic feet per minute (cfm) of conditioned air needed to satisfy the heating and cooling load for the room. This information can then be used to determine the duct size necessary to deliver heating and cooling for the space.

The 2009 IECC regulates the indoor design temperature for use in performing load calculations. The IECC specifies that the maximum heating indoor temperature shall be 72°F, and the minimum cooling temperature shall be 75°F per Section 302.1.

Table IA, Outdoor Design Conditions, of ACCA Manual J (see below) requires that the outdoor winter and summer design temperatures be based on the 99 percent (99%) value for winter, and 1 percent (1%) value for summer. To select the appropriate system,

See Residential Heating and Cooling -page 13

Census Item Numbers

Construction officials and technical assistants report monthly permit and certificate activity to the New Jersey Department of Community Affairs. You also report residential building permit data to the U.S. Bureau of the Census. For most of you, these requirements occur behind the scenes. The computer software takes care of them. Still, you need to know what the U.S. Census Bureau is looking for. Here is a summary that may be helpful to have next to your computers.

IF Group	AND Permit Type	AND Number of Dwellings	THEN Census Item Number Is:
R-3	New	1	101
R-4	New	1	101
R-5	New	1	101
R-3	New	2 (duplex)	103
R-4	New	2 (duplex)	103
R-2	New	0 (college dormitory)	999
R-2	New	3 or 4	104
R-2	New	5 or more units	105
I-2 (assisted living)	New	5 or more units	105*
Residential	Alteration or Additions		999
All other groups	New, Addition, Alteration, or Demolition	Does not matter, but record dwellings in mixed-use buildings	999 (off item to the Census Bureau)
* Note: If the assisted living facility has both nursing homes and apartments, count only the apartments as dwelling units.			

The U.S. Census Bureau classifies construction with three-digit item numbers. They are concerned only with new, privately owned residential work, the number of new dwellings authorized by building permits, and their estimated cost. The housing units can be either for sale or rent.

Census item number 101 is used for single-family houses that can be either detached or attached to one or more other dwellings. An attached townhouse or row house is classified as a 101 if it is separated by a wall that extends from ground to roof, no other dwelling is above or below it, and it has a separate utility meter and heating system. If you use the item number 101, the Census Bureau expects to see one and only one new dwelling unit gained. If more than one is recorded, expect a phone call.

Census item number 102 is no longer used. It was used to distinguish new, single-family detached houses from attached ones. Today, if you issue a permit for a new house attached to another, call it a 101, unless, of course, it is not really independent from the other dwellings. Attached housing is covered by the other item numbers: 103, 104, and 105, which are discussed next.

A 103 is a new, privately owned residential building that has two units. These are duplexes. When you use item number 103, the U.S. Census expects to see two dwellings gained. They can both be rental units. They can both be for sale. One can be for sale and the other for rent, but there are only two dwellings.

A 104 is a privately owned, new residential building with either three or four new dwellings. If you know one of these units will be for sale and two will be rented, indicate this by entering in one for-sale unit and two for rent. These might be new, garden apartments or condominiums.

Census item number 105 is for new, privately owned residential buildings that will have at least five dwellings. If you report a 105 and indicate fewer than five new apartment or condominium units, expect a call from the Census Bureau asking for an explanation.

See Census -page 12

Local Planning Services *continued from page 9*

3. Development fees on new homes may still be collected, as long as the ordinances for them were approved by either COAH or Local Planning Services.

Stay tuned and keep an eye on the Department of Community Affairs website (http://www.nj.gov/dca) for more details.

Source: John Lago
Division of Codes and Standards

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Census *continued from page 11*

The Census Bureau only wants to know about new houses or apartments. They do not track demolitions. They are no longer interested in most nonresidential buildings. The exception is assisted living buildings, which may fall into building use I-2. Both the Census Bureau and the Department of Community Affairs recognize that these buildings are places where people live. The number of dwellings units in the assisted living facilities should be counted and recorded on the building permit. Keep in mind that, if the assisted living facility also has a wing for nursing home or hospital beds, only the assisted living units should be counted as dwellings. The hospital and nursing home beds are NOT counted as dwellings. In most instances, the appropriate census item number for assisted living facilities will be 105.

They also don't care about housing rehab work and conversions, even if it results in new housing. Building permits issued for alteration work in an existing apartment building, say deck repairs, should be classified as "999." So should the conversion of a building that was once a bank or some other commercial use into new housing.

Don't misunderstand. Although the Census Bureau is only interested in new, residential construction, we at the Department of Community Affairs still do want you to report on all types of work. The only item numbers you have to remember, as far as the U.S. Census is concerned, however, are: 101, 103, 104, and 105. Everything else is a 999 or an "off item," to the Census Bureau.

If you have questions, you can call the Census Bureau directly at the toll free number: 1-800-845-8244. You also can call or e-mail me with questions.

Source: John Lago
jlago@dca.state.nj.us
NJ Department of Community Affairs
609-292-7898

Hot Aisle/Cold Aisle Containment Systems in Data Rack Storage Configurations

The Division of Codes and Standards has received several inquiries about hot aisle/cold aisle containment systems installed within data center rack configurations. These systems can best be described as physical barriers that eliminate or reduce the mixing of cold supply air and hot exhaust air from a data center rack configuration. The installation of these systems can provide a data center operator with a reduced energy expense.

When a hot aisle/cold aisle containment system is installed, a UCC permit must be obtained. These systems could be part of a new construction project, however most of the installations we have been made aware of are within existing buildings. Additionally, it is possible that existing Information Technology Equipment (ITE) rack configurations may be modified shortly after they have been installed because of ever-evolving technology. It is imperative that UCC enforcing agencies recognize that these systems may create physical barriers to fire protection systems within the building that these barriers are not always taken into account by design professionals.

Several hot aisle/cold aisle containment systems use plastic strips that closely resemble plastic curtains. These curtains are hung from the ceiling and create a containment area between the top of the rack configuration and the ceiling. Depending upon the Group classification, the International Building Code (IBC) may require this material to meet the flame propagation criteria of NFPA 701. Some of these systems use fusible heat links to drop the plastic strips; however, the systems themselves have not been tested as an assembly to show that the heat links will release properly so as not to obstruct the sprinkler head spray pattern in protected areas. There does not appear to be any UL certification for these systems. In addition, the UL 33 standard used to investigate fusible links is not relevant because it is not clear how the standard applies to this product.

When hot aisle/cold aisle containment systems are installed, automatic detection, automatic sprinklers, or alternative automatic fire extinguishing systems may be impacted. Typical impacts to these systems can include but are not limited to obstructing discharge patterns of fire sprinklers, limiting the distribution of alternative agents, and limiting the performance of automatic initiating devices such as smoke detectors. The

See Containment Systems -page 13

Residential Heating and Cooling *continued from page 10*

based on the heating and cooling load calculations, Section M1401.3 of the 2009 IRC requires that ACCA Manual S be used to size equipment. Excessively oversized equipment causes short-cycling, and creates unnecessary stress on the equipment. Also, larger systems require larger duct sizes, increasing the installation cost. In areas where humidity is an issue, an oversized system will degrade the humidity control. A properly sized system will run almost continuously at design conditions, and provide the proper level of dehumidification during the cooling season.

Municipality [a]	**Winter – Heating 99% Dry Bulb**	**Summer – Cooling 1% Dry Bulb**
Atlantic City	13	88
Long Branch	13	90
Millville	15	89
Newark	14	90
New Brunswick	10	89
Paterson	10	91
Phillipsburg	6	89
Teterboro	14	89
Trenton, McQuire AFB	15	90
Vineland	11	89
a – In the event your municipality is not listed, please use the next closest.		

If you have questions about the enforcement of the Energy Subcode, please contact me at (609) 984-7609.

Source: Robert Austin
Code Assistance

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Containment Systems *continued from page 12*

temperature in hot aisle containment areas can increase to the point where it approaches the temperature limits of the automatic detection equipment, which could affect the performance of fire protection systems. The installation of these containment systems in no case can obstruct the flow of gaseous agent systems or water spray systems and each containment system must be evaluated on a case by case basis.

The National Fire Protection Association (NFPA) Technical Committee has accepted new text, which will be added into NFPA 75, "Protection of Information Technology Equipment," to address these containment systems. These modifications will be included in the 2012 edition of NFPA 75 when it is published. Because the UCC does not have specific rules for the regulation of the installation of these systems, N.J.A.C. 5:23-3.6 or 3.7 can be used by the construction official and appropriate subcode officials to review these systems. The UCC does not reference NFPA 75, so a company that decides to install any type of hot or cold aisle containment system must supply all the applicable installation information showing compliance with this standard when they wish to use it.

The following are some of the factors to consider

See Containment Systems at right

Containment Systems *continued from left*

when reviewing ITE proposed containment systems.

1. What type of material is the aisle containment system made of?
2. Will the installation effect the location and or type of the existing detection system?
3. Will the fire sprinkler or suppression system be affected?
4. Will the means of egress be affected (exit signs, emergency lighting or travel distance)
5. Will an additional fire extinguisher be required?

When a containment system is installed it must be treated as an obstruction, detection systems and suppression systems might need to be extended within the heat containment system enclosure.

If you have any questions, please feel free to contact Carmine Giangeruso, Office of Regulatory Affairs, at (609) 984-7672 or Michael E. Whalen, Code Assistance Unit, at (609) 984-7609.

Sources: Carmine Giangeruso, Office of Regulatory Affairs
Michael E. Whalen, Code Assistance Unit

Unvented Attic Assemblies

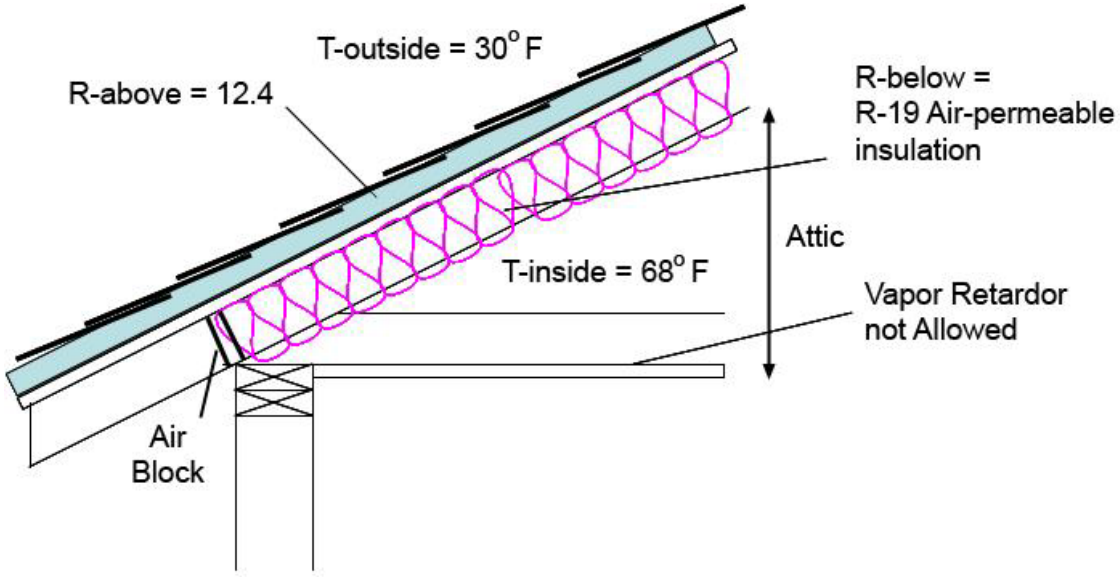
(Reprinted courtesy of the U.S. Department of Energy's Building Energy Codes Program, http://www.energycodes.gov/help/notes.stm)

Adequate attic ventilation is a long-standing requirement in building codes for moisture control. However, unvented attics can reduce residential energy needs, and are allowed by the code under certain conditions. Such assemblies are sometimes called cathedralized attics because, as with cathedral ceilings, the insulation is in the rafters and/or the roof deck. The primary benefit of cathedralized attics is the ability to locate HVAC ducts inside conditioned space, where duct leaks and heat losses or gains are not detrimental to the home's energy bill.

Section R806.4 of the 2009 International Residential Code (IRC) has five specific requirements for unvented (conditioned) attic assemblies; all criteria must be met. The overall insulation level in the roof assembly must meet the baseline requirements for energy efficiency as given in the 2009 International Energy Conservation Code (IECC), Section 402.

Additionally, there are requirements related to the arrangement of the insulation to prevent moisture condensation in the roof assembly. In New Jersey, the 2009 IRC requires air-impermeable insulation in direct contact with the underside of the roof deck. A combination of an air-impermeable insulation and air-permeable insulation directly below it is permitted.

Table R806.4 of the 2009 IRC sets the minimum requirements for minimum rigid board insulation (Zone 4 = R-15; Zone 5 = R-20) to be placed on top of the roof deck if air permeable insulation is installed in direct contact with the underside of the roof deck. The addition of the rigid board insulation will keep the monthly average condensing surface temperature at or above 45°F. Note that the additional rigid board insulation is not required if air impermeable insulation is installed in direct contact with the underside of the roof sheathing.



For example, the proposed building is located in Climate Zone 5. The minimum Ceiling R-value requirement based on Section 402.1.2 and Table 402.1.1 of the 2009 IECC is R-38. R-19 air impermeable insulation is proposed to be placed on the underside, and in direct contact, with the roof sheathing. Based on Table R806.4, R-20 rigid board insulation will be required to be placed on top of the roof deck to keep the condensing surface temperature at or above 45°F. The total insulation R-value for the assembly will be an R-39 (R-20 + R-19) which complies with the prescriptive requirements of the 2009 IECC.

The 2009 IRC also prohibits a vapor retarder on the attic floor of conditioned attics so that any moisture that may build up in the attic can dissipate into the house. If wood shingles or shakes are used, a ¼-inch air gap must be left above the roof sheathing, but below the shingles or shakes and roofing felt. Air-permeable insulation used in Climate Zone 5 shall be a vapor retarder, or shall have a vapor retarder installed in direct contact with the underside of the insulation.

If you have questions about the Energy Subcode, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Zone 5 Walls *continued from page 5*

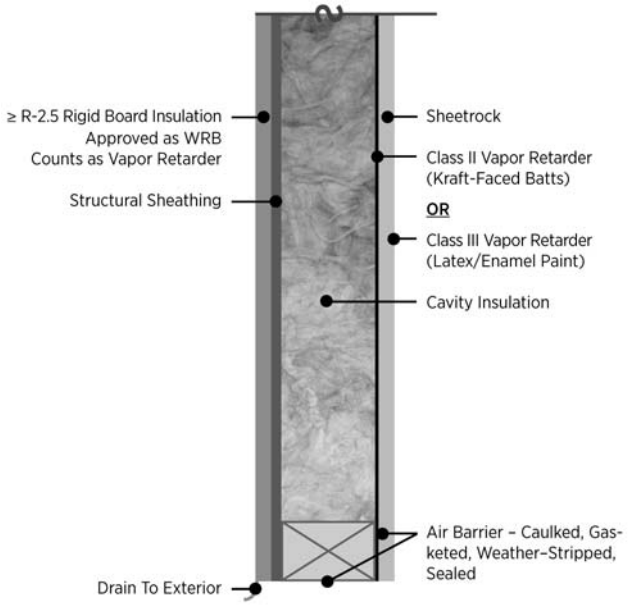
One of the properties typically associated with insulative sheathing is its high R-value per inch; rigid foam board is a good example. Different cell configurations, films, and other added features give the products specific characteristics that may allow the product to meet your needs for more than one function. However, one characteristic may be perfect for one application and totally unacceptable for another. Read the product data, carefully select the product for your application, and follow the manufacturer's installation instructions.

Vapor Retarder Requirements

The IRC requires a Class I or II vapor retarder on the interior side of frame walls in Zone 5, with the exception that a Class III vapor retarder is permitted if R-5 or higher sheathing is used.

Water-Resistive Barrier (WRB)

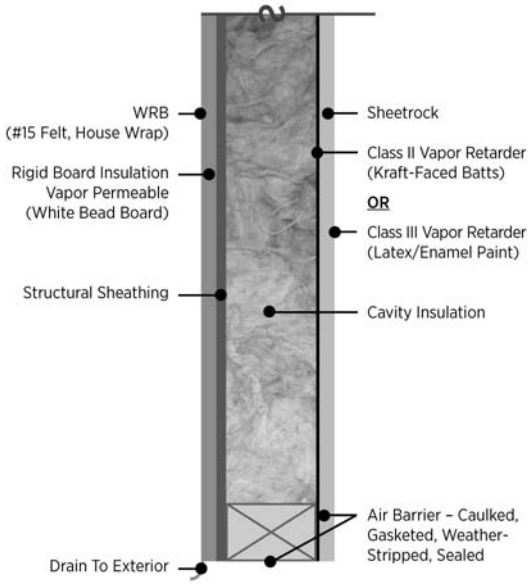
For Zone 5, the IRC requires exterior walls shall provide the building with a weather-resistant exterior wall envelope. This water-resistive barrier (WRB) can be one layer of No. 15 asphalt felt or other approved material (e.g., insulating sheathing approved as a WRB, house wraps) applied over studs or sheathing of all exterior walls. A properly installed and sealed closed-cell foam board sheathing typically is rated for use as a WRB, eliminating the expense of a dedicated water-resistive barrier product. WRB- approved products can be identified in the International Code Council-Evaluation Service (ICC-ES) Evaluation Reports (www.icc-es.org). Concrete or masonry walls designed in accordance with Chapter 6 and flashed according to Section R703.7 or 703.8 are the exception to this requirement.



2"X4" WALL SYSTEM W/RIGID BOARD AS WRB

See Zone 5 Walls at right

Zone 5 Walls *continued from left*



2"X4" WALL SYSTEM W/VAPOR PERMEABLE, RIGID BOARD AND WRB

Air Sealing

For Zone 5, the air barrier should be the innermost surfaces--the interior wall, ceiling, floor, etc. The building thermal envelope shall be durably sealed to limit infiltration. All joints, seams, penetrations and other sources of infiltration shall be caulked, gasketed, weather-stripped, or otherwise sealed with an air barrier material, suitable film or solid material. Air tightness and insulation installation shall be demonstrated to comply with either a blower door test option--after rough in and after installation of penetrations of the building envelope for utilities, plumbing, electrical, ventilation, and combustion appliances option--or a visual inspection option--field inspection and verification of the air barrier and insulation (see Bulletin 11-1 for more information).

HVAC Equipment Efficiency

No requirement

2b – Performance Compliance Approach

The 2009 IECC Chapter 4 Section 405--Simulated Performance Alternative--provides the ability to "trade-off" lower levels of insulation in the building envelope for increased levels of efficiency in other areas of the building. This approach can be used to demonstrate

See Zone 5 Walls –page 16

Zone 5 Walls *continued from page 15*

compliance using 2x4 stud walls in a house and trading off the lower efficiency with increased efficiencies in glazing, reduced air leakage in the building envelope or reduced leakage in the duct system. For example, a home being designed for construction in Climate Zone 5 using 2x4 walls with R-13 insulation can take credit for reducing the air leakage in the house down from the required 7 ACH 50 to an air leakage value that will offset the energy use of the reduced wall insulation. Under this example, the building envelope would need to be tested to ensure that it did not exceed the air leakage rate modeled in performance software. Documentation would need to be provided to the jurisdiction demonstrating that the envelope met the requirements. Also, ventilation may need to be added to the house based on the targeted air leakage rate.

3 – Application

As an alternative, foam-in-place polyurethane or other foamed-in or blown-in cavity fill strategies may achieve Frame Wall assemblies with U-factors equal to or lower than the Table 402.1.3 Frame Wall Equivalent values. However, a continuous layer of foam insulating sheathing reduces thermal bridging through the studs and maintains temperatures sufficiently high to avoid condensation on the stud and in the stud cavity. Resources are better managed; a properly installed and sealed closed-cell foam board sheathing typically is rated for use as a WRB, eliminating the expense of a dedicated water-resistive barrier product.
If you have questions about the Energy Subcode, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

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A Note about e-Mail Messages from the Licensing and Education Units

As we move further into the electronic age, the need to communicate by e-mail has become an indispensable and invaluable tool to get information out to the code enforcement community faster and more effectively.

This is especially true for our office. We try to send notices of special training opportunities and advance copies of our semester and conference brochures by e-mail. For the most part, we have found this to be very successful. However, we get many emails returned as “undeliverable” or rejected by mail servers that categorize our messages as spam.

To alleviate this, we would like you to add our e-mail addresses, educationunit@dca.state.nj.us and codeslicensing@dca.state.nj.us, to your “safe senders list” or to your address book to be sure that our messages reach you.

If you have not received e-mails from us recently, that is likely the reason. If you want to be sure that we have your e-mail address, please feel free to send it to us, along with your name and license number; then add our e-mail addresses to your address book, as directed above.

If you have any questions, please feel free to contact us by e-mail or at (609) 984-7834.

Source: John Delesandro
Supervisor, Licensing & Education

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The Construction Code Communicator is an online publication of the New Jersey Department of Community Affairs’ Division of Codes and Standards. It is 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.

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Division of Codes and Standards
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P.O. Box 802
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Volume 24, Number 2 **Summer 2012**

The 31st Annual Building Safety Conference of New Jersey

The 31st Annual Building Safety Conference was held May 9th through 11th at Bally's Atlantic City. Our focus this year was on building new connections and welcoming new friends in our code enforcement community. We had a very successful conference this year with over 600 people in attendance to honor our inspectors and technical assistant of the year.

The kickoff event for the Conference, as always, was the "Crackerbarrel." We tried a new format wherein there were two rooms instead of one, with each room separated by similar areas of interest. This was intended to allow our guests a better opportunity to find presenters based upon areas of interest and help in providing a quieter atmosphere to be able to ask and have answered their questions by over 35 experts. The topics ranged the code enforcement spectrum from a brief overview of the newly adopted 2011 National Electrical Code to an examination of the requirements for gas piping systems.

The centerpiece of the Conference was, of course, the opportunity to recognize and honor those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year. We were very honored to have both Commissioner Richard E. Constable III and Director Edward M. Smith make the award presentations this year at the annual luncheon, along with the Presidents of the respective associations.

See Building Safety Conference- page 2

Light Pollution and Municipal Ordinances

The Department of Community Affairs has received questions about the enforcement of a municipal ordinance addressing light pollution; a brief explanation might be helpful.

At N.J.A.C. 5:23-6.2(g)1i, the Rehabilitation Subcode states that "Exterior light fixtures that replace existing light fixtures shall comply with a municipal ordinance adopted to control light pollution." For a municipality with such an outdoor lighting ordinance for the replacement of existing fixtures, enforcement takes place through the Uniform Construction Code (UCC). The question that is asked is whether there is a UCC process for enforcement of a municipal ordinance for new lighting installations.

Municipal ordinances may cover only items that are not within the jurisdiction of the Uniform Construction Code (UCC). An ordinance establishing limitations on the intensity of exterior lighting would be such an ordinance. If a municipality were to make all exterior lighting installations subject to the outdoor lighting ordinance, the ordinance would be enforced as a prior approval.

The local code officials do not enforce prior approvals, but a permit may not be issued until the conditions of all prior approvals have been met. For a project involving exterior lighting, the municipal official

See Light Pollution - page 4

In This Issue

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Building Safety Conference *continued from page 1*

The following awards were presented:

Building Officials Association of New Jersey
Building Inspector of the Year
Lawrence Scorzelli

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year
Thomas Walsh

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year
James Mercready

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year
Edward Reed

New Jersey Association of Technical Assistants
Technical Assistant of the Year
Deborah Simone

Congratulations to all for your hard work and dedication to the betterment of code enforcement here in New Jersey!

The Building Safety Conference is a terrific opportunity to broaden your knowledge of cutting edge code enforcement and building construction techniques, and also, to meet with officials from throughout the state to share ideas and promote camaraderie among our community. We hope to see you all next year at Bally's Atlantic City May 1st through 3rd, 2013. Please save the date!

Source: John Delesandro
Supervisor, Licensing and Education



Above, BOANJ's 2012 honoree Lawrence Scorzelli, (2nd l.), accompanied by BOANJ President Thomas Pinand (3rd l.), DCA Commissioner Richard E. Constable III (l.) and Codes and Standards Director Edward M. Smith (r.).



Above, NJPIA's 2012 honoree Thomas Walsh, (3rd l.), accompanied by NJPIA President William Olinger (2nd l.), DCA Commissioner Richard E. Constable III (l.) and Codes and Standards Director Edward M. Smith (r.).



Above,NJFP&PA's 2012 honoree James Mercready, (2nd l.), accompanied by NJFP&PA President Stanley Sickels (3rd l.), DCA Commissioner Richard E. Constable III (l.) and Codes and Standards Director Edward M. Smith (r.).



Above, MEIA's 2012 honoree Edward Reed, (2nd l.), accompanied by MEIA President Jean F. Verrier (3rd l.), DCA Commissioner Richard E. Constable III (l.) and Codes and Standards Director Edward M. Smith (r.).

See Building Safety Conference- page 3

Building Safety Conference *continued from page 2*



Above, NJATA's 2012 honoree Deborah Simone, (2nd l.), accompanied by NJATA President Linda Aiello (3rd l.), DCA Commissioner Richard E. Constable III (l.) and Codes and Standards Director Edward M. Smith (r.).



Above, Commissioner Constable, Director Smith and all 2012 honorees.

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High-efficiency Lighting In New Homes

(Reprinted courtesy of the U.S. Department of Energy's Building Energy Codes Program, http://www.energycodes.gov/help/notes.stm)

Lighting consumes more than 10% of electric energy used in homes, presenting a substantial opportunity for lowering residential energy consumption. The 2009 International Energy Conservation Code (IECC) requires that half of the permanent lighting in a new home have high-efficiency lamps.

See HE Lighting - page 6

Elevator Devices – Permits and Permit Updates

The Elevator Safety Unit (ESU) has received a number of inquiries regarding Permit requirements for the installation of elevator devices; as you know, a Construction Permit or a Permit Update is the authorization to proceed with construction work, and one or the other *is* required before elevator work may begin.

It is important to understand that the Elevator Subcode Technical Sections (i.e., UCC-F150 and UCC-F155) themselves are not Permits nor are they Permit Updates; they are simply a part of an applicant's Permit application as is, for example, the Electrical Subcode Technical Section.

The following demonstrates how a Permit Update would apply to elevator devices during the construction of a new building containing an elevator. A Construction Permit application, including building plans and specifications, is submitted to the local enforcing agency.

- The submitted documents are reviewed for code compliance and released by the various subcode officials according to their responsibilities as outlined in N.J.A.C. 5:23-3.4.
- Plans are released, and a Permit (i.e., UCC-F170) issued, granting permission to perform *Building*, *Electrical*, *Plumbing* and *Fire Protection* work; the Construction Permit, however, does not authorize the installation of the elevator device(s).
- As part of the *Building* work authorized by the Permit, the elevator shaft, machine room and control room/space are also authorized to be built. The Permit, however, did not authorize the installation of elevator equipment; therefore, a Permit Update (i.e., UCC-F190) is required before the elevator equipment may be installed.
- To obtain the required Permit Update, elevator layout drawings, Elevator Subcode Technical Section(s), and, when applicable, an Application for a Variation (UCC-F160) must be submitted for the project, and must be reviewed and released by an Elevator Subcode Official. Upon release, a Permit Update allowing the installation of the elevator equipment is issued by the Construction Official at the local level.

Without the Permit Update, the installation of elevator equipment *is not authorized*, and the elevator may not be inspected or approved for use.

Questions about the Elevator Subcode may be directed to the Elevator Safety Unit at (609) 984-7833.

Source: Paulina Caploon
Elevator Safety Unit

Light Pollution *Continued from page 1*

charged with enforcing the outdoor lighting ordinance would be required to submit a letter to the construction official attesting to compliance with the ordinance before a permit could be issued. The letter would be required to state that (1) the plans and specifications for the exterior lighting have been reviewed and have been determined to comply with the outdoor lighting ordinance and (2) any changes to the outdoor lighting as presented on plans or specifications are required to be re-approved. This process is similar to the operation of a zoning approval as a prior approval.

Questions on prior approvals may be directed to the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Division of Codes and Standards

Notice to Fire Official: Roof-Mounted Photovoltaic Systems

A new code provision that takes effect July 16, 2012 requires the Construction Official to notify the local Fire Official when a permit has been issued for the installation of a roof-mounted photovoltaic system. The Construction Official must issue the notification in writing within 10 business days.

Photovoltaic systems present a special hazard for firefighters. This notice is intended to ensure that the presence of the system is known. This is a very important notification and it will allow the Fire Official to alert his local fire companies of the presence of these secondary power sources.

The adopted changes can be found at N.J.A.C. 5:23-4.5(h)1xx.

The new code provisions are found at the link below.

http://www.nj.gov/dca/divisions/codes/codreg/pdf_rule_proposals/p2012_5_23_2_15.pdf

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

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General Information Signs

The National Fire Protection Association (NFPA) now requires fire sprinkler systems that are installed in accordance with NFPA 13, *Installation of Sprinkler Systems*, to have “General Information Signs.”

The installation contractor must provide permanent, general information signs that provide design information that is relevant to the inspection, testing, and maintenance requirements of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems.*

The signs must be weatherproof metal or rigid plastic and permanently marked. They must be installed with corrosion-resistant wire, chain, or other acceptable means and they must be placed at each system control riser, antifreeze loop, and auxiliary system control valve.

The signs shall include the following information:

1) Name and location of the facility protected
2) Presence of high-piled and/or rack storage
3) Maximum height of storage planned
4) Aisle width planned
5) Commodity classification
6) Encapsulation of pallet loads
7) Presence of solid shelving
8) Flow test data
9) Presence of flammable/combustible liquids
10) Presence of hazardous materials
11) Presence of other special storage
12) Location of auxiliary drains and low point drains
13) Original results of main drain flow test
14) Name of installing contractor or designer
15) Indication of presence and location of antifreeze or other auxiliary systems

This new sign requirement is in addition to the Fire Sprinkler Hydraulic Data Plate, UCC Form F380. This sign will provide additional information that will assist with maintenance inspections required by NFPA 25.

Following is a sample of the new general information sign that is required for all main risers, antifreeze systems or other auxiliary systems that are installed in accordance with the International Building Code (IBC)/2009 and NFPA 13. Some of the information will not be applicable to single riser residential systems, but the sign is required for all risers.

See General Information Signs –page 5

General Information Signs *continued from page 4*

FIRE SPRINKLER SYSTEM
GENERAL INFORMATION SIGN

NAME: ABC Corporation

ADDRESS: 101 Broad Street, Trenton, NJ 08652

HIGH PILED or RACK STORAGE: YES X **TYPE:** Double Row Rack

MAXIMUM HEIGHT OF STORAGE PLANNED: 28' 0"

AISLE WIDTH PLANNED: 8' 0"

COMMODITY CLASSIFICATION: High Hazard

ENCAPSULATION of PALLETS: No

PRESENCE OF SOLID SHELVES: No

FLOWTEST: Q = _____ GPM; **Static PSI:** _____ **Residual PSI:** _____

PRESENCE OF FLAMMABLE/COMBUSTIBLE·LIQUIDS: No

PRESENCE OF HAZARDOUS· MATERIALS: Yes **TYPE:** Level 3 Aerosols

PRESENCE OF OTHER SPECIAL STORAGE: Yes **TYPE:** Idle plastic pallets

AUXILIARY or LOWPOINT DRAIN LOCATIONS: 1._____

2._____ 3._____

ORIGINAL MAIN DRAIN TEST: Static PSI: _____ **Residual PSI:** _____

REQUIRED SPRINKLER DEFLECTOR CLEARANCE: 36 inches

ANTIFREEZE SYSTEM: No **LOCATION OF SYSTEM:**_____

AUXILIARY SYSTEMS: No **TYPE/LOCATION:**_____

INSTALLATION/DESIGNER CONTRACTOR: 123 Fire Protection, Trenton, NJ 08652

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Property Maintenance Ordinances

The Division of Codes and Standards is conducting a review of local property maintenance ordinances and resale inspection ordinances whether applicable to single-family, multi-family or non-residential structures. We also are interested in change of tenancy ordinances that contain provisions requiring building upgrades or some form of compliance with one of the adopted subcodes of the UCC or a fire safety code.

See Ordinances at right

Ordinances *Continued from left*

Please submit the ordinances to the Office of Regulatory Affairs at PO Box 818, Trenton, New Jersey 08625-0818. Ordinances may also be sent via e-mail to susan.lydon@dca.state.nj.us. If the municipality has no such ordinances, please respond and let us know this.

Should you have any questions, you may contact Susan Lydon of the Office of Regulatory affairs at (609) 984-7672. Thank you for your anticipated cooperation.

Source: Lou Mraw
Office of Regulatory Affairs

HE Lighting *Continued from page 3*

Requirements

Section 404.1 of the 2009 IECC states that a minimum of 50 percent of the lamps in permanently installed lighting fixtures shall be high-efficiency lamps. The IECC defines high efficiency in Section 202 as: 60 lumens/W for lamps over 40W; 50 lumens/W for lamps over 15W to 40W; 40 lumens/W for lamps 15W or less.

These efficiency minimums are above the level of current incandescent products. However, many compact fluorescent lamps, all T-8 or smaller diameter linear fluorescent lamps, and most metal halide lamps meet these requirements. A "lamp" is simply the light bulb or tube itself; it is not the fixture. So a chandelier is one fixture but may have many lamps.

The count is based on the number of lamps and includes both pin-based fixtures (fluorescent tubes and pin-based compacts) and standard screw-base fixtures. The provision applies to indoor spaces and outdoor facades of all residential buildings, including accessory structures and garages. The code permits up to 50% of the lamps to be of a standard efficiency, providing flexibility to allow lighting for certain applications that cannot be met with high-efficiency lamps.

Benefits

Compact fluorescent lamps (CFLs) have become more available and have dropped in price. A 60-watt replacement CFL can be purchased for about $1.50 per lamp. CFLs use about 80% less energy than standard incandescent lighting and last 6 to 10 times longer. At $1.50 per lamp with electricity at 9 cents per kwh, the payback time is less than two years, assuming that each light is on a half hour each day.

CFLs offer versatile lighting solutions

CFLs are available in a variety of shapes and sizes so they can be used in most areas of the home where standard incandescent lamps would be used. Their longer life makes them ideal for high ceilings and other hard-to-reach spots. Reflector CFLs are now available for recessed downlighting; the best models have passed Elevated Temperature Life Testing, lasting over 6,000 hours without failure (see www.pnl.gov/rlamps).

Energy-efficient chandeliers

While incandescent lamps have traditionally been used in chandeliers because of their ability to dim and their small size possibilities, dimmable high-

See HE Lighting at right

HE Lighting *Continued from left*

efficiency CFLs designed for candelabra-sized sockets and other specialty applications are also readily available.

For more information on lighting, see the ENERGY STAR® web page.

Plan Review

- Verify that 50% of all lamps will be high-efficiency according to the count of lamps as shown on the plans. Confirm each lamp type's efficiency by requiring manufacturer's or independent test data for each lamp type indicating its efficiency rating. If the manufacturer or product packaging has only separate ratings for lumen output and wattage, simply divide the lumen rating by the wattage to get lumens per watt.

Field Inspection

- Inspect representative CFL lamps, linear fluorescents, and other lamps to ensure that at least 50% of all lamps are high-efficiency by comparing the installed lamp make/model number to the ones on the approved plans. Non-specified lamps should have efficiency rating information supplied at inspection.

Code Citations

(see "Requirements" above)

If you have any questions about the Energy Subcode, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Two Barrier Free Questions Answered

Two questions have recently arisen concerning two separate provisions of the Barrier Free Subcode. One is a requirement that is drawn from the Americans with Disabilities Act (ADA) and from the Barrier Free enabling legislation; the second deals with the scoping of the accessibility requirements in the Barrier Free/Council of Affordable Housing (COAH) low and moderate income housing law.

At N.J.A.C. 5:23-7.4(a)2, the Barrier Free Subcode requires that an elevator be provided in a building that is 10,000 square feet or more total gross enclosed floor area. There is an exception to this requirement for "floors that are less than 3,000 square feet or floors that

See Barrier Free –page 7

Barrier Free *Continued from page 6*

contain only mechanical equipment." The following theoretical question has arisen: Is a seven-story building with 2,999 square feet per floor required to have an elevator? The answer is No.

The second question deals with the scoping of the Barrier Free Subcode/COAH law for accessible affordable housing. It has come to the Department's attention that there is some confusion as to whether this law applies only to townhouses and multistory dwelling units or whether it also applies to flats (single story dwelling units). At N.J.A.C. 5:23-7.5(a)1, the Barrier Free Subcode provides that "Multistory dwelling units, which are ground floor dwelling units and for which credit is sought for low and moderate income housing through the Council on Affordable Housing (COAH) and that are attached to at least one other dwelling unit, shall comply with the applicable provisions of this section."

Barrier Free *Continued from left*

The Barrier Free/COAH law was passed to ensure that townhouses and multistory dwelling units, which had become the most commonly constructed form of affordable housing, would be required to serve all New Jersey's low and moderate income citizens, with or without disabilities. At N.J.A.C. 5:23-7.5(b), townhouses are exempt from the Barrier Free Subcode. The Barrier Free/COAH law created an exception to that exemption, which is codified at N.J.A.C. 5:23-7.5(a)1 and 6). Single story dwelling units, more commonly called "flats," are required to be accessible when there are four or more dwelling units in a single structure (N.J.A.C. 5:23-7(a)). The Barrier Free/COAH law does not address flats.

If you have any questions on the Barrier Free Subcode, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily Templeton
Division of Codes and Standard

Plain Old Telephone Service (POTS) to Managed Facility Voice Network (MFVN) Service

Many people are switching over from POTS to MFVNs. A new code provision that takes effect July 16, 2012 will make it easier for them to make the switch. Currently, when someone wishes to change their POTS line to a MFVN, they need a full permit.

The changes found at N.J.A.C. 5:23-2.17A, 4.18 and 4.20 allow MFVNs to be used without making the owner of a building apply for a full permit to change phone lines. A new verification form U.C.C. F391 contains a compliance checklist. This form must be completed by a licensed/certified alarm service provider and submitted to the Fire Protection Subcode Official of the Local Enforcing Agency within 24 hours of conversion.

The new form can be found on the Division of Codes and Standards webpage at http://www.nj.gov/dca/divisions/codes/resources/constructionpermitforms.html

The new code provisions dealing with this change are found at the link below.

http://www.nj.gov/dca/divisions/codes/codreg/pdf_rule_proposals/p2012_5_23_2_15.pdf

The adopted amendments at N.J.A.C. 5:23-4.18(c)4

See POTS to MFVN at right

POTS to MFVN *Continued from left*

and 4.20(c)2iv(10) also set a minimum fee for the transmission line change.

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Automatic Lighting Shutoff for Tenant Spaces

(Reprinted courtesy of the U.S. Department of Energy's Building Energy Codes Program, http://www.energycodes.gov/help/notes.stm)

Automatic shutoff capability for all interior building lighting (with exceptions) is required by ANSI/ASHRAE/IESNA Standard 90.1-2007 (as well as previous versions back to 1999) for buildings over 5,000 square feet. The energy-saving intent of the requirement is to be sure that unnecessary lights are turned off, such as those not needed after the end of the business day. The requirement itself ensures that the control is available so that occupants can set up automatic shutoff of lighting.

See Automatic Shutoff –page 8

Automatic Shutoff *Continued from page 7*

The requirement does have important exceptions including: lighting intended for 24-hour operation, lighting in spaces where patient care is rendered, and lighting in spaces where automatic shutoff would endanger the safety or security of the room or occupants. AHSRAE 90.1 considers sleeping units within hotels, motels, boarding houses, and similar buildings exempted under the 24- hour-operation exemption.

The size threshold issue and tenant spaces

The 5,000-square-foot threshold was originally included because of the potential impracticality and relative high cost of whole-building control systems for smaller buildings. This threshold is easy to apply for single-tenant buildings and for buildings with structured or uniform operating hours because the building schedule can be easily programmed into a whole building system that applies to the entire building.

However, some building types with multiple tenant occupancies do not lend themselves to practical application of whole-building control. One classic example is the typical retail strip mall. If a strip mall is over 5,000 square feet in total, the code language as written in the controls section technically requires complete automatic shutoff for the building as a whole. Because each retail business will typically have different operating schedules, it is difficult and often impractical to apply a whole-building control system.

Typically, individual tenant businesses (such as those in a strip mall structure) will have separate electrical feeds and firewalls between adjoining tenants, making them effectively separate business entities. In these cases, the whole building automatic shutoff is intended to be applied on a tenant business basis and those individual businesses less than 5,000 square feet would not have to comply with the automatic lighting shutoff requirement. The intent in ASHRAE 90.1 is to apply this requirement in a practical manner. ASHRAE 90.1 interpretations are likely to focus on the uniqueness of business schedules and separate electrical services in determining appropriate application of the 5,000-square-foot threshold.

Plan Review

- Verify that the lighting and/or electrical control plans specify controls to be installed that meet the provisions of the code, including the control area limitations. Check individual tenant space sizes for applicable exemption.
- Verify from the design submission (plans and specifications) that the control has appropriate

See Automatic Shutoff at right

Automatic Shutoff *Continued from left*

scheduling capability in sufficient detail for the intended use of the space or building. An appropriate scheduling control should be capable of maintaining the type of day (weekday or weekend) and appropriate lighting schedule for that day type.

Field Inspection

- Verify that controls installed meet the capabilities and requirements as shown on the plans.
- Verify the automatic control device will shut off during the designated or programmed times as scheduled for each day of the week.

Code Citation

ASHRAE Standard 90.1-2007, Section 9.4.1.1, Automatic Lighting Shutoff

Interior lighting in buildings larger than 5000 ft^2 shall be controlled with an automatic control device to shut off building lighting in all spaces. This automatic control device shall function on either:

1. a scheduled basis using a time-of-day operated control device that turns lighting off at specific programmed times--an independent program schedule shall be provided for areas of no more than 25,000 ft2 but not more than one floor,
2. an occupant sensor that shall turn lighting off within 30 minutes of an occupant leaving a space, or
3. a signal from another control or alarm system that indicates the area is unoccupied.

The following shall not require an automatic control device:

1. Lighting intended for 24-hour operation,
2. Lighting in spaces where patient care is rendered, and
3. Lighting in spaces where an automatic shutoff would endanger the safety or security of the room or building occupant(s).

If you have questions about the energy subcode, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance

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Dept. of Labor: The Removal of Asbestos Containing Material

It has come to the attention of the Department of Labor that there is some misinformation surrounding renovations and demolitions involving asbestos containing materials (ACM). Navigating the maze of federal and state asbestos regulations can leave even the most conscientious contractor dazed and confused. In order to avoid problems, for each project, the contractor should answer some basic questions in order to determine which regulations are applicable.

It is the ***contractor's responsibility*** to determine whether the project involves the disturbance of asbestos containing material (ACM) before proceeding with work. Any material containing more than 1% asbestos meets the regulatory definition of ACM. If the contractor is working with more than 3 linear feet or 3 square feet of ACM, then the project falls within the jurisdiction of the New Jersey Department of Labor and Workforce Development (DOL). The removal or repair of ACM during such projects must be completed by a licensed asbestos abatement contractor. The demolition of a structure containing ACM also falls within the jurisdiction of DOL since the ACM is disturbed during the demolition process.

DOL regulations focus on the quantity, not the quality, of ACM. There is no distinction between friable and non-friable ACM in determining whether DOL regulations apply. The DOL regulates both friable ACM and non-friable ACM.

There are a few very limited exceptions to the DOL licensing requirement. One of those exceptions involves asbestos containing roofing and siding materials in renovation projects. The removal of asbestos containing roofing or siding in a ***rehabilitation project*** is not regulated by DOL and, therefore, does not require a licensed asbestos abatement contractor. However, it is important to note that the removal of asbestos containing roofing or siding ***must be completed by a licensed asbestos abatement contractor if the structure will be demolished***.

See Asbestos at right

Asbestos *Continued from left*

In addition to DOL regulations, a contractor must be concerned with federal regulations (National Emission Standards for Hazardous Air Pollutants, which applies to residential buildings with 5 or more dwelling units and commercial buildings involving the stripping or removal of at least 160 square feet or 260 linear feet of regulated ACM), Occupational Safety and Health Administration (OSHA) requirements, New Jersey regulations for asbestos projects in educational facilities and public buildings (Asbestos Hazard Abatement Subcode of the Uniform Construction Code) and New Jersey Department of Environmental Protection regulations pertaining to the transport and disposal of ACM. DOL regulations can be found at N.J.A.C. 12:120, Asbestos Licenses and Permits. (Exceptions and exemptions can be found at N.J.A.C. 12:120-1.4 and N.J.A.C. 12:120-4.2).

Code enforcement officials should be aware that at N.J.A.C. 5:23-8.6, the Asbestos Hazard Abatement Subcode, requires that before work may be undertaken in an existing building or before a building may be demolished, a certification must be provided by the architect, engineer, or contractor specifying the extent to which ACM will be disturbed. If ACM will be disturbed, an assessment by the New Jersey Department of Health (DOH), local or county health department, or a private business authorized by DOH to perform an assessment is required before a permit may be issued for the rehabilitation or demolition project. Obtaining the DOH assessment and ensuring that, where required, the work will be performed by a licensed DOL contractor is a prior approval before a permit may be issued for a rehabilitation or demolition project in which ACM will be disturbed.

For further assistance on the DOL contractor licensing requirements, please call DOL at (609) 633-2159. For assistance on code enforcement, please contact Jim Amici of the Bureau of Code Services at (609) 633-6224.

Source: Tom Voorhees
Department of Labor

James Amici
Bureau of Code Services

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

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Volume 24, Number 3 Fall 2012

Plan Release with Conditions

On November 5, 2012, the adoption of a new rule, plan release with conditions, was published in the *New Jersey Register*. It is effective immediately. This article seeks to provide a brief explanation for the development of this rule and then a summary of the changes it makes.

Background: The Department had received complaints about the lack of predictable timeframes in rehabilitation projects, particularly in tenant fit-outs upon a change of tenancy. The lack of predictability in timeframes meant that business owners and project managers could not provide an accurate move-in timeframe for their tenants or clients. In response to the concerns that were expressed, the Department formed a small working group. Serving on it were representatives of the business community, property managers, design professionals, and code enforcement officials. The focus of the small working group was to devise a process to provide predictability in the plan review process for changes of tenancy, including those changes in tenancy that involve construction projects. Upon discussion, it was found that the plan review process is extended by multiple revisions of the plans to ensure that the released drawings demonstrate code compliance. The initial plan review period, by statute, is 20 business days. The period for re-review is seven business days. The business professionals in the group asserted that they want the protection afforded by the plan review, but they are repeatedly frustrated in their efforts to give their clients accurate move-in dates because they could neither predict nor control the number of re-reviews of the plans that might be required.

Solution: The solution that gained the consensus of the small working group was a process that would allow for "plan release with conditions." It is that process that has been adopted as an amendment to the Uniform Construction Code.

Plan Release with Conditions—Process: This rule amendment, plan release with conditions, would provide that, at the end of the 20-day plan review period, the plans for alteration or reconstruction projects in Groups B (Business), F (Factory), M (Mercantile), or S (Storage) would be released with a list of conditions specifying code deficiencies,

See Plan Release with Conditions - page 2

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Plan Release with Conditions *continued from page 1*

enumerating deferred submittals, and listing pending prior approvals; the list of conditions will include a timeframe for the submittal of the corrections. If revised drawings are required in order to perform the inspection, a timeframe for their submittal must also be included in the list of conditions. Substantially deficient plans (plans that cannot be used to determine code compliance upon inspection) are not eligible for release with conditions. Upon written acceptance of the conditions by the permit applicant and once all prior approvals have been obtained, the permit is issued. The enforcing agency is required to send a copy of the list of conditions to the design professional of record. Code compliance will be determined at inspection. To facilitate inspections, the list of conditions must be attached both to the plans that are retained on site and to the plans that are retained by the enforcing agency.

This "plan release with conditions" process does not apply to a project involving a change of use or change in the character of a use. The rehabilitation subcode addresses a change of use through a hierarchy of hazards in which the increase in hazard associated with the proposed change is evaluated on an item-by-item basis and specific code requirements result. Such a project could not be reasonably addressed through plan release with conditions. For the same reason, a change of character of use, in which the use designation of the building does not change, but the intensity of the use changes, could not be reasonably addressed through plan release with conditions. So, change of use and change of character of use were omitted from this amendment.

A bulleted summary follows:

The regulatory amendment is at N.J.A.C. 5:23-2.16—Construction permits-procedure, titled:

Exception: Plan Release with Conditions and Issuance of Permit.

- This procedure applies to rehabilitation work in Groups B, F, M, or S; it does not apply to a change of use or to the change in the character of a use.
- Following a plan review by all applicable subcode officials, unless the plans are so deficient as to make determining code compliance through inspections impossible, plans will be released with a list of conditions attached identifying any deficiencies in code compliance and also identifying information that must be provided either before the permit can be issued (such as prior approvals) or during the course of the work (such as sprinkler shop drawings).
  - o To ensure that the deficiencies have been corrected at the time of inspection, a timeframe for providing the corrections or the missing information must be specified in the list of conditions.
  - o Revised drawings may be required before the Certificate of Approval or Certificate of Occupancy is issued. A timeframe for receipt of the revised drawings must be established in the conditional plan release. Issuance of a temporary certificate of occupancy (TCO) will be in accordance with N.J.A.C. 5:23-2.23(g).
- Upon written agreement of the permit applicant (owner or owner's agent) to the list of identified deficiencies and to their correction during the course of work, the construction official will act on the permit application. The local enforcing agency will forward a copy of the conditions to the design professional of record.
- Upon inspection, if the deficiencies identified as conditions of the release have not been corrected, the work must be corrected; it will then be reinspected.
- Upon inspection, if the scope of the work has changed and work is found that was not included in the permit application, the standard UCC process, including issuing a stop work order and penalties will be followed.

See Plan Release with Conditions –continued at right

Plan Release with Conditions *continued from left*

The Department is looking into offering training on this process. In the meantime, questions should be directed to the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Division of Codes and Standards

UCC-F160, Application for a Variation Continues to be a UCC Standard Form

As many of you may have noticed by now, an error occurred in the July 16, 2012 Code Update, specifically with the printing of page 23-64.2, which begins section 5:23-4.5, Municipal enforcing agencies –administration and enforcement.

In (b)2, the form, "F-160 Application for a Variation" was inadvertently dropped from the table of standardized forms. This is a printing error.

UCC-F160, the Application for a Variation, remains a part of the UCC Standard Forms complement. The printing error will be corrected as soon as is practicable.

Source: Berit Osworth
Division of Codes and Standards

Counting Houses

Most technical assistants and construction officials know building permits are an important source of statistical information. They are one of the few data sources available by municipality every month.

One of the more significant indicators from building permits is the number of new houses. Housing data help economists gage trends in an important sector of the construction industry. They also are used by school administrators, utility companies, planners, and others to identify emerging settlement patterns.

Counting new houses sounds simple, but it's not, and recent construction trends make it harder. This article discusses pitfalls and how to avoid them.

Quacks like a duck: Dwellings were once easy to count. Kitchens are a good clue. So are separate entrances. The units also must be intended for long-term stays of at least 30 days.

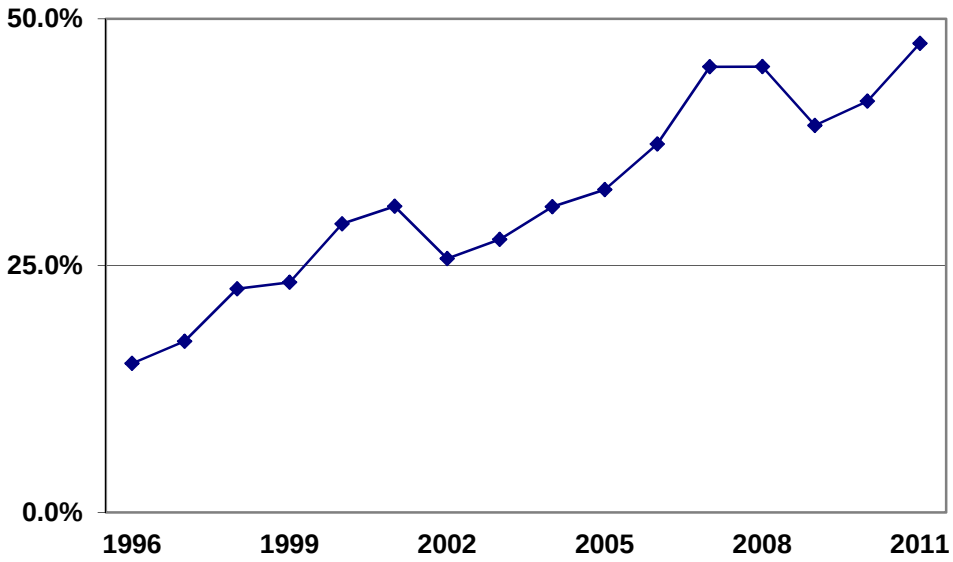
Today's houses can be harder to spot. Time-share apartments and extended-stay suites look like dwellings, but they're not. Occupants can stay for short periods of time. They are like hotels; technical assistants and construction officials generally *don't report them as dwellings*. But, length of stay or occupancy is not always a defining feature. After all, a seldom-used vacation house is still a dwelling, so is a spec house that is not sold or rented.

Nursing home room or elderly apartment: Another important trend is the growth in elderly housing. Age-restricted shelter varies. Residents who need medical care may live in nursing homes or hospitals. *Like hotel rooms, nursing home rooms are not dwellings*. Some elderly housing, however, are for people who can live more independently. These units may be connected to nursing homes but look more like small apartments. Residents come and go as they please. They buy groceries and cook meals. *Because these units look and function more like apartments, technical assistants and construction officials report them as dwellings*.

Delta House: Blurred boundaries also occur with college housing. *Dormitories, like hotels, generally have rooms, not dwellings*. Some colleges and universities have started to build housing that looks like town houses. These units have kitchens, separate entrances, and parking. Technical assistants and construction officials have correctly reported them as dwellings.

Hello neighbor: In 1996, a little more than 15 percent of all new houses authorized for construction in New Jersey were in buildings with other residential units (multifamily housing) or in mixed-use buildings with office, retail, and other nonresidential uses. In 2011, the proportion was 47.5 percent.

Multi-Family & Mixed-Use Housing as a Percentage of All Authorized Housing, 1996-2011



See Houses- page 4

Houses *continued from page 3*

Today's multifamily buildings are complex. They often have garages, gyms, and other common areas. Many are built and occupied in phases, over several years. Some construction offices issue separate permits for each dwelling. Generally, this is bad practice. If reporting software does not allow the issuance of multiple COs from a single permit, treat the units as fit ups, alterations for nominal work. (See in the spring 2008, volume 20, and issue 1 *Construction Code Communicator* article "Multiple Permits for Multiple Units Mean Multiple Mistakes.")

Mixed-use Buildings: A related trend is the increase in housing in buildings with office, retail, and other commercial uses. Let the Census Bureau know if the newly constructed, mixed-use building has dwellings. Construction officials and technical assistants must *use the proper item numbers.* These are summarized below:

Item numbers for the U.S. Census	
Census Item Number	Number of housing units
101	1
103	2
104	3 or 4
105	5 or more

Users of ***PermtisNJ*** must be mindful of the sequence they use to report building use. If the mixed-use building has housing, report the residential use first. Otherwise, the dwellings go undetected by the Census Bureau. Nonresidential uses reported first automatically trigger a '999' item number. This tells Census Bureau to ignore the permit and results in the agency missing housing it should count.

False starts: Tough economic times can muddy the waters. This can lead to confusion about the number of authorized houses. Construction officials sometimes must cancel or suspend work on a permit. This does not mean the information reported earlier was wrong and needs to change. A permit issued last year for ten new dwellings does not have to be corrected because the applicant goes bankrupt this year. The number of dwellings gets counted when permits are issued. *If and when* the project gets certificates of occupancy, the dwellings are reported and counted again as certified housing units. Both measures provide important information.

A *firewall* exists between municipalities and the U.S. Census Bureau and the New Jersey Department of Community Affairs. This security measure makes it difficult to change building permits once sent. Any changes other than normal updates are flagged and

See Houses –continued at right

Houses *continued from left*

don't reach either agency. Occasionally, municipalities must void permits or make changes other than those allowed by permit updates. To do so, call or e-mail DCA staff, either Charlie Pierson, Jr. or me.

In sum,

1. Authorized housing, the number of dwellings authorized by building permits, is an important economic and demographic indicator, one of the few available for every locality, every month.
2. Both the U.S. Census and the New Jersey Department of Community Affairs publish monthly statistics on new dwellings authorized for construction.
3. Generally, a dwelling is a residential unit with a kitchen and separate entrance; it is intended for long-term use of 30 days or more.
4. Hotel rooms, time-shared units, extended stay suites, and most dormitory rooms usually are not dwellings, but age-restricted units that let residents live in a setting more like apartments rather than nursing homes are.
5. Recent building trends have made it harder to count housing.
6. One trend is the growth in apartments, condominiums, and other multi-family housing.
7. A related trend is an increase in buildings where housing shares space with office, retail, or other nonresidential uses. Use the proper item number to report mixed-use housing; otherwise, the Census Bureau will not be notified of these new units.
8. Be careful when you issue multiple permits for multiple housing units in a single building. Don't over count.

   Many changes can be handled with permit updates. If you need to make other changes, remember there is a firewall between construction offices and the Department of Community Affairs. After permits are transmitted, you must notify DCA of any changes other than normal permit updates.

If there is are questions about whether something is a dwelling or not, call John Lago or Charlie Pierson, Jr. at (609) 292-7898.

Source: John Lago
Division of Codes and Standards

Corrugated Stainless Steel Tubing: A Letter from the Board of Examiners of Electrical Contractors

Dear Mr. Smith:

It has recently been brought to the attention of the NJ Board of Examiners of Electrical

Contractors ("the Board") that code officials in some municipalities are demanding that electrical contractors install the bonding jumper for CSST installations, as required by the IRC/2009 and the IFGC/2009.

Apparently, this is occurring even when the electrical contractor was not under contract to perform any work related to the installation of the equipment and/or CSST installed. In considering the number of questions received by the Board related to this subject, and in context with the Board's authority and jurisdiction of licensing electrical contractors, the Board would like to advise the Department of Community Affairs of its position with respect to the installation of the bonding jumper for CSST installations.

The Board's enabling statute requires generally that anyone that advertises or enters into, or engages in the work or business as an electrical contractor must first obtain a license and business permit from the Board (NJSA 45: 5A-9). The term "electrical contractor" means a person who engages in the business of contracting to install, erect, repair, or alter electrical equipment for the generation, transmission, or utilization of electrical energy (NJSA 45:5A-2(d)).

The statute also exempts from licensure any work with a potential less than 10 volts (NJSA

45:5A-18(j

Accordingly, the Board has reasoned that CSST is not electrical equipment that would require installation by an electrical contractor. Its purpose is not to generate, transmit, or utilize electrical energy but rather generally to supply gas to utilization equipment. Additionally, a bonding jumper, consisting of an appropriate conductor and its related clamp(s) used as a grounding electrode conductor to bond the CSST gas piping system to the electrical service grounding electrode system has a potential of less than 10 volts; its purpose being to maintain a potential of zero volts, or ground potential throughout the system. Consequently, the Board's position is that a license and business permit issued by the Board is not necessary to install a bonding jumper on a CSST gas piping system to the electrical service grounding electrode system; provided such work does not include the intrusion into any other

See Letter- page 6

Who Can Install the "Electrical Bond" for CSST Gas Piping?

I am sure that by now the question from the title above has reared its ugly little head regarding the corrugated stainless steel tubing (CSST) gas piping electrical bond per Section 310.1.1 of the International Fuel Gas Code/2009 and Section G2411.1.1 of the International Residential Code/2009. Well, resolution was gotten at the April 4, 2012 Business Meeting of the Board of Examiners of Electrical Contractors (Public Session). On page 5 of the minutes of the Board of Electrical Contractors, the Board reviewed the Spring 2011 *Construction Code Communicator* article regarding the installation of CSST gas piping. Here is their conclusion on who may install the bond.

"Motion was made and seconded, and unanimously passed, ***that although a New Jersey licensed electrical contractor is the most qualified person to perform the bonding, the Board's position that it is not required that a licensed electrical contractor install the bonding clamps and conductor provided that the connection to the grounding electrode system is outside the service enclosure***; i.e. to the electrical system grounding electrodes with the appropriate ground clamp, to the foundation rebar when the electrical system employs a Ufer-ground, to the electrical system grounding electrode conductor if it is of sufficient size, to other grounding electrodes (lightning) if integrated with the electrical system, or copper water pipe if it serves as primary grounding electrode. The Board notes that this position is applicable only for installations required to be inspected and are inspected per the State Uniform Construction Code."

NOTE: The minutes of the Board of Electrical Contractors are posted at:

http://www.njconsumeraffairs.gov/electric/minutes/elecmin_040412.pdf

Therefore, the bond required by the above sections does not require a licensed electrical contractor to install the bonding clamps and conductor provided that the connection to the grounding electrode system is outside the service enclosure. This means that the person installing the gas piping, typically a master plumber (residential and non-residential), mechanical contractor (non-residential) or home improvement contractor (residential), may install the bond per Sections 301.1.1 or G2411.1.1 without also being licensed as an electrical contractor.

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

Source: Rob Austin
Code Assistance Unit

Letter *continued from page 5*

electrical equipment such as electrical panels, switchgear, junction boxes, lighting fixtures, disconnect switches, transformers, etc. to facilitate the installation of the bonding jumper. In view of the foregoing, the Board posits that code officials within the various enforcement agencies established pursuant to the NJ Uniform Construction Code Act (UCC), may issue an electrical sub-code permit for the installation and inspection of CSST gas piping and the installation and inspection of its mandated bonding jumper, to persons that have not obtained a license or business permit from the Board; (i.e. the plumbing contractor, mechanical contractor, or other entity performing the CSST installation work).

Thus, to the extent code officials are relying upon the necessity of the contractor to be licensed by the Board in order to issue an electrical sub-code permit to perform and inspect the CSST bonding work, the Board requests that they be advised, perhaps via the "Construction Code Communicator" that such is not necessary, except as noted herein above. (NOTE: This is not to suggest that bonding is not electrical work subject to the provisions of the National Electrical Code, rather, and only with respect to CSST, it is electrical work that may be performed without first obtaining a license and business permit issued by the Board.) Accordingly, code officials may find it more effective and efficient to require the person (e.g. plumbing or mechanical contractor) seeking the UCC permit(s) to install, replace, or repair, as the case may be, the CSST and/or the equipment or appliance to which it is connected, to be the person responsible for the installation of the bonding jumper. Hence, that person also would be responsible for obtaining the permits and inspections required thereof pursuant to the UCC, rather than demanding that an electrical contractor licensed by the Board but having no contract for, or involvement with the installation of the CSST, being required to subsequently install the bonding jumper.

Thank you for your assistance in this matter.

Sincerely,

Joseph P. Schooley, Chairman
Board of Examiners of Electrical Contractors

Cost Estimates

The presidents of the construction officials' and subcode officials' associations have asked the Division to provide clarification on whether local enforcing agencies may ask for additional documentation when it is obvious that the cost estimate provided is extremely low.

The State's fee schedule provides a mechanism to deal with such a situation. N.J.A.C. 5:23-4.20(c)2i(2) allows the State to request additional documentation for cost per thousand projects in the form of a design professional's estimate, if available, estimating form, or by the contractor of record. The Department does not object to local enforcement agencies utilizing this section of the regulations for good cause. But the Department cautions that it may not be used as a policy for every project submitted to a municipality, and should not be applied when homeowners are doing their own work and there is no contractor. In this situation, I recommend that you let the homeowner know about the provisions of N.J.A.C. 5:23-2.15(a)4, which require that any labor or materials provided at no cost shall be estimated at its normal or usual costs. Most homeowners have no idea that their labor and/or free materials must be accounted for. The Uniform Construction Code (UCC) does not, and code enforcement officials should not, require a homeowner to hire a cost estimator or a design professional for this purpose. It's an unnecessary expense for the consumer and it is a bad business practice that will only lead to complaints being submitted to your administration and/or my office. In these tough times, we should not add impediments to the construction code enforcement process.

If the homeowner has a contractor and you believe that the estimate is unreasonably low, you may ask for a copy of the contract; however, this should not be standard practice. Bear in mind that Bulletin No. 94-3, Permit Documentation, states that items for which no permit is required must be excluded from the total cost of the calculations for the permit fee.

Under no circumstances is any code enforcement official to change an estimated cost and charge a permit fee that you believe is appropriate. One code official did this and was arrested for falsifying public records. Reject the application. Ask for additional documentation.

We expect you to use common sense and good judgment and only use this tool when there appears to be an obvious issue.

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

Source: Louis Mraw
Office of Regulatory Affairs

Air Admittance Valves are Allowed!!

As we all know, the use of air admittance valves (AAV) has been a hot topic. In Appendix E, "Special Design Plumbing Systems" (E.8), the National Standard Plumbing Code (NSPC)/2009 allows the installation of AAVs when the system is designed by a licensed design professional.

The following are two excerpts from the New Jersey State Uniform Construction Code Act (N.J.S.A. 52:27D-119 et seq.) pertaining to the use of new products in construction:

> N.J.S.A 52:27D-120.a, Purpose, states: "To encourage innovation and economy in construction and to provide requirements for construction and construction materials consistent with nationally recognized standards."
>
> N.J.S.A. 52:27D-120.d states: "To eliminate restrictive, obsolete, and conflicting and unnecessary construction regulations that tend to unnecessarily increase construction costs or retard the use of new materials, products or methods of construction, or provide preferential treatment to types or classes of materials or products or methods of construction."

The International Code Council (ICC) Evaluation Service (ES) report PMG-1025 was recently revised (July 27, 2012) and now specifies that AAVs that are in compliance with the listed standards are deemed to be in compliance with the NSPC/ 2009 and 2012. The standards are: ASSE 1050-2009, Performance Requirements for Stack Air Admittance Valves for Sanitary Drainage Systems, ASSE 1051-2009, Performance Requirements for Individual and Branch Type Air Admittance Valves of Sanitary Drainage Systems – Fixture and Branch Devices and NSF Standard 14-2010, Plastic Piping System Components and Related Materials.

N.J.A.C 5:23-3.7, Municipal approvals of alternate materials, equipment, or methods of construction, **requires** the enforcing agency to approve materials, equipment, or methods of construction that are approved by ICC ES reports. Therefore, AAVs that comply with the standards listed in the ICC ES report are permitted to be used in one- or two-family dwellings and Class III structures without a design professional's seal. This does not apply to any Class I and Class II commercial projects, which require a design professional's seal under the Building Design Services Act.

AAVs must be furnished and installed in compliance with NSPC Appendix E.8, the ICC ES report, and the manufacturer's installation instructions.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Do I Really Need the Name of the Contractor to Perform a Plan Review?

The Department has received an influx of phone calls from design professionals and building owners asking why the contractor's name is being required by local enforcing agencies with the initial permit application. The answer to this question is . . . . it's not.

N.J.A.C. 5:23-2.15(b) requires the specific information to be provided on any application for a construction permit when such information is available, but not later than the commencement of work. The name and license number of the contractor is included in this list.

The name and license number of the contractor is required to be provided no later than the commencement of work. SO, applying some common sense to this rule, being that the commencement of work typically coincides with the issuance of the construction permit, it would be appropriate to wait until the contractor's name and license number is provided to issue the permit. However, this should NOT hold up the plan review on the project.

If you have any questions regarding this, please feel free to contact me.

Source: John N. Terry
Division of Codes and Standards

Items to Consider When Finishing a Basement

So, you want to finish your basement in a single-family home. In the process, you are creating a room to hide those unsightly existing mechanicals. What does this mean in terms of their operation? Well, for starters, consult the Rehabilitation Subcode (N.J.A.C. 5:23-6) and see what requirements of the referenced model codes apply.

The work described above is an alteration (as defined at N.J.A.C. 5:23-6.3, Definitions), so N.J.A.C. 5:23-6.6, Alterations, is the starting point. The enclosure being created around the existing mechanicals may or may not be detrimental to the combustion air. In short, this means that this new enclosure must provide openings to have the proper combustion air.

N.J.A.C. 5:23-6.6(i) requires that the materials and methods (at N.J.A.C. 5:23-6.8, materials and methods) are to be met for compliance. Specifically, N.J.A.C. 5:23-6.8(h)13 and 20 reference the combustion air requirements from the International Residential Code (IRC)/2009, Chapter 17 for oil/electric and Chapter 24 for gas equipment/appliances.

Other non-mechanical items to consider in this sort of

See Basement- page 8

Basement *continued from page 7*

alteration, include, but are not limited to:

- N.J.A.C 5:23-6.6(e)10iii--When finished space is created in previously unfinished space, receptacle and lighting outlets shall comply with Sections 210.52 and 210.70, respectively, of the electrical subcode.
- N.J.A.C 5:23-6.6(e)14--When the work being performed creates or exposes wood framing of any wall, floor, ceiling, or roof, fireblocking shall be provided as required by section R302.11 of the one- and two-family dwelling subcode.
- N.J.A.C 5:23-6.6(e)15--When the work being performed creates or exposes the framing of any wall, floor, or ceiling assembly that is part of the building thermal envelope (encloses conditioned space), any accessible voids in insulation shall be filled using insulation meeting the R-values in Table 402.1.1 of the residential energy code. Of course, in the event that insulation meeting the R-values above cannot be installed due to space constraints, insulation that fills the cavities of the framed assembly shall be installed.

As another example, when the mechanicals are being replaced in the same location, they are categorized as a renovation if the replacements are of the same BTU output. Since the "hazard" has not changed, the existing chimney size should be acceptable, assuming the chimney itself is in good condition and the replacement equipment efficiency rating doesn't require resizing. This would be consistent with N.J.A.C. 5:23-6.5(c) where it states in part, "The replacement of fixtures, equipment or appliances shall not increase loads on these systems unless the system is upgraded in accordance with the applicable subcode of the UCC to accommodate the increased load."

NOTE: If it is discovered that work was done before obtaining a permit, apply Bulletin 06-1, Work Performed Without Permit.

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

Source: Rob Austin
Division of Codes and Standards

Underwriters Laboratories Provides Informational Warnings

Underwriters Laboratories (UL) posts important notices concerning safety, alerts about product hazards, counterfeit products, and other potential hazards. Often these notices deal with products that are subject to UCC requirements. As examples: Smoke alarms, oil fired furnaces, fire sprinkler pipe

See Warnings -continued at right

Bulkheads, Piers and the Uniform Construction Code

There have been a number of inquiries on whether a permit is required to construct a bulkhead or pier. An article on this subject was published in the *Construction Code Communicator*, Winter 2001 (Volume 13, Number 44, page 2). For the convenience of code users, that article is being reprinted and revised; its references are updated and an example is added for clarity. The article follows:

There are no technical standards adopted under the Uniform Construction Code (UCC) for bulkheads and piers; therefore, UCC permits are not required. Neither the International Building Code (IBC)/2009 nor the International Residential Code (IRC)/2009 provides criteria for the design of bulkheads or piers.

There are exceptions to this rule:

1. If the bulkhead or pier is used to support a building or structure, then a permit is required, because it becomes part of the building foundation.
2. If the bulkhead is used as a retaining wall that is part of the means of egress, a permit is required. See N.J.A.C. 5:23-2.14(g).

An example might help:

A bulkhead is 30 feet from the building. Failure of this bulkhead could eventually cause the building to fail from erosion due to the grade being equal to the height of the water. Would that bulkhead fall under exception 1 above?

No, exception number 1 is not applicable, because the bulkhead is not supporting the foundation of the building.

The responsibility for the review and inspection of bulkheads and piers remains with the municipal engineer. UCC permit applications should not be used for this purpose.

If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Warnings *continued from left*

hangers, communication cable, ceiling dampers, GFCIs, and more. If you suspect an issue with a product being used or just wish to review UL current products identified having potential safety issues, a list may be found at the following web address:

http://www.ul.com/global/eng/pages/corporate/newsroom/publicnotices/

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Local Enforcing Agency Plan Review

It has been brought to the Department's attention that several municipalities fail to comply with N.J.A.C. 5:23-2.15(f)(5)ii(l) which states that if local, county or State prior approvals have not been met, plan review shall proceed as long as the rest of the permit application is complete. The exception is one- and two-family dwelling projects that must have a zoning approval in place before plan review begins.

Therefore, if a permit application is submitted (for other than a one- and two-family dwelling) and prior approvals are missing, you must accept the plans, charge a nonrefundable plan review fee, and perform the plan review. By submitting the application for plan review before obtaining prior approvals, the applicant assumes a certain risk. If a planning board approval requires substantive changes that affect code compliance, then the plans must be revised and resubmitted. Of course, if a municipality has an hourly rate in the municipal fee schedule, the hourly rate may be charged for this review. Under no circumstances can the permit be issued until all required prior approvals have been obtained.

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

Source: Louis J. Mraw, Supervisor
Office of Regulatory Affairs

Gypsum Finish Ratings –Membrane Protection

For your information, the Gypsum Association provides guidelines for specifying fire resistance rated wall and ceiling membrane systems as GA-610-02 (Fire Resistance Provided by Gypsum Board Membrane Protection), which provides fire resistance through the installation of multiple layers of gypsum board. Similar in application to FTO-13 (Fire Separation between Dwelling Units and Attached Private Garages), GA-610-02 provides the installation methods for a finish/membrane rating of a system. The Gypsum Association offers these finish-rating systems for purposes such as:

- In certain types of new construction, it may be neither practical nor economical to use the type of structural components found in tested and listed systems.
- Upgrading existing walls or floor-ceiling systems may involve limited access to the space or the

See Gypsum Finish -continued at right

presence of construction materials that may not be used in any currently available tested or listed system.

Therefore, GA-610-02 can be used for fire-resistance in new and existing construction for one- and two-hour ceilings and one-hour wall membranes. To see the exact listing and its installation requirements, please visit:

http://www.gypsum.org/wp/wp-content/uploads/2011/11/GA-610-02b.pdf

Reminder: The finish rating above is derived from the same test method (ASTM E 119) that establishes fire-resistance ratings for systems from Sections 703.2 and 703.3 of the International Building Code/2009. In gypsum board construction, the finish rating can be determined to be the fire-resistance rating provided by the gypsum board membrane on the fire exposed side. In short, this rating applies in limited areas of construction.

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

Source: Rob Austin
Code Assistance Unit

Production Meter Requirements for Solar Projects and the Electrical Subcode

Recently, the New Jersey Board of Public Utilities (BPU) adopted new rules requiring that a revenue-grade meter (RGM) must be installed by November 30, 2012 so that all solar energy systems eligible to earn solar renewable energy credits (SRECs) can report system production. Credits are earned based upon readings obtained from a RGM measuring the system output.

Some of you might think, isn't the system's inverter capable of displaying accumulated kilowatt-hours? This is true; however, the accuracy of the inverter meter typically does not meet the American National Standards Institute (ANSI) Standard C12.1-2008 accuracy standards required by the New Jersey Clean Energy Program and therefore cannot be used for the purpose of generating SRECs.

So what does a RGM (aka, production meter) mean to the electrical subcode official? This meter is (1) in addition to the electric meter installed by the local utility to measure the home or business' electric consumption and (2) subject to the requirements of the Uniform Construction Code.

As mentioned earlier, the meter is required to meet

See Requirements- page 10

Department of Education Approval for School Projects – Clarification

In the Fall 2011 *Construction Code Communicator*, Frank LoDolce (Department of Education) and I published an article that provided guidance to code officials on determining the need for a Department of Education (DOE) review on school projects. One sentence in this article caused confusion; let's set the record straight.

If DOE review is not required on a school project, then a DOE124 is not required. In these instances, the local enforcing agency is authorized to perform the review of the construction documents without individual authorization by the Department. This is, of course, contingent on the enforcing agency having the appropriate classification for the review.

I hope this clarifies this matter, but, if you should have questions, please feel free to give me a call at (609) 984-7609.

Source: John N. Terry
Division of Codes and Standards

Fire Resistive, Fire Resistant and Circuit Integrity Cables

On September 26, 2012, Edward Smith, Director of the Division of Codes and Standards, sent a letter to all Construction Officials and Electrical Subcode Officials providing initial guidance on Underwriter Laboratories' withdrawal of its listing for specific cables. Director Smith committed to updating the guidance as additional information was made available. This article is such an update and is intended to provide clarity as to which cables cannot be used; it is based on the Underwriter

See Cables -continued at right

Cables *continued from left*

Laboratories (UL) press release.

In its most recent guidance UL has made it clear that it is no longer authorizing manufacturers to place the UL mark or ULC mark on the following categories of cables:

1. UL Classified Fire Resistive Cable (FHJR);
2. ULC Listed Fire Resistant Cable (FHJRC); and
3. UL Listed Cable with "-CI" Suffix (Circuit Integrity).

These categories of fire resistive and cable integrity cables no longer consistently achieve a ***fire-resistive rating*** when subjected to the standard Fire Endurance Test of UL2196 or ULC-S139. However, Electrical Subcode Officials and Fire Protection Subcode Officials may approve the use of these cables where other alternative methods (e.g. automatic fire suppression system, 2-hour rated assembly, embedded in 2 inches of concrete, etc.) are used to obtain the required fire-resistive rating.

In addition, UL is not the only testing laboratory that provides ratings for fire-resistive cable. If cable marked by another testing laboratory meets the two-hour fire-resistive rating, it may be approved/used.

Finally, the Department has learned that some code officials have denied the use of UL1424 listed cable types FPLP, FPLR and FPL and UL1425 listed cable types NPLF, NPLFR and NPLFP. The listings for these cable types have not been withdrawn and these cables (including cables with a CI designation) may continue to be approved for use where no fire resistive rating is required.

If you have any questions, please feel free to call us at (609) 984-7609.

Source: Michael E. Whalen and Rob Austin
Code Assistance Unit

Requirements *continued from page 9*

the accuracy standard of the American National Standards Institute (ANSI) C12.1-2008 and must be installed per the manufacturer's installation instructions. Even though a Uniform Construction Code (UCC) permit is required for the installation of the meter, the Department of Community Affairs has determined that the listing/labeling requirements per Sections 90.7 and 110.3(B) of the electrical subcode are not applicable. Therefore, when a RGM is installed in a new or existing solar energy system, the electrical subcode official needs to verify (1) that the RGM meter meets the ANSI standard and (2) that it is compatible with the listed meter socket cabinet.

The BPU has provided two lists (see links below) intended to assist you in identifying a RGM that meets these accuracy requirements. These lists are not all-inclusive. The first link is from the New York State Department of Public Service and the second link is from the California Energy Commission:

http://www.njcleanenergy.com/files/file/Renewable_Programs/REIP/Approved_%20Meter_%20List.pdf

http://www.gosolarcalifornia.org/equipment/system_perf.php

If you have any questions regarding this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: Ken Verbos
Office of Regulatory Affairs

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
Trenton, NJ 08625-0802

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Volume 24, Number 4 Winter 2012

The Winter Communicator: A Reminder

The final issue of the *Construction Code Communicator* each year will consist of a collection and re-printing of all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year.

Once the *Construction Code Communicator* has been posted, the individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from the Division's website. However, it will still be possible to see a copy of any of these documents as it was originally posted on the Division's website by accessing the Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

In short, there are no new articles in this issue.

Also, the Index for all four issues of the *Construction Code Communicator* 2012 is included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year. We hope that you continue to appreciate this aspect of the *Construction Code Communicator.*

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at etempleton@dca.state.nj.us.

Source: Emily W. Templeton
Division of Codes and Standards

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State Permit Surcharge Fee and Permits for Storm Damage Repair

In a letter dated November 2, 2012, Director Smith wrote:

Dear Construction Official:

I am writing to remind everyone that municipalities may waive fees for permits for work made necessary by hurricane damage. Pursuant to N.J.A.C. 5:23-4.19(b)5., if the municipality is waiving its fees, then the State permit surcharge fee also is waived.

Should you have any questions, please feel free to contact the Office of Regulatory Affairs at (609) 984-7672.

Sincerely,

Edward M. Smith
Director
Division of Codes and Standards

Are You Ready to Ride?

In a May 21, 2012 Alert, the Bureau of Code Services provided the following Safety tips:

The DOs of Ride Safety:

- Do observe each ride before participating – make sure you are comfortable with it
- Do look for the posted State of New Jersey certificate of operation – this document ensures rides are inspected and have passed the stringent safety regulations required by the state
- Do read and obey all written and verbal warnings and instructions
- Do observe age, height and weight, and other physical restrictions for each ride

Before the Ride Begins:

- Do fasten safety equipment such as a seatbelt, shoulder harness, lap bar or chain
- Do secure all clothing and personal possessions
- Do follow instructions of ride operators

While the Ride is in Motion:

- Do keep hands, arms, legs and feet inside the ride at all times

Before Getting off of the Ride:

- Do keep all safety equipment fastened until the operator instructs you to exit
- Do stay in the ride until it comes to a complete stop and wait for the operator to tell you to get out
- Do enter or dismount a ride only in the area instructed by the ride operator

The DON'Ts of Ride Safety

- Don't throw any object from an amusement ride or attraction
- Don't endanger or injure yourself or others around you on the ride by behaving in a reckless manner
- Don't enter any ride that you are uncomfortable with or that your child fears
- Don't horseplay around, on or near a ride at any time
- Don't enter a ride without the supervision of the ride operator
- Don't bring food or drinks on any ride, and don't smoke

Child Safety

- Parents should take several additional safety precautions for their children, especially small children, when participating in amusement rides or attractions

Parents should:

- Know your child's capabilities and limitations with regard to whether the ride is appropriate for them
- Watch the ride in operation before entering to make sure your child can ride it safely
- Remind your child of Ride Safety 'Dos' and 'Don's'
- Remind your child to stay seated, hold on to safety bars and obey the ride operator's instructions
- Designate an easily recognizable place to meet your child after the ride is over
- Supervise your child at all times

Safety is the most important component of every family outing. New Jersey's amusement parks, fairs, carnivals and attractions are some of the best in the country and are designed to entertain every member of your family. So the next time you visit your favorite amusement park, fair or carnival, just remember to be "Ready to Ride."

Local Property Maintenance and Resale Inspection Ordinances

In a letter dated June 2012, Director Smith wrote:

Dear Construction Official:

The Division of Codes and Standards is conducting a review of local property maintenance ordinances and resale inspection ordinances whether applicable to single-family, multi-family or non-residential structures. We also are interested in change of tenancy ordinances which contain provisions requiring building upgrades or some form of compliance with one of the adopted subcodes of the UCC or a fire safety code.

Please submit the ordinances to the Office of Regulatory Affairs at PO Box 818 Trenton NJ 08625-0818. Ordinances may also be sent via e-mail to susan.lydon@dca.state.nj.us. If the municipality has no such ordinances, please respond and let us know this.

Should you have any question you may contact Susan Lydon of the Office of Regulatory affairs at 609-984-7672. Thank you for your anticipated cooperation.

Sincerely,

Edward M. Smith
Director
Division of Codes and Standards

Permit Extension Act, Updated Guidance

In a letter dated December 10, 2012, Director Smith wrote:

Dear Construction Official:

As you may know, P. L. 2012, c.48, the Greenwald Jobs Creation Bill (A-1338) extends the expiration date of certain permits under the Permit Extension Act of 2008, P.L. 2008, c.78. Under this new law, the dates have changed, the definition of "environmentally sensitive areas" is modified and amendments have been made to the list of permits and approvals included and excluded under the Permit Extension Act. The other terms and conditions of the Permit Extension Act remain as they were. Below and attached please find updated guidance on the application of the Permit Extension Act which has been revised to reflect the new expiration dates.

See Guidance -page 6

The Flood Hit! Now What?

In an article originally published in Summer 2007 but posted at the Division's website in Summer 2011 again as a reminder, the Division advised:

When flooding causes damage throughout your community, as a local Uniform Construction Code (UCC) enforcement agency, you may be called on to assist in the process of returning building occupants safely back into their homes or businesses. UCC enforcement agencies should provide property owners with the necessary support to evaluate conditions in identified damaged buildings. Depending on the extent of damage to the building, examples of tasks that your agency might be asked to complete are:

- Assessment by building inspectors of damage to foundation walls and inspection for signs of structural damage
- Evaluation by electrical inspectors of the damage to the property's electrical system, including the electrical service and whether reconnection can be made by the utility provider
- Evaluation by plumbing inspectors of the condition of the property's piping and fuel service, including recommending when it is safe to turn service back on
- Evaluation by fire-protection inspectors of the status of fire-protection systems within buildings

Completing these tasks may be overwhelming to your agency, depending on the extent of flood damage in your community. The Department of Community Affairs, Division of Codes and Standards is able to provide assistance to local enforcement agencies in helping a community complete the above tasks during a disaster. A brochure, "Flooding Hazards: What You Need to Know," is available on the Department's web site at:

http://www.nj.gov/dca/divisions/codes/alerts/pdfs/flood.pdf

Please feel free to reach out to me with questions or comments. I can be reached at (609) 292-7898 or cgiangeruso@dca.state.nj.us.

Source: Carmine Giangeruso
Division of Codes and Standards
Construction Official/Emergency Coordinator

UL-listed Fire Resistive Cable

In a letter dated September 26, 2012, Director Smith wrote:

Dear Construction Officials and Electrical Subcode Officials:

As you may be aware, Underwriters Laboratories (UL) has pulled its listing of all fire resistive cable, including listings for electrical circuit protective systems using fire resistive cable. I am writing to offer guidance on how to handle the withdrawal of these listings based on the information available.

Currently, UL still is investigating how and whether these products fail to perform and under what circumstances. We will continue to monitor this investigation closely and we will provide updated information and instructions as warranted. For now, code officials are advised to follow the below guidance:

Existing installations in any building or project for which a certificate of occupancy has been issued regardless of its age should be left as is. There is no recall or retrofit at this point in time.

For projects for which permits have been issued, but for which no certificate of occupancy has been issued, and for projects for which permit applications have been received, but for which no permit has been issued, the project should be allowed to proceed with the use of the product since the product was listed at the time of permit application. However, the applicant and the owner, if other than the applicant, should be given a copy of the enclosed notice informing them of the current situation and allowing them to make decisions based upon what is known at this time.

Projects for which applications are filed after today's date cannot use a product for which there is no listing. In these cases, an alternate method of compliance must be used to achieve required fire rating.

Should you have any questions or need any further information, please feel free to contact our Code Assistance Unit at (609) 292-7899 or codeassist@dca.state.nj.us.

Sincerely,

Edward M. Smith
Director
Division of Codes and Standards

Guidance *continued from page 5*

As code officials, you will continue to deal with this law on two levels: its impact on permits issued under the UCC and its impact on prior approvals. The Act stops the clock on the running of approvals during the "extension period," which is now defined as January 1, 2007 through December 31, 2014. This means that any UCC permit that was valid as of January 1, 2007 will still be valid on December 31, 2014. On December 31, 2014, when the clock starts again, the permit is valid for an additional six months or for the time that would have remained on January 1, 2007, whichever is shorter. Any permit issued during the extension period (between January 1, 2007 and December 31, 2014) will be valid until June 30, 2015 (six months beyond the end of the extension period,) or until the date when it would have expired if the Permit Extension Act had not been passed, whichever is longer. (Some examples of how to apply the Permit Extension Act to UCC permits are enclosed.)

There continues to be an exclusion in the Act for permits issued for projects in environmentally sensitive areas. To determine whether your municipality or any portion of your municipality is an "environmentally sensitive area" as that term is defined in the Act, please refer to the enclosed attachment.

In order to determine whether a prior approval qualifies for extension under this Act, construction officials should check with the agencies and officials responsible for issuing those prior approvals to make sure that those prior approvals remain in effect. A list of the approvals included and of those excluded by the Act is enclosed.

In those cases where plan review was done by DCA, any plan release that was valid on or after January 1, 2007 may be used to support issuance of a permit through June 30, 2015. Once again, before issuing a permit, it is necessary to check with the agencies or officials involved to ensure that any required prior approvals remain valid.

Information, including the full text of the Act, is posted on the Division's website at for your use. (Direct link: http://www.njleg.state.nj.us/2012/Bills/A1500/1338_R4.PDF).

Should you have any questions about the application of the Permit Extension Act, please feel free to call the Code Assistance Unit at (609) 984-7607.

Sincerely,
Edward M. Smith
Director
Division of Codes and Standards

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Attachments:

- Definition of "Environmentally Sensitive Area"
- List of permits included and excluded
- Examples of Application to Permits Issued under the UCC

Permit Extension Act of 2008
Definition of "Environmentally Sensitive Area"

"Environmentally sensitive areas" include areas designated in the State Development and Redevelopment Plan as Planning Area 4B (Rural/Environmentally Sensitive), Planning Area 5 (Environmentally Sensitive), or a critical environmental site, but shall not include any “extension area.”

An “extension area” is an area designated pursuant to P.L.1985, c.398 (C.52:18A-196 et seq.) as Planning Area 1 (Metropolitan), Planning Area 2 (Suburban), Planning Area 3 (Fringe Planning Area), Planning Area 4A (Rural Planning Area), a designated center, or a designated growth center in an endorsed plan until June 30, 2013, or until the State Planning Commission revises
and readopts New Jersey’s State Strategic Plan and adopts regulations to refine this definition as it pertains to Statewide planning areas, whichever is later; a smart growth area and planning area designated in a master plan adopted by the New Jersey Meadowlands Commission pursuant to subsection (i) of section 6 of P.L.1968, c.404 (C.13:17-6); regional growth areas, villages, and towns, designated in the comprehensive management plan prepared and adopted by the Pinelands Commission pursuant to section 7 of the "Pinelands Protection Act," P.L.1979, c.111 (C.13:18A-8); the planning area of the Highlands Region as defined in section 3 of the "Highlands Water Protection and Planning Act," P.L.2004, c.120 (C.13:20-3), and any Highlands center designated by the Highlands Water Protection and Planning Council, established pursuant
to section 4 of P.L.2004, c.120 (C.13:20-4); an urban enterprise zone designated pursuant to P.L.1983, c.303 (C.52:27H-60 et seq.) or P.L.2001, c.347 (C.52:27H-66.2 et al.); an area determined to be in need of redevelopment pursuant to sections 5 and 6 of P.L.1992, c.79 (C.40A:12A-5 and 40A:12A-6) and as approved by the Department of Community Affairs; or
similar areas designated by the Department of Environmental Protection. "Extension area" shall not include an area designated pursuant to the State Development and Redevelopment Plan adopted, as of the effective date of P.L.2008, c.78, pursuant to P.L.1985, c.398 as Planning Area 4B (Rural/Environmentally Sensitive) or Planning Area 5 (Environmentally Sensitive), except for any area within

See Guidance –continued at right

Guidance *continued from left*

Planning Area 4B or Planning Area 5 that is a designated center, or a designated growth center in an endorsed plan.

Permit Extension Act of 2008
List of Permits and Approvals Included and Excluded

The law specifically **includes** UCC permits and includes the following: any approval of a soil erosion and sediment control plan granted by a local soil conservation district, any waterfront development permit, any permit issued pursuant to "The Wetlands Act of 1970," any permit issued pursuant to the "Freshwater Wetlands Protection Act," any approval of an application for development granted by the Delaware and Raritan Canal Commission, any permit issued by the New Jersey Meadowlands Commission, any approval of an application for development granted by the Pinelands Commission and determination of municipal and county plan conformance pursuant to the "Pinelands Protection Act," any permit issued or center designations made pursuant to the "Coastal Area Facility Review Act," any septic approval, any highway access permit or right-of-way permit granted by the Department of Transportation, any approval granted by a sewerage authority*, any approval granted by a municipal utilities authority, an agreement with a municipality, county, municipal authority, sewerage authority, or other governmental authority for the use or reservation of sewerage capacity, any approval issued by a county planning board, any preliminary and final approval granted in connection with an application for development pursuant to the "Municipal Land Use Law," any plan endorsement and center designations approved pursuant to the "State Planning Act," any permit or certification issued pursuant to the "Water Supply Management Act," any permit granted authorizing the drilling of a well, exemption from a sewerage connection ban granted*, wastewater management plan approved, and pollution discharge elimination system permit pursuant to the "Water Pollution Control Act," any certification granted pursuant to "The Realty Improvement Sewerage and Facilities Act," any certification or approval of water and sewerage facilities for 50 or more units granted pursuant to P.L.1971, c.386, any certification issued and water quality management plan approved pursuant to the "Water Quality Planning Act," any approval granted pursuant to the "Safe Drinking Water Act."

*Note: The continuation of an approval for connection to a sanitary sewer is contingent on the availability of sufficient capacity.

The law specifically **excludes** the following: any permit or approval issued by the government of the United

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Guidance *continued from page 7*

States or any agency or instrumentality thereof, or any permit or approval for which the expiration is determined under Federal law; any permit or approval issued pursuant to the "Pinelands Protection Act," if the extension would result in a violation of federal law, or any State rule or regulation requiring Federal approval; any permit or approval issued within an environmentally sensitive area; any permit or approval within an environmentally sensitive area issued pursuant to the "Highlands Water Protection and Planning Act," or any permit or approval issued within the preservation area of the Highlands Region; any permit or approval issued by the Department of Transportation other than a right-of-way permit or a highway access permit; any permit or approval issued pursuant to the "Flood Hazard Area Control Act," except (a) where work has commenced in any phase or section of the development, on any site improvement or on any buildings or structures or (b) where the permit or approval authorizes work on real property owned by the government or the federal government; any coastal center designated pursuant to the "Coastal Area Facility Review Act," that as of March 15, 2007 (a) had not submitted an application for plan endorsement to the State Planning Commission, and (b) was not in compliance with the provisions of the Coastal Zone Management Rules; any permit or approval within the Highlands planning area located in a municipality subject to the "Highlands Water Protection and Planning Act," that has adopted, as of May 1, 2012, in accordance with the Highlands Water Protection and Planning Council conformance approval, a Highlands master plan element, a Highlands land use ordinance, or an environmental resource inventory, except that the provisions of this paragraph shall not apply to any permit or approval within a Highlands center designated by the Highlands Water Protection and Planning Council, notwithstanding the adoption by the municipality of a Highlands master plan element, a Highlands land use ordinance, or an environmental resource inventory.

Permit Extension Act of 2008, as amended and extended by P.L. 2012, c.48
Examples of Applying the Act to UCC Permits

The Permit Extension Act extends all permits that were open and valid as of January 1, 2007. Under the UCC rules, a construction permit lapses if (1) no work is done for a year or (2) work, having been started, is discontinued for six months. (See NJ.A.C.5:23-2.16(b)) The following are some examples of how certain scenarios would be affected by the Permit Extension Act:

Examples:

See Guidance –continued at right

Guidance *continued from left*

1. A construction permit was obtained prior to January 1, 2006 and no work was done. The permit has lapsed and is not revived by the Permit Extension Act because it was not a valid, open permit on January 1, 2007.
2. A construction permit was obtained on April 1, 2006 and no work was done. The permit was deemed to have lapsed as of April 1, 2007. However, the permit is now deemed to have been revived by the passage of the Permit Extension Act. Since it would have been valid for three more months as of January 1, 2007, it will continue to be valid for three more months as of December 31, 2014, and its new expiration date, if it is not acted upon, will be March 31, 2015.
3. A construction permit was obtained on October 1, 2006 and no work was done. The permit would have been valid for nine more months as of January 1, 2007 and is now deemed to have been revived, and to continue to be valid as of December 31, 2014. However, since a permit that is only valid because it was extended by the Permit Extension Act can only remain valid for six months following the end of the extension period, the permit would only be valid for six more months, and would expire on June 30, 2015.
4. A construction permit is obtained between January 1, 2007 and June 30, 2014. Though the time would not begin to run until December 31, 2014, the permit would expire on June 30, 2015, since the Permit Extension Act does not allow any extensions beyond June 30, 2015 unless the permit would have continued in existence beyond that date had the Permit Extension Act not been adopted.
5. A construction permit is obtained after June 30, 2014. Since the permit is valid for a year, it is unaffected by the June 30, 2015 cut-off date and expires one year from the date of issuance, just as it would have if the Permit Extension Act had not been adopted.



P.L. 2012, C. 48 Permit Extension Act

CHAPTER 48

AN ACT concerning the extension of certain permits and approvals affecting the physical development of property located within the State of New Jersey and amending P.L.2008, c.78.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Section 2 of P.L.2008, c.78 (C.40:55D-136.2) is amended to read as follows:

C.40:55D-136.2 Findings, declarations relative to extension of certain permits and approvals.

2. The Legislature finds and declares that:

a. The most recent national recession has caused one of the longest economic downturns since the Great Depression of the 1930s and has drastically affected various segments of the New Jersey economy, but none as severely as the State's banking, real estate and construction sectors.

b. The real estate finance sector of the economy is in severe decline due to the sub-prime mortgage problem and the resultant widening mortgage finance crisis. The extreme tightening of lending standards for home buyers and other real estate borrowers has reduced access to the capital markets.

c. As a result of the crisis in the real estate finance sector of the economy, real estate developers and redevelopers, including homebuilders, and commercial, office, and industrial developers, have experienced an industry-wide decline, including reduced demand, cancelled orders, declining sales and rentals, price reductions, increased inventory, fewer buyers who qualify to purchase homes, layoffs, and scaled back growth plans.

d. The process of obtaining planning board and zoning board of adjustment approvals for subdivisions, site plans, and variances can be difficult, time consuming and expensive, both for private applicants and government bodies.

e. The process of obtaining the myriad other government approvals, required pursuant to legislative enactments and their implementing rules and regulations, such as wetlands permits, treatment works approvals, on-site wastewater disposal permits, stream encroachment permits, flood hazard area permits, highway access permits, and numerous waivers and variances, also can be difficult and expensive; further, changes in the law can render these approvals, if expired or lapsed, impossible to renew or re-obtain.

f. County and municipal governments obtain determinations of master plan consistency, conformance, or endorsement with State or regional plans, from State and regional government entities which may expire or lapse without implementation due to the state of the economy.

g. The current national recession has severely weakened the building industry, and many landowners and developers are seeing their life's work destroyed by the lack of credit and dearth of buyers and tenants, due to the crisis in real estate financing and the building industry, uncertainty over the state of the economy, and increasing levels of unemployment in the construction industry.

h. The construction industry and related trades are sustaining severe economic losses, and the lapsing of government development approvals would, if not addressed, exacerbate those losses.

i. Financial institutions that lent money to property owners, builders, and developers are experiencing erosion of collateral and depreciation of their assets as permits and approvals expire, and the extension of these permits and approvals is necessary to maintain the value of the collateral and the solvency of financial institutions throughout the State.

j. Due to the current inability of builders and their purchasers to obtain financing, under existing economic conditions, more and more once-approved permits are expiring or lapsing and, as these approvals lapse, lenders must re-appraise and thereafter substantially lower real estate valuations established in conjunction with approved projects, thereby requiring the reclassification of numerous loans which, in turn, affects the stability of the banking system and reduces the funds available for future lending, thus creating more severe restrictions on credit and leading to a vicious cycle of default.

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Permit Extension Act *continued from page 9*

k. As a result of the continued downturn of the economy, and the continued expiration of approvals which were granted by State and local governments, it is possible that thousands of government actions will be undone by the passage of time.

l. Obtaining an extension of an approval pursuant to existing statutory or regulatory provisions can be both costly in terms of time and financial resources, and insufficient to cope with the extent of the present financial situation; moreover, the costs imposed fall on the public as well as the private sector.

m. It is the purpose of this act to prevent the wholesale abandonment of approved projects and activities due to the present unfavorable economic conditions, by tolling the term of these approvals for a period of time, thereby preventing a waste of public and private resources.

2. Section 3 of P.L.2008, c.78 (C.40:55D-136.3) is amended to read as follows:

C.40:55D-136.3 Definitions relative to extension of certain permits and approvals.

3. As used in P.L.2008, c.78 (C.40:55D-136.1 et seq.):

"Approval" means, except as otherwise provided in section 4 of P.L.2008, c.78 (C.40:55D-136.4), any approval of a soil erosion and sediment control plan granted by a local soil conservation district under the authority conferred by R.S.4:24-22 et seq., waterfront development permit issued pursuant to R.S.12:5-1 et seq., permit issued pursuant to "The Wetlands Act of 1970," P.L.1970, c.272 (C.13:9A-1 et seq.), permit issued pursuant to the "Freshwater Wetlands Protection Act," P.L.1987, c.156 (C.13:9B-1 et al.), approval of an application for development granted by the Delaware and Raritan Canal Commission pursuant to the "Delaware and Raritan Canal State Park Law of 1974," P.L.1974, c.118 (C.13:13A-1 et seq.), permit issued by the New Jersey Meadowlands Commission pursuant to the "Hackensack Meadowlands Reclamation and Development Act," P.L.1968, c.404 (C.13:17-1 et al.), approval of an application for development granted by the Pinelands Commission and determination of municipal and county plan conformance pursuant to the "Pinelands Protection Act," P.L.1979, c.111 (C.13:18A-1 et seq.), permit issued and center designations pursuant to the "Coastal Area Facility Review Act," P.L.1973, c.185 (C.13:19-1 et seq.), septic approval granted pursuant to Title 26 of the Revised Statutes, permit granted pursuant to R.S.27:7-1 et seq. or any supplement thereto, right-of-way permit issued by the Department of Transportation pursuant to paragraph (3) of subsection (h) of section 5 of P.L.1966, c.301 (C.27:1A-5), approval granted by a sewerage authority pursuant to the "sewerage authorities law," P.L.1946, c.138 (C.40:14A-1 et seq.), approval granted by a municipal authority pursuant to the "municipal and county utilities authorities law," P.L.1957, c.183 (C.40:14B-1 et seq.), an agreement with a municipality, county, municipal authority, sewerage authority, or other governmental authority for the use or reservation of sewerage capacity, approval issued by a county planning board pursuant to chapter 27 of Title 40 of the Revised Statutes, preliminary and final approval granted in connection with an application for development pursuant to the "Municipal Land Use Law," P.L.1975, c.291 (C.40:55D-1 et seq.), permit granted pursuant to the "State Uniform Construction Code Act," P.L.1975, c.217 (C.52:27D-119 et seq.), plan endorsement and center designations pursuant to the "State Planning Act," P.L.1985, c.398 (C.52:18A-196 et al.), permit or certification issued pursuant to the "Water Supply Management Act," P.L.1981, c.262 (C.58:1A-1 et al.), permit granted authorizing the drilling of a well pursuant to P.L.1947, c.377 (C.58:4A-5 et seq.), certification or permit granted, exemption from a sewerage connection ban granted, wastewater management plan approved, and pollution discharge elimination system permit pursuant to the "Water Pollution Control Act," P.L.1977, c.74 (C.58:10A-1 et seq.), certification granted pursuant to "The Realty Improvement Sewerage and Facilities Act (1954)," P.L.1954, c.199 (C.58:11-23 et seq.), certification or approval granted pursuant to P.L.1971, c.386 (C.58:11-25.1 et al.), certification issued and water quality management plan approved pursuant to the "Water Quality Planning Act," P.L.1977, c.75 (C.58:11A-1 et seq.), approval granted pursuant to the "Safe Drinking Water Act," P.L.1977, c.224 (C.58:12A-1 et al.), permit issued pursuant to the "Flood Hazard Area Control Act," P.L.1962, c.19 (C.58:16A-50 et seq.), any municipal, county, regional, or State approval or permit granted under the general authority conferred by State law or rule or regulation, or any other government authorization of any development

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Permit Extension Act *continued from page 10*

application or any permit related thereto whether that authorization is in the form of a permit, approval, license, certification, permission, determination, interpretation, exemption, variance, exception, waiver, letter of interpretation, no further action letter, agreement or any other executive or administrative decision which allows a development or governmental project to proceed.

"Development" means the division of a parcel of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or other structure or facility, or of any grading, soil removal or relocation, excavation or landfill or any use or change in the use of any building or other structure or land or extension of the use of land.

"Environmentally sensitive area" means an area designated pursuant to the State Development and Redevelopment Plan adopted, as of the effective date of P.L.2008, c.78, pursuant to P.L.1985, c.398 (C.52:18A-196 et al.) as Planning Area 4B (Rural/Environmentally Sensitive), Planning Area 5 (Environmentally Sensitive), or a critical environmental site, but shall not include any extension area as defined in this section.

“Extension area” means an area designated pursuant to P.L.1985, c.398 (C.52:18A-196 et seq.) as Planning Area 1 (Metropolitan), Planning Area 2 (Suburban), Planning Area 3 (Fringe Planning Area), Planning Area 4A (Rural Planning Area), a designated center, or a designated growth center in an endorsed plan until June 30, 2013, or until the State Planning Commission revises and readopts New Jersey’s State Strategic Plan and adopts regulations to refine this definition as it pertains to Statewide planning areas, whichever is later; a smart growth area and planning area designated in a master plan adopted by the New Jersey Meadowlands Commission pursuant to subsection (i) of section 6 of P.L.1968, c.404 (C.13:17-6); regional growth areas, villages, and towns, designated in the comprehensive management plan prepared and adopted by the Pinelands Commission pursuant to section 7 of the "Pinelands Protection Act," P.L.1979, c.111 (C.13:18A-8); the planning area of the Highlands Region as defined in section 3 of the "Highlands Water Protection and Planning Act," P.L.2004, c.120 (C.13:20-3), and any Highlands center designated by the Highlands Water Protection and Planning Council, established pursuant to section 4 of P.L.2004, c.120 (C.13:20-4); an urban enterprise zone designated pursuant to P.L.1983, c.303 (C.52:27H-60 et seq.) or P.L.2001, c.347 (C.52:27H-66.2 et al.); an area determined to be in need of redevelopment pursuant to sections 5 and 6 of P.L.1992, c.79 (C.40A:12A-5 and 40A:12A-6) and as approved by the Department of Community Affairs; or similar areas designated by the Department of Environmental Protection. "Extension area" shall not include an area designated pursuant to the State Development and Redevelopment Plan adopted, as of the effective date of P.L.2008, c.78, pursuant to P.L.1985, c.398 as Planning Area 4B (Rural/Environmentally Sensitive) or Planning Area 5 (Environmentally Sensitive), except for any area within Planning Area 4B or Planning Area 5 that is a designated center, or a designated growth center in an endorsed plan.

"Extension period" means the period beginning January 1, 2007 and continuing through December 31, 2014.

"Government" means any municipal, county, regional, or State government, or any agency, department, commission or other instrumentality thereof.

3. Section 4 of P.L.2008, c.78 (C.40:55D-136.4) is amended to read as follows:

C.40:55D-136.4 Existing government approval; extension period.

4. a. For any government approval in existence during the extension period, the running of the period of approval is automatically suspended for the extension period, except as otherwise provided hereunder; however, the tolling provided for herein shall not extend the government approval more than six months beyond the conclusion of the extension period. Nothing in P.L.2008, c.78 (C.40:55D-136.1 et seq.) shall shorten the duration that any approval would have had in the absence of P.L.2008, c.78, nor shall P.L.2008, c.78 prohibit the granting of such additional extensions as are provided by law when the tolling granted by P.L.2008, c.78 shall expire. Notwithstanding any previously enacted provision of P.L.2008, c.78, as amended and supplemented, the running of the period of approval of all government approvals which would have been

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extended pursuant to the definition of “extension area,” added by P.L.2012, c.48, shall be calculated, using that definition, retroactive to the enactment of P.L.2008, c.78.

b. Nothing in P.L.2008, c.78 (C.40:55D-136.1 et seq.) shall be deemed to extend or purport to extend:

(1) any permit or approval issued by the government of the United States or any agency or instrumentality thereof, or any permit or approval by whatever authority issued of which the duration of effect or the date or terms of its expiration are specified or determined by or pursuant to law or regulation of the federal government or any of its agencies or instrumentalities;

(2) any permit or approval issued pursuant to the "Pinelands Protection Act," P.L.1979, c.111 (C.13:18A-1 et seq.) if the extension would result in a violation of federal law, or any State rule or regulation requiring approval by the Secretary of the Interior pursuant to Pub.L.95-625 (16 U.S.C. s.471i);

(3) any permit or approval issued within an environmentally sensitive area;

(4) any permit or approval within an environmentally sensitive area issued pursuant to the "Highlands Water Protection and Planning Act," P.L.2004, c.120 (C.13:20-1 et al.), or any permit or approval issued within the preservation area of the Highlands Region as defined in section 3 of P.L.2004, c.120 (C.13:20-3);

(5) any permit or approval issued by the Department of Transportation pursuant to Title 27 of the Revised Statutes or under the general authority conferred by State law, other than a right-of-way permit issued pursuant to paragraph (3) of subsection (h) of section 5 of P.L.1966, c.301 (C.27:1A-5) or a permit granted pursuant to R.S.27:7-1 et seq. or any supplement thereto;

(6) any permit or approval issued pursuant to the "Flood Hazard Area Control Act," P.L.1962, c.19 (C.58:16A-50 et seq.), except (a) where work has commenced, in any phase or section of the development, on any site improvement as defined in paragraph (1) of subsection a. of section 41 of the "Municipal Land Use Law," P.L.1975, c.291 (C.40:55D-53) or on any buildings or structures or (b) where the permit or approval authorizes work on real property owned by the government or the federal government;

(7) any coastal center designated pursuant to the "Coastal Area Facility Review Act," P.L.1973, c.185 (C.13:19-1 et seq.), that as of March 15, 2007 (a) had not submitted an application for plan endorsement to the State Planning Commission, and (b) was not in compliance with the provisions of the Coastal Zone Management Rules at N.J.A.C.7:7E-5B.6; or

(8) any permit or approval within the Highlands planning area located in a municipality subject to the "Highlands Water Protection and Planning Act," P.L.2004, c.120, that has adopted, as of May 1, 2012, in accordance with the Highlands Water Protection and Planning Council conformance approval, a Highlands master plan element, a Highlands land use ordinance, or an environmental resource inventory, except that the provisions of this paragraph shall not apply to any permit or approval within a Highlands center designated by the Highlands Water Protection and Planning Council, notwithstanding the adoption by the municipality of a Highlands master plan element, a Highlands land use ordinance, or an environmental resource inventory.

c. P.L.2008, c.78 shall not affect any administrative consent order issued by the Department of Environmental Protection in effect or issued during the extension period, nor shall it be construed to extend any approval in connection with a resource recovery facility as defined in section 2 of P.L.1985, c.38 (C.13:1E-137).

d. Nothing in P.L.2008, c.78 shall affect the ability of the Commissioner of Environmental Protection to revoke or modify a specific permit or approval, or extension thereof pursuant to P.L.2008, c.78, when that specific permit or approval contains language authorizing the modification or revocation of the permit or approval by the department.

e. In the event that any approval tolled pursuant to P.L.2008, c.78 is based upon the connection to a sanitary sewer system, the approval's extension shall be contingent upon the availability of sufficient capacity, on the part of the treatment facility, to accommodate the development whose approval has been extended. If sufficient capacity is not available, those permit holders whose approvals have been extended shall have priority with regard to the further allocation of gallonage over those approval holders who have not received approval of a

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hookup prior to the date of enactment of P.L.2008, c.78. Priority regarding the distribution of further gallonage to any permit holder who has received the extension of an approval pursuant to P.L.2008, c.78 shall be allocated in order of the granting of the original approval of the connection.

f. P.L.2008, c.78 shall not toll any approval issued under the "Municipal Land Use Law," P.L.1975, c.291 (C.40:55D-1 et seq.) in connection with an application for development involving a residential use where, subsequent to the expiration of the permit but prior to January 1, 2007, an amendment has been adopted to the master plan and the zoning ordinance to rezone the property to industrial or commercial use when the permit was issued for residential use.

g. Nothing in P.L.2008, c.78 shall be construed or implemented in such a way as to modify any requirement of law that is necessary to retain federal delegation to, or assumption by, the State of the authority to implement a federal law or program.

h. Nothing in P.L.2008, c.78 shall be deemed to extend the obligation of any wastewater management planning agency to submit a wastewater management plan or plan update, or the obligation of a municipality to submit a wastewater management plan or plan update, pursuant to the "Water Quality Planning Act," P.L.1977, c.75 (C.58:11A-1 et seq.) and the Water Quality Management Planning rules, N.J.A.C.7:15-1.1 et seq., adopted by the Department of Environmental Protection, effective July 7, 2008.

i. All underlying municipal, county, and State permits or approvals within the extension area as defined in section 3 of P.L.2008, c.78 (C.40:55D-136.3), as amended, are extended in the Pinelands Area as designated pursuant to the “Pinelands Protection Act,” P.L.1979, c.111 (C.13:18A-1 et seq.).

4. Section 5 of P.L.2008, c.78 (C.40:55D-136.5) is amended to read as follows:

C.40:55D-136.5 Notice.

5. State agencies shall, within 30 days after the effective date of P.L.2008, c.78 (C.40:55D-136.1 et seq.), and within 30 days after the effective date of any subsequent amendment and supplement thereto, place a notice in the New Jersey Register tolling all approvals in conformance with this act.

5. Section 6 of P.L.2008, c.78 (C.40:55D-136.6) is amended to read as follows:

C.40:55D-136.6 Liberal construction.

6. The provisions of this act shall be liberally construed to effectuate the purposes of this act, and any subsequent amendment and supplement thereto.

6. This act shall take effect immediately.

Approved September 19, 2012.

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
Trenton, NJ 08625-0802

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Energy Subcode Compliance – Continuation

The Fall 2010 *Construction Code Communicator* (Volume 22, Number 3) contained a lot of information about energy subcode compliance with regard to the 2009 International Energy Conservation Code (IECC/2009) and the American Society of Heating, Refrigeration, Air-Conditioning Engineers (ASHRAE) Standard 90.1-2007. That article referenced a soon-to-be published checklist that was being developed for code enforcement officials and independent (from the installer of the insulation) inspectors to use when verifying building thermal envelope tightness. Well, the checklist has been published as part of Bulletin 11-1, on pages 7-8; it applies to low-rise residential buildings. (NOTE: There is a forthcoming rule proposal to make this checklist a standard form). The following is a summary of what is required and the role the checklist plays in providing for thorough inspections and accurate records.

In accordance with N.J.A.C. 5:23-2.18(b)1 and (b)2, in all buildings, work must stop for the insulation inspection, which will take place after the rough inspections for compliance with the other subcodes and

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Electric Vehicle Charging Stations – Installation and Permit Requirements

The growing need to offer drivers relief from the increasingly high cost of gasoline has produced various models of vehicles powered by alternate sources, i.e. natural gas, hybrid and electric, to name just a few. The purpose of this article is to provide you with technical and administrative guidance on the installation of electric vehicle (EV) charging stations.

An EV charging station supplies electricity to recharge electric or plug-in hybrid vehicles at voltages and currents that minimize the charging time. Even though most electric cars can be recharged from a typical 120 volt/15 amp wall receptacle (NEMA 5-15R), the charging time for a fully depleted battery can take longer than the typical eight-hour overnight charge. This makes EV charging stations a practical means of faster charging.

The Society of Automotive Engineers (SAE) classify EV charging stations in three categories: Level 1 - 120 volt alternating current (AC) charging; Level 2 - 240 volt AC charging; and Level 3 - 500 volt direct current (DC) high-

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before the installation of any interior finish material. The Uniform Construction Code (UCC) inspector will complete the insulation portion of the checklist, which is separated into verification of the "insulation" and the "air barrier" requirements in Section 402.4.2 of the IECC/2009.

Section 402.4.2 of the IECC/2009 provides the permit holder with two options for verifying building thermal envelope tightness: (1) testing in accordance with Section 402.4.2.1, or (2) visual inspection in accordance with Section 402.4.2.2. Because the insulation inspection is a UCC-required inspection, the visual inspection (option #2) will have already been partially completed; the remaining inspection issues for envelope tightness relate to the air barrier.

If the permit holder chooses a visual inspection, the code official will field-verify that the building thermal envelope tightness complies with Table 402.4.2. The air barrier inspection may be performed by a person other than the local code official, but that person must be independent of the installer and approved by the code official. The IECC/2009 does not establish credentials for persons performing these inspections. In all cases where the inspection option is used to document compliance, the Air Barrier and Insulation Checklist must be completed.

If the permit holder chooses testing, the documentation showing the results of the blower door test will be part of the permit file. If the permit holder chooses a visual inspection, the code official will field-verify that the building thermal envelope tightness complies with Table 402.4.2. The air barrier inspection may be performed by a person other than the local code official, but that person must be independent of the installer and approved by the code official. The IECC/2009 does not establish credentials for persons performing these inspections. In all cases where the inspection option is used to document compliance, the Air Barrier and Insulation Checklist must be completed. Once completed, checklists documenting visual inspection(s), as described below, are to be retained in the file.

- o UCC inspector(s) – One checklist documenting both insulation and air barrier requirements have been met is filed.
- o UCC inspector(s) and independent inspector(s) – In this case, two checklists would be filed, one for the insulation completed by the UCC inspector(s), and one for the air barrier completed by the independent inspector(s).
- o UCC inspector(s) and blower door test – One checklist, for insulation, that was completed by the UCC inspector(s) is filed; in addition, the documentation of a passing blower door test is appended to the checklist.

Bulletin 11-1 and the checklist can be found at the

See Energy Subcode Compliance at right

Energy Subcode Compliance *Continued from left*

following direct link: http://www.nj.gov/dca/divisions/codes/publications/pdf_bulletins/11-1.pdf. Alternatively, you may go to our main page, http://www.nj.gov/dca/divisions/codes, click on "Publications," scroll to the bottom of that page and click on "Bulletins" under the title of "Uniform Construction Code." This will take you to the entire list of current bulletins. Scroll down to Bulletin 11-1, which is at the bottom. Click on it to open it.

Finally, since this article deals with a portion of the "Air Leakage" section of the IECC/2009, I would also like to remind you that a general article was published in the *Construction Code Communicator,* Spring/Summer 2009. It included figures that showed the areas that must be caulked, gasketed, weatherstripped, or otherwise sealed to make the building thermal envelope tightness effective.

If you have questions on this matter, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

ASME Requirement for Pressure Vessels

In the National Standard Plumbing Code (NSPC), Section 3.3.8, Pressure Tanks and Vessels, states: "Hot water storage tanks shall meet construction requirements of ASME, CSA, or UL, as appropriate." At N.J.A.C. 5:23-3.15(b)4vi, Section 3.3.8a has been amended to add the following phrase: "Pressure vessels shall be designed and constructed in accordance with the requirements of the American Society of Mechanical Engineers (ASME), Rules for the Construction of Pressure Vessels, Section VIII/2004. Any pressure vessel that exceeds any of the following shall meet the requirements of ASME and shall be stamped ASME:

- A heat input rating of 200,000 BTU per hour; or
- water temperature of 200 degrees Fahrenheit; or
- nominal water capacity of 120 gallons or any other thresholds of ASME that apply."

Any hot water storage tank or water storage heater exceeding any of these thresholds is required to be constructed in accordance with ASME and must be stamped "ASME."

It is critical that, prior to issuing a permit for a new or replacement water heater that is required to meet the ASME standard, the contractor must be made aware that the water heater must be ASME stamped.

Should you have any questions, you may contact me at 609-984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Electric Vehicle Charging Stations *Continued from page 1*

current charging. To speed up the charging process electric vehicle owners will probably opt to install a level 2 charging station at home, while businesses and local government may provide level 2 and level 3 public charging stations. It is important to note that SAE standards have been developed for Levels 1 and 2, but DC Level 3 Fast Charge standards are still under development.

Just like any other electrical installation, the charging systems for electric vehicles are required to comply with the subcodes adopted by the State of New Jersey in the Uniform Construction Code (UCC). In fact, the installation of the electric vehicle charging systems are addressed in Article 625 of in the 2008 National Electrical Code (NEC) as adopted in the UCC.

The most common question about electric vehicle charging stations is about listing and labeling requirements. Most electrical equipment is listed and labeled per Section 625.5; this makes the approval of the equipment for the installation and use a "no brainer". However, what does one do when there is no clear listing or labeling? N.J.A.C. 5:23-3.7, Municipal approvals of alternative materials, equipment, or methods of construction, provides regulations to assist in the approval of equipment that does not have the standard listing and labeling. A testing agency may verify the installation and the intended use, which means that the equipment complies with Section 625.5. Note that, per Sections 625.29(C) and (D), indoor charging stations may require special ventilation per their listing and labeling or testing.

Another common question: When are permits required for the installation of the charging systems for electric vehicles? At N.J.A.C. 5:23-2.14, Construction permits, when required, the UCC does not require a permit for cord-and-plug-connected electrical equipment. This includes equipment that is capable of being plugged in to an existing receptacle, no matter what the voltage rating of the equipment is. If the existing receptacle has the proper voltage rating, but the configuration is not compatible with the plug on the equipment, the replacement of the receptacle to one with the proper configuration would be considered Ordinary Electrical Maintenance (N.J.A.C. 5:23-2.7(c)3.i.) and no permit for, inspection, or notice to the enforcing agency of Ordinary Maintenance, is required. However, there are exceptions to this rule. For example: if there is an existing 120 volt receptacle on a 15 amp circuit that is to be replaced by a higher current 120 volt receptacle that requires a 20 amp circuit (NEMA 5-20R), the upgrade of the circuit would be considered Minor Work (N.J.A.C. 5:23-2.17A(c)3).

When a vehicle charging system is being installed that

See Electric Vehicle Charging Stations at right

Electric Vehicle Charging Stations *Continued from left*

requires a new 120 or 240 volt receptacle or an electrical line that will be directly connected the system, it also is subject to the Minor Work provisions. As with all Minor Work, the issuance of a permit is not required before the work may proceed. However, the owner or contractor acting on behalf of the owner must provide notice to the enforcing agency before the work begins. Also, a permit application must be filed and must be delivered in person or by mail within five business days from the date of oral notice. The inspection of Minor Work must be performed within 30 days of the request for inspection and is based upon what is visible at the time of the inspection with the certificate of approval stating so.

Recognizing that electric vehicles and their charging stations are not yet the norm in most communities, here are some examples that describe the different charging needs of vehicles that you may encounter:

- With the launch of the 2011 Chevrolet Volt and the 2011 Nissan Leaf, 240volt (level 2) EV charging stations are being hardwired in homes to reduce charging times. Chevrolet states that their 240 volt EV charging station will take about 4 hours to recharge the Volt's batteries. Nissan states that their 240 volt EV charging station will take about 7 hours to recharge the Leaf's batteries with the option of a 480 volt (level 3) "quick-charge" EV charging station to further reduce charging time. However, due to their high cost and the lack of an adopted SAE standard, it is highly unlikely that level 3 charging stations will be installed in homes at this time. Why the difference in charging times for Chevrolet and Nissan? This is because the Volt can go approximately 40 miles before recharge and the Leaf can go approximately 100.
- Owners of the high end Tesla Roadster, are offered similar charging stations as described above. However, they also have the option of a "universal mobile connector" which provides multiple adapters, such as one that works with an electric dryer receptacle (NEMA 14-50R) and 10 additional adapters. Therefore, dependent on adapter, there may be more issues to looks at along with the example given above where the 120 volt receptacle is upgraded from 15 amps to 20 amps.

Although home charging of electric vehicles will likely necessitate the installation of an EV charging station, it should not be a deterrent to considering these cars.

If you have any questions on this matter, you may reach us at (609) 984-7609.

Source: Suzanne Borek and Rob Austin
Code Assistance Unit

Accessible and Adaptable Dwelling Units Revisited



Once again, the rumor seems to be traveling around that the Barrier Free Subcode (BFSC) of the Uniform Construction Code (UCC) requires a percentage of dwelling units in multifamily dwellings to be fully accessible. Sometimes the rumor is two percent accessible; sometimes it is four percent accessible. This is not true. These percentages were eliminated in 1990 because they did not meet the requirements of the Federal Fair Housing Amendments Act. Let me take this opportunity to straighten out the requirements for accessible and adaptable dwelling units.

What is the difference between accessible and adaptable?

An adaptable dwelling unit is a Type A dwelling unit that meets Section 1003 of the ICC/ANSI A117.1-2003 (ICC/ANSI-2003). Essentially, this unit is a dwelling unit with an accessible entrance, accessible clear floor space, and accessible route into and through the dwelling unit, and adaptable features in the kitchen and bathroom. The BFSC specifies that an adaptable dwelling unit must have (1) an accessible entrance, (2) an accessible interior route throughout the dwelling unit, (3) one full adaptable bath on an accessible route, (4) maneuvering space at all doors, and (5) adaptable features in the kitchen and bathroom.

An accessible dwelling unit is a dwelling unit that meets Section 1002 of ICC/ANSI A117.1-2003. As with an adaptable dwelling unit, an accessible dwelling unit must have an accessible entrance and an accessible route into and throughout the dwelling unit. In an accessible dwelling unit, however, the toilet and bathing facilities must comply with general requirements for toilet room and bathing facilities that are in ICC/ANSI A117.1-2003, Section 603 through Section 610 inclusive. Similarly, kitchens are required to comply with the general requirements in ICC/ANSI A117.1-2003 at Section 804, kitchens and kitchenettes, and must also provide one 30-inch long work surface that meets the requirements of Section 902, dining surfaces and work surfaces, regarding clear floor space and height. Finally, storage facilities must also meet the general requirements in ICC/ANSI A117.1-2003, which are at Section 905, for clear floor space, height, and operable controls, and must meet the requirement of Section 804.5 that 50 percent of the shelves in cabinets must comply with Section 905.

Which dwelling units are required to be adaptable?

1. In a building with four or more dwelling units, if the building has an elevator, all (100 percent) of the dwelling units must be adaptable. [*N.J.A.C.* 5:23-7.5(b)]

See Accessible and Adaptable at right

2. In a building with four or more dwelling units, if there is no elevator, all (100 percent) of the ground-floor dwelling units must be adaptable. [*N.J.A.C.* 5:23-7.5(c)]

3. Ground-floor dwelling units: In a building with dwelling units, the first floor containing dwelling units must be accessible and must contain adaptable dwelling units, regardless of whether that floor is at grade. [*N.J.A.C.* 5:23-7.5(c)1] Keep in mind, a building may have more than one ground floor due to sloping grade.

4. Generally speaking, townhouses are exempt from the Barrier-Free Subcode. There is one exception: Townhouses for which credit as a low or moderate income unit (COAH credit) is awarded are required to comply—and are discussed below. A townhouse is a single dwelling unit with two or more stories of dwelling space, exclusive of basement or attic, where each dwelling unit extends from foundation to roof. This dwelling unit is to have an independent entrance that serves one dwelling unit only and that is at or near grade; most or all of the sleeping rooms are on one story; and most or all of the remaining habitable space, such as kitchen, living, and dining areas, are on another story. [*N.J.A.C.* 5:23-7.3(b)1]

5. What level of accessibility is required for a townhouse that has "COAH credit?" When a townhouse, or a multistory dwelling with fewer than four dwelling units in a single structure, is being constructed with credit as low or moderate income housing, the dwelling unit must comply with the Barrier Free Subcode. There are two unique requirements that apply to these buildings: each dwelling unit must have a room that could be used as a bedroom on the entry level; and they may have either an accessible or an adaptable entrance. If an adaptable entrance is provided, the plans for making the adaptation to an accessible dwelling unit must be submitted and released through the standard plan review process. The funds to effect the adaptation of 10% of the entrances that are not accessible must be escrowed with the municipality.

What features in the kitchen may be adaptable?

1. Adaptable work surface: There must be a 30-inch length of counter that is either set at 34 inches or that can be adjusted to an accessible height. The base cabinets in this section must be removable and the floor must be finished all the way to the wall. The 30-inch section of the counter does not have to be pre-cut; it can be "replaceable as a unit." This means that it must be able to be cut and either lowered or replaced. [ANSI/2003, Sections 1003.12.3.1 and 1003.12.3.2, as amended at N.J.A.C. 5:23-7.2(b)33 and 34, respectively]

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NSPC Code Change Hearings Will be Held in New Jersey - Again

The public hearing for the code changes for the 2012 edition of the National Standard Plumbing Code (NSPC) will be held again in New Jersey. It will be held on Thursday, June 9, 2011 at the Tropicana Casino and Resort at Brighton and the Boardwalk and will begin at 8:30 a.m.

Information is available on the web site for the National Association of Plumbing, Heating, and Cooling Contractors (NAPHCC), www.PHCCweb.org. Information will also be provided on the Division's web site, www.nj.gov/dca/codes.

This will be the third time the public hearing for the NSPC code changes will be held in New Jersey. The previous two hearings, which were held in 2008 and 2010, were very well attended by code officials, master plumbers, union representatives, engineers, architects, manufacturers' representatives, and the general public. This hearing is open to the public, so you do not have to pre-register to attend. If you have not attended in the past, please come and see how the NSPC's code change process works.

Any interested party may comment in support of -- or against -- any of the proposed code changes before the code change committee votes on the changes.

Let's have a great turnout and keep the NSPC's public hearing on proposed code changes here in New Jersey!

Should you have any questions, you may contact me at 609-984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Exterior Balconies and Decks – Defined

When the International Residential Code (IRC)/2009 was adopted in New Jersey, it was amended to retain the IRC/2006's 60 psf loading requirements for exterior balconies (N.J.A.C. 5:23-3.21(c)3vi/Table R301.5). Because the unamended IRC/2009 had the same loading requirements for exterior balconies as for decks, there was no need in the code to define the terms. Yes, we should have put the definitions of "exterior balconies" and "deck" back into the Uniform Construction Code (UCC) regulations, but we forgot. In the meantime, until we correct this error, use Section R201.4 of the IRC/2009. Where terms are not defined through the methods authorized by the code, such terms shall have ordinary accepted meanings as the

See Exterior Balconies and Decks at right

Highlights of Changes to Lateral Wind Bracing in the International Residential Code/2009

There have been a number of changes to the International Residential Code (IRC)/2009 for wind bracing requirements.

1. The IRC/2009 allows for the mixing of bracing methods -- intermittent bracing methods and the continuous sheathing methods -- in Section R602.10.1.1.
   a. Mixing of bracing methods is permitted from story to story. That is, you can have one type of bracing on the first story and a different type of bracing on the second story.
   b. Mixing of bracing methods is permitted within a story. Example: On the north wall you may have method Diagonal Wood Boards (DWB) on a braced wall line and on the east wall you may have method Portland Cement Plaster (PCP) on a braced wall line.
   c. Mixing of bracing methods within a braced wall line is permitted, but you must provide the greatest required bracing length of the methods chosen. If you choose one method that requires a minimum length of 4 feet of braced wall line and another method that requires a minimum length of 8 feet of braced wall line, the minimum length of bracing of 8 feet of braced wall line must be provided.
2. Bracing methods are no longer referred to by number as per the 2006 International Residential Code (IRC/2006). Instead, in the IRC/2009, the methods are identified by abbreviations of the name of the bracing method. Bracing methods are separated into two distinct classifications, intermittent and continuous.

See Lateral Wind Bracing - page 15

Exterior Balconies and Decks *Continued from left*

context implies. The NJ IRC/2006 contained the following definitions and they are considered accepted meanings:

BALCONY, EXTERIOR. An exterior floor projecting from and supported by a structure without additional independent supports.

DECK. An exterior floor system supported on at least two opposing sides by an adjoining structure and/or posts, piers, or other independent supports.

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

Source: John N. Terry
Manager, Construction Code Enforcement

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2. Kitchen cabinets: Upper kitchen cabinets may be installed at the standard height as long as they are attached in such a manner that they can be lowered without damaging the wall. [ANSI/2003, Section 1003.12.5, as amended at N.J.A.C. 5:23-7.2(b)38]

3. Kitchen sink: This is almost a combination of the above two. The cabinets below the sink must be removable and the floor must be finished all the way to the wall. Also, the sink and the counter are required to be adjustable or replaceable as a unit to an accessible height provided; rough-in plumbing that allows connections of supply and drain piping for sinks mounted at heights of 29 inches must be provided. [ANSI/2003, Sections 1003.12.4.1 and 1003.12.4.2, as amended at N.J.A.C. 5:23-7.2(b)35 and 36, respectively]

What features in the bathroom may be adaptable?

1. Grab bars do not have to be installed, but the wall must be reinforced to permit their later installation. [ANSI/2003, Sections 607.4, 1003.11.4 and 1003.11.8]

2. The threshold in a transfer shower may be adaptable as long as the adaptation can be made easily without undertaking a construction project. [ANSI/2003, Sections 1003.11, as amended at N.J.A.C. 5:23-7.2(b)32]

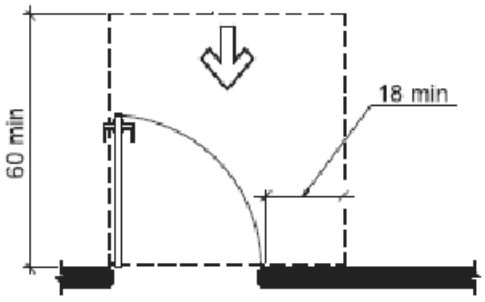
3. The mirror may be installed at a standard height as long as it is attached in such a way that it can be lowered without damaging the wall. [ANSI/2003, Section 1003.11.6, as amended at N.J.A.C. 5:23-7.2(b)31]

4. A vanity may be installed underneath the lavatory as long as it can be removed without requiring the removal or replacement of the lavatory. [ANSI/2003, Section 1003.11.5]

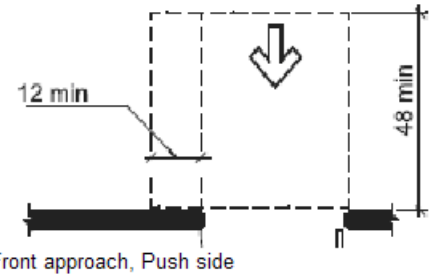
Maneuvering Space at Doors

There have been some projects that have been brought to the Department of Community Affairs' attention in which no maneuvering space has been provided at doors. Maneuvering space is critical to the usability of the dwelling unit. The requirements can be found in Section/Table 404.2.3.1 dependent on approach.

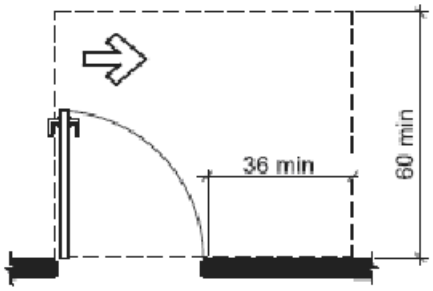
The following are the maneuvering spaces with dimensions as noted based on the door location:



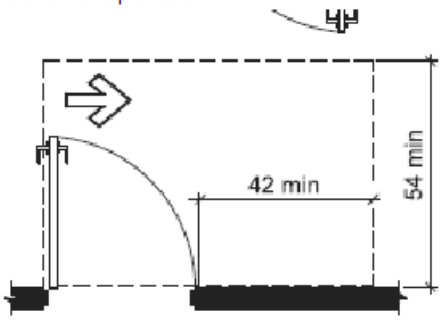
(1) Front approach, Pull Side
60-in perpendicular, 18-in parallel beyond latch



(2) Front approach, Push side
48-in perdendicular, 12-in parallel beyond latch if both closer and latch are provided, otherwise 0-in if one or none provided



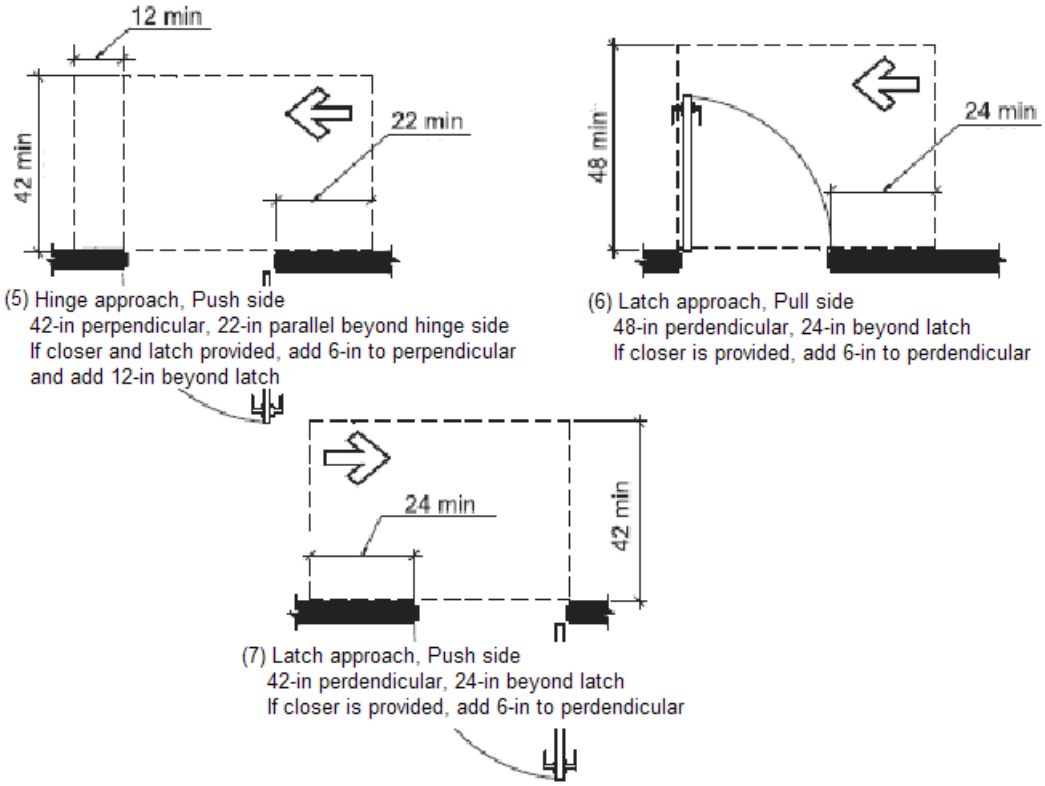
(3) Hinge approach, Pull side
60-in perdendicular, 36-in parallel beyond latch



(4) Hinge approach, Pull side
54-in perdendicular, 42-in parallel beyond latch

See Accessible and Adaptable - page 7

Acessible and Adaptable *continued from page 6*



A wider door is not better. The Barrier Free Subcode requires that a wheelchair user be able to *maneuver* the wheelchair. Maneuvering space is critical and, therefore, is required in both dwelling units and commercial buildings. This is one of those items that must be checked in plan review and checked again at the framing inspection. It is nearly impossible to fix once the building is built.

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

Source Rob Austin
Code Assistance Unit

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IRC Errata

The purpose of this article is to make you aware of an error that was made in the printing of the IRC (New Jersey edition and unamended version).

In Chapter 44, entitled "Referenced Standards", under the American Forest and Paper Association heading, the 2008 edition of the *Wood Frame Construction Manual (WFCM) for One- and Two-Family Dwellings* is listed. This is an error!! The correct edition of this manual is the 2001. In fact, the next version of the *WFCM* is tentatively slated as the 2012 Edition to coincide with the *2012 IRC*.

This error, as well as all of the I-Code errata, is available on-line at ICC Errata Central (http://www.iccsafe.org/cs/codes/Pages/errata.aspx)

Source: John N. Terry
Manager, Construction Code Enforcement

Ordinary Maintenance – Shower Valves

At N.J.A.C. 5:23-2.7(c)2vii, the section on ordinary maintenance includes the "replacement of valves (including shower or combination bath/shower valves in a single family dwelling)."

The question is: Is the replacement of a two-handle and diverter bath/shower valve by a combination single bath/shower valve in a single-family dwelling ordinary maintenance? If not, is a permit required?

The answer is that it is ordinary maintenance and, therefore, no permit is required. Whether the valve is replaced with like-for-like or with another type of valve where minor piping modifications would be needed, the replacement would be ordinary maintenance and would not require a permit.

Should you have any questions, you may contact me at 609-984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Private Garages Below Dwelling Units – Fire Separation

There has been some confusion in the reference to FTO-13 from Section 406.1.4 of the International Building Code (IBC)/2009 and Section R302.6 of the International Residential Code (IRC)/2009. Both sections require a 1-hour fire-resistance-rated horizontal assembly, with the option of using FTO-13, when a private garage is below a Group R-3 or R-5 dwelling unit(s). It appears the way the code references FTO-13 may be the problem as it states "see FTO-13" after the 1-hour rating requirement. If you were to go to the FTO, you will see that it states "The text that follows provides examples of construction practices that *meet the intent of the code requirements and should be considered as acceptable methods of providing a one-hour, fire-resistance-rated assembly* when there is living space above an attached, private garage in homes in Group R-3 or R-5." This is why we say "see FTO-13" as it is an acceptable way to achieve the 1-hour rating. Please keep in mind, penetrations are treated separately based on the one-hour rating option. This means, if a 1-hour rated assembly is chosen from a nationally recognized testing laboratory, penetrations are to be dealt with via the allowances in the testing report/documentation. However, if FTO-13 is chosen, then the bulletin specifically spells out how to deal with penetrations (*see* Section 712 of the IBC/2009).

If you have any questions on this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Americans with Disabilities Act: Recent Revisions are under Review

On September 15, 2010, the US Department of Justice published revisions to the Americans with Disabilities Act Accessibility Guidelines (ADAAG). The Department of Community Affairs is currently reviewing, but has not yet completed its review of, these revised Federal standards. However, questions about how to address differences between State and Federal accessibility laws are coming into the Code Assistance Unit.

When the Americans with Disabilities Act (ADA) was passed in 1990 and the ADAAG were first promulgated in 1991, the Department faced the same

See ADA: Recent Revisions Under Review - page 9

Prototypes and the Permit Extension Act

Prototype releases that might otherwise have expired are still valid. Why? As you may recall, the Permit Extension Act (PEA) extends all permits that were open and valid as of January 1, 2007. This Act overrides the rules of the Uniform Construction Code (at N.J.A.C. 5:23-2.16(b)) regarding the suspension of a construction permit. (As a reminder, the UCC provides that a permit lapses if (1) no work is done for a year or (2) work, having been started, is discontinued for six months.) However, every beginning must have an ending and the PEA ends December 31, 2012, with exceptions that may allow the permit to continue to June 30, 2013.

In general, the PEA provided that a UCC permit issued before January 1, 2007 would be valid for an additional six months beyond December 31, 2012 or for the time that would have remained on January 1, 2007, *whichever is shorter*. Any permit issued during the extension period (between January 1, 2007 and December 31, 2012) would be valid until June 30, 2013 (six months beyond the end of the extension period,) or until the date when it would have expired if the PEA had not been passed, *whichever is longer*.

The Department has provided guidance on this issue (September 23, 2008 and January 25, 2010 correspondence to code officials). However, another question has arisen: How does the PEA affect prototype plans? The answer is: **If a prototype plan release was valid on January 1, 2007, it remains valid until June 30, 2013.** The reasoning is provided below:

The PEA stopped the clock for releases that were in place on January 1, 2007. It also extended the "useful life" of any releases issued between January 1, 2007 and December 31, 2012. This means that the adoption of subsequent editions of the model codes, and the ending of their associated grace periods, does not affect the validity of prototype releases issued during timeframe delineated in the PERA. All of these prototype releases remain valid until June 30, 2013. NOTE: Prototype plan releases based on the 2009 editions of the national model codes will remain valid until the end of the grace period following the adoption of a subsequent edition(s) of the model code(s). Remember that the PEA says June 30, 2013 or the date when the release would otherwise expire, *whichever is longer*.

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

Source: John N. Terry
Manager, Construction Code Enforcement

ADA: Recent Revisions Under Review *continued from page 8*

problem: design professionals and building owners might want to comply with the Federal standards, but code enforcement officials are licensed to enforce the Uniform Construction Code, State, not Federal, law. In the Spring, 1992 *Construction Code Communicator*, Assistant Director Charles M. Decker provided guidance to code enforcement officials and design professionals with regard to the enforcement relationship between the new Federal requirements and the Barrier Free Subcode (BFSC). Grounded in logic, his guidance applies today:

- When the Federal requirements exceed those of the BFSC, upon request, code enforcement officials should allow compliance with Federal law. Because this deals with an exceedence, providing more that the BFSC requires, there is no need for a variation.
- When the BFSC exceeds the Federal standards, code enforcement officials must enforce the BFSC.
- For dimensional differences that are not a question of stringency, but where both dimensions cannot be met, code enforcement officials should allow compliance with Federal law, upon request. Code enforcement officials should verify that, in fact, the dimensions are different. Then, to ensure that a valid legal record is created, the variation process of the Uniform Construction Code (UCC) should be used.

These rules of thumb that worked so well 19 years ago can be used again in this interim period during which Departmental staff is reviewing the recently published Federal standards for accessible construction and preparing amendments to the BFSC to ensure that it is, once again, at least as stringent as Federal law in each particular.

It is helpful to remember that the UCC is enforced by licensed code enforcement officials through plan review, permits, and inspections; its enforcement takes place on the "front end" of construction. As civil rights laws, the Americans with Disabilities Act and, for multifamily residences with four or more dwelling units, the Federal Fair Housing Amendments Act (FFHAA) are enforced by civil lawsuit alleging discrimination against people with disabilities; their enforcement is on the "back end" of construction. In some cases, defending against such a lawsuit and altering a completed building to meet the Federal standards can cost more than compliance would have cost at the time of construction. Because of this enforcement mechanism, there is a strong incentive to comply with Federal design standards.

Municipal code enforcement officials can allow, but cannot -- and will not – require, compliance with Federal law; New Jersey's code enforcement professionals are licensed to enforce the State UCC. The ADA and the FFHAA are enforced at the Federal level and do not provide for the delegation of enforcement authority to State or municipal code enforcement professionals.

See ADA: Recent Revisions Under Review at right

ADA: Recent Revisions Under Review *continued from left*

Therefore, code officials will not ask whether a permit applicant wants to comply with the newly amended ADAAG; the request that one of the three options above be exercised is the responsibility of the permit applicant or the applicant's agent.

Bottom Line: Code officials must continue to enforce the BFSC by making sure that plans/projects meet or exceed it. For dimensional differences where both dimensions cannot be met, a variation should be allowed.

I trust this provides all code users with a framework in which to make a decision concerning the application of any differences that you have identified between the ADAAG/1991, the BFSC, and the ADAAG/2010.

If you have any questions, please do not hesitate to contact me at (609) 984-7609.

Source: Emily W. Templeton
Division of Codes and Standards

Ordinary Maintenance -- Application

This article is a follow-up to the one published in the Fall 2010 *Construction Code Communicator.* It is a response to continuing questions regarding the application of the Uniform Construction Code (UCC) provisions for ordinary maintenance.

At N.J.A.C. 5:23-2.7(a), the UCC states that the ordinary maintenance of structures may be made without filing a permit application with, or giving notice to, the construction official. The question that has arisen is whether this applies only to existing buildings. Common sense dictates that ordinary maintenance does not apply to new construction, but, as with anything else in the UCC, when in doubt, look for a definition. At N.J.A.C. 5:23-1.4, "ordinary maintenance" is defined as the "restoration or improvement of a routine or usual nature which is done by replacing a part of, or putting together, something that is worn or broken in a building, electrical, plumbing, heating, ventilation or air conditioning system and meeting the definition set forth in N.J.A.C. 5:23-2.7."

This definition makes it clear that ordinary maintenance applies to existing structures. It addresses the repair or replacement of a building element. Ordinary maintenance also applies to the initial installation of certain items, such as batt insulation or communication wiring, in an existing building. As was emphasized in the Fall 2010 *Construction Code Communicator* article, it is important to remember that, although there is no

See Ordinary Maintenance- page 12

Guard Heights in the IRC/2009 – Correcting An Error

The International Residential Code (IRC)/2009 was adopted as the one- and two-family dwelling subcode (N.J.A.C. 5:23-3.21) on September 7, 2010. In the adoption, the minimum height requirement for a guard (within the exception of Section R312.2) was unintentionally modified to 30 inches in height. Obviously, allowing a 30-inch high guard in new construction was not the intent. To correct this, the Department has proposed a correction in the *New Jersey Register*. The revised text of R312.2 is provided below and is to be enforced.

R312.2 Height.
Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches high measured vertically

See Guard Heights at right

Electrical Bonding of CSST Gas Piping Systems

There has been some confusion as to whether Section 310.1.1 of the International Fuel Gas Code (IFGC)/2009 and Section G2411.1.1 of the International Residential Code (IRC)/2009 are in direct conflict with Section 309.1 and Section G2410.1, respectively, of the same codes, along with Section 250.104(B) of the National Electrical Code (NEC)/2008. We believe the confusion lies in the words of Section 309.1 (IRC)/G2410.1 (IFGC) as follows: "Gas piping shall not be used as a grounding electrode." In short, bonding the gas CSST piping system does, by default, make it part of the electrical service grounding electrode system, it however is not being *USED* as the grounding electrode.

The IRC/2009 and IFGC/2009 state:
"G2411.1.1 (310.1.1) CSST.
Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building. The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent."

The purpose of the bonding jumper required by these sections is to reduce the likelihood of damage to the CSST caused by the electrical energy from an indirect

See Electrical Bonding at right

Guard Heights *continued from left*

above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.

Exceptions:

1. Guards on the open sides of stairs shall have a height not less than 34 inches measured vertically from a line connecting the leading edges of the treads.
2. Where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be not less than 34 inches (864 mm) and not more than 38 inches measured vertically from a line connecting the leading edges of the treads.

If you have any questions on this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

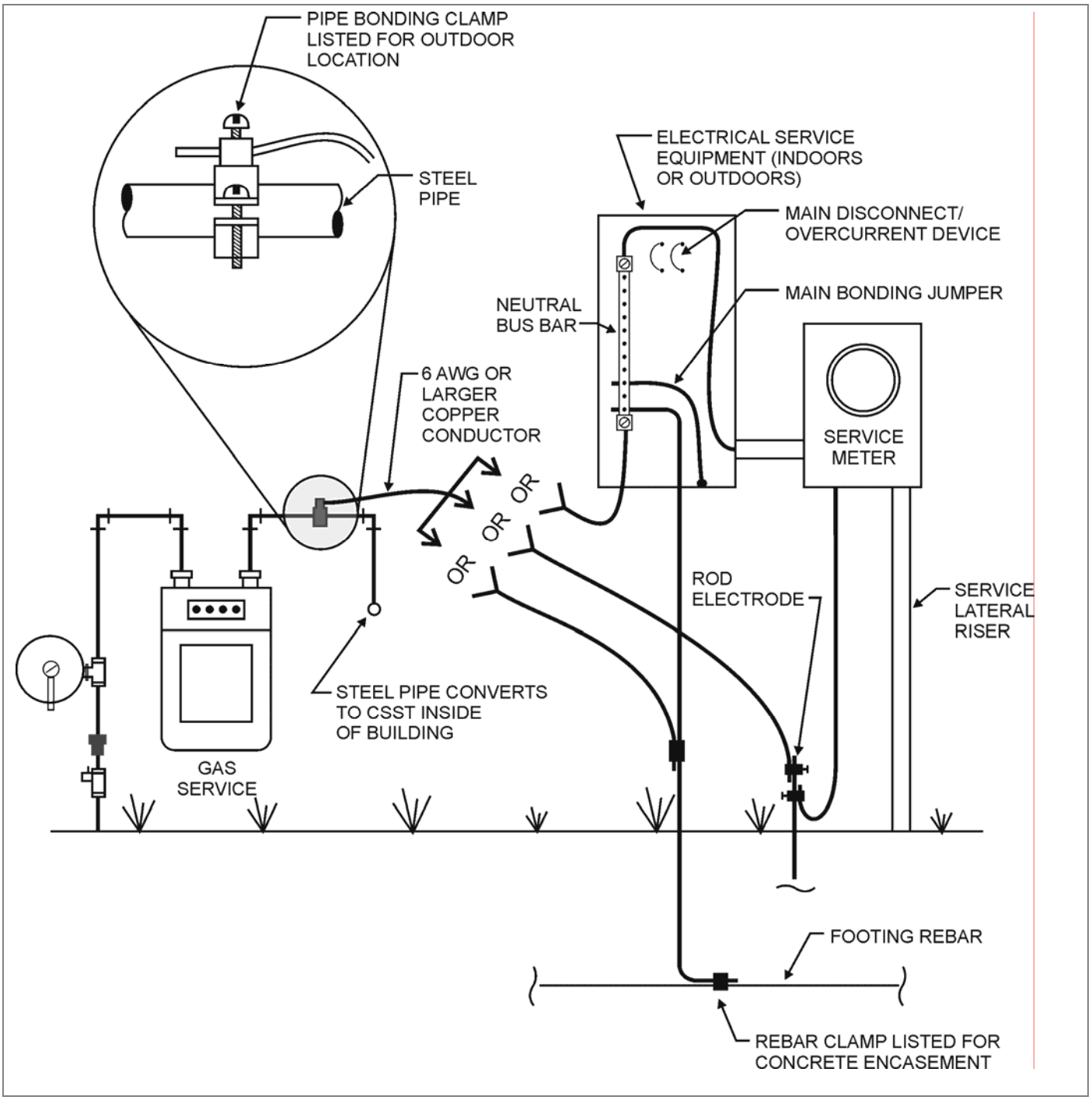
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Electrical Bonding *continued from left*

lightning strike. As you know, NOTHING is capable of protecting ANYTHING from a direct lightning strike. In the case of an indirect strike, the electrical energy could travel along metal piping and tubing and "jump" off to other metal components in the building. This causes an arcing that could burn and perforate the wall of CSST tubing due to the lack of thickness of its exterior wall thus causing a gas leak. Per the IRC/2009 Commentary, the bonding of the CSST directly to the electrical service grounding electrode system has been shown in laboratory testing to greatly reduce this risk. Remember that the bonding clamp must connect to the rigid steel piping at the point where the gas service enters the building and may be located either inside or outside the building. The bonding conductor must be continuous with the other end connected to the steel enclosure of the electrical service equipment or the grounded conductor at the electrical service or the grounding electrode conductor (if od sufficient size) between the service equipment and the grounding electrode(s) or one or more of the grounding electrodes for the electrical system. The bonding jumper may be connected as per the diagram below. The diagram is a reprint, with permission from the International Code Council (ICC), from the IRC/2009 Commentary. As you can see, ICC Commentaries provide wonderful insight into the intent of the code provisions and are a useful tool in any code official's library.

See Electrical Bonding - page 11

Electrical Bonding *continued from page 10*



Source: Rob Austin, Suzanne Borek, Tom Pitcherello
Code Assistance Unit

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Ordinary Maintenance *continued from page 9*

permit required for work categorized as ordinary maintenance, all work is required to meet the UCC.

For those who would like to review what items are specified as ordinary maintenance, please see N.J.A.C. 5:23-2.7(c). Again, keep in mind that these are not all-inclusive listings for ordinary maintenance items.

If you have any questions on this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Accessible Parking Serving Multifamily Dwellings: How to Calculate

It has come to the Department's attention that there may be confusion about how to calculate accessible parking when multiple multifamily residential buildings that are required to comply with the Barrier Free Subcode share a common parking lot. In the Fall, 2009 *Construction Code Communicator*, the Department provided guidance on the application of the accessible parking requirements in a commercial application, specifically at health care centers and offices where people with mobility impairments receive health care services. This article is intended to provide similar, clear guidance for a site with more than one multifamily residential building that is required to comply with the Barrier Free Subcode where parking is provided and, therefore, where some of the parking must be accessible.

At N.J.A.C. 5:23-7.10(d), the Barrier Free Subcode requires that two percent (2%) of the parking spaces for multifamily residential buildings with accessible/adaptable dwelling units be accessible. The Barrier Free Subcode itself provides some clarity because N.J.A.C. 5:23-7.10(d) also states that "two percent of the parking spaces *serving the dwelling units* be accessible" (emphasis added*).* The Department has long considered that, where there is a project with multiple buildings served by a common parking lot, the Barrier Free Subcode be applied so that those "parking spaces *serving the dwelling units "*are accessible." This means that there will be accessible parking serving each building.

An example might help. Consider a project with five multifamily residential buildings that are required to comply with the Barrier Free Subcode are served by 200 parking spaces in a single, common parking lot. In

See Accessible Parking -page 13

Construction Data: Dummy Dates

We receive a lot of building permits with bad dates. Some construction officials and technical assistants intentionally report the wrong month, day, and year. They do so to get a jump on work customers submit but are not ready to pay for. Some use a dummy year, say 1953 or 2050. Others enter 11/11/11, or another made-up date as a temporary placeholder until the customer is ready to pay for the inspections and the real date is known.

Don't do this.

You need to understand two things about construction data in New Jersey. First, what you enter in your computer is transmitted to the Department of Community Affairs (DCA) on a regular basis. This means monthly and weekly. Second, there's a firewall between us. Once your data are sent, it blocks changes made on your side from going through to our side. We allow you to report additional work on existing permits. These are permit updates. But edits, corrections, and other changes to existing permits are blocked by the firewall. If you need to make corrections, you must let us know. This is the only way to scale the firewall. You must call and report any corrections to either Charlie Pierson, Jr. or me at (609) 292-7898.

If you enter a bad permit date, transmit the record, and then go back and re-enter the right date, we won't get this change. Again, don't do it. There are ways to get a jump on your work or keep it from piling up without sending bad data. We can help with that, too. Some reporting software may have an "issue permit" function. It allows you to enter the permit, without issuing it to the applicant or sending it to us. ***PermitsNJ*** uses an application or control number. This switches to a formal permit number when you are ready to issue the permit and transmit the information. Both approaches allow users to enter a building permit on one day and formally issue it and report it on another. If your software does not do this, talk to your vendor or contact us. That's where the solution is, not bad dates.

Building permits are one of the few sources of information available from every town, every month. They provide key insights on settlement patterns and development trends, as well as vital indicators on New Jersey's construction industry and the health of the State's economy. Many people rely on this information. It is important to get it right.

If you have any questions, please call Charlie Pierson or me at (609) 292-7898.

Source: John Lago
Division of Codes and Standards

Accessible Parking *continued from page 12*

the absence of a specific number of parking spaces for each building, assume that the parking spaces are equally allocated among the five buildings. This would mean that there would be 40 parking spaces "serving the dwelling units" of each building. Of those 40 parking spaces, 2% (or 1) would be required to be accessible, so there would be one accessible parking space serving each multifamily residential building. At N.J.A.C. 5:23-7.10(a)2, the Barrier Free Subcode also requires that "for every eight accessible parking spaces, or fraction thereof, at least one shall be a van accessible parking space." Therefore, the one accessible parking space that serves each building would be required to be van accessible. In addition, each accessible parking space must be the "closest parking space provided and must be on the shortest route, which must be an accessible route, to an accessible entrance." (N.J.A.C. 5:23-7.10(a)).

If the calculation were erroneously based on the total number of parking spaces without regard for the number of buildings served, a total of four accessible parking spaces (200 X .02 = 4) would be required. This would mean that one building with accessible/adaptable dwelling units and with parking serving the building (and, in the language of the Barrier Free Subcode, "serving the dwelling units") would have no accessible parking at all, and, therefore, would not be in compliance.

It is important to remember that the Barrier Free Subcode exists to ensure access for people with disabilities. That over-arching charge would not be met if a commonly provided parking lot were allowed to have no direct relationship to the accessible entrance of, or the accessible dwelling units in, the buildings the parking spaces serve.

In sum, where multifamily buildings are required to comply with the Barrier Free Subcode and, therefore, the multifamily buildings have (each multifamily building has) accessible dwelling units; and the multifamily buildings are served by (each multifamily building is served by) parking, two percent of the parking spaces serving the dwelling units in each building are required to be accessible. This means that the accessible parking must be the closest parking spaces provided to the accessible entrance. They must also be on the shortest route, which must be an accessible route, to the accessible entrance for each building. It also means that each grouping of accessible parking spaces must comply with the requirements for van accessible parking spaces.

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

Source: Emily W. Templeton
Division of Codes and Standards

Deferred Submittals

The Code Assistance Unit has been receiving multiple questions on whether the design professional of record is required to sign and seal deferred submittals prepared by other design professionals. The simple answer is, no.

However, the design professional of record is required to review all documents that are not submitted with the initial application and that are prepared by others. Furthermore, the design professional of record must submit a letter indicating that he has reviewed and found the construction documents to be in conformance with the regulations of the design for the building. In lieu of a letter, the design professional of record may stamp and signed on each page that the construction documents have been reviewed and found to be in conformance with the regulations of the design for the building.

The applicable regulations are found at N.J.A.C. 5:23-2.15(f)1.xi(1), which states, "All documents prepared by people other than the design professional shall be reviewed by the design professional and submitted with a letter indicating that they have been reviewed and found to be in conformance with the regulations for the design of the building."

Two examples that illustrate the application of the requirement follow:

1. A New Jersey State licensed architect has prepared all of the construction documents for the project; however the roof trusses are being designed by others. The trusses have been designed by the truss manufacturer based upon the design criteria provided by the architect of record. The architect of record must review the truss documents for compliance with the regulations for the design of the building before submitting them to the authority having jurisdiction. The construction documents submitted to the authority having jurisdiction must be accompanied by a letter signed and sealed by the architect of record acknowledging this.
2. Another example is a building that contains an automatic fire suppression system. Typically, the design of a suppression system is prepared by a sprinkler manufacturer and construction documents are prepared accordingly. In this case, the design professional of record must review the construction documents for compliance with the project design requirements. The construction documents must be accompanied by a signed and sealed letter acknowledging this.

I cannot stress enough that the design professional of record is not "sealing" the design of another design professional; the design professional of record must verify that the construction documents have been reviewed and state that they comply with the design parameters of the

See Deferred Submittals -page 14

Deferred Submittals *continued from page 13*

project.

The two examples above are not all-inclusive. There are a multitude of situations to which the above referenced section can be applied. These examples are intended to illustrate instances when the design professional of record's review is required.

This issue was discussed in a previous *Construction Code Communicator* article by Rob Austin of our staff (Winter of 2006, Volume 18, number 3, page 2).

If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Fire Department Connections & Large Diameter Hose STORZ Connections for Automatic Fire Sprinkler and Standpipe Systems

Over the past year, the Department has received questions about using STORZ type threadless adaptors as a Fire Department Connection (FDC). Some Fire Subcode Officials and Fire Officials have informed the Department that the fire company has required the adaptor to be installed as a FDC. Some sprinkler contractors and designers have asked if this can be done. The answer is yes. The Building Officials and Code Administrators (BOCA) National Building Code/1990 had an exception allowing the installation of a single connection with the approval of the local fire department. This exception has been retained in the building subcode of the Uniform Construction Code (UCC), including the adoption of the current New Jersey edition of the International Building Code (IBC)/2009. The National Fire Protection Association (NFPA) standard is referenced in the charging text in the FDC section.

NFPA 13 prohibits the use of a large diameter threadless adaptor unless it has been listed for use as a FDC. In NFPA 13-2002, Section 6.8.3 specifically states that the use of threadless couplings is permitted where required by the authority having jurisdiction and where listed for that use. Thus, when the fire department requires the FDC to be of the threadless

See Fire Department Connections at right

Fire Department Connections *continued from left*

type, the building subcode allows it. The exception in the building subcode supersedes the requirement in the standard. In the legal hierarchy, the code trumps the referenced standard. This means that, where the provisions of the adopted building subcode differ from those in the referenced standard, the requirements in the building subcode govern. I have checked with some threadless adaptor manufacturers and they are in the process of getting their adaptors listed. This will help in other states that have not amended the current national model building code and that require the strict compliance of the NFPA standards for the system being installed.

There have been other issues with using the single adaptor as the FDC. First, the Department has learned that these large diameter adaptors have been installed on some small residential systems where a single 1 ½- or 2 ½- inch connection could provide the required additional water supply. There is no reason to require a large adaptor for this application; it can be detrimental to the sprinkler system when a firefighter over-supplies the system. The second issue is dealing with the high zone on high rise buildings. Many fire departments purchase only large diameter supply or relay fire hose. Supplying a high zone on a high rise building cannot be accomplished with standard supply or relay hose. If a fire department is requiring the single adaptors for high rise buildings, ask whether it has large diameter attack hose. Make sure the fire department knows what they are asking for.

It should also be noted that hose lines between the pumper and the fire department connection are considered attack, rather than supply, hose. This is supported by the definition of supply hose in NFPA 1961, the Standard on Fire Hose. A dual-inlet connection has the benefit of allowing an immediate changeover to the alternate inlet without shutting down should debris obstruct the first inlet or should the hose at the first inlet become damaged and unusable. This not only aids in extinguishing the fire, but also increases the safety of firefighters involved with interior attack lines. When a single large diameter line breaks or is damaged, the supplemental water supply is lost. So, when these adaptors are installed on any system, the question that needs to be asked is: Does the Fire Department have the proper hose?

If you have any questions, please feel free to contact me at (609) 984-7609.

Source: Michael Whalen
Code Assistance Unit

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Lateral Wind Bracing *continued from page 2*

Intermittent Bracing Methods

2006 International Residential Code –Section R602.10.3	2009 International Residential Code –Table R602.10.2
Method 1	LIB – Let-in-bracing
Method 2	DWB – Diagonal wood boards
Method 3	WSP – Wood structural panel, see Section R604
Method 4	SFB – Structural Fiberboard sheathing
Method 5	GB – Gypsum board
Method 6	PBS – Particleboard sheathing
Method 7	PCP – Portland cement plaster
Method 8	HPS – Hardboard panel siding
Alternate braced wall panel – Section R602.10.6.1	ABW – Alternate braced wall, see Section R602.10.3.2
Alternate braced wall panel adjacent to a door or window opening, see Section R602.10.6.2	PFH – Intermittent portal frame Portal frame with hold-downs, see Section R602.10.3.3
-	PFG- Intermittent portal frame at garage At garage door openings in Seismic Design Category A, B and C, see Section R602.10.3.4

Continuous Sheathing Bracing Methods

2006 International Residential Code	2009 International Residential Code –Table R602.10.4.1
Continuous wood structural panel sheathing – see Section R602.10.5 and Length requirements for braced wall panels in a continuously sheathed wall – see Table R602.10.5	CS – WSP - Wood structural panel see Section R602.10.4 and Table R602.10.4.2
Length requirements for braced wall panels in a continuously sheathed wall – see Table R602.10.5 note b	CS – G – Wood structural panel adjacent to the garage openings and supporting roof loads only see Section R602.10.4 and Table R602.10.4.2
Length requirements for braced wall panels in a continuously sheathed wall – see Table R602.10.5 note c	CS – PF – Continuous portal frame see Section R602.10.4.1.1 and Table R602.10.4.2

The following reference is not part of the Table, but is discussed in R602.10.5 and is provided here for completeness and convenience.

-	CS – SFB – Continuously sheathed braced wall line Section R602.10.5

The IRC/2009 allows the continuously sheathed braced wall line to be applied to each wall line individually, but the IRC/2006 required that if this method was chosen, it then applies to all walls on all stories.

See Lateral Wind Bracing -page 16

Lateral Wind Bracing *continued from page 15*

3. There are now two separate tables in the IRC/2009 to calculate the amount of bracing required. Table R602.10.1.2(1) provides the bracing requirements for wind loading and Table R602.10.1.2(2) provides the bracing requirements for seismic loading. **Note** that the seismic requirements in the IRC/2009 have been deleted as per N.J.A.C. 5:23-3.21(c)3.v and Table No. 301.2(1). Therefore, Table R602.10.1.2(2) is not applicable and bracing length is designed only in accordance with Table R602.10.1.2(1).

In the previous editions of the IRC, there was one bracing table for wind and seismic. The table was based on the seismic loads, which increased the amount of bracing required as the wall length increased. The wind tables are based on engineering principles.

4. The amount of required bracing is now provided in feet (IRC/2009) instead of a percentage of braced wall line length (IRC/2006). This eliminates the need to calculate the length of bracing necessary as a percentage of the braced wall line.
5. The number of narrow wall bracing alternatives increased from two to five.
6. The definitions for "braced wall line" and "braced wall panel" have been revised and a new term "continuously sheathed braced wall line" has been added. All of these terms are defined in Chapter 2 of the IRC/2009.

   A good source of information is "A Guide to the 2009 IRC Wood Wall Bracing Provisions" published by the International Code Council (ICC).

   If you have any questions, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Typo in Bulletin 11-1

With the adoption of the 2009 International Energy Conservation Code, the Prescriptive Packages no longer have window-to-wall percentage ratios. Please note that on page "2 of 8" in Bulletin 11-1, there are some words (three, to be exact) that were not supposed to make it to publishing.

Please strike the words "window percentages and" in the 4th sentence or 7th line in item #4, Compliance with Prescriptive Packages and retain your corrected copy. A corrected copy is also available on the Division's web site, www.nj.gov/dca/codes.

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

Source: Robert Austin
Code Assistance Unit

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

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2011 Building Safety Conference "30 Years of Working Together for a Safer New Jersey"

The 30th annual New Jersey Building Safety Conference was held this year from April 27th through April 29th at the Trump Taj Mahal in Atlantic City. Our theme this year was "30 Years of Working Together for a Safer New Jersey." It is meaningful not only because it celebrates the 30 years that the Conference has existed, but because it highlights the real reason for the Building Safety Conference--bringing together all elements of the code enforcement community to share and exchange ideas with the goal of making our State and our individual communities safer.

The "Crackerbarrel" event on the first evening offered over 40 tables at which presenters covered topics that ranged from an update on the newly adopted energy subcode to an overview of certificate requirements. There were 12 seminars held each training day. They ranged from construction code updates and reports to an examination of the retrofit provisions of the Uniform Fire Code.

One of the major events at the Conference, as always,

See 2011 Building Safety Conference- page 2

OPRA, Common Law, and Construction Documents

It has come to the Department's attention that there is some confusion about the Open Public Records Act (OPRA) as it pertains to construction documents. At this time, the Division of Codes and Standards together with the Government Records Council (GRC) is undertaking an initiative to provide guidance about construction documents and OPRA to code enforcement officials.

Background: Generally speaking, documents created or held by a public entity are public records and are to be made available to a member of the general public upon request. There are specific exceptions to this general statement. In its definition of "government record," the OPRA statute (*N.J.S.A.* 47:1A et seq.) contains 24 exemptions from disclosure. One of those exemptions addresses building security, as follows: "emergency or security information or procedures which, if disclosed, would jeopardize security of the building or facility or persons therein."

Building Plans: Because this reference is broad, but not particularly clear, the Department has sought to provide clarity in its proposed rules for OPRA. Published in the *New Jersey Register* on November 1, 2010 and made effective through Executive Order 47 (Christie 2010), the proposed rules provide that "[b]uilding plans submitted in conjunction with any permit

See OPRA - page 4

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Pictured above (from left to right) Edward Smith -Codes and Standards Director, MEIA-South President, Joseph Freeman, MEIA's 2011 honoree, Anthony Nicolisi, NJATA Vice President, Dawn Neil, MEIA-North President Jean Verrier, NJATA's 2011 honoree, Monika Sackman, NJPIA President, William Olinger, NJATA Treasurer, Susan McLaughlin, NJFP&PA's 2011 honoree, Cary Costa, BOANJ's 2011 honoree, Andrew Sanfilippo, and NJFP&PA President, Stanley Sickels.

Not pictured: BOANJ's 2011 award presenter and President, Thomas Pinand, and NJPIA's 2011 honoree, Robert VanCauwenbergh.

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Energy Compliance Support

When looking for guidance concerning Energy Subcode compliance, there are several effective options. The Uniform Construction Code bulletin relating to this topic is Bulletin 11-1 (it was previously Bulletin 07-2 and Bulletin 03-2); it can be found at http://www.nj.gov/dca/divisions/codes/publications/pdf_bulletins/b_11_1.pdf (or general website address at http://www.nj.gov/dca/divisions/codes).

If you are looking for more information on the topics in Bulletin 11-1, such as the 2009 International Energy Conservation Code (IECC/2009), the 2007 ANSI/ASHRAE/IESNA Standard 90.1 (ASHRAE 90.1-2007), REScheck and/or COMcheck, please keep reading…

The Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), through its Building Energy Code University program, offers resources to trainers. Although it is advertised for trainers, code officials and design professionals can benefit from these resources, too. For those who want to learn more, the following link provides great PowerPoint and PDF guides to the IECC/2009 and/or ASHRAE 90.1-2007: http://www.energycodes.gov/becu/trainers.stm. From this link, there is a very helpful PDF file entitled "Residential Requirements of the 2009 International Energy Conservation Code" located in the second box under the "Residential" heading (direct link: http://www.energycodes.gov/becu/documents/2009iecc_residential_BECU.pdf). There is also a useful link entitled "ANSI/ASHRAE/IESNA Standard 90.1-2007" located in the fourth box under the "Commercial" heading (direct link: http://www.energycodes.gov/becu/documents/90.1-2007_BECU.pdf).

The Building Energy Code Program of the Office of EERE also offers technical support documents for REScheck and COMcheck at http://www.energycodes.gov/help/support_docs.stm. More specifically, the REScheck software user's guide can be found at http://www.energycodes.gov/rescheck/documents/rescheck_users_guide_1008.pdf and the COMcheck software compliance guide based on ASHRAE 90.1-2007 can be found at http://www.energycodes.gov/comcheck/documents/com_software_users_guide_90.1-2004_and_90.1-2007.pdf.

Source: Rob Austin
Code Assistance Unit

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Barrier Free Subcode: Maneuvering Clearance at Doorways. . . . . What Does "Clear" Really Mean?

Over the past several years, the Code Assistance Unit has fielded hundreds, if not thousands, of calls about the maneuvering clearance at doorways for compliance with the International Code Council/American National Standards Institute (ICC/ANSI) A117.1.

The recurring question seems to be: "Is the required maneuvering clearance permitted to include the knee and toe clearance at a lavatory?" In response, the Code Assistance Unit has said "No, the maneuvering space must be clear of the fixture and may not include the knee and toe clearance at the lavatory."

With the publication of the 2009 edition of ICC/ANSI A117.1, which is under review by the Department but has not yet been adopted, this response is affirmed. In fact, ICC/ANSI A117.1-2009 specifically prohibits including the knee and toe clearance in the maneuvering clearance.

Remember that ICC/ANSI A117.1-2009 cannot be cited because it has not been adopted. But, the clarification in the newly published standard confirms that the Department's response is correct. The clear floor space required at a fixture must remain clear and may not intrude on the knee and toe clearance at the lavatory.

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

Source: John Terry
Manager, Code Assistance Unit

HVAC Smoke Detectors and Detection Systems Signals

The Department has been receiving calls about code officials who are requiring all duct smoke detectors installed in accordance with the 2009 International Mechanical Code (IMC/2009) for heating, ventilation, or air-conditioning (HVAC) systems to be connected to fire alarm panels. In some cases, code officials are requiring the installation of a fire alarm panel. The applicable code section is Section 606.4.1 of the IMC/2009, entitled "Supervision," which does not require duct smoke detectors that are used as

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OPRA *Continued from page 1*

application" are exempt from disclosure under OPRA. The reason for this exemption is simple: OPRA requires that government records be provided to any citizen without requiring an explanation for why the records are wanted. That standard operates well for most of the records that we hold, but building plans are an exception to that general rule. Building plans contain details about building construction and also about security and safety systems that should not be available to just anyone upon request. This does not mean that no one should ever be able to view or obtain copies of building plans; it means that no one should be able to view or obtain copies of building plans *without a valid reason* for doing so. OPRA does not take into consideration the requestor's reason for requesting records; the common law right of access does consider the requestor's need for records.

Common Law Right of Access: Fortunately, OPRA states plainly that "nothing… shall be construed as limiting the common law right of access to a government record" (*N.J.S.A.* 47:1A-8). Under the common law right of access to a public record, the individual requesting the record submits a written request stating the reason for obtaining or viewing the record. If the explanation is reasonable, access to the public record is granted. For local code enforcement officials, when there is a question as to whether the explanation is reasonable, the municipal attorney should be consulted for advice. This path, the common law right of access, is the path to follow when a requestor wants to view or obtain copies of building plans.

Bulletin 03-3, Public Access to Building Plans: Bulletin 03-3 was intended to provide guidance to code enforcement officials with regard to OPRA and building plans. It appears that there are some cases in which the Bulletin itself has generated questions. Throughout the Bulletin, the references to "plans" should be read as "building plans." As its title suggests, the Bulletin was focused in its intent to provide guidance on the disclosure of building plans. The Division of Codes and Standards and the Government Records Council have committed to work together to revise Bulletin 03-3 to ensure that its guidance is clear and accurate in each particular circumstance.

Site Plans and Architectural Renderings: The Department holds that site plans are different from building plans and are public records that are subject to disclosure under OPRA. Bulletin 03-3, Public Access to Building Plans, states that "Members of the public should be given access to general information

See OPRA at right

OPRA *Continued from left*

such as elevations, site layout, architectural renderings, etc. This is the type of information that is filed with the planning board or zoning board of adjustment and that the entire community has a right to know."

From the questions that we have received, the Department believes that a significant portion of the requests to "see plans" in a local code enforcement office are actually requests to view the site plans for a specific project. The person asking is often a neighbor who has a concern that a project undertaken on an adjacent property could have an impact on their property. Where the request to "see plans" is really a site concern, access to the site plan can be offered under OPRA and is likely to satisfy the requestor.

In sum,

- **Building plans are protected from disclosure pursuant to OPRA; they may be requested through the common law right of access with a clearly stated reason for viewing the building plans;**
- **Site plans and architectural renderings are subject to disclosure through OPRA.**

If you have questions about OPRA, please contact the Government Records Council at (609) 292-6830. If you have questions about how the Division of Codes and Standards has responded to specific records requests, please contact Emily Templeton at etempleton@dca.state.nj.us or at (609) 984-7609. We look forward to providing you with additional information as it is available.

Sources: Edward M. Smith, Director, Division of Codes and Standards
Catherine Starghill, Esq., Executive Director, Government Records Council

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HVAC *Continued from page 3*

shutdown devices to be connected to fire alarm systems. When the 2009 International Building Code (IBC/2009) requires a fire alarm system, the duct detectors must be connected to the fire alarm panel. In that instance, the alarm condition needs to sound the notification devices within the building.

In the absence of a fire alarm system, Section 606.4.1 of the IMC/2009 requires only that the building have a supervisory signal, local-type alarm to alert occupants when the duct detector is activated. In this situation, the term "supervisory signal" is an alarm that sounds an audible and visible signal at an approved location. While

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the code requires the signal to go to a constantly-attended location, that location can be anywhere within the building that is normally occupied. The most common location for this alarm is near the thermostat control. The signal is not required to leave the building. Code officials cannot require the installation of an alarm system because the alarm is not attended when the building is not occupied.

As per the IMC/2009, the smoke detector is a shutdown device to prevent smoke spread from one area of the building to another. In accordance with the exception contained in Section 606.2 of the IMC/2009, if all of the HVAC units/air distribution systems are installed in the same room or space and no smoke spread is possible beyond the enclosed walls, no smoke detectors are required. Many of the activations have come from dust accumulation, not an active smoke condition. If every shutdown device were connected to an alarm system, there would be many more nuisance alarms. When the local alarm sounds in a building and there is no smoke, a certified fire alarm contractor or a licensed electrician can be called to find out what might have caused the activation of the smoke detector.

Remember, the requirement to monitor duct smoke detectors is based in the IMC/2009, not the IBC/2009. If there is a smoke condition in a building, it is likely that building occupants will know long before the smoke detector mounted in the return air duct activates.

If you have questions about this matter, I may be reached at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Energy Subcode Certificates

Section 401.3 of the 2009 International Energy Conservation Code (IECC/2009), entitled "Certificate," requires a permanent certificate to be posted on or in the electrical distribution panel in low-rise residential buildings. (This requirement is further defined in Uniform Construction Code (UCC) Bulletin 11-1). The IECC/2009 also states that the certificate must not cover or obstruct the visibility of the circuit directory label, service disconnect label, or other required labels.

The certificate must be completed by the builder or registered design professional and must list the applicable predominant building thermal envelope properties, along with the type and efficiencies of heating, cooling and service water heating equipment installed. In lieu of the certificate provided (see below),

See Certificates at right

Certificates *Continued from left*

a certificate from REScheck or NJ Energy Star Homes is acceptable.

As you can see, this certificate is designed for posting in the home; it is in addition to compliance calculations. I note this because, if REScheck is the chosen method of documenting compliance, a "Compliance Certificate" meets N.J.A.C. 5:23-2.15(f)1vi(1) and a "Panel Certificate" meets Section 401.3 of the IECC/2009.

In April 2011, Bulletin 11-1 was updated to reflect this information. The next UCC update package should include newly-revised Pages 1, 2, 5 and 6 (two pages, front and back) of this bulletin.

If you have any questions regarding this matter, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

NJ IECC/2009 Energy Efficiency Certificate for Low-rise Residential Dwellings*

Address:	Permit #:	
Insulation Rating (batt, spray, blown, continuous, other)	*R-value*	
Ceiling/Roof		
Above Grade Wall: framed__; mass__		
Floor: over unconditioned space__; slab__		
Crawlspace Wall		
Foundation/Basement Wall		
Ductwork (unconditioned spaces)		
Fenestration Rating	*U-factor*	*SHGC*
Window		
Skylight		
Door		

Heating & Cooling Equipment	*Type* (Oil, Gas, Electric, other)	*Efficiency* (AFUE, EER/SEER, HSPF, other)
Furnace		
Heatpump		
Boiler		
Cooling System		
Water Heater		
Other		

Renewables (type of system)
Other Energy Efficiency Equipment
Builder or Design Professional Certification
Name: Date:
Registration/License Number:
Comments

** This is a generic certificate and some items listed above may not be applicable to this specific design when initially constructed; please leave those items blank.*

Energy Subcode Blogging

Dear Energy Subcode,

As much as I would like to embrace your requirements, I am still confused about some key points. I was wondering if you could clear up the following for me: (1) the applicability of your multiple requirements, (2) walls above/below grade plane, and (3) subcategories within climate zones.

Sincerely,
Conservation Lover

Dear Conservation Lover,

As you know from reviewing Bulletin 11-1, the following low-rise residential buildings are required to meet the International Residential Code/2009 (IECC/2009): a one-family dwelling of any height; a two-family dwelling of any height; or a multiple family dwelling of three stories or less in height. This is rooted in the definitions of "Residential Building" in Chapter 2 of the IECC/2009 and also in "low-rise residential" in the ASHRAE Standard 90.1-2007 (ASHRAE 90.1-2007). This means that any building not described above is subject to ASHRAE 90.1-2007.

That being said, Question #1 must be broken up into two parts, 1(a) heating and cooling and 1(b) height of structure.

1(a) – Buildings and thermally-isolated spaces not conditioned (heated or cooled) are not required to meet the energy subcode.

For low-rise residential buildings, the IECC/2009 applies when a space within a building is conditioned using a peak design rate of energy usage equal to greater than 3.4 Btu/h • ft^2 or 1.0 watt/ft^2 of floor area. (Source: Section 101.5.2 and definition of "conditioned space.")

For all other buildings, ASHRAE 90.1-2007 applies and works somewhat differently. ASHRAE divides buildings into two major categories: conditioned and unconditioned. Again, unconditioned buildings are not required to comply with any energy conservation requirements. Under the broader heading of "conditioned" are cooled, heated and indirectly conditioned spaces. The first two are fairly obvious and the definitions in ASHRAE say how much heating or cooling makes a space heated or cooled. According to ASHRAE, a *cooled space* is an enclosed space within a building that is cooled by a cooling system whose sensible output capacity exceeds 5 Btu/h·ft2 of floor area. A *heated space* is an enclosed space within a building that is heated by a heating system whose output capacity relative to the floor area is greater than or equal to 15 Btu/h·ft^2.

Determining whether a space is indirectly conditioned (the third kind of conditioned space) is a bit trickier. It involves a calculation to determine whether the rate of heat transfer from any adjacent *conditioned* space to the *connected* (unconditioned) space is greater than the heat transfer rate from that connected space to the outdoors or to other unconditioned spaces. In other words, you have to calculate whether there is more heating or cooling coming into this space from adjacent heated or cooled spaces than what is being lost. The definition in ASHRAE gives the following formula for determining this: the product of the U-factor(s) and surface area(s) of the space adjacent to connected space(s) exceeds the combined sum of the product of the U-factor(s) and surface area(s) of the space adjoining the outdoors, unconditioned spaces, and to or from semi-heated spaces (e.g., corridors.) *Yeah, right!* There is a second part to the definition of indirectly conditioned space that does not involve doing the math. If the air from heated or cooled spaces is intentionally transferred (naturally or mechanically pushed) into the space at a rate exceeding 3 air changes per hour (ACH) (e.g., atria), it is considered an indirectly conditioned space.

ASHRAE also contains a third, hybrid category: semi-heated space. A *semi-heated space* is an enclosed space within a building that is heated by a heating system whose output capacity is greater than or equal to 3.4 Btu/h·ft^2 of floor area (as compared to greater than or equal to 15 Btu/h·ft^2 for a heated space.) It is not a conditioned space as defined above, but it does have some heat. A good example would be a warehouse space that has just enough heat to prevent the contents from freezing. Tables 5.5-4 and 5.5-5 in ASHRAE have a separate heading, with separate thermal envelope requirements, for semi-heated spaces. (Source: Definition of "space.")

1(b) – Once we know that the energy subcode is applicable (per "1(a)" above), we must decide which code within the energy subcode applies. One- and two-family dwellings of any height (including townhouses), attached or detached, follow the IECC/2009 for energy conservation regardless of whether the structural requirements are based on the International Building Code/2009 (IBC/2009) or International Residential Code/2009 (IRC/2009). The tricky part applies to multi-family buildings (three or more dwelling units) and the three-story limit between codes. Because multifamily dwellings (Group R-2) follow the IBC/2009, consulting the definitions in

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Blogging *Continued from page 6*

Chapter 2, we see that a "Story Above Grade" is defined as "any story having its finished floor surface entirely above grade plane, or in which the finished surface of the floor next above is: 1) more than 6 feet above grade plane or 2) more than 12 feet above the finished ground level at any point." Since there is no such thing as a ½ story per the IBC/2009, when there is a portion of a story on the fourth level that is a "story above grade," then the building would no longer follow the IECC/2009 for energy conservation and must now use ASHRAE 90.1-2007.

CAUTION, dear Conservation Lover, I am shifting gears on you now. The above discussion about stories above grade is used to determine the height of a residential building which goes to whether the building falls under the IECC or ASHRAE. I am moving (in 2. below) to walls above or below grade—we are now talking insulation requirements.

2 – If there is a question as to whether a wall is above or below grade, first the definitions in the IECC/2009 and ASHRAE 90.1-2007, as applicable, should be consulted. For example, when there is a basement with one wall that is considered above grade, the basement is treated as above grade even if the rest of the basement walls are considered below grade, as in a typical walk-out basement. Therefore, when the insulation provisions are applied, an above-grade wall (per the IECC/2009) is defined as "a wall more than 50 percent above grade and enclosing conditioned space. This includes between-floor spandrels, peripheral edges of floors, roof and basement knee walls, dormer walls, gable end walls, walls enclosing a mansard roof and skylight shafts." ASHRAE 90.1-2007 generally defines a *wall* as "that portion of the building envelope, including opaque area and fenestration, that is vertical or tilted at an angle of 60° from horizontal or greater. This includes above- and below grade walls, between floor spandrels, peripheral edges of floors, and foundation walls." This definition is further clarified as "(a) *above-grade wall*: a wall that is not a below-grade wall; (b) *below-grade wall*: that portion of a wall in the building."

3 – There are eight climate zones for the United States of America. New Jersey falls in two of these zones, 4 and 5. There are subcategories for some zones: Moist (A), Dry (B), and Marine (C). New Jersey is completely in the moist category. For low-rise residential buildings (IECC/2009), the subcategory is not all that important as Table 402.1.1 splits New Jersey into two simplified zones for the insulation and fenestration requirements by component. Similarly, in ASHRAE, the building envelope requirements of Tables 5.5-4 and 5.5-5

See Blogging at right

Blogging *Continued from left*

apply to all subcategories. Please note these tables are split into non-residential, residential (multifamily, 4 stories or greater) and semi-heated. However, the subcategories do become important, for example, when analyzing the need for an economizer per Table 6.5.1 in the prescriptive path. Here you will see that Zone 4A does not require an economizer but in Zone 5A, when the cooling capacity is greater than or equal to 135,000 Btu/h, an economizer is required.

In short, it is important to remember to apply the defined terms by the definitions per each code. As you can see, in some instances, it matters!

Sincerely,
Energy Subcode

Source: Rob Austin
Code Assistance Unit

Forced Circulation Coil-Type/Water-Tube Boilers: Low Water Cutoff Controls vs. Flow Sensing Devices

The Department has received questions about whether low water cutoff controls or flow sensing devices should be installed on forced circulation coil-type/water-tube boilers. This article is intended to provide guidance on the type of control or device that should be installed on coil-type/water-tube boilers.

Both the 2009 International Mechanical Code (IMC/2009) and 2009 International Residential Code (IRC/2009) have requirements for low water cutoff controls. Section 1007 of the IMC/2009, entitled "Boiler Low-Water Cutoff," and Section M2002.5 of the IRC/2009, entitled "Boiler low-water cutoff," require a low water cutoff control to be installed on all steam and hot water boilers. A low water cutoff is an essential control device designed to prevent boiler operation when the water level is too low.

However, low water cutoff controls are not appropriate for coil-type/water-tube boilers because the controls cannot detect flow and cannot prevent a coil-type/water-tube boiler from overheating when loss of circulation occurs. Therefore, flow sensing devices, which detect flow and verify that the boilers and systems contain appropriate amounts of water, should be installed in lieu of low water cutoff controls.

If you have any questions, I may be reached at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

New Jersey Code Adoptions -Elevator Safety Subcode

The following chart gives the adoption dates and the editions of the codes and standards used in connection with the Elevator Safety Subcode.

Edition Date for Building Subcode	Effective Date for Model Codes	BOCA Article Number for Elevators, Dumbwaiters, and Conveyor Equipment	ANSI A17 Safety Standard for Elevators and Escalators	ANSI A90.1 Safety Standard for Belt Manlifts	ASME A18.1 and A18.1a Safety Standard for Platform Lifts and Stairway Chairlifts
1975	01/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973	A90.1-1969	
1976/S	12/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1978	10/01/78	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1981	05/07/81	21	A17.1 - 1978	A90.1 - 1976	
1983/AS	02/22/83*	21	A17.1 - 1981	A90.1 - 1976	
1984	08/06/84	21	A17.1 - 1981; A17.1a - 1982	A90.1 - 1976	
1985/S	04/01/85	21	A17.1 - 1984	A90.1 - 1976	
1986/AS	09/22/86	21	A17.1 - 1984	A90.1 - 1976	
1987	04/01/87	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1988/S	06/20/88	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1989/AS	11/01/89	26	A17.1 - 1987	A90.1 - 1985	
1990	07/01/90	26	A17.1 - 1987	A90.1 - 1985	
1991/S	03/04/91	26	A17.1 - 1987		
1993	05/01/93	Chapter 30	A17.1 - 1990	A90.1 - 1985	
1996	07/06/98	Chapter 30	A17.1 - 1993 and 1994, 1995 Supplements	A90.1 - 1992	
IBC-2000 New Jersey Edition	05/05/03	Chapter 30	A17.1 - 1996 and 1997, 1998 Supplements	A90.1 - 1997	A18.1 - 1999 and A18.1a - 2001
IBC-2006 NJ Edition	02/20/07	Chapter 30	A17.1-(2004-2005), including A17.1.S-2005	A90.1-2003	A18.1-2003
IBC-2009 NJ Edition	09/07/10	Chapter 30	A17.1-2007	A90.1-2003	A18.1-2005

see Elevator Safety Subcode - page 9

Note:
The grace period is covered at N.J.A.C. 5:23-1.6(a).

1) Consult construction files to determine under which elevator or building code the permit was issued;
2) The following provides guidance on how to determine the applicable ASME A17.1 or ASME A90.1 codes (editions/supplements) when this information is not available for existing elevator devices. When performing cyclical inspections, if the permit — or installation — date precedes or is within the grace period, apply the code edition immediately preceding the adoption of the new subcode. Example: A permit was issued on May 15, 1987. If the construction file does not have the information about the edition of the standard used, then ANSI A17.1 - 1984 is enforced. If the permit was issued on November 16, 1987, ANSI A17.1 - 1984 with the 1985 supplement applies.

S = Supplement
AS = Accumulative Supplement
* = Operative date

If you have questions about the Elevator Safety Subcode, you may contact the Elevator Safety Unit at (609) 984-7833.

Source: Paulina Caploon
Elevator Safety Unit

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License Renewal for Child Day Care Centers and New Certificates of Occupancy

A number of questions have arisen with the withdrawal of FTO-8 and FTO-9. Some of these questions are: Must buildings that have been classified in accordance with a use group in conformance with either FTO-8 or FTO-9 be revised to the current group classification per the 2009 International Building Code (IBC/2009)? Is a new Certificate of Occupancy required for an existing child day care because the newer version of the code would classify it as a Group I-4 when one child younger than 2 ½ years of age is present? If a new Certificate of Occupancy is required, is the building required to comply with the provisions of the Rehabilitation Subcode of the Uniform Construction Code (UCC)?

No new Certificate of Occupancy is required. A new Certificate of Occupancy is not required when the building subcode is amended to adopt a newer edition of a national model code. The UCC is not a retrofit code, so a legal Certificate of Occupancy remains in effect until the building undergoes a reconstruction or a change of use. The withdrawal of FTO-8 and FTO-9 does not change this. Existing buildings that were in compliance with the FTOs, which were part of the UCC, continue to be in compliance with the UCC and there is no need for a new Certificate of Occupancy.

For licensure renewal for a child day care, a Certificate of Continued Occupancy (CCO) may be required. If the day care operator requests a CCO, then the required inspection must be performed pursuant to N.J.A.C. 5:23-2.23(e); a CCO may be issued upon compliance.

If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Residential Clothes Dryer Exhaust

The Department has received calls on two items pertaining to the requirements for residential clothes dryer exhaust as stated in the 2009 International Residential Code (IRC/2009).

The first item has to do with the maximum length of the exhaust duct from the connection to the transition duct from the dryer to the outlet terminal. Section M1502.4.4.1 of the IRC/2009, entitled "Specified length," states that the maximum length of the exhaust duct shall be 25 feet for electric clothes dryers. Section G2439.5.5.1 of the IRC/2009, entitled "Specified length," further states that the maximum length of the exhaust duct shall be 35 feet for gas clothes dryers. Confusion has arisen because both the 2009 International Mechanical Code (IMC/2009) and 2009 International Fuel Gas Code (IFGC/2009) each state that the maximum length of exhaust ducts for clothes dryers, whether electric or gas, shall be 35 feet. This is not a mistake and is not a contradiction. For an electric clothes dryer that is regulated by the IRC/2009, the maximum length of the exhaust duct shall be 25 feet in conformance with Section M1502.4.4.1 of the IRC/2009.

However, Section M1502.4.4.2, entitled "Manufacturer's instructions," and Section G2439.5.5.2

See Dryer Exhaust at right

Dryer Exhaust *continued from left*

of the IRC/2009, entitled "Manufacturer's instructions," both state that the size and maximum length of the exhaust duct shall be determined by the manufacturer's installation instructions. If the manufacturer's installation instructions specify a maximum length for the exhaust duct that is more restrictive than the applicable code section, then the more restrictive length applies. The converse is also true. If the manufacturer's installation instructions specify a maximum length for the exhaust duct that is greater than the length specified by the applicable code section, then the manufacturer's installation instructions must be followed.

The second item has to do with the termination location for exhaust ducts. Section G2439.1 of the IRC/2009, entitled "Installation," states that clothes dryers shall be exhausted in accordance with the manufacturer's instructions. Section M1502.3 of the IRC/2009, entitled "Duct termination," states that if the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than three feet in any direction from openings into buildings. Therefore, if the manufacturer's installation instructions do not specify an exhaust duct termination, Section M1502.3 of the IRC/2009 applies.

If you have any questions, I may be reached at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

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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.

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Volume 23, Number 3 Fall 2011

Dormitories and the Barrier Free Subcode

Some facilities of higher education are initiating the construction of new undergraduate dormitories and new graduate student housing. With regard to providing accessibility for students with disabilities, higher education facilities must comply with both the Barrier Free Subcode (BFSC) and the Americans with Disabilities Act (ADA). It has come to our attention that the ADA/2010 has a new section in which it addresses "graduate student or faculty housing leased on a year-round basis and without any common use areas available for educational programming" (ADA/2010, Section 233). Because the ADA is specific in its requirements for leased housing for graduate students and faculty, questions have arisen about the requirements of the BFSC for graduate student housing.

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Group Home Fire Sprinkler Requirements Group R or Group I

The Department of Community Affairs and the Department of Human Services met recently to complete a review of fire suppression system requirements as they apply to homes licensed under N.J.A.C.10:44A, Standards for Community Residences for Individuals with Developmental Disabilities, and N.J.A.C. 10:37, Standards for Community Mental Health Services Regulations. This review resulted in the determination that a NFPA 13D fire sprinkler system may be installed in licensed community homes with five or fewer persons, one or more of whom cannot evacuate in three minutes or less.

See Group Homes - page 2

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Group Homes *continued from page 1*

This determination is based on the following:

1. Homes with five or fewer residents.

The definition of Group I-1 from the Building Subcode of the Uniform Construction Code (N.J.A.C. 5:23-3.14(b)) follows.

308.2 Group I-1

This occupancy shall include buildings, structures or parts thereof housing more than 5 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services. The occupants are capable of slow evacuation in an emergency situation without physical assistance from staff. For the purpose of applying this provision, slow evacuation shall mean the movement of all occupants, residents and staff to an exit in more than three minutes, but not more than 13 minutes. This group shall include, but not be limited to, the following:

Alcohol and drug abuse centers
Assisted living facilities
Boarding houses
Congregate care facilities
Convalescent facilities
Group homes
Halfway houses
Social rehabilitation facilities

A facility such as the above with five or fewer persons shall be classified as a Group R-3 in accordance with the building subcode (N.J.A.C. 5:23-3.14) or shall comply with the one- and two family dwelling subcode (N.J.A.C. 5:23-3.21).

In sum, a home with up to five residents, one or more of whom is not capable of evacuating in less than three minutes, is Group R-3; a NFPA 13D sprinkler system may be installed.

2. Homes with more than five residents who cannot self-evacuate.

Residential group homes housing more than five persons with any occupant who is not able to evacuate in emergency situations without physical assistance from staff are classified as Group I-1. These homes are required to install NFPA 13R fire sprinkler systems in accordance with the building subcode. A contracted provider/housing developer can apply for a variation from the building subcode to apply the provisions of the unamended International Building Code (IBC)/2009. The variation would allow the installation of a NFPA 13D fire sprinkler system in accordance with IBC/2009, Section 903.2.6 (unamended), which allows this type of system for Group I-1 facilities.

See Group Homes - page 4

Soil Conservation Prior Approvals for Projects Involving Demolition

At N.J.S.A. 4:24-41(g), the Soil Erosion and Sediment Control Act defines "Project" as “any disturbance of more than 5,000 square feet of the surface area of land (1) for the accommodation of construction for which the State Uniform Construction Code would require a construction permit, except that the construction of a single-family dwelling unit shall not be deemed a "project" under this act unless such unit is part of a proposed subdivision, site plan, conditional use, zoning variance, planned development or construction permit application involving two or more such single-family dwelling units, (2) for the demolition of one or more structures, (3) for the construction of a parking lot, (4) for the construction of a public facility, (5) for the operation of any mining or quarrying activity, or (6) for the clearing or grading of any land for other than agricultural or horticultural purposes.”

Therefore, if the project requires a permit through the Uniform Construction Code (UCC) *and* the soil disturbance meets the definition of “project” given above, a prior approval by the Soil Conservation District is required. The problem is that some local code officials have not been properly classifying the work as a demolition project and, therefore, are concluding incorrectly that no soil conservation approval is required.

For example, a UCC demolition permit is not required for the partial demolition of the exterior of a building or structure because that work is categorized as alteration or reconstruction work according to the Rehabilitation Subcode. However, if the project will cause the disturbance of more than 5,000 square feet of soil, the partial demolition falls within the parameters of N.J.S.A. 4:24-41(g), and a soil conservation prior approval is required before a UCC permit can be issued.

As you can see, it does not make any difference whether the project is an alteration, reconstruction, or demolition. Quite simply, when more than 5,000 square feet of soil is disturbed, the project falls within the parameters of N.J.S.A. 4:24-41(g) and a soil conservation prior approval is required before the issuance of a UCC permit.

If you have any questions on this, please direct your calls to me at (609) 984-7609 or to the appropriate County Soil Conservation District listed in Bulletin 91-2, Compliance with Requirements of the Soil Erosion and Sediment Control Act.

Source: Marcel Iglesias
Code Assistance Unit

Dormitories *continued from page 1*

CURRENT BARRIER FREE SUBCODE: The BFSC does not draw a distinction between housing provided for undergraduate students and housing provided for graduate students. At N.J.A.C. 5:23-7.5(f), the BFSC has a clear standard for dormitories: 5% accessible and 95% adaptable rooms/suites. As with the scoping requirements for other kinds of accessible housing, whether elevator service is provided affects the total number of accessible or adaptable dwelling units. Where an elevator is provided, 5% of the total dwelling units/rooms/suites must be accessible and 95% must be adaptable. Where no elevator service is provided, 5% of the ground floor dwelling units/rooms/suites must be accessible and 95% of the ground floor dwelling units/rooms/suites must be adaptable.

Because the ADA/2010 is specific with regard to multifamily graduate student housing that is leased on an annual basis, questions have arisen as to the applicability of the BFSC to housing being constructed for graduate students or faculty. In advance of revising the BFSC for clarity, this article is intended to stand as a statement of the Department's position on the accessibility requirements for these projects and to provide the reasoning behind that position.

ADA 2010—Graduate Student/Faculty Housing: The ADA/2010 requires compliance with Sections 233 and 809 of 2010 ADA standards for "apartments or townhouses that are provided on/behalf of a place of higher education." Section 809 contains the specific requirements for accessibility within the residential unit—accessible route, bathrooms, communication features, etc. It does not address scoping and, therefore, is not the subject of this review. Section 233 contains the scoping provisions. At 233.3.1, Minimum number, new construction, 5% of the residential units ("graduate student housing leased on a year-round basis and without any common use areas available for educational programming") are required to be accessible (which means that they must comply with Section 809).

OTHER LAWS (BFSC and FHA): In guidance provided in its technical assistance manual, the Department of Justice states that it is possible for a residential unit to be subject to both Title II (State and Local Government) and Title III (public accommodations and commercial facilities) and that "the standard that provides the highest degree of access to individuals with disabilities" applies. It is reasonable to conclude that this reasoning also applies to other laws—the Federal Fair Housing Amendments Act and the BFSC. (NOTE: Because the BFSC has been amended to reflect the requirements of the Federal Fair Housing Amendments Act, this discussion focuses on the BFSC only.)

Following the line of reasoning that a graduate student housing construction project is subject to more than one law, once the 5% accessible requirements of the ADA have been met, a review must be conducted to determine whether other laws might apply. If it is found that other laws do apply, it must be determined whether those laws have requirements that are more stringent than those of the ADA. In New Jersey, this review would involve the BFSC and its application to the balance of the residential units. In multifamily residences with four or more units in a single structure, the BFSC requires adaptability of ground floor dwelling units in non-elevator-serviced buildings and of all units in elevator-serviced buildings. Thus, in buildings with four or more dwelling units in a single structure, the 95% of the units that are not required to be accessible would be required to be adaptable—because, when conducting a stringency test, adaptability is more stringent than no requirement at all. As with other multifamily designs, where elevator service is provided, 95% of the dwelling units/rooms/suites would be adaptable. Where no elevator service is provided, 95% of the ground floor dwelling units would be required to be adaptable.

On the other hand, if the graduate student housing consists of otherwise exempt building designs (single-family detached, townhouses, or buildings with three or fewer dwelling units in a single structure), 5% of the dwelling units would be required to be accessible; none would be required to be adaptable.

IN SUM: If the buildings constructed as "graduate student housing leased on a year-round basis and without any common use areas available for educational programming" are townhouses or another exempt housing design, they must be 5% accessible only. No adaptable units are required.

Where there are four or more dwelling units in a single structure, multistory dwelling units and single story dwelling units (flats) must be 5% accessible. An elevator is not required, but when an elevator is provided, 95% of the remaining dwelling units in the elevator-serviced building must be adaptable. When no elevator is provided, 95% of the ground floor dwelling units, including the entry level of multistory dwelling units, must be adaptable.

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

Source: Emily W. Templeton
Division of Codes and Standards

Group Homes *continued from page 2*

Each variation request must be accompanied by a rationale. The following are the New Jersey Uniform Construction Code variation criteria that must be followed.
N.J.A.C. 5:23-2.9 *Variations and exceptions*

(a) No variations or exceptions from the requirements of any subcode of these regulations may be made, except upon the following findings:

1. That strict compliance with any specific subcode provision, if required, would result in practical difficulty to such owner; and

2. That the exception, if granted, will not jeopardize the health, safety and welfare of intended occupants and the public generally.

(b) Except as may be otherwise specified in this chapter, no variations shall be granted from any of the requirements of N.J.A.C. 5:23-2, 4 or 5.

In this case, the Department regards allowing compliance with Section 903.2.6 (unamended) as reasonable. However, the decision regarding an application for a variation rests with the local enforcing agency, not with the Department. A denial may be appealed to the Construction Board of Appeals.

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

License Number for Alarm Contractor is Required!

Just a quick reminder that, as with licensed electrical, plumbing, home improvement, fire alarm, and suppression contractors, the name and license number of the contractor installing burglar alarms, fire alarms, or electronic security devices MUST appear on the construction permit application.

The Department of Community Affairs has received a complaint from the Director of the Division of Consumer Affairs about the lack of compliance with the licensing laws. As code officials, we are the front line of enforcement for many of the licensing laws in the State.

As a reminder, the applicant is required to fill out the forms completely!

Source: John N. Terry
Code Assistance Unit

Read-only Link to National Fire Protection Codes and Standards

The below link is being provided through a new National Fire Protection Association (NFPA) initiative to offer public access to NFPA codes and standards. After signing in and receiving a validation email, code users will be able to view the NFPA standards referenced in the International Codes Council codes adopted as part of the State's Uniform Construction Code.

Instructions:

1. Click on the link below or a link is also provided on the Division of Codes and Standards webpage at http://www.nj.gov/dca/divisions/codes/codreg/

   http://www.nfpa.org/itemDetail.asp?cateforyID=279&itemID=18123&order_src=C800

2. Click on **"View the list of NFPA's codes and standards"** under the title **"To review NFPA's codes and standards online:"**

3. Click on the NFPA code or standard you wish to view.

4. Select the currently referenced edition by clicking on the drop down arrow next to the **"Edition to display"** at the top of the page.

5. Click on **"View the** (edition you selected in step 4) **edition online"** under the title **"View the document online (read only)".** After agreeing to the terms, start viewing the document. If you are a first time user, you must enter your email address and a password before you can proceed. In some cases you may need to click on **"Create an account"** and follow the prompts.

6. NFPA will send you an email validation message from verify@nfpa.org. Please make sure that your email provider is not blocking this address as spam.

7. Once you receive the validation email, just click on **"click here"** to validate your email address and

See NFPA Link - page 6

Water-powered Sump Pumps –Backflow Preventer

With the many storms we have been having that involve the loss of electrical power, this office has been receiving many calls about what type of backflow preventer is required on the water supply to the new type of water-powered back-up sump pumps.

Manufacturers recommend that a water- powered sump pump be used as a backup sump pump for the primary electric sump pump. The discharge from the water-powered sump pump must discharge to the outdoors. Manufacturers state that the discharge not be connected to the discharge from the main pump. It will cause the main pump to send water back into the pit and a spill from the backflow preventer will occur.

Since these pumps could be subject to a back siphon condition, a proper backflow preventer must be installed on the water supply to the pump. Not knowing what might enter the sump pit, a reduced pressure zone backflow preventer is the proper backflow preventer to use.

This could conflict with some of the manufacturer's recommendations which only require an atmospheric vacuum breaker. In that case, the Uniform Construction Code (UCC) would override the manufacturer's instructions. Check to be sure that the ejector pump is not set into the sump pit. These units are not made to be submerged.

Finally, a plumbing technical section is required for the installation of this system. It is very important to ensure that the proper backflow preventer is installed and that the pump discharge is not connected to the primary sump pump discharge piping. Connection to the primary pump discharge would be a violation of the manufacturer's installation instructions.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Commercial Kitchen Exhaust Hoods, Alarms Required?

Questions have been coming in recently about when hood suppression systems are required to have alarm devices installed. Apparently some code officials have required contractors to install a local horn and strobe device when a hood requires a suppression system. The horn/strobe device has been required to activate upon discharge of the hood suppression system even though there is no fire alarm system installed in the building. This is incorrect. Although subsection 904.3.4, Alarms and warning signs, and subsection 904.3.5, Monitoring, have been cited by code official, these sections only require that automatic fire extinguishing systems be monitored when the occupancy is required to have a fire alarm system.

The requirement to monitor the activation of a hood system comes from the International Building Code (IBC)/2009 New Jersey edition, specifically Section 904.3.5, Monitoring. This section does not require an additional horn or strobe to be installed when no fire alarm system is required; in fact, it requires the monitoring of hood suppression systems only when a fire alarm system is otherwise required to be installed in the building.

The IBC/2009 provides for the building fire alarm system to monitor the activation of the kitchen hood extinguishing system. To accomplish this, the monitoring system would need to activate a required fire alarm system in accordance with Section 907, Fire Alarm and Detection Systems. When no fire alarm system is required, no additional alarm devices are required.

In closing, as a reminder: To verify proper operation, all required tests and inspections must be conducted in accordance with National Fire Protection Association (NFPA) 72, and the IBC/2009, Section 904.4, Inspection and Testing, and Section 907, Fire Alarm and Detection Systems.

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Refrigerant –Locking Access Port Caps

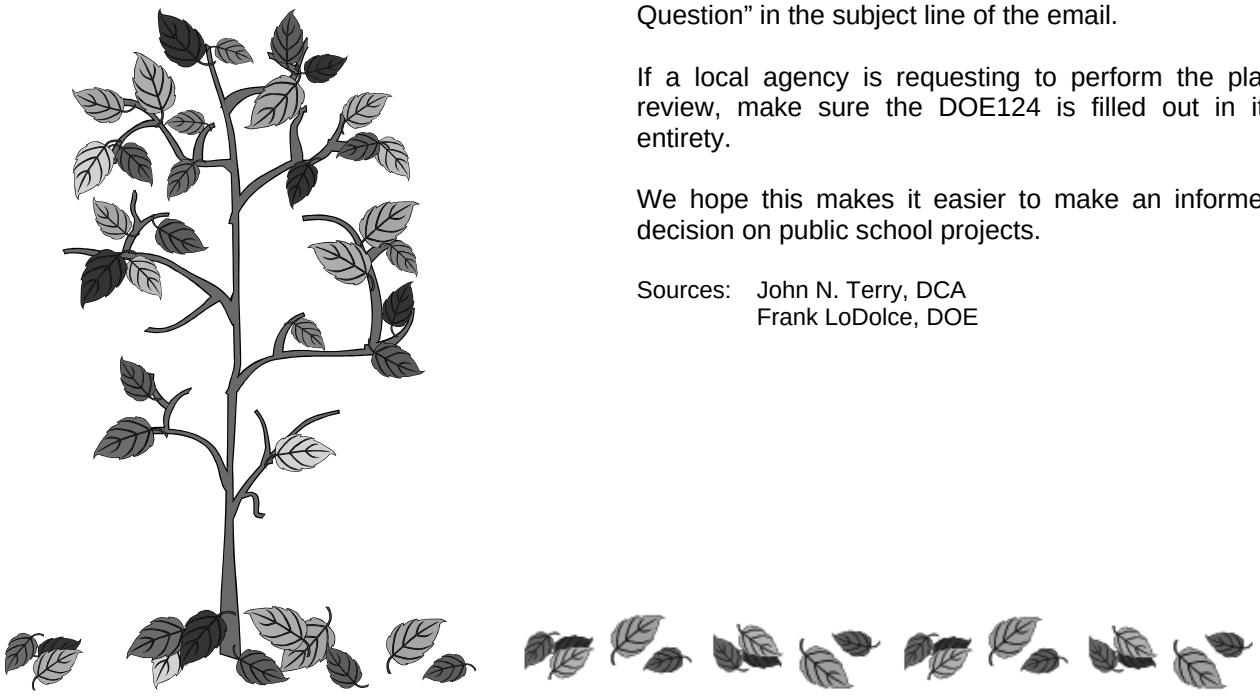
This article is to bring to your attention, a new requirement with the adoption of the International Mechanical Code (IMC)/2009 and International Residential Code (IRC)/2009: Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps. IMC Section 1101.10 Locking access port caps, and IRC Section M1411.6 Locking access port caps, states: "refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps."

Condensing units or heat pump units are typically located outdoors and that are equipped with access ports on the vapor and liquid refrigerant lines are required to be fitted with locking-type tamper-resistant caps. This would include all newly installed and replacement equipment. The access ports allow the connection of diagnostic gauges and to allow refrigerant to be added to or taken from the unit during servicing.

This article is to alert you that, during an inspection, the inspector must make sure that these locking-type caps are installed. If they are not, the equipment/lines will fail inspection.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit



NFPA Link *continued from page 4*

start using the free read only edition of this code or standard. If the standard does not open, have someone check your computer for the required program to read the document.

If you have any problems or questions about this service please call (609) 984-7609, ask for Code Assistance, and someone will help.

Source: Michael E. Whalen
Code Assistance Unit

Department of Education Approval for School Projects

Do I really need Department of Education (DOE) approval for that school project? This is a recurring question that code officials ask when school administrators bring projects directly to their offices. Now, there is a very simple way to get an answer. (No, don't call the Department of Community Affairs!) Go directly to the source, Frank LoDolce at DOE.

The process is quite easy. Simply email Mr. LoDolce at frank.lodolce@doe.state.nj.us, provide him with the details of the project, and he will let you know whether DOE review and approval is required. To receive a prompt response, make sure you put "EA Review Question" in the subject line of the email.

If a local agency is requesting to perform the plan review, make sure the DOE124 is filled out in its entirety.

We hope this makes it easier to make an informed decision on public school projects.

Sources: John N. Terry, DCA
Frank LoDolce, DOE

Kitchen Remodeling Projects

The Department has been receiving questions on the enforcement of code requirements in kitchen remodeling or renovation projects. Some of the most frequently asked questions revolve around determining the category of work; others are concerned with permit requirements and code compliance when the work is ordinary maintenance. In this article, we will try to answer some of the most common questions as they have been asked of us.

Question 1: Bulletin 94-3 states that the installation of new and/or replacement cabinets does not need a permit and that only electrical or plumbing work requires permits. There is a discrepancy in this requirement in the categorization of the replacement or installation of cabinets as ordinary maintenance. N.J.A.C. 5:23-2.7(c)1vi refers to the replacement of a cabinet, which is singular, as in one cabinet, and only replacement, not the addition of new cabinets.
RESPONSE: The text states: "The repair or replacement of any non-structural member such as a partition railing or kitchen cabinet." "Any… kitchen cabinet" can mean one -- or more than one -- kitchen cabinet, so there is no discrepancy.

Question 2: N.J.A.C. 5:23-2.7(c)1ii refers to "repair or replacement of 25% or more of interior finishes in any one room." The vast majority of kitchen cabinets replacements involve more than 25% of wall surfaces in the kitchen. Cabinetry is part of the interior finishes of a kitchen since they are permanently attached to the wall, they are not furniture or furnishings and are much more involved than installing paneling for which a permit is required. This should require a Building Technical Section for verification of compliance with N.J.A.C. 5:23-6.8 for materials, methods and attachment, especially for the upper cabinets.
RESPONSE: Because kitchen cabinets are not interior finishes, the 25% limitation does not apply to them.

Question 3: N.J.A.C. 5:23-2.7(b)4 and 5 refer to ordinary maintenance that "does not affect fire safety.. [and] does not increase non-conformity with the regulations." In Section 1901, the International Residential Code (IRC)/2009, as adopted at N.J.A.C. 5:23-3.21, references clearances to combustibles above ranges and cooking appliances. At N.J.A.C. 5:23-3.4, the plan review and inspection responsibilities are assigned to the Fire Subcode Official. This clearly indicates the need for a Fire Technical Section to review and inspect for compliance with this regulation with regard to fire-related issues.
RESPONSE: Within the framework of the Uniform Construction Code (UCC), there is a distinction between requiring a construction permit and code compliance. Although a permit is not always required, the code requirements always apply. It is not unusual for code requirements to be associated with "ordinary maintenance" items. For example, the replacement of glazing in the side-light of a door is ordinary maintenance and therefore, no permit, inspection, or notice to the enforcing agency is required. However, the UCC requires that the glazing being installed be safety glazing. Regardless of whether a construction permit is required, the project must comply with the UCC. The same holds true for the clearances to combustibles above ranges and cooktops—a construction permit is not required, so a technical section is not required, but the code provisions do apply.

Question 4: N.J.A.C. 5:23-2.17A(c)1ii refers to requiring a minor work permit for "renovation provided no primary structures are altered and the project is not a reconstruction." A kitchen is, by definition, a renovation project and possibly even a reconstruction, since it usually takes from 1 to 4 weeks to do the project and the room, in some cases, cannot be used or occupied during the progress of work. This puts most kitchen renovations, at the very least, in the scope of minor work and, in some cases, a major project. *Very few* kitchen projects are replacement of cabinets only.
RESPONSE: Reconstruction, by definition, is work that is so extensive that it not only encompasses the entire primary function space, use group, or tenancy, but also requires a new certificate of occupancy. Therefore, remodeling a kitchen <u>is never</u> a reconstruction project. We agree that a kitchen remodeling project can be, and often is, minor work. As a reminder, in a kitchen remodeling project, the cabinets would be exempt from the permit; only work that requires a permit should be included in the permit application and in the calculation of the fee.

One of the most basic, foundational ideas of the UCC is that its requirements be predictable; another is that its enforcement be uniform. Questions should be directed to the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit



Vapor Retarders

The requirements --and the exceptions--for vapor retarders in the International Residential Code (IRC)/2006 have been distributed throughout the text of IRC/2009 regarding the building thermal envelope. The Department has received many questions on the application and installation of vapor retarders, so, in this article, we are providing the IRC/2006 text, footnoted, to help you find the requirements in the IRC/2009; keep in mind that climate zone 4 is exempt for framed assemblies, so the following applies to climate zone 5, unless otherwise noted.

IRC/2006

R318.1 Moisture control.

In all framed walls[a], floors[b] and roof/ceilings[c] comprising elements of the building thermal envelope, a vapor retarder shall be installed on the warm- in-winter side of the insulation.

Exceptions:

1. In construction where moisture or freezing will not damage the materials.
2. Where the framed cavity or space is ventilated to allow moisture to escape.
3. In counties identified as in climate zones 1 through 4.

IRC/2009

a – R601.3, General wall construction

b – R408.1 and R408.2, Naturally ventilated under-floor spaces; R408.3, Unvented under-floor spaces; R506.2.3, Concrete floors on ground (*not a framed assembly and contains its own exceptions*)

c – R806.4, Unvented attic assemblies

The term "vapor retarder," is included in the following sections of the IRC/2009, but not necessarily for the building thermal envelope:

- R202 – Definitions
  * Roof assembly
  * Vapor retarder class
- R302.10.1 – Flame spread index and smoke developed index for insulation
- R317.1, item #7 – Protection of wood and wood based products against decay
- R405.2.2 – Wood Foundations
- R611.9.1.2, exception – Removal of stay-in-place form material at bolts (for connections between concrete walls and light-framed floor, ceiling and roof systems)
- R702.3.8 – Water-resistant gypsum backing board (for interior wall coverings)
- M1601.3 – Duct insulation materials
- M1601.4.5 – Duct insulation

If you have questions, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

See Vapor Retarders -continued at right

Smoke Alarms and Additions

The Department has been receiving inquiries about whether low voltage smoke detection systems can be installed or extended during rehabilitation work; the question specifically focuses on addition to a detached single family dwelling or a one- or two-family dwelling of Group R-3 or R-5.

N.J.A.C. 5:23-6.32(f)1 of the Uniform Construction Code (UCC) requires that smoke alarms that comply with the building subcode or one-or two-family dwelling subcode, as applicable, be installed throughout the addition and the existing building when the cumulative area of all floors of the addition(s) is 25 percent or more of the floor area of the largest floor of the existing building. At N.J.A.C. 5:23-6.32(f)2, the UCC requires that smoke alarms be installed on each level of the dwelling when the cumulative area of all floors of the addition(s) is at least five percent, but less than 25 percent, of the floor area of the largest floor of the existing building. When the addition is less than five percent (5%), the provisions of the rehabilitation subcode at N.J.A.C. 5:23-6.4(f) apply. Smoke alarms may be battery-powered. They must be installed or maintained on each level of the dwelling and outside the immediate vicinity of the bedrooms.

So what does this mean for smoke alarms? When additions to dwellings are constructed that meet the thresholds of the above sections, smoke alarms are required to be installed. The smoke alarms can either be hardwired, interconnected smoke alarms with battery back-up or smoke alarms meeting the requirements of Section R314, Smoke alarms, of the one- and two-family dwelling subcode. The International Codes Council (ICC) modified Section R314 to allow household fire alarm systems that are installed in accordance with National Fire Protection Association (NFPA) 72, National Fire Alarm Code, and the requirements of this new subsection, including Section R314.2, which requires that the detection system become a permanent fixture of the occupancy, owned by the homeowner, monitored by an approved supervising station, and maintained in accordance with NFPA72.

When a contractor builds an addition to an existing dwelling and there is an existing low voltage smoke detection system, the existing low voltage system may be extended as long as a qualified contractor verifies that the conditions specified in Section R314.2 have been met. When a homeowner performs his/her own

See Smoke Alarms - page 9

Smoke Alarms *continued from page 8*

work, the homeowner must provide a written statement from the monitoring and service company that the conditions in Section R314.2 have been met.

Section R314.2 also requires that the household fire alarm system provide the same level of smoke detection and alarm as required by Section R314 for smoke alarms. So, a low voltage detection system may be approved as long as there is documentation that it complies with Section R314.2. A homeowner is not required to install a separate hardwired A/C supplied, interconnected smoke alarm system with battery back-up if the low voltage system meets the requirements of Section R314.2. Furthermore, a variation is no longer needed.

Please contact me if you have any questions; I can be reached at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Ductwork and the Energy Subcode

In the International Energy Conservation Code (IECC)/2009, Section 403.2, Ducts, has been modified and expanded from the IECC/2006 for ductwork insulation and sealing. For your information and convenience, the changes follow.

Insulation: This is a minor change. Section 403.2.1 now requires supply ducts in attics to be insulated to a minimum of R-8 when outside the building thermal envelope, and all other ducts outside the building thermal envelope, to a minimum of R-6. The obvious exception to this is when ducts or portions thereof are located completely inside the building thermal envelope.

Sealing: As before, Section 403.2.2 requires that all ducts, air handlers, filter boxes and building cavities used as ducts be sealed and that joints and seams comply with Section M1601.4.1, Joints and seams, of the International Residential Code (IRC)/2009. This reference ensures that joints of duct systems are made substantially airtight by means of tapes, mastics, liquid sealants, gasketing, or other approved closure systems, including UL 181 tapes per duct type.

These changes are minor; the bigger change is this: ***Starting January 1, 2013*****,** duct tightness must be verified by a leakage test unless the air handler and all ducts are located within conditioned space. The

See Ductwork -continued at right

Playground Equipment

The Department has recently received inquiries about when foundations drawings for playground equipment are required to be signed and sealed by a design professional.

N.J.A.C. 5:23-7.16 of the Barrier Free Subcode states that the construction of recreational equipment *may* require a construction permit, if so determined by the building subcode official.

If the building subcode requires a construction permit, plans for the foundation may or may not be required depending on the recreational structure. The decision as to whether plans are required lies with the building subcode official. Some structures could be considered "work of minor nature" as per N.J.A.C. 523-2.15(f)1x, in which case, plans would not be required. Large, complex structures might need footings and, due to the size or complexity, the building subcode official might need to review plans to ensure the stability of the structure.

If the building subcode official requires plans, they must be signed and sealed by a design professional. The only exception to the requirement for plans that are signed and sealed by a design professional is for a single family home owner who has prepared his or her own plans for the construction of a detached structure used or intended to be used exclusively as his or her private residence.

If you have any questions, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Ductwork *continued from left*

permit holder may have the test conducted either post-construction or during rough-in; the timing of this test is the permit holder's choice. The benefit to a post-construction test is that the standard for passing is less stringent than is the standard for a rough-in test. The benefit to a rough-in test is that the ductwork should be much more accessible to fix if the work fails the test. A copy of the test results will be part of the permit file. The IECC/2009 establishes no credentials for persons performing this test.

Again for your convenience, the standards for passing follow:

* Postconstruction test -- Leakage to outdoors is to be less than or equal to 8 cfm per 100 ft^2 of

See Ductwork - page 12

Hotels/Motels and the Rehabilitation Subcode

It has come to the attention of the Division that some rehabilitation projects in hotels and motels are not well-understood and are being misclassified. Hotels and motels are unique in that rehabilitation projects are routinely undertaken—guest rooms are taken out of service to be altered or upgraded and, over time, all rooms undergo rehabilitation.

As an example, the classification of a project in which all the guest rooms are rehabilitated at one time is clear: it is a reconstruction project. In this case, the primary function of building (transient lodging) has ceased. The work involves a primary function space (guest rooms). Even when the work is limited to removing and replacing all the sheetrock and plumbing fixtures within the guest rooms (renovation) and does not include reconfiguring the guest rooms (alteration), this is classified as a reconstruction project.

As a reminder, a reconstruction project consists of "repairs, renovations, alterations or any combination thereof in a building which results in the entire use, primary function space or tenancy not being able to be occupied while the work is in progress and in which a new Certificate of Occupancy is required prior to re-occupying." (N.J.A.C. 5:23-6.3)

Referring to the definition above, when the work involves the entire use or primary function space, the space cannot be occupied while the work is taking place, and a new Certificate of Occupancy (CO) is required, the project is a reconstruction project. It is critical to remember that the basic and supplemental requirements of the Rehabilitation Subcode apply to reconstruction projects.

However, most of the time, all the guest rooms in a hotel or motel are not rehabilitated at one time. It is more common for some rooms to be rehabilitated at one time and for all rooms to have been rehabilitated over a period of time. Remember, the Rehabilitation Subcode provides for projects undertaken over time. In fact, when classifying a project, all work begun within a single 12-month period is counted (N.J.A.C. 5:23-6.10(b)2). So, even when a project is phased, it can still be classified as a reconstruction project. To make sure that the work is classified correctly, the construction official should ask the agent of record and/or design professional named on the construction project application to identify in writing the full extent of work at the completion of a phased or long-term project.

See Hotels/Motels - page 11

REScheck Assumptions 

As they say, the information provided is only as good as the user who provided it! That being said, how many of you really know how REScheck "works"? Well, the creators of REScheck (Pacific Northwest National Laboratories) include "Help" within the program itself. The "Help" function is in the same row as the "File" menu. Scroll the cursor to "Help." A drop down menu will appear; select "Help Topics". The topics provided help a user become more familiar with REScheck and also help the user find out what the program assumes when the user inputs information.

Since "Wall Software Inputs" seem to cause the most questions, for your convenience, they are provided below.

Wall Software Inputs

- Gross Area - Enter the gross area of the wall component in the *Gross Area* field. The gross wall area includes the area of all windows and doors within the wall. You must link the wall to the windows and doors within that wall by using the tree on the left side of the *Envelope* screen. To link a window or door to a wall, drag the window or door label on the tree to the wall label and release the mouse. The gross wall area also includes the peripheral edges of floors (the area of the band joist and subfloor between floors).

- The gross area of any one wall of a conditioned basement with an average depth less than 50% below grade should be entered as a wall (not as a basement). In this case, the gross wall area includes the below-grade portion of the wall as well as the areas of doors and windows within those walls.

- Cavity Insulation R-Value - Enter the R-value of any insulation to be installed in the cavities between above-grade wall structural members. The insulating values of other parts of the building assembly (e.g., gypsum board and air films) are accounted for by the program and should not be included.

- Continuous Insulation R-Value - Enter the R-value of any continuous insulation in the above-grade wall. Continuous insulation is continuous over framing members or furring strips and is free of significant thermal bridging. The R-values of other parts of the

See REScheck - page 11

REScheck *continued from page 10*

building assembly (e.g., gypsum board and air films) are accounted for by the program and should not be entered. Insulating sheathing installed on the exterior of above-grade walls is an example of continuous insulation. For structural insulated panels and insulated concrete forms, enter the manufacturer-reported R-value for the entire assembly. Continuous insulation on wood-framed walls is assumed to cover 100% of the wall area. If the continuous insulation does not cover the entire wall or the continuous insulation has variable R-value ratings across the wall, create separate wall assemblies for each distinct R-value rating.

- Assembly U-Factor - If you have selected the *Other* wall type, enter the overall U-factor of the above-grade wall assembly including exterior and interior air films. Building departments may require supporting documentation for assemblies entered using the *Other* wall type and *U-Factor* field.

REScheck may be downloaded from www.energycodes.gov.

If you have questions, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Hotels/Motels *continued from page 10*

Properly classifying rehabilitation projects as reconstruction is especially important in buildings that were built prior to the Uniform Construction Code (UCC). Reconstruction projects are required to comply with the basic and supplemental requirements of the Rehabilitation Subcode (N.J.A.C. 5:23-6.7(i) and (j)). The basic and supplemental requirements are drawn from Subchapter 4 of the Uniform Fire Code (UFC), so that compliance with them results in compliance with the UFC's retrofit requirements in Subchapter 4 (N.J.A.C. 5:70-4).

Proper classification of reconstruction projects means that, when classifying an extensive project, whether that project is undertaken at one time or over a period of time, UFC-required retrofit work is included in a reconstruction project. This, in turn, ensures that there are no surprises at the completion of the project. No building owner wants to learn of retrofit requirements at the completion of an extensive rehabilitation project. To avoid this, proper classification of projects under the Rehabilitation Subcode is vital.

You may direct any questions to the Code Assistance Unit at (609) 984-7609.

Source: Carmine Giangeruso
Supervisor of Investigations
Office of Regulatory Affairs

Lateral Deck Connection: Reminder



It has recently come to the Department's attention that there has been some confusion as to when lateral deck attachment, like the one illustrated in Figure R502.2.2.3, which shows deck lateral load connection, of the International Residential Code/2009 (IRC/2009), is required.

The specific deck attachment for lateral loads as demonstrated in Figure R502.2.2.3, as referenced by Section R502.2.2.3, Deck lateral load connection, of the IRC/2009, is not required. This figure is 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

See Reminder -continued at right

Reminder *continued from left*

Provisions, of the IRC/2009, states "Detached one- and two- family dwellings and attached single family townhouses are exempt from the seismic requirements of this code."

Based on this, the lateral deck attachment like the one illustrated in Figure R502.2.2.3 is 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/2009.

If you have any questions, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Useful Links Regarding Code Violations



The duties of a subcode official/inspector, N.J.A.C. 5:23-4.5(i), requires that violations found in the plan review or during inspections be reported to the construction official and the owner (or owner's agent). This report should be complete. This means: do not stop reviewing after you find the first area of noncompliance; do a thorough review/inspection and be sure all violations are noted.

Those of us who are involved in the "code world" know how to make sense of the citations so that we can find the subject-matter of the identified violations. However, the building owner (or owner's agent) does not have the code book to make sense of the citations Fortunately, many of the codes are not online and, in an attempt to help, a list of links is provided below to direct persons seeking the texts of the references:

- **Uniform Construction Code (N.J.A.C. 5:23)**: http://www.nj.gov/dca/divisions/codes/codreg/ucc.html *(regulations listed by subcode)*;
  - Rehabilitation Subcode (N.J.A.C. 5:23-6)
  - Barrier Free Subcode (N.J.A.C. 5:23-7)
- **International Building Code/2009**: http://www.ecodes.biz/ecodes_support/Free_Resources/NewJersey/2009/09NJ_Bldg/09NJBldg_main.html *(regulations listed by chapter)*;
  - **National Fire Protection Association (NFPA) referenced standards**: http://www.nfpa.org/aboutthecodes/list_of_codes_and_standards.asp;
- **International Residential Code/2009**: http://www.ecodes.biz/ecodes_support/Free_Resources/NewJersey/2009/09NJ_Residential/09NJResidential_main.html *(regulations listed by chapter)*;
- **National Electrical Code/2008 (NFPA 70)**: http://www.nfpa.org/aboutthecodes/list_of_codes_and_standards.asp;
- **International Energy Conservation Code/2009**: http://publicecodes.citation.com/icod/iecc/2009/index.htm?bu=IC-P-2009-000014&bu2=IC-P-2009-000019 *(regulations listed by chapter)*;

- **ASHRAE Standard 90.1-2007** *(the link provided is for the 2010 edition as the 2007 edition is not longer online for free)*: http://openpub.realread.com/rrserver/browser?title=/ASHRAE_1/ashrae_90_1_2010_IP_1024 *(regulations listed by chapter)*;
- **International Mechanical Code/2009**: http://publicecodes.citation.com/icod/imc/2009/index.htm?bu=IC-P-2009-000005&bu2=IC-P-2009-000019 *(regulations listed by chapter)*;
- **International Fuel Gas Code/2009**: http://publicecodes.citation.com/icod/ifgc/2009/index.htm?bu=IC-P-2009-000007&bu2=IC-P-2009-000019 *(regulations listed by chapter)*.

See Useful Links -continued at right

Useful Links *continued from left*

Unfortunately, we do not have links for the National Standard Plumbing Code/2009 or International Code Council/American National Standards Institute (ICC/ANSI) A117.1-2003 standard for accessible design, but this list could be given to those who do not have code books and who are trying to decipher the references in a code violation. Finally, if any of these links does not work, the user can go to the Division's website and "backdoor" these links at www.nj.gov/dca/divisions/codes.

Source: Rob Austin
Code Assistance Unit

Ductwork *continued from page 9*

conditioned floor area or a total leakage less than or equal to 12 cfm per 100 ft^2 of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots are to be taped or otherwise sealed during the test.

* Rough-in test -- Total leakage is to be less than or equal to 6 cfm per 100 ft^2 of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the roughed in system, including the manufacturer's air handler enclosure. All register boots are to be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage is to be less than or equal to 4 cfm per 100 ft^2 of conditioned floor area.

Building Cavities: There is no change at Section 403.2.3, Building cavities, but I want to take this opportunity to remind you that this section does not allow building framing cavities to be used as supply ducts.

If you have questions, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
Trenton, NJ 08625-0802

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Volume 23, Number 4 Winter 2011

The Winter Communicator: A Reminder

The final issue of the *Construction Code Communicator* each year will consist of a collection and re-printing of all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year.

Once the *Construction Code Communicator* has been posted, the individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from the Division's website. However, it will still be possible to see a copy of any of these documents as it was originally posted on the Division's website by accessing the Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

In short, there are no new articles in this issue.

Also, the Index for all four issues of the *Construction Code Communicator* 2011 is included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year. We hope that you continue to appreciate this aspect of the *Construction Code Communicator.*

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at etempleton@dca.state.nj.us.

Source: Emily W. Templeton
Division of Codes and Standards

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Are you ready to Ride?

In a May 2011 Alert, the Bureau of Code Services provided the following Safety tips:

The DOs of Ride Safety:

- Do observe each ride before participating – make sure you are comfortable with it
- Do look for the posted State of New Jersey certificate of operation – this document ensures rides are inspected and have passed the stringent safety regulations required by the state
- Do read and obey all written and verbal warnings and instructions
- Do observe age, height and weight, and other physical restrictions for each ride

Before the Ride Begins:

- Do fasten safety equipment such as a seatbelt, shoulder harness, lap bar or chain
- Do secure all clothing and personal possessions
- Do follow instructions of ride operators

While the Ride is in Motion:

- Do keep hands, arms, legs and feet inside the ride at all times

Before Getting off of the Ride:

- Do keep all safety equipment fastened until the operator instructs you to exit
- Do stay in the ride until it comes to a complete stop and wait for the operator to tell you to get out
- Do enter or dismount a ride only in the area instructed by the ride operator

The DON'Ts of Ride Safety

- Don't throw any object from an amusement ride or attraction
- Don't endanger or injure yourself or others around you on the ride by behaving in a reckless manner
- Don't enter any ride that you are uncomfortable with or that your child fears
- Don't horseplay around, on or near a ride at any time
- Don't enter a ride without the supervision of the ride operator
- Don't bring food or drinks on any ride, and don't smoke

Child Safety

- Parents should take several additional safety precautions for their children, especially small children, when participating in amusement rides or attractions

Parents should:

- Know your child's capabilities and limitations with regard to whether the ride is appropriate for them
- Watch the ride in operation before entering to make sure your child can ride it safely
- Remind your child of Ride Safety 'Dos' and 'Don's'
- Remind your child to stay seated, hold on to safety bars and obey the ride operator's instructions
- Designate an easily recognizable place to meet your child after the ride is over
- Supervise your child at all times

Safety is the most important component of every family outing. New Jersey's amusement parks, fairs, carnivals and attractions are some of the best in the country and are designed to entertain every member of your family. So the next time you visit your favorite amusement park, fair or carnival, just remember to be "Ready to Ride."

Non-residential Development Fee Moratorium, 8-29-11 Letter to Construction Officials

In a letter dated August 29, 2011, Director Smith wrote:

Dear Construction Official:

I am writing to inform you that the collection of nonresidential development fees has been suspended. You no longer are required to obtain proof of payment or proof of exemption prior to the issuance of a certificate of occupancy. This will be the case for any project that receives preliminary or final site plan approval before July 1, 2013 and that has a building permit before January 1, 2015.

This change came about on August 24, 2011 when Acting Governor Kim Guadagno signed into law P.L. 2011, c.122 which includes an amendment to the Statewide Non-residential Development Fee Act (P.L. 2008, c.46) that suspends the collection of non-residential development fees and provides a process by which developers may claim refunds of non-residential development fees paid.

Under this law, a developer that has paid a non-residential development fee subsequent to June 30, 2010 may claim a refund of the fee provided the fee has not been expended by the municipality on affordable housing projects and provided the provisions of Section 37 of the Statewide Non-residential Development Fee Act, as amended, do not permit the imposition of a fee on the non-residential development.

Individuals who believe they are entitled to a refund should be directed to request the refund from the State or local entity to which the payment was made. If a non-residential development fee was paid to the municipality, the request for a refund must be submitted to the municipality. If a non-residential development fee was paid to the State, the request for a refund must be submitted to the State. The request must be made in writing within 120 days of the law being signed and must include a copy of the receipt of payment.

Individuals who are seeking refunds from a municipality and who have questions about their eligibility for refunds should be directed to the local tax assessor.

Individuals seeking refunds from the State may submit the requests to:

See Non-residential Development Fee –at right

Non-residential Development Fee *continued from left*

Department of Community Affairs
Division of Codes and Standards
Post Office Box 802
Trenton, New Jersey 08625
Attn: Non-residential Development Fee Coordinator

If you have questions about this, please feel free to contact my office at (609) 292-7899.

Sincerely,

Edward M. Smith
Director
Division of Codes and Standards

Emergency Building Inspection Program: A Timely Reminder

In an August 2011 Alert the Office of Regulatory Affairs reminded licensed code officials:

There are current indications that a potentially large hurricane could make landfall in the State of New Jersey sometime on Saturday, August 27 or Sunday, August 28.

It is anticipated there might be a need for licensed Uniform Construction Code (UCC) Officials to ensure timely re-occupancy of buildings throughout the State.

Local UCC Enforcing Agencies should be reminded to utilize their officials to the greatest extent possible. Additionally, existing mutual aid agreements should be engaged if local resources are overwhelmed.

As stated at N.J.A.C. 5:23-4.25, if local and mutual aid resources are exhausted, the Division of Codes and Standards shall be contacted for additional resources.

If Division resources are necessary, please contact Louis Mraw or Carmine Giangeruso of the Division's Office of Regulatory Affairs, at 609-984-7768 or 609-610-2937.

A Flooding Hazards instructional pamphlet prepared by the Department may be found at: http://www.nj.gov/dca/divisions/codes/alerts/pdfs/flood.pdf.

Please use this as a resource throughout your community.

The Flood Hit! Now What?



In an article originally published in Summer 2007 but posted at the Division's website in Summer 2011 again as a reminder, the Division advised:

When flooding causes damage throughout your community, as a local Uniform Construction Code (UCC) enforcement agency, you may be called on to assist in the process of returning building occupants safely back into their homes or businesses. UCC enforcement agencies should provide property owners with the necessary support to evaluate conditions in identified damaged buildings. Depending on the extent of damage to the building, examples of tasks that your agency might be asked to complete are:

- Assessment by building inspectors of damage to foundation walls and inspection for signs of structural damage
- Evaluation by electrical inspectors of the damage to the property's electrical system, including the electrical service and whether reconnection can be made by the utility provider
- Evaluation by plumbing inspectors of the condition of the property's piping and fuel service, including recommending when it is safe to turn service back on
- Evaluation by fire-protection inspectors of the status of fire-protection systems within buildings

Completing these tasks may be overwhelming to your agency, depending on the extent of flood damage in your community. The Department of Community Affairs, Division of Codes and Standards is able to provide assistance to local enforcement agencies in helping a community complete the above tasks during a disaster. A brochure, "Flooding Hazards: What You Need to Know," is available on the Department's web site at:

http://www.nj.gov/dca/divisions/codes/alerts/pdfs/flood.pdf

Please feel free to reach out to me with questions or comments. I can be reached at (609) 292-7898 or cgiangeruso@dca.state.nj.us.

Source: Carmine Giangeruso
Division of Codes and Standards
Construction Official/Emergency Coordinator

Flood Permits Surcharge Fee

In a letter dated August 29, 2011, Director Smith wrote:

Dear Construction Official:

As you deal with inspections in the wake of Hurricane Irene, please be reminded that the municipality may waive fees for permits for work done as a result of this event. Pursuant to N.J.A.C. 5:23-4.19(b)5., if the municipality is waiving its fees, then the State permit surcharge fee is also waived.

Should you have any questions, please feel free to contact the Office of Regulatory Affairs at (609) 984-7672.

Sincerely,

Edward M. Smith
Director
Division of Codes and Standards

Attention New Jersey Licensed Code Officials

In an August 25, 2011 Alert the Division of Code and Standards advised:

There are current indications that a potentially large hurricane could make landfall in the State of New Jersey sometime on Saturday, August 27 or Sunday, August 28.

It is anticipated there might be a need for licensed Uniform Construction Code (UCC) Officials to ensure timely re-occupancy of buildings throughout the State.

Local UCC Enforcing Agencies should be reminded to utilize their officials to the greatest extent possible. Additionally, existing mutual aid agreements should be engaged if local resources are overwhelmed.

As stated at N.J.A.C. 5:23-4.25, if local and mutual aid resources are exhausted, the Division of Codes and Standards shall be contacted for additional resources.

See Attention Licensed Officials –page 7

Attention Licensed Officials *continued from page 6*

If Division resources are necessary, please contact Louis Mraw or Carmine Giangeruso of the Division's Office of Regulatory Affairs, at 609-984-7768 or 609-610-2937.

A Flooding Hazards instructional pamphlet prepared by the Department may be found at:

http://www.nj.gov/dca/divisions/codes/alerts/pdfs/flood.pdf

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Please use this as a resource throughout your community.



Annual Pool Bonding and Grounding Inspections and Backflow Preventer Testing

In a March 7, 2011 e-mail message, the Division of Codes and Standards advised:

To assist in implementing rules concerning the annual bonding and grounding inspection of swimming pools, spas and hot tubs, and also the annual testing of backflow preventers, the Division of Codes and Standards has developed *model* notices and reminders that may be used by municipal Construction Code Enforcement offices when advising property owners of expiring Certificates of Compliance and inspection and testing requirements.

Both the *model* Annual Pool/Spa/Hot Tub Inspection Notice and the *model* Annual Testing of Backflow Preventer Reminder may be found on the division's website at: www.nj.gov/dca/divisions/codes/official.

If you have any questions concerning the model notice or model reminder, or the inspection, testing and certificate requirements, please telephone the division's Code Assistance unit at (609) 984-7609.

Hurricane Irene-related Requests for Emergency Assistance Must Go Through County Emergency Management Coordinator

In a letter dated August 26, 2011, Director Smith wrote:

Dear Code Officials:

Yesterday, Governor Christie issued Executive Order 73 declaring a state of emergency in preparation for the arrival of Hurricane Irene. As part of this Executive Order, the Governor has directed that any movement of "public works, fire, police, emergency medical or other personnel or equipment into any noncontiguous disaster-stricken municipality" must be directed through the county emergency management coordinator. **In compliance with this Executive Order, any and all requests for assistance, whether made under the Emergency Building Inspection Program (NJAC 5:23-4.25) or not, must go through the county emergency management coordinator.** The county emergency management coordinators will be working under the direction of the State Director of Emergency Management. The contact information that the Department has collected under NJAC 5:23-4.25 will be used to identify available inspection resources for requests coming through the county emergency management coordinators.

As always, we stand ready to help one another respond to emergent situations. Funneling the requests through the county emergency management coordinators will enable us to get help where it is needed in the event that the damage is widespread.

Thank you for your anticipated cooperation.

Sincerely,

Edward M. Smith
Director
Division of Codes and Standards

Announcement: NJ UCC Energy Subcode Training Opportunities

In a January 2011 Alert, the Division of Codes and Standards announced:

The Department of Community Affairs has received an award from the United States Department of Energy to conduct training in the newly adopted Energy Subcode of the Uniform Construction Code for construction code officials, design professionals, and builders. More than 40 training courses will be held throughout New Jersey between March and June of this year. The training will include courses on the 2009 International Energy Conservation Code (IECC/2009) and on the American National Standards Institute/American Society of Heating, Refrigeration, and Air-conditioning Engineers/Illuminating Engineers Society North America (ASHRAE) 90.1-2007. The training courses will be offered for credit toward meeting continuing education requirements for construction code official licensing. Each course will offer duplicate credit in the building and electrical technical areas.

There will be a priority registration for licensed construction code officials beginning on January 18, 2011. Design professionals and builders may register for the training courses beginning on February 16, 2011.

The training courses are free for all registered participants. In addition, the IECC/2009 and ASHRAE 90.1-2007 will be provided in a single volume free of charge to those who participate in the training. See below for schedule of training. (Please note that a conference fee applies to anyone who registers for the April 28th and/or April 29th training courses which are being offered as part of the Building Safety Conference.)

Construction code officials, design professionals, and builders may register for the courses by contacting the Education Unit in the Division of Codes and Standards of the Department of Community Affairs at (609) 984-7820 or by e-mailing the Unit at educationunit@dca.state.nj.us. When calling or emailing to register, please be sure to provide your construction code license number (if applicable), the appropriate course code noted below, and the date(s) of the training that you would like to attend. A confirmation of registration will be provided approximately two weeks prior to the training.

Schedule of Training

IECC/2009
Course Code D146 (B565/E159)

Date	Location
March 22, 2011	Holiday Inn – Hasbrouck Heights
March 24, 2011	Holiday Inn – Clinton
March 29, 2011	Birchfield Fire Department Headquarters – Mt. Laurel
March 31, 2011	Rutgers Center for Government Services – New Brunswick
April 5, 2011	Quality Inn – Toms River

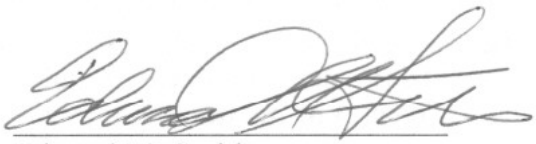
Energy Code Training *continued from page 8*

April 7, 2011	Ramada Inn – East Hanover
April 14, 2011	Northeast Spa & Pool Association – Hamilton (Mercer County)
April 28, 2011	Building Safety Conference – Taj Mahal – Atlantic City
May 4, 2011	Hampton Inn – Woodbridge
May 6, 2011	Rutgers EcoComplex – Bordentown (Columbus)
May 10, 2011	Convention Center – Wildwood
May 12, 2011	The Inn at Lambertville Station – Lambertville
May 18, 2011	Ramada Inn – Vineland
May 19 & May 20, 2011	Wilshire Grand Hotel – West Orange
June 1, June 2 & June 3, 2011	Rutgers Center for Government Services – New Brunswick
June 7 & June 8, 2011	Holiday Inn – Cherry Hill
June 14, June 15 & June 16, 2011	Atlantic Cape Community College – Atlantic City
June 21, June 22, June 23 & June 24, 2011	Quality Inn – Toms River

ASHRAE 90.1-2007
Course Code D147 (B566/E160)

Date	Location
March 23, 2011	Holiday Inn – Hasbrouck Heights
March 25, 2011	Holiday Inn – Clinton
March 30, 2011	Birchfield Fire Department Headquarters – Mt. Laurel
April 1, 2011	Rutgers Center for Government Services – New Brunswick
April 6, 2011	Quality Inn – Toms River
April 8, 2011	Ramada Inn – East Hanover
April 15, 2011	Northeast Spa & Pool Association – Hamilton (Mercer County)
April 29, 2011	Building Safety Conference – Taj Mahal – Atlantic City
May 5, 2011	Hampton Inn – Woodbridge
May 11, 2011	Convention Center – Wildwood
May 13, 2011	The Inn at Lambertville Station – Lambertville
May 17, 2011	Ramada Inn – Vineland





Edward M. Smith
Director
Division of Codes and Standards

League of Municipalities' New Jersey Municipalities Magazine Article: When Time is Money, Communicate Via E-mail

In a March 15, 2011 e-mail message, the Division of Codes and Standards announced:

Below please find a link to an article on the use of electronic communications for code enforcement which appeared in the March issue of New Jersey Municipalities, the magazine published by the New Jersey League of Municipalities.

http://www.njslom.org/magazine/2011-03/pg-26.html

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Kim Guadagno, Lt. Governor

Department of Community Affairs
Lori Grifa, Acting Commissioner

Volume 22, Number 1 Spring 2010

Status of Adoption of 2009 National Model Codes

The adoption of the 2009 editions of the following national model codes, as amended, has been delayed as a result of Governor Christie's Executive Order 1, which was signed on January 19, 2010.

- International Building Code/2009 as the Building Subcode (N.J.A.C. 5:23-3.14) and Fire Protection Subcode (N.J.A.C. 5:23-3.17);
- National Standard Plumbing Code/2009 as the Plumbing Subcode (N.J.A.C. 5:23-3.15);
- International Energy Conservation Code/2009 as the Energy Subcode (N.J.A.C. 5:23-3.18);
- International Mechanical Code/2009 as the Mechanical Subcode (N.J.A.C. 5:23-3.20);
- International Residential Code/2009 as the One- and Two-Family Dwelling Subcode (N.J.A.C. 5:23-3.21); and
- International Fuel Gas Code/2009 as the Fuel Gas Subcode (N.J.A.C. 5:23-3.22).

All rules subject to Executive Order 1 are undergoing a review. Information on the pending publication of the 2009 national model codes as an adoption will be

See 2009 Model Codes - page 2

PERMIT EXTENSION ACT of 2008 – Extended

On January 18, 2010, former Governor Jon S. Corzine signed a bill into law to extend the expiration date of certain permits under the "Permit Extension Act of 2008," P.L. 2008, c.78, by an additional two and a half years. Under this new law, P.L. 2009, c. 336, only the dates have changed. All of the other terms and conditions of the Permit Extension Act remain as they were. Below please find updated guidance on the application of the Permit Extension Act, which has been revised to reflect the new expiration dates.

As code officials, you will continue to deal with this law on two levels: its impact on permits issued under the UCC and its impact on prior approvals. The Act stops the clock on the running of approvals during the "extension period," which is now defined as January 1, 2007 through December 31, 2012. This means that any UCC permit that was valid as of January 1, 2007 will still be valid on December 31, 2012. On December 31, 2012, when the clock starts again, the permit is valid for an additional six months or for the time that would have remained on January 1, 2007, **whichever is shorter.** Any permit issued **during** the extension

See Permit Extension - page 2

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2009 Model Codes *continued from page 1*

posted on the Division's web site as it is known.

While this review is taking place, all information in this *Construction Code Communicator* regarding requirements of the 2009 national model codes is informative only. Although a permit applicant could ask to be allowed to use the 2009 model codes, as proposed, the use of the 2009 model codes cannot be required by code officials until, and unless, the adoption is published in the *New Jersey Register.*

If you have any questions about the status of the adoption of the 2009 editions of these national model codes, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Division of Codes

Permit Extension *continued from page 1*

period (between January 1, 2007 and December 31, 2012) will be valid until June 30, 2013 (six months beyond the end of the extension period,) or until the date when it would have expired if the Permit Extension Act had not been passed, **whichever is longer.** However, the Act does have exclusions.

Please visit www.nj.gov/dca/codes for the information sent to construction officials in January 2010. The information contains examples of the Act's application to UCC permits, lists the types of permits/projects that are included and excluded, and further clarifies the definition of "Environmentally Sensitive Area."

If you have questions regarding this matter, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

New Referenced Standard for Residential Construction in High Wind Regions

There is a new referenced standard in the 2009 International Building Code (IBC/2009) and 2009 International Residential Code (IRC/2009) for residential construction in high wind regions. This standard, International Code Council (ICC) 600, is referenced in exception #1 of Section 1609.1.1 of IBC/2009 and in Item #2 of Section R301.2.1.1 of IRC/2009. NOTE: This will apply once the 2009 model codes have been adopted.

See New Reference Standard –High Wind at right

New Referenced Standard –High Wind *Continued from left*

What is the scope of this standard?

The scope of this standard is one- and two-family dwellings that are subject to the IRC/2009 and Group R-2 and R-3 buildings built under the IBC/2009. The provisions contained in the standard are based on enclosed buildings. An enclosed building is defined as having all exterior walls with solid elements for the full perimeter of the building. However, an open porch not exceeding 20 feet in width is allowed to be constructed in accordance with this standard.

Table 102 of the ICC 600 provides the limitations of building geometry including the number of stories for specific construction materials.

What does this standard have to offer?

The standard provides ***prescriptive*** methods for wind resistant design and construction details for residential buildings of concrete, masonry, wood-framed, and cold-formed steel-framed construction that are sited in high-wind areas consistent with the IBC/2009 and ASCE 7.

The standard is arranged as follows:

Chapter 1	General requirements – provides the limitations of the standard, design parameters and criteria.
Chapter 2	Buildings with concrete or masonry exterior walls – prescribes construction requirements for buildings where all of the exterior walls above the foundation are concrete or masonry.
*Chapter 3	Buildings with wood or steel light-framed exterior walls – prescribes construction requirements for building in which all exterior walls above the foundation are of light-framed construction using wood or steel framing members.
*Chapter 4	Combined exterior wall construction – prescribes construction requirements for various individual building elements where one or more exterior walls above the foundation contain a combination of building materials.
Chapter 5	Roof assemblies – provides the criteria for design, materials, construction and quality control of roof assemblies.
Chapter 6	Fenestration – prescribes performance and construction requirements for windows, skylights, garage doors, sliding glass doors, glass patio doors and entry doors. Waterproofing, sealing and flashing are not included.

See New Referenced Standard –High Wind - page 4

Index to the *Construction Code Communicator* 2009 (Volume 21)

Article	Edition	Issue No.	Page	Discipline
2006 IECC, 2% Better Than Code and RES-Check	Fall	2	4	Mechanical;Energy
2009 Building Safety Conference	Spring/Summer	1	1	
Accessible Parking at Health Care Centers and Offices Where People with Mobility Impairments Receive Health Care Services	Fall	2	5	Barrier Free; Building
Air Leakage	Spring/Summer	1	5	Building; Energy
ALERT! Changes Are Coming to the *CCC*	Spring/Summer	1	6	
Attention Electrical Subcode Officials—New FPN Bulletin on Web	Fall	2	1	Electrical
Certification to Perform Services on Unregulated Underground Heating Oil Tank Systems	Spring/Summer	1	7	Plumbing
Certification to Perform Services on Unregulated Underground Heating Oil Tank Systems	Fall	2	6	Plumbing
Children's Plumbing Fixture Requirements in Code	Fall	2	12	Plumbing
Clarification Regarding the Recent Amendment to the State Uniform Construction Code Act Concerning Technical Assistants	Fall	2	3	
COAH and You	Fall	2	8	
CPVC Fire Sprinkler System Drop Installations	Spring/Summer	1	1	Fire Protection
The Foundation of Good Partnerships	Spring/Summer	1	6	
Garden-type Utility Sheds and Similar Structures--Clarification	Spring/Summer	1	7	Building
Green Buildings: An Introduction	Spring/Summer	1	11	
Index to *Construction Code Communicator* 2008 (Volume 20)	Spring/Summer	1	3	
Kidde Recalls Dual Sensor Smoke Alarms- Can Fail to Warn of Fire	Fall	2	13	Fire Protection
Limited Use Limited Application Elevators and the Barrier Free Subcode	Fall	2	8	Barrier Free; Elevator; Building
Lowest Floor Level in Flood-Resistant Construction	Spring/Summer	1	10	Building
New Jersey Register Adoptions	Spring/Summer	1	10	
New Jersey Register Adoptions	Fall	2	10	
The New Jersey State Permit Surcharge (Training) Fee: Charge or No Charge?	Spring/Summer	1	4	
Owners Doing Work in Their Own Homes	Spring/Summer	1	8	
Rehab and the 2008 NEC	Fall	2	2	Electrical
Rehab and the 2008 NEC: Corrected Version	*Posted on Division's Web Site 2/2010*			Electrical
Residential and Commercial Building Duct Insulation—There is a Difference!	Fall	2	14	Plumbing
Residential Swimming Pools and the Plumbing Subcode: Update	Fall	2	9	Plumbing
Shared Services	Spring/Summer	1	8	
Site Remediation Reform Act: A Prior Approval Alert	Fall	2	7	
Solar Photovoltaic Systems—How to Calculate the Fee for the Permit Application	Fall	2	4	Building; Electrical
Special Inspections	Fall	2	1	Building
Update on National Standard Plumbing Code Hearings	Spring/Summer	1	11	Plumbing
We've Got the Power	Spring/Summer	1	9	Electrical
Which IFC Do I Use?	Spring/Summer	1	5	Fire Protection

New Referenced Standard –High Wind *Continued from page 2*

Chapter 7 Exterior wall covering – provides the criteria for the design, materials, construction and quality of exterior wall covering.

Chapter 8 Referenced standards – provides a list of standards that are referenced in this standard.

Appendix A Design load assumptions – provides an overview of design assumptions for prescriptive continuous foundations for use with wood and steel light-framed buildings.

Appendix B Flood-resistant foundations for residential buildings with wood for light-steel framed walls – provides the criteria to construct a building in flood plains.

Appendix C ICC-600 design checklist – provides general guidelines to accomplish compliance with this standard.

Appendix D Dimensions of nails described by penny-weight system – provides dimensions for penny-weight nails.

*Chapters 3 and 4 of this standard do not address the prescriptive design of wood or steel light-framed constructed exterior walls above the foundation. The standard provides a reference for all exterior walls above the foundation to the American National Standards Institute/American Forest and Paper Association (ANSI/AF&PA), Wood Frame Construction Manual, for wood-framed buildings and the American National Standards Institute/American Iron and Steel Institute S230 (ANSI/AISI/S230), Standard for Cold-Formed Steel Framing-Prescriptive Method for One- and Two-Family Dwellings for steel light-framed construction.

The design checklist in Appendix C provides a tool to ensure compliance with all of the items that are part of this standard. The checklist facilitates the plan review for code officials to ensure that all items have been addressed.

If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

New Recreational Park Trailer Standard is Released

At N.J.A.C. 5:23 - 4D, the Uniform Construction Code (UCC) adopts American National Standards Institute (ANSI) A119.5 (Recreational Park Trailer Standard) as

See Recreational Park Trailer Standards at right

Duct Insulation R-values: IECC/2006 vs. IECC/2009

In the International Energy Conservation Code (IECC)/2006, ducts or portions thereof that are located outside the building thermal envelope (BTE) are required to be insulated as per Section 403.2.1 of the 2006 International Energy Conservation Code (IECC), which requires that *supply and return ducts* be insulated to a minimum of R-8 and ducts in floor trusses be insulated to a minimum of R-6.

With the 2009 IECC on the horizon for adoption, I thought I would bring to your attention that Section 403.2.1 has been rewritten. Once the IECC/2009 is adopted, *supply ducts outside the BTE in attics* will be required to be insulated to a minimum of R-8 and *all other ducts outside the BTE* will be required to be insulated to a minimum of R-6.

As you can see, this is a significant difference between the 2006 and the 2009 editions of the IECC and it will be very important for mechanical plans to be labeled specifically for supply and return ducts.

Following the adoption of the 2009 IECC, if there are no supply ducts in the attic, all ducts outside the BTE will be required to be insulated with at least R-6 insulation.

If you have any questions of this matter, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Recreational Park Trailer Standards *Continued from left*

the basis for its construction requirements for recreational park trailers. The 2005 edition is adopted by reference in the UCC. A 2009 version was recently published. The Department anticipates that the industry will begin to produce units to the newer version of the standard sometime later this year. We also anticipate that this will occur before we can change the version of the standard that is referenced in the UCC.

We have reviewed the newer version of the standard and determined that it is at least as stringent as the previous version and, in some cases, it is more stringent. Therefore, units that are constructed to the 2009 version are in compliance with the 2005 version and should be accepted as meeting the requirements of the UCC.

If you have any questions, please call me at (609) 984-7974.

Source: Michael Baier
Acting Chief, Bureau of Code Services

CONSTRUCTION REPORTER: DECEMBER 2009 CONSTRUCTION HIGHLIGHTS AND YEAR-TO-DATE SUMMARY

Following is a reprint of the December 2009 Highlights of the New Jersey Construction Reporter, a publication of the NJ Dept. of Community Affairs that examines construction statistics derived from building permits and certificates issued throughout the State. The full New Jersey Construction Reporter may be viewed online at ***www.nj.gov/dca/codes/cr/conrep.shtml****.*

- 2009 looks to be one of the worst years for New Jersey's construction industry in more than twenty years, and December building permit activity was typical of previous months this past year.
- The estimated cost of construction authorized by building permits in December was $643.3 million; 553 municipalities reported.
- Residential construction totaled $373.6 million. This was 58.1 percent of all activity. New home construction totaled $193.2 million, or 30 percent of all work.
- Nonresidential construction amounted to $269.7 million, accounting for 41.9 percent of all activity. A total of 356,606 square feet of new office space was authorized by permits in December. New retail space amounted to 230,721 square feet.
- Evesham Township, Burlington County led all municipalities with $23.5 million of work in December. Most of this was for assisted living complexes with 91 apartments. Evesham also ranked third among municipalities with the most new houses in December. Delanco, also in Burlington County, had 100 authorized units. Lower Township, Cape May County had 93. In all three communities, age- and income-restricted apartment buildings accounted for most of the housing activity.

Year to Date

Even though year-to-date figures are preliminary, as a few municipalities still must submit monthly building permit reports, several trends are evident for 2009:

- New Jersey's construction industry, which declined in 2008, grew worse in 2009.
- All major indicators are down compared to 2008. The depressed housing market continues, both for single- and multi-family developments.
- Between January and December 2009, the estimated cost of construction authorized by permits was $9.4 billion. This is $4.4 billion less than this same time period for 2008, for a decline of 31.7 percent.

Major Construction Indicators, New Jersey
December Year-to-Date Figures Compared to Annual Totals

Period	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Year-to-Date Figures (January to December)				
January – December 2009	$9,446,838,643	11,067	4,035,812	2,417,629
January – December 2008	$13,834,284,685	16,203	7,869,822	5,459,374
January – December 2007	$14,907,746,308	25,472	8,875,968	4,993,848
Annual Figures				
2008	$13,944,534,578	16,338	7,962,998	5,557,101
2007	15,356,572,820	25,948	9,569,501	5,423,889
2006	15,675,107,955	32,050	11,113,555	5,186,662

See Construction Reporter - page 6

Construction Reporter *continued from page 5*

Major Construction Indicators, New Jersey December Year-to-Date Figures Compared to Annual Totals				
Period	**Estimated Cost of Construction**	**Authorized Housing Units**	**Authorized Office Space (square feet)**	**Authorized Retail Space (square feet)**
Annual Figures *-continued*				
2005	15,397,507,147	39,688	11,038,132	5,965,258
2004	14,274,331,850	39,254	12,219,068	4,911,257
2003	12,148,747,807	35,171	9,744,146	6,038,428
2002	12,079,942,099	34,589	9,261,054	7,560,913
2001	12,007,456,630	35,680	19,134,533	7,244,833
2000	11,387,683,514	38,065	15,531,039	6,063,412
1999	10,584,167,530	37,536	13,237,891	6,229,471
Difference between January–December 2008 & January-December 2009				
2008 – 2009 (Jan – Dec)	-$4,387,446,042	-5,136	-3,834,010	-3,041,745
Percent Change	-31.7%	-31.7%	-48.7%	-55.7%
Source: N.J. Department of Community Affairs, 2/8/10				

- New home construction declined by over 5,100 units (31.7 percent). Only 11,067 new dwellings were authorized by permits between January and December 2009. Two years ago, the number exceeded 25,000.
- For the past ten years, one of the strongest housing markets in the State has been along the Hudson River waterfront in Jersey City. This trend continued in 2009. Jersey City accounted for one in ten new houses built in the State in 2009. Between January and December 2009, the City's construction office issued building permits for 1,129 dwellings.

Authorized Housing in Newark and Jersey City, 2001-2009 ytd					
	Newark		**Jersey City**		**All New Jersey**
Year	**Authorized Units**	**Rank**	**Authorized Units**	**Rank**	**Authorized Units**
2001	1,066	2	2,009	1	35,680
2002	1,223	1	907	2	34,589
2003	1,730	1	969	2	35,171
2004	1,702	2	2,156	1	39,254
2005	2,611	2	3,778	1	39,688
2006	2,125	2	2,578	1	31,709
2007	927	2	2,765	1	25,948
2008	289	6	1,468	1	16,338
2009 ytd	285	4	1,129	1	11,067
Source: N.J. Department of Community Affairs, 2/8/10					

See Construction Reporter - page 7

 continued from page 6

- The City of Newark also had a strong demand for new houses in 2009, ranking fourth among all municipalities with 285 dwellings authorized by permit. As in Jersey City, Newark's strong housing market has occurred throughout most of the decade.

2008

- Last year, in 2008, big, commercial and public-works developments softened the effects of a depressed homebuilding industry. Atlantic City led all municipalities with $594.2 million of work. Much of this was from the new casino, hotel, and parking complex for Revel Entertainment.
- Voorhees Township in Camden County had $357.6 million of construction. A new hospital for Virtua Health network was reported with an estimated construction cost of $300 million.
- Jersey City ranked third among localities in 2008 with $349.2 million of work, and much of this was from a strong housing market.



Revel Entertainment casino and hotel, Atlantic City

2009

- Between January and December 2009, Jersey City had the most authorized construction among all municipalities. The estimated cost of all work reported on building permits was $436.4 million. Nearly two-thirds of all permit activity was for new home construction.
- Franklin Township, Somerset County ranks second with $278.8 million. Most of this was for one development, a new office complex for investment bank Morgan Stanley. The facility will have total floor area of more than 370,000 square feet.
- Newark ranked third with $204.9 million. Rehab work on office, retail, and other existing commercial buildings accounted for almost all of the activity in the City.
- "State Buildings" refers to permits for projects reviewed at the Department of Community Affairs. They typically include large, public projects managed or constructed by State Government agencies or their instrumentalities. Since January, $297.9 million was authorized for such projects in communities throughout the New Jersey. Many are big capital improvements at public facilities of higher education, including Stockton College, Montclair University, and Rutgers University. This figure also includes facility improvements for New Jersey Transit.

See Construction Reporter - page 9

GFCI Protection in New Jersey

The National Electrical Code (NEC)/2008 was adopted, as amended, on April 6, 2009 as the electrical subcode (N.J.A.C. 5:23-3.16) of the Uniform Construction Code (UCC).

In the adoption of the NEC/2008, at N.J.A.C. 5:23-3.16(b)3i, Section 210.8(A)(2) and (5) and their exceptions from the NEC/2005, which relate to GFCI protection, **were retained**.

In NEC/2005, Section 210.8(A)(2) requires GFCI protection in "garages, and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use" with the following two exceptions:

1 - Receptacles that are not readily accessible.

2 - A single receptacle or a duplex receptacle for two appliances located within dedicated space for each appliance that, in normal use, is not easily moved from one place to another and that is cord-and-plug connected in accordance with 400.7(A)(6), (A)7, or (A)(8). Receptacles installed under the exceptions to 210.8(A)(2) shall not be considered as meeting the requirements of 210.52(G).

In NEC/2005, Section 210.8(A)(5) requires GFCI protection in "unfinished basements, defined as portions or areas of the basement not intended as habitable rooms and limited to storage areas, work areas, and the like" with the following three exceptions:

1 - Receptacles that are not readily accessible.

2 - A single receptacle or a duplex receptacle for two appliances located within dedicated space for each appliance that, in normal use, is not easily moved from one place to another and that is cord-and-plug connected in accordance with 400.7(A)(6), (A)7, or (A)(8).

3 - A receptacle supplying only a permanently installed fire alarm or burglar alarm system shall not be required to have ground-fault circuit-interrupter protection.

These NEC/2005 sections continue to be part of the electrical subcode of the UCC.

If you have any questions, you may contact me at (609) 984-7609.

Source: Rob Austin
Code Specialist

* * * * * * *

New NFPA Referenced Standards for the 2009 I-Codes

I have been receiving quite a few calls lately about which NFPA standards will be used once we adopt the 2009 editions of the International Code Council (ICC) model codes (I-codes). Below is a partial list from Chapter 35 of the International Building Code (IBC) and Chapter 43 of the International Residential Code (IRC) of the most commonly used referenced standards that must be used for installation *once we start using the 2009 ICC model codes*. A complete list of referenced standards can be found in Chapter 35 of the IBC and Chapter 43 of the IRC.

Subject	**Standard/Edition**
Portable Fire Extinguishers	10-07
Low Expansion Foam	11-05
Carbon Dioxide Extinguishing Systems	12-05
Sprinkler Systems	13-07
1&2 Family Dwellings and Manufactured Homes	13D-07
Residential Occupancies Up to and Including Four Stories in Height	13R-07
Standpipe and Hose System	14-07
Foam-water Sprinkler and Foam-water Spray	16-07
Dry Chemical Extinguishing Systems	17-02
Wet Chemical Extinguishing Systems	17A-02
Stationary Pumps for Fire Protection	20-07
Flammable and Combustible Liquids Code	30-08
Liquefied Petroleum Gas Code	58-08
Prevention of Fires and Dust Explosions in Agricultural and Food Product Facilities	61-08
National Fire Alarm Code	72-07
Fire Doors and Other Opening Protectives	80-07
Smoke Management Systems in Malls, Atria and Large Spaces	92B-05
Identification of the Hazards of Materials for Emergency Response	704-07
Clean Agent Fire Extinguishing Systems	2001-08

If you need information on the applicable edition of any other standards, please call me at (609) 984-7609.

Source: Michael Whalen
Division of Codes and Standards

 continued from page 7

Dollar Amount of Authorized Construction

Top Performers, 2009 year to date

Municipality	County	Estimated Cost of Construction (dollars)	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jersey City	Hudson	$436,436,533	1,129	77,990	5,400
Franklin Township	Somerset	278,821,851	139	393,090	0
Newark City	Essex	204,934,234	285	117,079	26,588
Woodbury City	Gloucester	164,002,923	1	460	0
Paterson City	Passaic	150,213,279	86	206	7,938
Toms River	Ocean	105,306,547	98	41,807	5,764
Lakewood	Ocean	98,735,713	368	84,230	5,955
Edison Township	Middlesex	88,202,530	29	57,977	161,284
Woodbridge	Middlesex	88,128,550	22	29,535	78,851
Princeton Twp	Mercer	82,165,958	20	30,588	0
State Buildings		297,895,137	0	112,566	48,536
New Jersey		$9,446,838,643	11,067	4,035,812	2,417,629

Source: N.J. Department of Community Affairs, 2/8/10

New Home Prices

- In the fourth quarter of 2009, a total of 2,045 new houses were completed, occupied, and began enrollment in a new home warranty program.
- Five counties accounted for over half of these new houses. Ocean County had 261 new homes. Monmouth had 199. Gloucester had 185. Hudson had 179, and Bergen County had 178 new homes that began enrollment in a warranty program in the fourth quarter of 2009.
- The median sales price of the new houses built in the State during this time was $340,521. This was a decline of 8.1 percent compared to the previous quarter.
- Somerset, Hunterdon, and Cape May Counties had the highest priced homes.

New House Prices

Period	Number of New Houses	Median Sale Price	Percent Change in Sale Price
1998	23,884	$209,980	10.5%
1999	24,479	$224,496	6.9%
2000	25,058	$231,728	3.2%
2001	23,372	$253,670	9.5%
2002	23,647	$274,705	8.3%
2003	22,226	$307,168	11.8%
2004	23,844	$349,900	13.9%

See Construction Reporter - page 10

Construction Reporter *continued from page 9*

New House Prices			
Period	**Number of New Houses**	**Median Sale Price**	**Percent Change in Sale Price**
2005	24,571	$378,992	8.3%
2006	22,697	$413,825	9.2%
2007	18,397	$424,570	2.6%
2008	13,841	$425,000	0.1%
4th Quarter 2007	4,155	$410,000	-0.4%
1st Quarter 2008	3,637	$432,900	5.6%
2nd Quarter 2008	4,240	$475,000	9.7%
3rd Quarter 2008	3,204	$405,000	-14.7%
4th Quarter 2008	2,760	$380,000	-6.2%
1st qtr 09 prelim	1,564	$360,000	-5.3%
2nd qtr 09 prelim	2,041	$375,000	4.2%
3rd qtr 09 prelim	1,726	$370,400	-1.2%
4th qtr 09 prelim	2,045	$340,521	-8.1%
Source: N.J. Department of Community Affairs, 2/8/10			

Source: John Lago
Division of Codes and Standards

Permits and Prior Approvals

On May 18, 2009, the construction permit application and plan review procedures in the Uniform Construction Code (UCC) were revised with regard to prior approvals.

At N.J.A.C. 5:23-2.15(f)4ii, the UCC states that where a Department plan review is not required, an applicant for a construction permit is to file an application with the local enforcing agency. The UCC requires that all prior approvals be met before a construction permit may be obtained. However, the revised subsection (1) makes it clear that if a required State, county or local prior approval has not been granted, *plan review is to proceed* provided that the application for a permit is otherwise complete and the plan review fee has been paid. In addition, at subsection (A), an exception is included for permit applicants for plan review of individual, owner-occupied one- or two family home addition or alteration projects when zoning approval is not in place.

See Prior Approvals - page 11

Solar Photovoltaic Installations: The Board of Examiners of Electrical Contractors Explains

It seems there is considerable confusion about whether an electrical contractor's license is required for solar-photovoltaic (SPV) installations. Substantially, the question is: are SPV installations, including the SPV panels themselves, electrical work within the meaning of the regulations, so as to require an applicant for a construction permit to obtain an electrical contractor's license to perform such work? The short answer is yes; except that owners of single-family homes doing work on their own dwellings are exempt.

N.J.S.A. 45:5A-1 et seq., known as "The Electrical Contractors Licensing Act of 1962" (the Act), establishes generally that no person shall advertise, enter into, engage in, or work in a business as an

See SPV Installations - page 11

SPV Installations *continued from page 10*

electrical contractor unless they have secured a business permit and a license from the New Jersey Board of Electrical Contractors (the Board).

The term "electrical contractor" is defined as a person who engages in the business of contracting to install, erect, repair, or alter electrical equipment for the generation, transmission, or utilization of electrical energy (N.J.S.A. 45:5A-2(d)). Accordingly, any person who engages in these activities is an electrical contractor by definition and is required to obtain a business permit and license from the Board.

SPV systems are, by definition, electrical work. They are a series of components that generate (the SPV panels), transmit, and/or utilize electrical energy. Any person engaged in installing, erecting, repairing, etc. such equipment must be an electrical contractor under the provisions of the Act.

The Act further sets forth a limited listing of exempt electrical work or construction that is not included in the business of electrical contracting so as to require a license and business permit under the Act (N.J.S.A. 45:5A-18). Neither SPV systems nor SPV panels are listed therein and thus are not exempt, *per se*.

Recently the Board considered this issue and concluded that SPV systems, including the SPV panels themselves, to the extent that they are used for the generation, transmission, or utilization of electrical energy, constitute electrical work within the meaning of the Act. Therefore, unless work was exempted by statute (e.g. operates at less than 10 volts, etc.), a contractor is required to obtain a license and business permit issued by the Board to install, erect, and repair, etc., SPV systems including SPV panels themselves.

Consequently, pursuant to the UCC, code officials should require permit applications for SPV systems, including SPV panels themselves, to be signed and sealed by electrical contractors holding a valid business permit issued by the Board.

Questions as to whether a licensed electrical contractor is required may be directed to either Marian or Kathleen of the Board of Examiners of Electrical Contractors at (973) 504-6410.

Source: Joseph P. Schooley, Chairman.
Board of Examiners of Electrical Contractors

* * * * * * *

Prior Approvals *continued from page 10*

The UCC continues to require that *no permit may be issued* until all required State, county and local approvals are in place.

In sum,

- For an owner-occupied one- or two-family dwelling, zoning approval must have been obtained before plan review may proceed.
- For all other projects, plan review proceeds before all prior approvals have been obtained as long as the permit application is otherwise complete and the plan review fee has been paid.
- For all projects, prior approvals must be in place before a permit may be issued.

If you have any questions on this matter, please contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Solar Panels and Guards 

As more and more solar panels are being installed, the Department has received many phone calls asking whether guards are required for servicing the panels. The short answer is no, guards are not required.

Section 304.10 of the International Mechanical Code (IMC)/2006 states that guards shall be provided where appliances, equipment, fans or other components *that require service* are located within 10 feet of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches above the floor, roof or grade below.

Typically solar panels installed on a roof require cleaning, but not servicing. Therefore, this section of the IMC/2006 does not require solar panels to have guards.

Finally, please note that the language in the IMC/2009 is identical to that of the IMC/2006 and will be applied the same way once the 2009 national model codes have been adopted.

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

Source: Suzanne Borek
Code Assistance Unit

Replacement and Newly Installed Electrical Panels

"Newly installed" versus "replacement." "Never there" versus "upgrade." What am I getting at, you ask? Well, it's an electrical panel being installed in an existing home. What rules from the National Electrical Code/2008 (NEC/2008) apply?

New Jersey's Rehabilitation Subcode (N.J.A.C. 6:23-6) makes it clear that there are two sections to be consulted: Section 6.8, Materials and Methods, and Section 6.9, New Building Elements.

Replacement or Upgrade: N.J.A.C. 5:23-6.8(d) specifies the sections of the NEC/2008 that are to be met when a building owner upgrades or replaces an electrical panel. For example, when the panel stays in its existing location, but is upgraded from 100 amps to 200 amps, N.J.A.C. 5:23-6.8(d) provides that NEC/2008, Sections 110.26, 110.32, 110.33, 404.8 and 408.18 are *not* required to be followed for projects of 600 Volts, nominal, or less (Section 110.32 applies when the upgrade is over 600 Volts, nominal). To further bring this point home, N.J.A.C. 5:23-6.8(d)10 states, "Existing working clearances, clear space, access and entrance dimensions to working spaces, illumination, headroom clearances, and location of overcurrent protection devices shall be allowed to remain without modification."

Newly Installed: When the electrical panel is to be installed in a new location, N.J.A.C. 5:23-6.9(a)19 states, "Newly installed (not replacing an existing device) electrical service equipment, switchboards, panelboards, motor control centers and other electrical equipment containing overcurrent, switching or control devices likely to require examination, adjustment, servicing or maintenance while energized shall conform with the requirements specified in N.J.A.C. 5:23-6.8, Materials and methods, and, in addition, shall conform with Sections 110.26 (Space About Electrical Equipment--600 Volts, Nominal or Less), 110.32 (Work Space About Equipment--Over 600 Volts, Nominal), 110.33 (Entrance and Access to Work Space), 404.8 (Accessibility and Grouping) and 408.18 (Clearances), as applicable, of the electrical subcode.

Thus, for a totally new installation of an electrical panel, at N.J.A.C. 5:23-6.9(a), New building elements, the NEC/2008 sections that were deleted by N.J.A.C. 5:23-6.8(d), Materials and methods, for replacement

See Electrical Panels at right

or upgrade are brought back in and are applied to the installation of a panel in a location where there never was one.

If you have any questions, you may contact me at (609) 984-7609.

Source: Rob Austin
Code Specialist

US EPA Lead-Based Paint Renovation, Repair and Painting (RRP) Rules

What are the RRP Rules?

The US Environmental Protection Agency (EPA) has adopted rules for contractors performing work that disturbs lead-based paint. The rules, known as the RRP rules, apply to renovation, repair, painting or any other activity that disturbs painted surfaces. These rules require that contractors performing work in housing built before 1978 or in child-occupied facilities (schools or day care centers) be certified by the EPA. All employees performing this work must be trained in lead-safe work practices through completion of an EPA-accredited course. And the contractors must distribute a lead pamphlet before starting work. The rules exempt work that will disturb six square feet or less of paint per room in the building's interior or 20 square feet of painted surface or less on the exterior. Work in buildings that have been tested and found to be free of lead-based paint is also exempt.

We have begun to get questions now because the requirement for contractors to be certified becomes effective on April 22, 2010, two years after the date of adoption of the rules.

Who is responsible for enforcement of these rules?

States may apply to the US EPA for authorization to administer this program. The EPA is the enforcement agency in states that do not apply for authorization. New Jersey has *not* applied. This means that the EPA is the enforcement agency for the RRP rules in New Jersey.

Is the EPA certification to be treated as a prior approval for obtaining a permit under the UCC? No. Does the code official have any enforcement responsibility with regard to these EPA rules? No.

See Lead-Based Paint - page 13

UPDATE 2 - Certification to Perform Services on Unregulated Underground Heating Oil Tank Systems

This article is updating the article that appeared in the *Construction Code Communicator*, Fall 2009. As stated in that article, any contractor who provides services on any unregulated underground heating oil tank systems and applies for a permit from a municipality to perform this work is going to be required to provide proof of certification from the New Jersey Department of Environmental Protection (NJDEP).

On January 15, 2010, NJDEP began to enforce the provisions of N.J.A.C.7:14B-16, that require all individuals and firms performing work on unregulated underground tanks to hold a certification. At the time a permit is applied for from the local municipality, a proof of certification is required for all work performed on unregulated underground heating oil tanks as defined in N.J.A.C. 7:14B-1.6.

See Unregulated USTs at right

Lead-Based Paint *continued from page 12*

As stated above, enforcement rests with the EPA. This information has been provided to you so that you are aware of the new EPA requirements and are able to respond to questions from homeowners or contractors. If anyone has further questions or would like additional information, you may direct them to the EPA website at http://www.epa.gov/lead/pubs/renovation.htm. There is also a link on the Division's webpage.

Source: Amy Fenwick Frank
Division of Codes and Standards

Unregulated USTS *continued from left*

The following are two frequently asked questions:

1. Do the certification requirements pertain to aboveground heating oil tanks?

No, the regulations only pertain to underground heating oil tanks.

2. Can a homeowner do the work themselves without the proper certification?

No, all companies and individuals performing work on unregulated heating oil tanks (underground) must be certified in the proper category. Therefore, a homeowner can perform work **only on aboveground** heating oil tanks.

Further information concerning the Unregulated Heating Oil Tank program can be found at http://www.nj.gov/dep/srp/srp/unregulatedtanks/.

Should you have any questions on this matter, you may contact Gary Sanderson, Program Coordinator at the Department of Environmental Protection at (609) 633-0544 or me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit



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

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2010 Building Safety Conference "Lighting Our Way into the Future"

The 29th annual New Jersey Building Safety Conference was held this year from April 28th through April 30th at the Trump Taj Mahal in Atlantic City. As the theme, "Lighting Our Way into the Future," aptly suggests, the focus of this year's conference was on highlighting the many innovations and new techniques that the future will bring to ensure that our future is, indeed, safer.

At the Crackerbarrel, there were 45 tables, at which presenters covered topics that ranged from a presentation on backflow preventers to an opportunity to speak with International Code Council (ICC) Board member Steve Jones and Chief Executive Officer (CEO) Richard Weiland. Twelve seminars were held each day; they represented a wide spectrum of topics that ranged from Uniform Construction Code (UCC) updates and reports to analyses of electrical distribution systems.

One of the major events at the Conference, as always, is the opportunity to honor those whose commitment

See 2010 Building Safety Conference- page 2

Periodic Inspections Under the Uniform Construction Code

The purpose of this article is to clear up confusion surrounding the periodic testing, or inspection, or testing *and* inspection, of cross-connections/backflow preventers and swimming pools/spas/hot tubs. This article's target audience is Plumbing and Electrical Subcode Officials, Construction Officials and Technical Assistants.

When we speak of an inspection prefaced by the word, "periodic", or "on-going" or "maintenance" under the UCC, we are speaking about the routine and regularly occurring inspection of equipment that creates a significant potential hazard to public health and safety.

These inspections are not to be confused with inspections carried out during the progress of work on a construction project for which a Construction Permit has or should have been issued.

Equipment such as elevator devices, high pressure boilers, pressure vessels, refrigeration systems, cross-connections/backflow preventers, sprinklers/ standpipes, smoke control systems in open wells, underground storage tanks, swimming pools/spas/hot tubs, fire

See Periodic Inspections - page 4

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2010 Building Safety Conference *continued from page 1*

and dedication over the past year is recognized by their associations- the Inspectors and Technical Assistant of the Year. Congratulations to all for your hard work and well deserved awards!
Cynthia Wilk, Director of the Division of Codes and Standards, and the association presidents, presented the following awards:

New Jersey Association of Technical Assistants
Technical Assistant of the Year
Lucia Camporeale

Building Officials Association of New Jersey
Building Inspector of the Year
Salvatore J. DeSimone

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year
Michael G. Baker

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year
Richard A. Soltis, Jr.

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year
Jean F. Verrier

The Building Safety Conference provides a valuable opportunity not only to gain a better understanding of new code provisions and construction techniques, but also to allow for a chance to share ideas and experiences, fostering fellowship amongst our peers. The reception to honor the awardees gives us all a chance to offer congratulations to the award recipients. The inspector and technical assistant associations were of particular help this year, providing assistance in making our awards reception memorable- a special thanks to all involved!

The Building Safety Conference provides the chance to enhance your educational opportunities and receive information on important and cutting edge topics. If anyone has suggestions for next year's conference, please contact us at educationunit@dca.state.nj.us.

We are looking forward to seeing everyone again next year when we meet again at the Taj Mahal on April 27-29, 2011. Hope to see you there!

Source: John Delesandro
Licensing & Education

See 2010 Building Safety Conference at right

2010 Building Safety Conference *continued from left*



Above, NJATA's 2010 honoree Lucia Camporeale (c.) is accompanied by association President Linda Aiello (r.) and the Director of the Div. of Codes and Standards, Cynthia A. Wilk (l.).



Above, BOANJ's 2010 honoree Salvatore J. DeSimone (r.) accompanied by last year's honoree, Martin Vogt (l.).



Above, NJPIA's 2010 honoree Michael G. Baker (r.), accompanied by NJPIA President Thomas McGonigle (l.) and the Director of the Div. of Codes and Standards, Cynthia A. Wilk (c.)

See 2010 Building Safety Conference- page 3

2010 Building Safety Conference *continued from page 2*



Above, NJFP&PA's 2010 honoree Richard A. Soltis, Jr. (l.) accompanied by NJFP&PA President Stanley Sickels (r.) and the Director of the Div. of Codes and Standards, Cynthia A. Wilk (c.)



Above, MEIA's 2010 honoree Jean F. Verrier (l.) is accompanied by 1st Vice President Ed Reed (r.) and the Director of the Div. of Codes And Standards, Cynthia A. Wilk (c.).



Above, all 2010 honorees.

Roof Access Hatch

Are all roof access hatches required to comply with International Building Code (IBC)/2006, Section 1009.11, entitled "Stairway to roof"? The answer is "NO."

For buildings with an occupied roof, including roof gardens, observation decks, tennis courts or swimming pools, a code compliant stairway must be provided with a penthouse that complies with Section 1509.2, entitled "Penthouses."

For buildings with an unoccupied roof, Section 1009.11 requires buildings located four or more stories in height above grade plane, with a roof surface that has a slope of four units vertical in 12 units horizontal (33% slope) or less, to have one stairway that extends to the roof surface. Access to the roof from the top story is permitted to be by an alternating tread stairway. In addition, the exception to Section 1009.11.1, entitled "Roof Access," provides that access to the roof shall be permitted to be by a roof hatch or trap door with an area that is not less than 16 square feet with a minimum dimension of 2 feet. It is important to remember that this provision is applicable only to a *required* access to an unoccupied roof.

If the building is less than four stories in height above grade plane, access to an unoccupied roof is not required. If the design professional or building owner chooses to provide roof access, compliance with these code sections is NOT mandatory and there is no applicable minimum or maximum size for the roof access hatch.

If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

The Use of Solid Fuel Appliances in Commercial Cooking Applications

The Department has received the following question concerning the installation of solid fuel fired barbecue appliances in a commercial kitchen: "Can a wood- or charcoal-fueled barbecue appliance that is not listed and labeled be installed in a commercial kitchen?" The answer is: Yes, and here is why.

See Solid Fuel Appliances- page 4

Periodic Inspections *Continued from page 1*

alarms, LPGas Tanks, and other hazardous uses/places of assembly may be considered equipment creating (or signaling) a significant potential hazard to public health and safety. This list should be familiar to you; it is the listing of items whose inclusion in a construction project must be declared during the permitting process on the Construction Permit Application under section IV – DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

In the instance of elevators devices[1], cross-connections/backflow preventers and swimming pools, spas and/or hot tubs[1], that periodic …or maintenance …or on-going inspection is **YOUR** responsibility under the UCC.

Do not, however, be confused by that declaration during the permitting process. While it will enable your office to identify and track *additional* items requiring on-going inspections, do not infer from their reference in that portion of the Construction Permit Application (CPA) that a Construction Permit should be issued to conduct these on-going inspections; it should not.

When these items are installed as a part of a construction project, at the conclusion of that project, in addition to a Certificate of Occupancy or Approval issued, a Certificate of Compliance is also issued for the elevator, cross-connection/backflow preventer or swimming pool/spa/hot tub device. That Certificate of Compliance will reflect an expiration date. The approach of that expiration date should signal the need to conduct a periodic inspection.

To ensure successful Periodic Inspection management, this is what your office should be doing:

- Build and/or maintain your registry, i.e., inventory, of devices requiring periodic inspection by using the On-going Inspections log (UCC-L730), and completing one On-going Inspection Control Card (UCC-F290) for each device following Municipal Procedure 7.1.1.

  Maintain the On-going Inspections log and tickler file. Devices constructed/installed on Permits issued *before* the municipality's creation of the registry must also be identified and added to the registry. *Additional* devices are identified and added to the registry through the declaration of those devices on the Construction Permit Application's section IV.

See Periodic Inspections at right

Periodic Inspections *Continued from left*

- Monitor on-going inspections by:
  Reviewing the tickler file,
  Identifying inspections required, and
  Ensuring the appropriate subcode official is aware of those required inspections.
- Schedule and perform inspections and/or ensure required testing has been done by obtaining a copy of the testing certification.
- Collect the fee, complete the paperwork, prepare and distribute a Certificate of Compliance, and file the required and resulting documents in the central filing system.

This is what your office should *not* be doing:

- Do **NOT** issue Construction Permits for the purpose of conducting on-going inspections.

In support of the above, Bulletins 99-1 and 99-2 have been reviewed and clarification will be added where appropriate. Further, procedures 5.1.1, 7.1.1, 7.2.2 and 7.2.3 of the Municipal Procedures Manual will be revised to incorporate that clarity. And finally, a model Annual Pool/Spa/Hot Tub Inspection Notice, and a model Testing of Backflow Preventer Annual Reminder will be added to the Codes and Standards Information and PermitsNJ Document Library folders for ready access by those licensed Construction and Subcode Officials and Technical Assistants wishing to make use of those models. Watch for these changes.

Source: Berit Osworth
Division of Codes and Standards

Footnotes
[1] Jurisdiction for the periodic inspection of elevator devices may have been assumed by the DCA's Elevator Safety unit.
[2] Not associated with one- or two-family dwellings.

Solid Fuel Appliances *Continued from page 3*

Section 906 of the International Mechanical Code (IMC)/2006, entitled "Factory-built Barbecue Appliances," requires these appliances to be installed in accordance with Chapters 3, 5, 7, 8 and 9. Additionally, when the appliance contains an auxiliary fuel gas supply, it must also meet the requirements of the International Fuel Gas Code (IFGC)/2006. Section 623.1 of the IFGC, entitled "Cooking Appliances," requires that fuel gas appliances that are designed for permanent installation be tested in accordance with ANSI Z21.1, ANSI Z21.58 or ANSI Z83.11 and be installed in accordance with the manufacturer's installation instructions. For more information on the

See Solid Fuel Appliances - page 5

Solid Fuel Appliances *continued from page 4*

installation of fuel gas appliances, such as fuel supply connections and combustion air, you should refer to the appropriate IFGC sections. The purpose of this article is to focus on the IMC requirements.

Section 906.1 of the IMC entitled “General," requires that the solid fuel fired barbecue appliance be of an *approved* type and installed in accordance with the manufacturer’s installation instructions. As defined in Section 202 of the IBC/2006, the word *approved* means "acceptable to the code official or other authority having jurisdiction." The building and fire subcode officials must review the plans for the installation of these appliances and the building subcode official has inspection responsibility for the installation of the appliance only. A barbecue appliance that is factory-built is NOT required to be listed and labeled and the code official has the authority to approve its installation. The manufacturer’s installation instructions must be followed for clearances and location.

From an exhaust standpoint, Section 507.2.1 of the IMC/2006, entitled “Type I hoods” requires a Type I hood to be installed where the cooking appliance produces grease or smoke. Clearly, a wood- or charcoal-fueled barbecue appliance produces smoke; therefore, a Type I hood is required to be installed over the appliance. Furthermore, the definition of “Extra Heavy Duty Cooking Appliances” in Section 202 of the IMC/2006 includes solid fuel burning appliances as such. Section 507.2.4 of the IMC/2006, entitled “Extra-heavy-duty,” states that the hood may not cover any other cooking appliance that requires a hood with a fire extinguishing system. Additionally, the exhaust from the hood covering the barbecue appliance must be independent from all other exhaust systems. "Solid Fuel Cooking Applications" are defined in Section 202 of the IMC/2006 as a commercial food service operation burning hardwood, mesquite, charcoal, or briquettes as the heat source for the cooking operations.

Section 507.13.1 of the IMC/2006, entitled “Extra-heavy duty cooking appliances,” requires minimum exhaust ventilation between 550 to 700 CFM per linear foot of hood for these operations depending on the type of canopy installed. Section 508.1 of the IMC/2006, entitled “Makeup air,” requires that makeup air must be approximately equal to the exhaust air flow.

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

Equipotential Bonding and the NEC/2008

In the National Electrical Code (NEC), the purpose of the section on pool bonding has remained consistent: to reduce or eliminate voltage gradients in pool areas. That said, the change in language in the NEC/2005 caused some confusion regarding Section 680.26, "Equipotential Bonding," when the word “Equipotential” was added to the title (which had been "Bonding") and requirements were added to the code. An article in the Summer/Fall 2007 *Construction Code Communicator* attempted to clarify the equipotential bonding requirements of NEC/2005. This article attempts to clarify the equipotential bonding requirements of the NEC/2008. This appears to be particularly confusing because of the way that the sections were subdivided.

1. **Pool Shells, NEC/2008 Article 680.26(B)(1**) – Conductive pool shells consist of poured concrete, pneumatically applied or sprayed concrete, or concrete block with painted or plastered coating materials. Non-conductive pool shells include vinyl liners and fiberglass composite materials.

(a) – Typically, structural reinforcing steel is used in the conductive pool shells listed above. To be considered bonded, unencapsulated structural reinforcing steel is permitted to be secured together by steel tie wires.

(b) – When the pool reinforcing steel is encapsulated in a nonconductive material (coated rebar), then the bonding requirements, which are summarized in 1a above, no longer apply; however, a copper conductor grid must be installed within or under the pool and no more than 6 inches from the outer contour of the pool shell. The grid must be constructed of at least a #8 AWG bare solid copper conductor bonded to each other at all crossing points, and arranged in a 12 inch by 12 inch (12" X 12") grid with a tolerance of 4 inches.

2. **Perimeter Surfaces**, **NEC/2008 Article 680.26(B)(2)** – The NEC/2008 requires that ANY surface (e.g. soil, grass, concrete, pavers, etc.) around the pool or outdoor spa/hot tub must have equipotential bonding.

(a) – Unencapsulated structural reinforcing steel (summarized in 1a above) installed in a perimeter surface that extends three (3) feet from the pool wall is required to be bonded back to the pool shell at four (4) uniformly spaced points around the pool.

(b) – When the perimeter surfaces contain

See Equipotential Bonding - page 6

Equipotential Bonding *continued from page 5*

reinforcing steel encapsulated in a nonconductive material (coated rebar), or when the pool is fiberglass, or vinyl, then a copper conductor that meets the following must be used: (1) a minimum of a #8 AWG bare solid copper bonding conductor that follows the contour of the perimeter surface between 18 and 24 inches from the inside walls of the pool; (2) the bonding conductor shall be secured within (i.e. paved surface) or under the perimeter surface 4 to 6 inches below the subgrade (soil); and (3) listed splicing devices must be used.

3. **Pool Water, Article 680.26(C**)– This section requires a minimum conductive surface area of 9 square inches to be installed in contact with the pool or outdoor spa/hot tub. For example, the metal handrails of a ladder may be used as long as a minimum of 9 square inches is submerged in the pool in contact with the water. If there is no ladder (or other conductive surface), a component that

See Equipotential Bonding at right

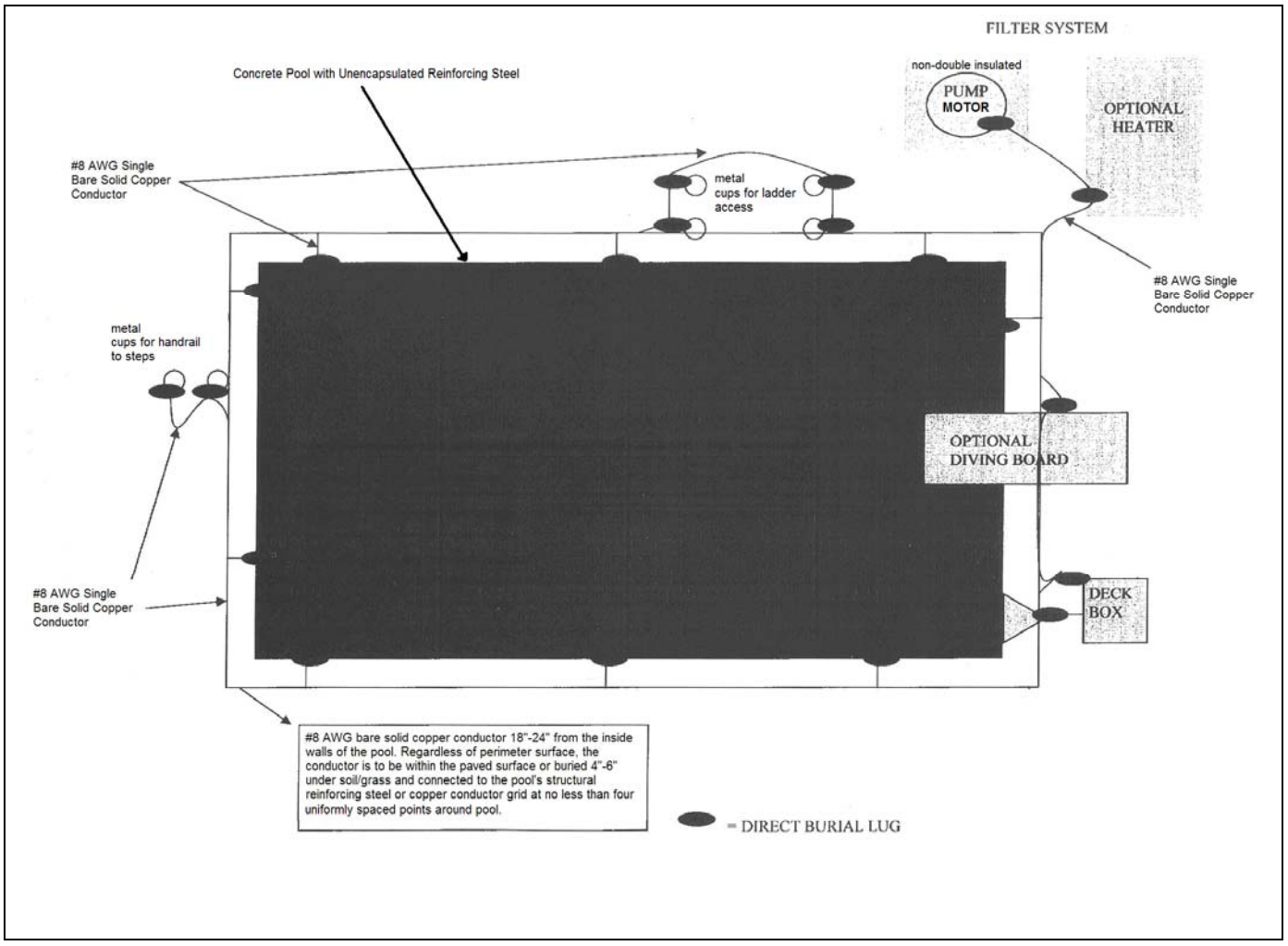
Equipotential Bonding *Continued from left*

meets the requirements of this section may be used. Please keep in mind that there are other items that are part of the equipotential bonding system that are not discussed in this article. As per Section 680.26(B), the following are also included, as applicable: metallic components, underwater lighting, metal fittings, electrical equipment, and metal wiring methods and equipment.

An example of typical equipotential bonding setup for an unencapsulated reinforced steel inground pool is provided below as a convenient accompaniment to this article. Please note that the graphic is an illustration only and is not a substitute for the code text.

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

Source: Rob Austin and Suzanne Borek
Code Assistance Unit



Rehabilitation Subcode: Application of Basic and Supplemental Requirements

The Department has received some specific questions on how to apply the basic and supplemental requirements in a rehabilitation project. N.J.A.C. 5:23-6.7(i) and (j) specifies how basic and supplemental requirements apply to a reconstruction project. When a project is a reconstruction project (N.J.A.C. 6:23-6.7), the applicable requirements are found at N.J.A.C. 5:23-6.10 through 6.30 based on occupancy group. So, for example, if I were performing a reconstruction project in a Group B building, I would be required to meet the requirements of N.J.A.C. 5:23-6.7 (Reconstruction), 6.10 (Basic requirements and supplemental requirements—general), 6.11 (Basic requirements in all Groups), 6.17 (Basic requirements--Group B), 6.17A (Supplemental requirements--Group B) and, as applicable, 6.8 (Materials and Methods), 6.9 (New Building Elements), 6.29 (Mixed use buildings) and 6.30 (Special technical requirements--all groups).

Now, the real reason for this article is that, from my experience, users of the Rehabilitation Subcode tend to skip over N.J.A.C. 5:23-6.10. Although it is not a large section, it does contain some specific scoping requirements that can come back to haunt you if they are overlooked. An example might help. If the Group B building undergoing a reconstruction is a high rise and the scope of work involves portions of the 7th floor, there will be a question as to whether a sprinkler system is required. In the supplemental requirements for Group B, at N.J.A.C. 5:23-6.17A(c)5, the sprinkler provisions are: "Automatic Sprinkler System: When the work area is an entire floor, an automatic sprinkler system shall be installed on that floor. When an automatic sprinkler system is provided, the sprinkler riser shall be sized to serve the entire building, even if the system currently being installed serves only a portion of the building. (Fire)." Because this project involves only portions of the 7th floor, it appears that the sprinkler system is not required.

At this point, the Rehabilitation Subcode has been applied as follows: At N.J.A.C. 5:23-6.7(i) and (j), a reconstruction project in Group B is required to meet the basic and supplemental requirements. Group B basic requirements are located at N.J.A.C. 5:23-6.17 and Group B supplemental requirements are located at N.J.A.C. 5:23-6.17A. However, there is one more section to review. Before consulting the basic and supplemental requirements for Group B, you must

See Rehab Subcode at right

* * * * * * *

Rehab Subcode *Continued from left*

first apply the requirements of N.J.A.C. 5:23-6.10, Basic requirements and supplemental requirements—general. More specifically, N.J.A.C. 5:23-6.10(b)1 states, "All reconstruction work begun within a single 12 month period shall be considered for determining the applicability of the supplemental requirement." Therefore, as far as the reconstruction project on the 7th floor of the Group B building is concerned:

- (a) If the reconstruction project on the 7th floor is the only reconstruction project to be undertaken on that floor during the past 12 months, then the work area for the project in question is not the entire floor and the sprinkler system requirement does not apply.
- b) If the reconstruction project on the 7th floor is one of two or more (multiple) reconstruction projects that have been undertaken on that floor during the past 12 months and if the work areas of the multiple projects add up to the entire floor, then the sprinkler system requirement does apply.

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

Source: Rob Austin
Code Assistance Unit

Correction: The New Jersey State Permit Surcharge (Training) Fee: Charge or No Charge?

This is a correction to the article entitled, "The New Jersey State Permit Surcharge (Training) Fee: Charge or No Charge?", which was published in the Spring/Summer 2009 *Construction Code Communicator* (CCC).

Subsequent to its publication, an inconsistency with other *CCC* articles on the subject of permit surcharge fees was discovered; a further and closer review of N.J.S.A. 52:27D-130.2 revealed that the previous articles were correct on the subject of whether or not a surcharge applies to the installation or alteration of solar energy heating or cooling systems.

See State Permit Surcharge (Training) Fee – page 8

Required Annual Backflow Preventer Testing



On September 8, 2009, N.J.A.C. 5:23-2.23(*l*)4 was amended to require that all backflow preventers that are designed to be tested and that are used to isolate sources of contamination as defined in the plumbing subcode must be tested every 12 months. In the past, only testable backflow preventers that were connected to a high hazard source were required to be tested annually. There is an exception for a testable backflow preventer that is installed on the water supply for a one- and two-family dwelling, which would require yearly testing only when isolating a high source of contamination.

In the plumbing subcode, Section 10.5.6 b of the National Standard Plumbing Code/2006 states: "devices that are designed to be field tested shall be tested prior to final inspection of the initial installation and once each year thereafter…"

It is the responsibility of the local enforcing agency (LEA) to keep track of backflow preventers and to notify the building owner that, to remain in compliance, they must be tested every 12 months by a certified backflow preventer tester. The tester must then obtain a Certificate of Compliance. The plumbing inspector or subcode official has the option of either witnessing the test and receiving the performance test certification or simply obtaining the performance test certification.

There are many municipalities that have already implemented recordkeeping. There are programs that will allow the tracking and recordkeeping and will generate reminders that the yearly test is due.

The Department is updating Bulletin 99-2, Testing of Backflow Preventers. The updated bulletin will include a model reminder letter that can be used to notify owner of a property at which the annual backflow preventers need to be tested.

NOTE: Also consult the article "Periodic Inspections under the Uniform Construction Code" in this issue of the *Communicator.*

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

State Permit Surcharge (Training) Fee *continued from page 7*

Bullet number 6 from the Spring/Summer issue article stated that no training fee or permit fee surcharge fee shall be charged where the construction permit was for the installation or alteration of solar energy heating or cooling systems. That is not true.

While it is true that the Uniform Construction Code Act does still contain N.J.S.A. 52:-27D-130.2 (P.L. 1985, c.85), which does exempt "solar energy heating and cooling systems" from construction permit fees and surcharges, N.J.S.A. 52:27D-130.2 refers to a system certified as eligible for property tax exemption under P.L. 1977, c. 256 (C. 54:4-3.113 et seq.). Since P.L. 1977, c. 256 expired on December 31, 1987, there are no longer installations of systems that are so certified.

Therefore, please disregard bullet number 6 of the Spring/Summer 2009 article entitled, "The New Jersey State Permit Surcharge (Training) Fee: Charge or No Charge?", and resume assessing the permit surcharge (training) fee in these instances.

Source: Berit Osworth
Division of Codes and Standards

Bills and Laws

How many code officials and technical assistants have been asked about legislation that is currently being heard --or was heard—in Legislative hearings? I'm sure many. But the question remains, do you know where to find the information and how to search for it? The key is http://www.njleg.state.nj.us/.

If you go to this website, you can search for bills as far back as 1996. There is a "Bill Search" on the right-hand side of the webpage, but, if you know the specific year, you can use the left-hand side. I'll demonstrate this through an example and search for Bill S2265 of Legislative Session 2008-2009, which requires developers to offer solar energy systems in certain new home construction.

There are two ways to search for a specific bill. The first way applies to bills currently under consideration and to bills introduced and considered in past Legislative sessions. The second way applies to current bills only.

See Bills and Laws – page 9

Bills and Laws *continued from page 8*

First, starting on the left-hand side of the website, click on "Bills 2008-2009". This will bring you to another page. Click on "Bill Number" and enter "S2265". From my search, I found that S2265 was substituted by A1558 and signed into law on 3/31/2009 as P.L.2009, c.33. If desired, you can search for this law under "Chapter Laws 2009."

Second, for bills under consideration in the current legislative session, starting on the right-hand side of the website, you may type the bill number into the search section. That search will yield the current status.

Hopefully this is helpful the next time your township administrator, zoning officer, tax assessor, etc. comes running to you for information on how to find a bill pending before the Legislature.

Source: Rob Austin
Code Assistance Unit

Classifying a Rehabilitation Project

We've been receiving an increasing number of calls regarding the Rehabilitation Subcode, N.J.A.C. 5:23-6, and how to classify projects. As you all should be aware, the Rehabilitation Subcode is divided into escalating categories of work: Repair, Renovation, Alteration and Reconstruction. The following are two examples in an attempt to help you classify rehabilitation projects properly. These stories might or might not be based on personal experiences.

1. *Sibling Spat:* Robbie, age 11, and younger brother Matt, age 7, are playing a game of tag in the back yard. 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:

See Classifying Rehab at right

Classifying Rehab *continued from left*

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.

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, buy a sheetrock patch, spackle and touch-up paint – Repair.
b) Replace the remaining plaster where the hole was with sheetrock– Renovation.
c) Look on 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.

You need to consult N.J.A.C. 5:23-2.7(c) to determine whether a permit is required. If a permit is required, you need to consult 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).

Please feel free to contact the Code Assistance Unit at (609) 984-7609 if you have any questions.

Source: Rob Austin
Code Assistance Unit

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A Fond Farewell to Director Cynthia A. Wilk

Cynthia A. Wilk, Director of the Division of Codes and Standards, recently retired from State government after 36 years of service. Over the course of her career, Cindy has had a hand in virtually every major initiative undertaken by the Division. She has also served as President of the National Conference of States on Building Codes and Standards, Chair of the Board of Visitors of the National Fire Academy and as a member of the panel issuing the report *America at Risk,* a reexamination of the issues raised in the *America Burning* report. Her tenure as director has been marked by her willingness to listen with an open mind and by her strong support for local code enforcement. We all join in wishing Cindy a long, happy and healthy retirement.

She will be missed!

Source: Division Staff

Welcome, Director Edward M. Smith

Edward M. Smith has been appointed Director of the Division of Codes and Standards by Commissioner Lori Grifa. While new to government, Ed is not new to construction. He brings to the job 28 years of experience in construction management. A proponent of team-based initiatives, Mr. Smith is looking forward to working with the code enforcement community. Upon accepting this position, Ed said, "I am honored that the Commissioner has placed her confidence in me. I look forward to working with all of the individuals and organizations involved in code enforcement to ensure that we continue to serve the public well during these challenging times."

Welcome aboard, Ed!

Source: Director's Staff

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Energy Subcode Compliance with the 2009 IECC and 2007 ASHRAE 90.1

On September 7, 2010, the 2009 International Energy Conservation Code (IECC) and the 2007 American Society of Heating, Refrigeration, Air-conditioning Engineers (ASHRAE) Standard 90.1 were adopted as the Energy Subcode, N.J.A.C. 5:23-3.18. What does this mean for demonstrating compliance with the newly adopted codes? Actually, not much has changed; the compliance options remain pretty much the same as those of the past codes.

Per N.J.A.C. 5:23-2.15(f)1vi, the Uniform Construction Code (UCC) requires applicants to demonstrate compliance with the Energy Subcode as part of the permit application process for a newly constructed building or an addition. (Buildings that are not heated or cooled do not have to meet the Energy Subcode and rehabilitated buildings have their own requirements per N.J.A.C. 5:23-6.) Compliance methods vary depending on climate zone and building type. The Energy Subcode separates the State into two climate zones as follows:

Zone 4 – Atlantic, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Middlesex, Monmouth, Ocean, Salem and Union counties;

Zone 5 – Bergen, Hunterdon, Mercer, Morris, Passaic, Somerset, Sussex and Warren counties.

Also, the Energy Subcode divides buildings into two categories: low-rise residential and commercial (which includes all buildings that are not low-rise residential).

PERMIT APPLICATION/PLAN REVIEW

The following is a description of the alternatives for documenting energy subcode compliance at the time of permit application.

Low-rise residential buildings are defined as one- and two-family dwellings or multiple-family buildings that are three stories or less in height. Compliance with the Energy Subcode and the International Energy Conservation Code (IECC)/2009 for these buildings must be demonstrated in one of four ways:

1. COMPLIANCE WITH CALCULATIONS: This has been the traditional way that compliance with energy codes has been shown. It involves calculating the "U" value (thermal transmittance) of the various building components (walls, floors, roofs, etc.) and showing that they are less than the code-specified maximum for the components. Guidance on how to perform the calculations can be found in the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE) Handbook of Fundamentals.

2. COMPLIANCE WITH RES*CHECK* SOFTWARE: The software program performs the calculations based on input about the shape and size of the building, the type of insulation and windows and the type of equipment that the applicant proposes to use. The software is available as a free download from the web site: http://www.energycodes.gov. The IECC/2009 version of the software should be used and can be selected under "Code" in the menu bar at top. The software simply requires the input of the areas of the various components, the R value of insulation, and the U value of windows and doors. The software automatically gives tradeoffs. A compliance report is generated by the software program, which can be submitted with the permit application. It must meet or exceed the IECC/2009 (i.e. passes) based on the applicable climate zone location.

3. COMPLIANCE WITH NJ ENERGY STAR HOMES: This program is sponsored by the New Jersey Board of Public Utilities through its Clean Energy Program (http://www.njenergystarhomes.com). The program provides incentives for projects that exceed the Energy Subcode. A letter of enrollment (typically the "builder's acknowledgement" letter) from the local utility company (or its consultant) should be submitted with the permit application when the applicant is using this compliance option. Inspections for this program are handled by the utility company or its consultant, except that IECC/2009. Section 403, entitled "Systems," must be verified by the local construction office. The application for a new home's Certificate of Occupancy should include the Home Energy Rating Scale certificate or equivalent (i.e., passing final inspection report).

NOTE: Homes built and certified to federal (Department of Energy/Environmental Protection Agency—DOE/EPA) Energy Star standards and verified by a certified rater would also be in compliance. Acknowledgement of program participation must be submitted at the time of the permit application and a Home Energy rating certificate or equivalent must be submitted to the local construction official at the time of application for a certificate of occupancy.

4. COMPLIANCE WITH PRESCRIPTIVE PACKAGE: Previous adoptions of the energy subcode allowed the use of a prescriptive package based on climate zone location and window-to wall ratios. However, the days of many options are gone. The following are the applicable portions of Table 402.1.1 of the IECC/2009 that can be applied as a prescriptive package. With this option, the applicant

See Energy Subcode Compliance- page 3

Energy Subcode Compliance *continued from page 2*

need only identify he/she is using the prescriptive package and show the corresponding details on the plans. If a proposed building has window percentages and U values (a measure of the windows' efficiency) that are equal to or lower than the values found on the line in the appropriate chart, and R values and equipment efficiencies that are equal to or higher than those listed in the chart, the building complies.

INSULATION & FENESTRATION REQUIREMENTS BY COMPONENT[a]										
Climate Zone	Fenestration U-Factor[b]	Skylight U-Factor[b]	Glazed Fenestration SHGC[b]	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value[i]	Floor R-Value	Basement Wall R-Value[c]	Slab R-Value[d] & Depth	Crawl Space Wall R-Value[c]
4	0.35	0.6	NR	38	13	5/10	19	10/13	10, 2 ft	10/13
5	0.35	0.6	NR	38	20 or 13+5[h]	13/17	30[g]	10/13	10, 2 ft	10/13
a. R-values are minimums. U-factors and SHGC are maximums. R-19 batts compressed into a nominal 2 × 6 framing cavity such that the R-value is reduced by R-1 or more shall be marked with the compressed batt R-value in addition to the full thickness R-value.										
b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.										
c. "10/13" means R-10 continuous insulated sheathing on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.										
d. R-5 shall be added to the required slab edge R-values for heated slabs.										
g. Or insulation sufficient to fill the framing cavity, R-19 minimum.										
h. "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 25 percent or less of the exterior, insulated sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.										
i. The second R-value applies when more than half the insulation is on the interior of the mass wall.										

Keep in mind, this Table 402.1.1 is for typical wood-framed construction. Steel-framed construction equivalents can be found in Table 402.2.5 of the 2009 IECC.

Regardless of the compliance method chosen, the documentation must be signed and sealed by a design professional for all buildings. The documentation may be signed by the mechanical contractor for Class 3 buildings, as defined at N.J.A.C. 5:23-4.3A(d). A single-family detached homeowner who resides or intends to reside in the home may sign the energy code compliance documentation.

Commercial buildings are defined as all buildings other than low-rise residential buildings. These must demonstrate compliance in one of two ways (compliance is in accordance with the Energy Subcode and ASHRAE Standard 90.1-2007):

1. COMPLIANCE WITH CALCULATIONS: This is very much like the calculations for low-rise residential buildings mentioned above. However, the applicant must also provide information on the type of lighting installed and its usage.

2. COMPLIANCE WITH COM*CHECK* SOFTWARE: This is very much like the RES*check* software mentioned above. However, the applicant must include the type of lighting installed and its usage. The software is available as a free download from the web site: http://www.energycodes.gov. The ASHRAE Standard 90.1-2007 software should be used and can be selected under "Code" in the menu bar at top. A compliance report is generated by the software program, which can be submitted with the permit application. It must meet or exceed the ASHRAE 90.1-2007 (i.e. passes) based on the applicable climate zone location.

Regardless of the compliance method chosen, the documentation must be signed and sealed by a design professional for all buildings. The documentation may be signed by the mechanical contractor for Class 3 buildings, as defined at N.J.A.C. 5:23-4.3A(d).

See Energy Subcode Compliance- page 4

Energy Subcode Compliance *continued from page 3*

INSPECTION (Low-Rise Residential)

The requirement to verify that the insulation specified on the plans is the insulation installed is not new. The IECC/2009 *does include new requirements for verifying the sealing (air tightness) of the building thermal envelope through either a visual inspection or a blower door test. The* IECC/2009 *also includes a requirement to verify duct tightness through an air leakage test. This requirement does not take effect until January 1, 2013.*

Insulation -- With the exception of those homes that are enrolled in the NJ Energy Star Homes Program (where compliance is verified by a third party), inspectors should verify that the insulation levels installed in all buildings match the insulation levels used in the calculations, found in the RES*check* or COM*check* printout, or shown in the Prescriptive Package table, as applicable. Other Energy Subcode requirements, such as piping and ductwork insulation, are still applicable in all cases. More specifically, when ductwork is installed within a low-rise residential building, supply ducts in attics are to be insulated to a minimum of R-8 when outside the building thermal envelope and all other ducts are to be insulated to a minimum of R-6 when outside the building thermal envelope.

Sealing -- Previous editions of the Energy Subcode were not specific about the requirements for the sealing of the building thermal envelope and ductwork. With the adoption of the 2009 IECC, new sealing requirements have been added, and to differentiate from the past editions of the energy subcode, the word "tightness" is used along with sealing.

See Energy Subcode Compliance-continued at right

Drinking Water Facilities – Plumbing Subcode Requirements

I have received several questions about the provisions of the National Standard Plumbing Code (NSPC), which, in Table 7.21.1, requires that "drinking water facilities" be provided in most use group occupancies. The question is what type of drinking water facility meets the plumbing code requirement?

There are many different types of water dispensing fixtures and appliances that meet the plumbing subcode. The following are examples of approved types: drinking fountains, water coolers, and bottled water cooler dispensers. In NSPC/2009, Section 7.21.5(b), drinking water facilities for employees, a kitchen, or bar sink shall be considered a meeting this requirement.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Energy Subcode Compliance *continued from left*

- Building Thermal Envelope tightness – The permit holder has two options for verifying building thermal envelope tightness: (1) testing per Section 402.4.2.1 or (2) visual inspection per Section 402.4.2.2. If the permit holder chooses testing, the results of the blower door test should be obtained and become part of the permit file. If visual inspection was selected, the building thermal envelope tightness should be verified utilizing Table 402.4.2. A checklist for this purpose will be included as part of the bulletin on this issue. Documentation of this inspection should be maintained in the permit file.
- Duct tightness – ***Beginning on January 1, 2013***, duct tightness will be required to be verified through a leakage test unless the air handler and all ducts are located within conditioned space. The permit holder should verify duct tightness through testing either at post-construction or during rough-in; the timing of this test is the permit holder's choice. The benefit to a post-construction test is that the qualifications for passing are less stringent than a rough-in test. The benefit to a rough-in test is that the ductwork should be much more accessible to fix if it does not pass. The requirements for passing can be found at Section 403.2.2. Again, a copy of the test results should become part of the permit file.

If you have any questions concerning this matter, please contact me at (609) 984-7609.

Source: Rob Austin
Codes Assistance Unit

Are Tenant Separations Required?

There seems to be confusion as to whether occupancies of the same Group need to be separated by a fire-separation assembly. The short answer is no, not since the Building Officials and Code Administrators (BOCA) National Building Code/1996 was superseded by the International Building Code/2000.

The following is the "separation" language from the International Building Code (IBC), 2000, 2006 and 2009 editions:

* Section 302.3.1 of the IBC/2000 -- Where a building is occupied by two or more uses not included in the same occupancy classification, the building or portion thereof shall comply with Section 302.3.1 or 302.3.2 or a combination of these sections.

See Tenant Separations- page 6

NSPC/2009: Update

On September 7, 2010, the 2009 national model codes were adopted with a six- month grace period, which is in effect until March 7, 2010. The following list presents some of the changes from the 2006 to the 2009 National Standard Plumbing Code (NSPC); this list is not an all-inclusive.

Chapter 2 - General Regulations

1. Section 2.16-- Freezing or Overheating - Item 5. – This item was expanded to describe areas of the building where piping needs protection from freezing.
2. Section 2.25-- Food Handling Establishments and Food Handling Areas Within Buildings - This section was totally rewritten and expanded with more details.
3. Section 2.26--Elevator Sump Pits – New section.

Chapter 3 - Materials

1. Section 3.1.2 General Requirements – e. and f. have been added; they contain the requirements for markings and certification of cast iron piping.
2. Section 3.1.3 – Standards Applicable to Plumbing materials-UCC Referenced Standard Associated Pool and Spa Professionals (APSP) 7, Entrapment voidance for swimming pools, spas and hot tubs, was added.
3. Section 3.3.9-- Roof Drains – Plastic was added as an approved material.
4. Tables 3.1.3, 3.4, 3.5 and 3.6 – Referenced standards were updated.

Chapter 4 - Joints and Connections

1. Section 4.2.17 Split Couplings – Rolled grooves are permitted for galvanized joints.
2. Section 4.3.7 Copper Tube to Threaded Pipe Joints – Exception was added that would prohibit dielectric unions on water heater connection unless permitted by the manufacturer.
3. Section 4.3.9.e. Plastic DWV Pipe to Other Materials, – This subsection now states that transition cement shall not be permitted to be used within buildings.

Chapter 5 – Traps, Cleanouts and Backwater Valves

1. Section 5.3.2 Trap Seals – Exception (1) was revised. If the interceptor does not provide a trap seal a separate trap must be provided.

Chapter 6 – Liquid Waste Treatment Equipment

1. Section 6.2 Grease Interceptors – Totally revised. Expanded lists of approved types of grease interceptors.

Chapter 7 – Plumbing Fixtures, Fixture Fittings and Plumbing Appliances

1. Section 7.5.1 Urinals – Expanded list of compliant urinals.
2. Section 7.10.6 Shower Floors and Shower Pan Liners – Totally revised. Details more types of permitted shower pan liners.
3. Section 7.23 Safety Features for Spas and Hot Tubs was deleted and reference to ANSI/APSP 7 was added.
4. Section 7.24 Plumbed Emergency Eyewash and Shower Equipment – This section has been expanded and water discharge temperatures have been added.
5. Table 7.21.1 Minimum Number of Required Plumbing Fixtures – “Use Group” column was deleted.

Chapter 10 – Water Supply and Distribution

1. Section 10.2 Identification of Potable and Non-Potable Water – Color coding for piping has been added.
2. Section 10.5.9 Protection from Fire Systems – Totally revised. Types of backflow preventers added for residential and limited area sprinkler systems.
3. Section 10.12.4, 10.12.5 & 10.12.6 – These sections were revised to better indicate where required valves are to be located.
4. Section 10.14.6.d. Excessive Pressures – A new paragraph, Gauge port or pressure gauge, has been added.
5. Section 10.15.6.a. Mixed Water Temperature Control – General revisions. Exception: Water temperature, has been changed from 120 deg. to 105 deg.
6. Section 10.15.8.e. Plastic Piping--The requirement for a pressure relief valve on plastic piping has been changed.
7. Section 10.15.9.1 Where Required – General revisions. “Tank-type” has been added to "water heater."
8. Section 10.17.5 Combined Distribution Systems – New section added that permits the use of manifold-type parallel water distribution systems to be combined with conventional main/branch piping systems.
9. Section 10.20 Multi-purpose fire sprinkler system – A new section has been added to cross reference Section P2904 of the International Residential Code/2009 as a part of the plumbing subcode.

Chapter 11 – Sanitary Drainage Systems

1. Table 11.4.1 Drainage Fixture Unit (DFU) Values - Shower stall – 1-1/2-inch trap added.
2. Table 11.5.1A Building Drains and Sewers – Drainage fixture unit value added for 3-inch pipe at 1/8-inch per foot slope.
3. Section 11.7.6 Grinder Pump Ejector – a. “Authority Having Jurisdiction” has been removed.

See NSPC/2009 Update- page 6

NSPC/2009 Update *continued from page 5*

4. Section 11.7.11 High Water Alarms – Exception: Macerating toilet systems was added.

Chapter 12 - Vents and Venting

1. Section 12.10.5 Reserved – Waste stacks in dwelling units was deleted.
2. Section 12.10.6 Floor Drains and Floor Sinks – New section for wet venting floor drains and floor sinks.
3. Section 12.19 Waste Stack Venting – New section added.

Chapter 15 – Tests and Maintenance

1. Section 15.4.1.a – Rough Plumbing—The use of an air test on plastic piping is prohibited.

These are just a few of the changes. There are many more. Please review the NSPC/2009 for all the changes.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Residential Swimming Pools and the Plumbing Subcode: UPDATE No. 2

The Fall, 2009, Volume 21, Number 2 edition of the *Construction Code Communicator*, contained my article on "Residential Swimming Pools and the Plumbing Subcode: UPDATE." That article stated that when a residential swimming pool has two main submerged suctions (bottom drains), they must be three feet apart and must also have some type of atmospheric safety vacuum release system (SVRS) provided at the pump or pumps to protect against suction entrapment.

The National Standard Plumbing Code/2006 required a SVRS unless there were no submerged suction outlets (bottom drains) in the pool. There is a change in the NSPC/2009, which adopts the "American National Standard for Suction Entrapment in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins," for suction entrapment. The "American National Standard for Suction Entrapment in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins" is published by the ANSI/APSP-7-2006 and is adopted as part of the NSPC/2009 by reference.

See Residential Swimming Pools -continued at right

Tenant Separations *continued from page 4*

* Section 508.1 of the IBC/2006 -- Where a building or portion thereof contains two or more occupancies or uses, the building or portion thereof shall comply with the applicable provisions of this section.

* Section 508.1 of the IBC/2009 -- Where a building contains more than one occupancy group, the building or portion thereof shall comply with the applicable provisions of Section 508.2, 508.3 or 508.4, or a combination of these sections.

As you can see, although the section number has changed and the words have been tweaked, the intent is still the same. An example might help. For a row of office suites (Group B) in one structure (no lot lines in-between), the walls between tenants do not have to have a fire-resistance rating. However, if one of the Group B tenants were to be changed to something other than Group B, a restaurant (Group A-2), for example, the walls between the Group B and the Group A-2 would then have to comply with the provisions for a mixed-use building.

Please keep in mind that the building subcode does contain "Special Occupancies" in Chapter 4 of the IBC/2009 and Special Provisions in Section 509 of the IBC/2009, which override Section 508.1 with regard to separation. For example, enclosed mall buildings require tenant separations and multiple family dwellings also require dwelling unit separation regardless of other code requirements.

Therefore, excluding the provisions from the Special Occupancies in Chapter 4 or the Special Provisions of Section 509, the same occupancies (groups) within the same structure do not require fire resistant tenant separations.

If you have questions regarding this matter, please contact Code Assistance at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Residential Swimming Pools *continued from left*

A summary of the change in the requirements follows: **ANSI/APSP-7 2006 does not require a SVRS if a swimming pool has two bottom main drains spaced at least three (3) feet apart that are properly piped. If only one bottom main drain or a single submerges side wall outlet drain is installed, then a SVRS is required.**

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Census Item Numbers

As construction officials and technical assistants, you know you must report information on monthly permit and certificate activity to the New Jersey Department of Community Affairs. You also have an obligation to report residential building permit data to the U.S. Bureau of the Census. For most of you, these requirements occur behind the scenes. The computer software takes care of these obligations. Still, you need to know about what it is the U.S. Census Bureau is looking for. Below is a cheat sheet. It might be helpful to keep it next to the computers used to record building permits.

IF Group	AND Permit Type	AND Number of Dwellings	THEN Census Item Number Is:
R-3	New	1	101
R-4	New	1	101
R-5	New	1	101
R-3	New	2 (duplex)	103
R-4	New	2 (duplex)	103
R-2	New	0 (college dormitory)	999
R-2	New	3 or 4	104
R-2	New	5 or more units	105
I-2 (assisted living)	New	5 or more units	105*
Residential	Alteration or additions		434
All other groups	New, Addition, or Alteration, Demolition,	Does not matter, but record dwellings in mixed-use buildings	999 (off item to the Census Bureau)
* Note: If the assisted living facility has both nursing homes and apartments, count only the apartments as dwelling units.			

Census item numbers classify construction based on three-digit numbers. The federal government wants to know about new home construction. They focus on building permits for residential uses. Their main concern is the number of new houses authorized by building permits, and their estimated cost.

The most common item number is a 101. It is used for all new, residential building permits issued to build one and only one new dwelling. If you issue a building permit for a new house, the correct item number is 101.

Census item number 102 is no longer used. It referred to a building permit issued for new, residential construction, where one dwelling unit is reported on the building permit and this unit is attached to one or more dwellings. A 102 was for building permits issued to build a single-family attached house. An example would be a row house or town home. Today, if you issue a permit for a new house attached to another, call it a 101, unless, of course, it is not really independent from the other dwellings. These attached units are covered by the other item numbers, which are discussed next.

A 103 item number denotes a building permit issued to build a duplex. If you use a 103 as the item number, the U.S. Census expects to see two dwelling units gained.

A 104 is a residential building that has three or four dwellings. A 105 is a building with five or more dwellings.

The Census Bureau only wants to know about new houses or apartments. They no longer track demolitions and are no longer interested in most nonresidential buildings. The exception is assisted living facilities (group I-2). Both the Census Bureau and the Department of Community Affairs recognize that these buildings as places where people live. The number of dwellings units in the assisted living facilities should be counted and recorded on the building permit. Keep in mind that, if the assisted living facility also has a wing for nursing home or hospital beds, only the assisted living units should be counted as dwellings. The hospital and nursing home beds are NOT counted as dwellings. In most instances, the appropriate census item number for assisted living facilities will be 105.

See Census Item Numbers- page 8

Census Item Numbers *continued from page 7*

Don't misunderstand. Although the Census Bureau no longer cares about demolitions and most nonresidential construction, we at the Department of Community Affairs still do. The only item numbers you have to remember and keep close by your computer if you use construction reporting software are: 101, 103, 104, and 105. Everything else is a 999 or an "off item," as far as the Census Bureau is concerned.

If you have questions you can call the Census Bureau directly at the toll free number: 1-800-845-8244. You also can call or e-mail me with questions I may be reached at jlago@dca.state.nj.us or at (609) 292-7898.

Source: John Lago
Division of Codes and Standards

New Requirements for Smoke Alarms and Low-voltage Smoke Detection Systems

This article is being written to make sure everyone is aware of a new positive addition to the requirement for smoke alarms in the New Jersey International Residential Code (IRC)/2009. Section R314.2, Smoke detection systems, now allows household fire alarm systems to be installed as the primary fire detection system. The IRC now provides homeowners the choice of either installing line voltage hardwired smoke alarms or a low voltage household fire alarm system. The low voltage household fire alarm system must be installed in accordance with the requirements of Sections R314.2, Smoke detection systems, and R314.4. Power source. Below is the new code text that allows the installation of the household fire alarm systems in accordance with the IRC/2009 and National Fire Protection Association (NFPA) 72/2007.

"R314.2 Smoke detection systems. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72.

Exception: Where smoke alarms are provided meeting the requirements of Section R314.4.**"**

See Smoke Alarms -continued at right

Smoke Alarms *continued from left*

"R314.4 Power source. Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be interconnected.**"**

The code change is very similar to Bulletin 08-1 in that it requires monitoring and servicing of the fire alarm system after installation. The new code section goes one step further and requires that the low voltage household fire alarm system be a permanent fixture owned by the homeowner.

So, as of September 7, 2010 when New Jersey adopted the IRC/2009, homeowners are allowed to install low voltage household fire alarm systems as long as they own the system, have it monitored by an approved supervising station, and have it maintained in accordance with NFPA 72. Therefore, a variation is no longer required for the installation of a low voltage household fire alarm system installed in accordance with IRC and NFPA-72.

The Department will be withdrawing Bulletin 08-1 when the 6 month grace period expires for the IRC/2009.

Source: Michael E. Whalen
Code Assistance Unit

Introducing the New and Improved Codes and Standards Internet Website

As many of you may have noticed by now, the Division of Codes and Standards has a new website. Its address is: www.nj.gov/dca/divisions/codes/.

We have carefully reorganized the information appearing at the Division's Internet website in a manner that we believe is now easier to navigate, and will more readily enable our website visitors to find whatever it is they need. If you look closely, you will also see that a standard of presentation has been employed as well.

Every page is structured to present the same blue navigation (or menu) list on the left; its purpose is to guide visitors through the website. The white space in the center of each page presents the bulk of the information on that page's subject. Depending on the page, there may also be a right-hand column defined, which may contain one, some, or all of these three components: 1) a teal-colored right-hand navigation that provides a "fast path" to the sub-pages of the

See New Website- page 9

New Website *continued from page 8*

subject as categorized, 2) a blue "related links" box, and 3) a green "more information" box. Note the "breadcrumbs" that appear at the top of each page will always track your location and "the way back."

Major categories of information appearing on the left-hand menu include: "About the Director," "Bureaus, Offices & Programs," "Codes & Regulations," "Code Official Information," "Advisory Boards," "Alerts & Issues," "Publications," the "Construction Reporter," "Forms," "Additional Resources," "Topics A-Z ," and "Contact Us;" simply mouse-click on your topic of interest.

Some of the categories are self-explanatory; for example, the category, "About the Director" provides a brief description of the division director.

The category, "Bureaus, Offices & Programs" provides the name, mailing address, telephone and fax numbers, and sometimes an e-mail address, along with a brief description of each, for the eight bureaus and offices that make up the Division of Codes and Standards. This page also provides the hyperlinks to bureau and offices subpages from which you may access detailed information on the Division's various programs.

The category "Codes & Regulations" provides information on currently adopted codes, previously adopted codes, the grace period, current administrative rules and regulations, and rule proposals and adoptions.

The category, "Code Official Information" provides information for and about the licensed code official community.

The category, "Advisory Boards" provides information about the Division's various advisory boards, their meeting schedules, agendas and meeting minutes, as available.

The category "Alerts & Issues" presents a listing (with hyperlinks) of current as well as past advisory/instructional letters, usually (but not always) issued by the division director, typically to the codes community.

The category, "Publications" provides the listing (with hyperlinks) of all of Codes and Standards' publications; the "Construction Reporter" publication has its own page.

The category, "Forms" provides a listing of all of the Division's various forms, organized by program area and including hyperlinks, where the form may be downloaded from, or completed over, the Internet.

The category, "Additional Resources" provides a listing (with hyperlinks) of additional resources organized by program; please note, this page is still under construction.

See New Website -continued at right

New Website *continued from left*

When you are looking for something at the Codes and Standards website, but are unsure of where to find it, click on the category, "Topics A-Z"

The category, "Contact Us" is self-explanatory.

If you have bookmarked our old website or *any* of the subpages found there, *please* remember to update those bookmarks to the new site. If after considering the website structure improvements explained above, you *still* have trouble finding something, by all means please telephone us at (609) 292-7899; ask for the Codes and Standards website editor.

Source: Berit Osworth
Division of Codes and Standards

Information about Available Training for Lead Safe Work Practices

Since September 15, 2000 the United States Department of Housing and Urban Development (HUD) has required all individuals performing work on "target housing" to be trained in lead-safe work practices (24 CFR 35, Lead Safe Housing Rule). In the case of lead safe work practices, "target housing" means any housing containing one bedroom or more constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than six years of age resides or is expected to reside in such housing). This was followed by the State of New Jersey adopting lead-safe building maintenance requirements for multiple dwellings (N.J.A.C. 5:10), emergency shelters (N.J.A.C. 5:15) and rooming and boarding homes (N.J.A.C. 5:27) in 2005……and finally in June of this year, the Environmental Protection Agency (EPA) fully implemented its Renovation, Repair and Painting (RRP) Rules (40 CFR 35).

Unfortunately, the requirements under each of these regulations can vary making it confusing and difficult for contractors, multiple dwelling owners and maintenance workers to ensure that their activities remain in compliance. The Division of Housing and Community Resources in the New Jersey Department of Community Affairs is offering a certificate program which will satisfy the training requirements under **ALL THREE** regulations. Information on the **reduced cost** training courses, including how to register can be obtained at: http://shop.njworkforce.org/

Code officials are not required to take this training; the Division is providing this as information. If you have any questions, please feel free to contact us at 1-877-DCA-LEAD.

Source: Veronica Delessandro
Division of Housing and Community Resources

CONSTRUCTION REPORTER AUGUST 2010 HIGHLIGHTS

- The estimated cost of construction authorized by building permits in August was $887.7 million. This is 13.3 percent more than last month.
- Residential work amounted to $426.6 million (48.1 percent). Office, retail, and other nonresidential activity totaled $461.1 million (51.9 percent). 560 of New Jersey's 566 municipalities reported.
- For the first time since December 2009, the number of new houses broke 1,000 units. The August tally was 1,252; this was 26.2 percent more than last month.
- Franklin Township, Somerset County had the most work, $32 million for the month. One of the bigger developments was a $21.4 million conversion of an existing warehouse to store financial data. Another big permit reported was for a new 70-unit, income- and age-restricted apartment building. Franklin Township ranked third among municipalities with 103 authorized dwellings in August. Only Monroe Township (Gloucester County) and Springfield Township (Union County) had more, 139 and 104, respectively.
- Glassboro in Gloucester County had $24.4 million of work in August, ranking second among municipalities. Nearly all of this was from a single project for Rowan University. It is a mixed-use building with an estimated construction cost of $23 million. The development will have 280 dorm rooms, as well as classroom and office space, and retail and restaurant uses.
- Paterson in Passaic County had $24 million of construction. A new, structured parking deck for St. Joseph Hospital accounted for $20.5 million.

Year-to-Date

- All major indicators are up.
- The estimated cost of work reported on all building permits between January and August 2010 was $6.4 billion. This is nearly one percentage point more than the same eight-month period last year.
- Nearly 1,200 more homes were built between January and August 2010 compared to the same period in 2009. This is a gain of 17.3 percent.
- Office construction is up by 49.6 percent, nearly 1.2 million more square feet.
- Retail work is only up by 1.3 percent compared to 2009.

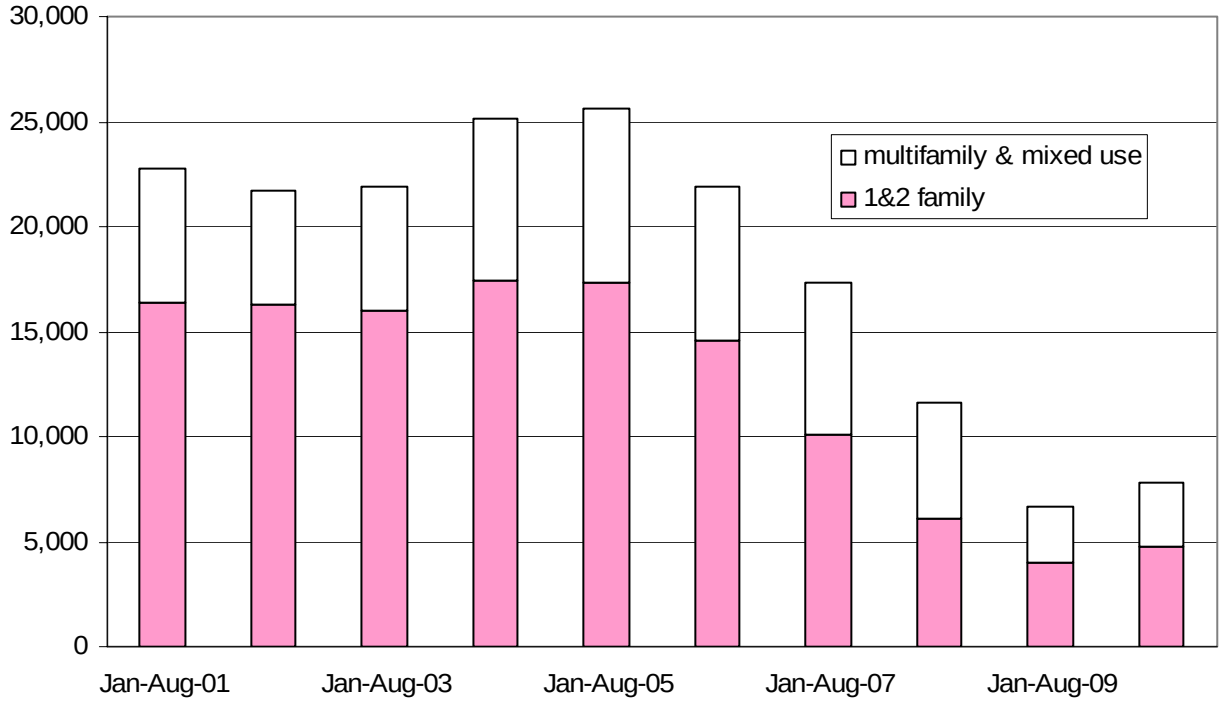
Major Construction Indicators, New Jersey: Year-to-Date Trends

Period	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jan – August 2010	$6,477,115,400	7,823	3,603,879	1,593,867
Jan – August 2009	$6,433,888,059	6,667	2,409,405	1,573,697
Jan – August 2008	$9,881,873,384	11,584	5,145,483	4,826,935
Jan – August 2007	$10,024,136,462	17,371	6,137,178	2,942,040
Jan – August 2006	$10,450,657,277	21,884	7,315,171	4,375,293
Jan – August 2005	$9,875,901,592	25,615	7,349,034	4,920,026
Jan – August 2004	$8,864,794,829	25,153	7,191,451	3,603,455
Difference Between 2009and 2010 year to date				
2009 - 2010	$43,227,341	1,156	1,194,474	20,170
Percent Change	0.7%	17.3%	49.6%	1.3%
	Difference Between 2008 and 2009 year to date			
2008 - 2009	-$3,447,985,325	-4,917	-2,736,078	-3,253,238
Percent Change	-53.6%	-73.8%	-113.6%	-206.7%

Source: N.J. Department of Community Affairs, 10/7/10

See Construction Reporter- page 11

Authorized Housing Units, Jan-Aug. 2001-10



Source: John Lago
Division of Codes and Standards

Ordinary Maintenance – Plumbing Fixture Replacements

The Department has been receiving questions as to who is permitted to replace plumbing fixtures in a single family dwelling under ordinary maintenance.

At N.J.A.C. 5:23-2.7(c)2x, ordinary maintenance, in the Uniform Construction Code (UCC), "Replacement of a water closet, and/or lavatory, and/or bathtub or shower unit and/or kitchen sink in a single family dwelling with an approved similar fixture provided that no change in the piping arrangement is made……" is listed as ordinary maintenance.

In addition, at N.J.A.C. 5:23-2.15(b)2i, Construction permits – application, the UCC states that "Plumbing and electrical work shall not be undertaken except by persons licensed to perform such work pursuant to law, except in case of a single family homeowner on his own dwelling."

See Ordinary Maintenance -continued at right

Ordinary Maintenance *continued from left*

So, who can replace plumbing fixtures in a single family dwelling under ordinary maintenance? A homeowner in his own home or a New Jersey Licensed Master Plumber may replace plumbing fixtures in a detached single family dwelling. A person with only a Home Improvement Contractor registration is not permitted to replace plumbing fixtures under the New Jersey Master Plumbers Licensing Law.

I hope this will clear up any confusion on this issue. Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

What's New in the International Building Code/2009

The following is a summary of the changes between the New Jersey edition of the International Building Code (IBC)/2006 and the New Jersey edition of the IBC/2009. This is not an all-inclusive list.

Chapter 2 - Definitions

- New term and definition for Ambulatory Health Care Facility has been added. These types of facilities are regulated as Group B occupancies.
- Definitions have been are added for **PRIMARY STRUCTURAL FRAME** and **SECONDARY MEMBERS**. These definitions apply to the terms used in Table 601 and clarify which members are required to be protected.

Chapter 3, Use and Occupancy Classification

- Two exceptions have been added at Section 303.1, Assembly Group A. These exceptions make it clear that assembly areas in Group E occupancies are not separate occupancies and educational rooms in religious occupancies with an occupant load less than 100 are not separate occupancies.
- In Groups S-2 and F-2, allowable, alcohol concentration has been increased from 12 % to 16%. This will allow all wines to be manufactured and stored in F-2 and S-2 facilities.

Chapter 4, Special Detailed Requirements Based on Use and Occupancy

- At 402.6, Types of Construction (Covered Mall Buildings), the concept of "Reduced Open Space" may now be applied to Covered Mall Buildings. This concept has been allowed for all other "Unlimited Area Buildings" since the 2000 IBC and the text of 402.6.1 is consistent with 507.5.
- As a result of the Terror Resistant Building Ad Hoc Committee (which was chaired first by the Division of Codes and standards' former Director William Connolly and then by Gary Lewis), there are several new requirements in Section 403, High Rise Buildings. They are: **403.2.3 Structural integrity of exit enclosures and elevator hoistway enclosures, 403.2.4 Sprayed fire-resistant materials (SFRM), 403.3.1 Number of sprinkler risers and system design, 403.3.2 Water supply to required fire pumps, 403.4.4 Emergency responder radio coverage, 403.5.1 Remoteness of exit stairway enclosures, 403.5.2 Additional exit stairway, 403.5.5 Luminous egress path markings, 403.6.1 Fire service access elevator.** These new sections provide an enhanced level of safety in high rise and iconic buildings.

See New in IBC/2009 -continued at right

- New Section 419 has been added to address Live/Work Units which are defined as dwelling units or sleeping units in which a significant portion of the space includes a nonresidential use that is operated by the tenant.
- New Section 422, entitled "Ambulatory Health Care Facilities" has been added to address the special requirements for facilities where individuals are rendered incapable of self-preservation for periods of less than 24 hours.

Chapter 5 – General Building Heights and Areas

- Table 503 is amended to add the following note to Group I-4: *"e. Child care facilities of Types IIB, III, IV or V construction shall be limited to 20 feet and 1 story."* The amendment to this section reverts back to the 1996 BOCA height limitations for Child care facilities.
- Section 508, entitled "Mixed Use and Occupancy" has been rewritten. The only substantive change is the deletion of "Storage rooms in excess of 100 sf" from Table 508.2.5. The effect of this is that a storage room can be treated as either an accessory use, non-separated mixed use or a separated use as is the case with any other mixed use scenario.
- Added new row and column for Group I-2 occupancies in Table 508.4 entitled "Required Fire Separation of Occupancies," thus increasing the required fire rating of the separations in this occupancy Group.

Chapter 7 – Fire and Smoke Protection Features

- Added UL 263 as a test standard to determine fire resistance rating (in addition to ASTM E119). This change is applied throughout the text of this chapter.
- Added UL 723 as a test standard to determine flame spread index (In addition to ASTM E84). This change is applied throughout the text of the code.
- Old Section 714 has been renumber as 704 and remains entitled "Fire-resistance rating of structural members."
- Section 704.13 has been added to include Sprayed fire –resistant material (SFRM) requirements into the body of the code. These requirements were previously contained in a standard.
- Section 707.3.9 has been amended to clarify the required fire resistance rating of fire barriers and horizontal assemblies separating a single occupancy into different fire areas.

See New in IBC/2009 -page 13

New in IBC/2009 *continued from page 12*

Chapter 9 – Fire Protection Systems

- Sprinklers are required in Group B ambulatory health care facilities when four or more care recipients are incapable of self-preservation or when one or more care recipients is incapable of self-preservation and is located at other than the level of exit discharge.
- The threshold for sprinkler protection in Group E occupancies has been lowered from 20,000 square feet to 12,000 square feet.
- In addition to the current threshold for sprinkler protection in Group M occupancies, a Group M occupancy used for the display and sale of upholstered furniture is required to be sprinklered.
- Group S-2 enclosed parking garages are required to be sprinklered when the fire area of the enclosed parking garage exceeds 12,000 square feet (1115 m^2);

Chapter 10 – Means of Egress

- Egress width per occupant is now calculated by the total occupant load being served by the means of egress multiplied by 0.3 inches per occupant for stairways and by 0.2 inches per occupant for other egress components. These multipliers are the same as those in the 2006 code for an unsprinklered building.

New in IBC/2009 *continued from left*

- A New Section 1009.4.1, entitled "Dimension reference surfaces" has been added that states that all stair dimensions are exclusive of carpets, rugs or runners.
- Old Section 1019 entitled "Number of Exits and Continuity" is now Section 1021 and has been rewritten. The code previously dealt with BUILDINGS with one exit. The new section 1021 deals with STORIES with one exit. This seems subtle but makes a huge difference!
- New Section 1024.1 requires luminous egress path markings that delineate the exit path be provided in buildings of Groups A, B, E, I, M and R-1 having occupied floors located more than 75 feet above the lowest level of fire department vehicle access.
- Section 1027.1, regarding exit discharge has been amended to clarify that exits that discharge through lobbies and vestibules may not exceed 50 percent of the number and capacity of the required exits.

Source: John N. Terry
Manager, Construction Code Enforcement

NEC and the Rehab Subcode – Which Edition?

The National Electrical Code/2008 (NEC/2008) was adopted April 6, 2009. The six-month grace period for using the NEC/2005 expired October 5, 2009. This means that since October 6, 2009, a complete permit application must comply with the NEC/2008. This applies to new construction only.

Under the Uniform Construction Code (UCC) existing structures must comply with N.J.A.C. 5:23-6, the Rehabilitation Subcode. We are taking this opportunity to remind all code users that any work done in an existing building or dwelling continues to be required to comply with the NEC/2005 because NEC/2005 is referenced in the Rehabilitation Subcode, materials and methods, at N.J.A.C. 5:23- 6.8(d). If you are looking for specific proof, please see the supplement date at the bottom of page 23-140.9; it states that this page is current as of 8-6-07, when the 2005 NEC was in effect.

See NEC and Rehab –page 15

To Vent or Not to Vent?

Per the International Residential Code (IRC)/2009, enclosed attics and enclosed rafter spaces that are formed where ceilings are applied directly to the underside of roof rafters are required to have cross ventilation, including opening requirements of not less than 1/150 of the area of the space ventilated, except that reduction of the total area to 1/300 is permitted when a Class I or II vapor barrier (see Section R601.3) is installed on the warm-in-winter side of the ceiling (Note: This is one of two exceptions listed for reducing the amount of openings.) For attics with the insulation in the "floor" joists, the insulation clearance from Section R806.3 is not difficult to obtain. In an attic that is part of the thermal envelope (or a cathedral ceiling) it may be difficult to maintain the minimum 1-inch space not only between the insulation and the roof sheathing, but also at the location of the vent. Typically, the installation of additional baffles is required. However, Section R806.4, Unvented attic assemblies, contains provisions that help with this situation. Section R806.4 allows for unvented attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) as long as all the following conditions are met:

See Vent or No Vent -page 14

Vent or No Vent *continued from page 13*

1. The unvented attic space is completely contained within the building thermal envelope.
2. No interior vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly.
3. Where wood shingles or shakes are used, a minimum 1/4 inch vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. In climate zone 5, any air-impermeable insulation shall be a vapor retarder, or shall have a vapor retarder coating or covering in direct contact with the underside of the insulation.
5. Either Items 5.1, 5.2 or 5.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.

5.1. Air-impermeable insulation only. Insulation shall be applied in direct contact with the underside of the structural roof sheathing.

5.2. Air-permeable insulation only. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing as specified in Table R806.4 for condensation control.

5.3 Air-impermeable and air-permeable insulation. The air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing as specified in Table R806.4 for condensation control. The air-permeable insulation shall be installed directly under the air-permeable insulation.

The key to applying the insulation directly against the roof sheathing is that the insulation used is air-impermeable as defined in Chapter 2 of the IRC/2009, which states that air-impermeable insulation is "an insulation having an air permanence equal to or less than 0.02 L/s-m2 at 75 Pa pressure differential tested according to ASTM E 2178 or E 283." Closed-cell and open-cell spray foam insulation typically meet this definition.

Therefore, in the case of Section R806.4, the 1-inch air space from R806.3 is no longer needed.

Note: For those still dealing with projects designed under the IRC/2006, a similar provision at the same section is provided; it is entitled "conditioned attic assemblies."

If you have any questions regarding this matter, please contact Code Assistance at (609) 984-7609

Source: Rob Austin
Code Assistance

Structural Integrity for High-rise Buildings - New Section in the IBC/2009

With the adoption of the 2009 International Building Code (IBC/2009), there is a new section, Section 1641, entitled "Structural Integrity," which addresses structural integrity for high-rise buildings. Buildings with an occupied floor located more than 75 feet above the lowest level of fire department vehicle access and assigned to Occupancy Category III or IV must comply with the requirements of this new section. Framed structures must comply with the requirements of Section 1614.3 and bearing wall structures must comply with the requirements of Section 1614.4.

The requirements of this section are intended to prevent progressive collapse by tying the structure together vertically and horizontally, thus providing for the transfer and/or redistribution of loads should there be a loss of support.

Occupancy Categories are defined in Table 1604.5 of IBC/2009. Occupancy Category III and IV are defined as follows, respectively:

Occupancy Category III includes buildings and other structures that represent a substantial hazard to human life in the event of failure. Such facilities include, but are not limited to, the following.

1. Building and other structures whose primary occupancy is public assembly with an occupant load greater than 300.
2. Building and other structures containing elementary school, secondary school or day care facilities with an occupant load greater than 250.
3. Buildings and other structures containing adult education facilities, such as colleges and universities, with an occupant load greater than 500.
4. Group I-2 occupancies with an occupant load of 50 or more resident patients but not having surgery or emergency treatment facilities.
5. Group I-3 occupancies.
6. Any other occupancy with an occupant load greater than 5,000.
7. Power-generating stations, water treatment facilities for potable water, waste water treatment facilities and other public utility facilities not included in Occupancy Category IV.
8. Buildings and other structures not included in Occupancy Category IV containing sufficient quantities of toxic or explosive substances to be dangerous to the public if released.

See Structural Integrity -page 15

NEC and Rehab *continued from page 13*

So what does this mean? Two big ticket items on which the Department receives many phone calls are: Arc-Fault Circuit-Interrupter (AFCI) Protection (NEC/2008, Section 210.12) and Tamper-Resistant Receptacles (TRR), (NEC/2008, Section 406.11). Obviously, for new construction, the sections in the NEC/2008 are to be followed. But, for work in existing buildings, these sections are not required because they were not part of the NEC/2005 as it was adopted as the electrical subcode.

An example might be helpful: when doing work within the original footprint of an existing home, no AFCI's or TRR's are required. However, if the work project is an addition (i.e. new construction and not finishing a basement or attic), TRR's are required ***only*** for the addition and AFCI's are required only ***if*** a new branch circuit is provided to the addition. It is important to note that existing circuits in the existing dwelling may be tapped into to feed the addition and, provided the changes comply with the materials and methods provisions of the rehabilitation subcode, no AFCI protection is required for those circuits in the addition.

Finally, per N.J.A.C. 5:23-6.2(b)2i, if a structure is demolished except for a *de minimis* amount, for example, if only the foundation remains, the replacement structure is designated as a new structure and the NEC/2008 is to be applied.

In summary, until the NEC/2008 is adopted as the materials and methods for the rehabilitation subcode (N.J.A.C. 5:23-6), the NEC/2005 remains in effect for work in existing structures.

If you have any questions on this matter, please contact us at (609) 984-7609.

Source: Rob Austin and Suzanne Borek
Code Assistance Unit

Ordinary Maintenance Does Not Mean No Rules

N.J.A.C. 5:23-2.14(a) requires that a Uniform Construction Code (UCC) permit be obtained to construct, enlarge, repair, renovate, alter, reconstruct or demolish a structure, to change the use of a building or structure, or portion thereof, to install or alter any equipment for which provision is made or the installation of which is regulated by the UCC, or to undertake a project involving lead abatement in accordance with N.J.A.C. 5:17.

See Ordinary Maintenance -page 16

Structural Integrity *continued from page 14*

Occupancy Category IV includes buildings and structures that are designated by the local emergency management authority as essential facilities. Essential facilities include, but are not limited to, the following:

1. Group I-2 occupancies having surgery or emergency treatment facilities.
2. Fire, rescue, ambulance and police stations and emergency vehicle garages.
3. Designated earthquake, hurricane or other emergency shelters.
4. Designated emergency preparedness, communications and operations centers and other facilities required for emergency response.
5. Power-generating stations and other public utility facilities required as emergency backup facilities for Occupancy Category IV structures.
6. Structures containing highly toxic materials as defined by Section 307 where the quantity of the material exceeds the maximum allowable quantities of Table 307.1(2).
7. Aviation control towers, air traffic control centers and emergency aircraft hangars.
8. Buildings and other structures having critical national defense functions.
9. Water storage facilities and pump structures required to maintain water pressure for fire suppression.

If the building is a high-rise and is either an Occupancy Category III or IV, it must comply with Section 1614 of IBC/2009.

If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

List of Registered Builders

Back in the Spring 2008 edition of the *Construction Code Communicator*, we said we would no longer be mailing to local construction officials the list of revoked or suspended new home builders, but, in fact, we continued to periodically mail the printed list of revoked or suspended new home builders.

We are advising you, once again, that we will no longer mail that list to local construction officials; this time we really mean it.

As a reminder, under New Jersey law, all new home builders must be registered with the Department of Community Affairs; and, in order to obtain a permit for

See Registered Builders -page 16

Registered Builders *continued from page 15*

the construction of a one- or two-family dwelling, condominium or cooperative. a builder's registration cannot be expired, revoked or suspended.

When presented with a new home builder registration number on a Construction Permit Application, check its validity by visiting the Division of Codes and Standards' website page specifically at:

www.nj.gov/dca/divisions/codes/publications/registered_builders.html

where you will find the current listing of ALL NJ builders. The list is sorted alphabetically by builder

See Registered Builders continued at right

Ordinary Maintenance *continued from page 15*

A permit is not required for projects that consist of ordinary maintenance. N.J.A.C. 5:23-2.7(c) provides a list of items that are ordinary maintenance. Please keep in mind, this is not an all-inclusive list; if you are curious as to whether something is ordinary maintenance, N.J.A.C. 5:23-2.7(b) lists those items that are not considered ordinary maintenance.

It is important to recognize that, although there is no permit required for work categorized as ordinary maintenance, the project is still required to meet the UCC. This can present problems for code enforcement officials who are not authorized to go into properties in search of non-compliant ordinary maintenance projects. However, if a code official is inspecting work that did require a permit and observes non-compliant work that did not require a permit, the code official may order that the non-compliant work be made to comply. In that case, if the work that required a permit is compliant, that work should be approved; a violation notice should be issued for the non-compliant work.

Finally, even though a UCC permit is not required for work categorized as ordinary maintenance, the professional licensing laws apply. Therefore, unless a homeowner is doing the work himself, appropriately licensed professionals are required. For instance, if a homeowner is having the toilet replaced and is not doing the work himself, a licensed master plumber is required to do the work. As another example, if a homeowner decides to have his home repainted and does not do the work herself, a licensed home improvement contractor is required. Code officials do not enforce the licensing laws, but because the code enforcing agency is often the primary source of information for homeowners for their projects, it is helpful to know that the licensing laws do apply.

Source: Rob Austin
Code Assistance Unit

Registered Builders *continued from left*

name; builder names beginning with numbers appear in numerical order at the beginning of the list.

The list's format is .pdf. As such, the 'Find' feature may be used to search builder name, registration number or even builder status. Please note, if a builder is not on the list, it means that builder is not currently registered with the State of New Jersey. Builders that have let their registrations lapse are no longer considered registered builders.

If, after reviewing the list, you still have questions about the status of a builder, please telephone the Bureau of Homeowner Protection's New Home Warranty Builder Registration unit at (609) 984-7910.

Source: Berit Osworth
Division of Codes and Standards

The National Standard Plumbing Code/2009 -Member Price Available



The National Standard Plumbing Code (NSPC)/2009 was adopted as the plumbing subcode on September 7, 2010. As a result of the Department's continuing efforts to negotiate with the organizations that publish the adopted national model codes to obtain discounted prices for the code books, the Plumbing, Heating, and Cooling Contractors - National Association (PHCC-NA), publishers of the NSPC, has again agreed to provide municipalities with a "member" price for both the non-illustrated and the illustrated versions of the NSPC/2009.

The NSPC/2009 must be purchased from NJPHCC. To receive the member price, the municipality must submit its request on official municipal letterhead and must include the name(s) of the inspector(s), along with a purchase order or check made payable to: NJPHCC. Each municipality is entitled to a limited number of codebooks at the member price.

Please call NJPHCC at (800) 652-7422 or fax at (609) 987-9797 for the member price, number of codes allowed, and shipping and handling charges.

Your order should be mailed to:

NJPHCC
Attention: Nicole
P.O. Box 2067
Princeton, NJ 08543

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

What's New in the International Residential Code/2009?

The following is a summary of changes between the New Jersey edition of the International Residential Code (IRC)/2006 and the New Jersey edition of the IRC/2009. This is not an all-inclusive list.

- Section R302 has been revised to include all of the fire-resistance rated construction requirements that have been spread throughout the code. This section now includes 302.1, Exterior walls; 302.2, Townhouses; 302.3, Two-family dwellings; 302.4, Dwelling unit rated penetrations; 302.5, Dwelling/garage opening protection; 302.6, Dwelling/garage fire separation; 302.7, Under-stair protection; 302.8, Foam plastics; 302.9, Flame spread index and smoke development index for wall and ceiling finishes; 302.10, Flame spread index and smoke development index for insulation; 302.11, Fire blocking; 302.12, Draftstopping; and 302.13, Combustible insulation clearance.
- Section R3084, entitled "Hazardous Locations," has been rewritten with regard to GLAZING. Although it might appear to be different, careful study shows that there are NO changes in the requirements; however, the section is MUCH clearer than the previous editions of the code.

See New in IRC/2009 continued at right

New in IRC/2009 *continued from left*

- In Sections R311, entitled "Means of Egress," and R312, entitled "Guards," all stairway, handrail and guardrail dimensions remain the same as in the past.
- In Section R313, entitled "Automatic Fire Sprinkler System," the scoping requirement for the installation of fire sprinklers has been deleted, however, the installation requirements remain in the code. Therefore, should a permit applicant choose to install an automatic fire sprinkler system, the system must be installed in accordance with NFPA 13D or Section P2904 of the IRC. Both NFPA 13D and P2904 provide requirements for a sprinkler system that is part of the water distribution system. These standards DO NOT require and independent sprinkler system.
- Section R314, entitled "Smoke Alarms," has been rewritten to clarify the requirements applicable to low-voltage smoke detection systems.
- In Section R322.2.1, entitled "Elevation requirements", a new criterion has been added which states: "Buildings and structures in flood hazard areas designated as Coastal A Zones shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or to the design flood elevation, whichever is higher."
- New Section R402.3.1, entitled "Precast concrete foundation materials," has been added to address this new technology. These types of foundation wall have been the subject of several Evaluation Reports. The requirements are now codified.
- In Section R408.2, entitled "Openings for under-floor ventilation" THE EXCEPTION IS BACK! "Exception: The total area of ventilation openings shall be permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is covered with an *approved* Class I vapor retarder material and the required openings are placed to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited."
- Section P2904, entitled "Multi-purpose fire sprinkler systems" is retained through a cross reference in the plumbing subcode. This provides a design alternative to the installation of sprinklers through the use of the plumbing system of the home.

Source: John N. Terry
Manager, Construction Code Enforcement

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
Trenton, NJ 08625-0802

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Volume 22, Number 4 Winter 2010

A Change to the Communicator, Winter 2010

Beginning with this issue, Winter 2010, the final issue of the *Construction Code Communicator* each year will consist of a collection and re-printing of all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year.

Once the *Construction Code Communicator* has been posted, the individual Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items will be removed from the Division's website. However, it will still be possible to see a copy of any of these documents as it was originally posted on the Division's website by accessing the Division's Document Library or through the "Topics A-Z" tab on the Division's website: www.nj.gov/dca/divisions/codes/.

So, in this issue, for the first time, there are no new articles. The Index for all four issues of the *Construction Code Communicator* 2010 is included in this issue as a handy reference.

Prospectively, the *Construction Code Communicator* will follow this same format: three issues, Spring, Summer, and Fall, that contain articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year. We hope that you will appreciate this change to the *Construction Code Communicator.*

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at etempleton@dca.state.nj.us.

Source: Emily W. Templeton
Division of Codes and Standards

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New! Electronic Communication with Plan Review Applicants

In a November 2010 Alert, the Bureau of Construction Project Review announced:

Beginning on or about November 22, 2010, the Department of Community Affairs, Division of Codes and Standards,
Construction Plan Review units will begin sending all plan review correspondence electronically.

To assist with this transition please provide an email address on all project review applications. An updated application, including email address, may be found on the bureau's website (http://www.nj.gov/dca/divisions/codes/offices/bcpr.html) under the Related Forms section located at the bottom of the page. Correspondence submitted for an existing project should also include email addresses for each applicant (owner and/or owner's agent and architect/engineer).

If you prefer correspondence be sent through regular mail you must check the appropriate box on the project review application. It should be noted that if any applicant contacts opt out of email communication (owner or architect), all correspondence will be sent regular mail. We cannot accommodate partial email communication.

If you would like to email documentation to the BCPR please send to: planreviewintake@dca.state.nj.us

Please take note of a few items before emailing information to BCPR:

- Information should be sent as an attachment. All attachments should be in PDF format or the office may not be able to open, read or respond.
- Do not send duplicate documentation. If you have sent an email response please do not send a copy through regular mail. This may cause duplication of work and thus, slow down the review process.
- Do not send project status questions. The above email address is to be used exclusively for sending requested documentation. If you have a question about a project please contact the appropriate review team. Teams may be reached at the phone numbers listed below.
- **Do not send any correspondence requiring plans or other signed and sealed documentation. Rather, send it along with plans to the following:**

Class I, II, Special Projects, State Buildings Healthcare Facilities Plan Review	NJ DCA Division of Codes and Standards Bureau of Construction Project Review PO Box 817, 101 S. Broad Street, 4th floor Trenton, NJ 08625-0817
Educational Facilities Plan Review	NJDCA Division of Codes and Standards Education Plan Review Unit 200 Wolverton Avenue PO Box 821, Building 20, 2nd floor Trenton, NJ 08611
Casino Projects Plan Review	NJDCA Division of Codes and Standards Atlantic City Plan Review Office 1601 Atlantic Avenue, 6th floor Atlantic City, NJ 08401

If you have a question regarding a specific project review teams may be reached at:

Bureau of Construction Project Review	609-984-7850
State Buildings	609-984-7865
Class I, II and Special Projects	609-633-7448
Health	609-633-8151
Education	609-943-5157
Atlantic City	609-441-3679

2006 International Fire Code Adopted with Amendments

In a letter dated February 5, 2009 Directors Wilk and Petrillo wrote:

Dear Construction Officials and Fire Officials:

As fire officials already know and construction officials may be aware, the Department has adopted the 2006 International Fire Code, with amendments, as the new State Fire Prevention Code, N.J.A.C. 5:70-3. This new State Fire Prevention Code took effect on February 1, 2009. The enforcement of this new code will require an increased level of cooperation between the local construction official and the local fire official.

In the past, BOCA published a model fire prevention code that included only maintenance requirements. The International Fire Code, which is referenced in the International Building Code, contains both construction and maintenance requirements. As adopted under the Uniform Fire Code (UFC), the New Jersey edition of the International Fire Code is meant to address the maintenance of buildings and sites in compliance with applicable fire safety requirements. Requirements for the installation of new fire safety equipment are found in the Uniform Construction Code (UCC) or in the retrofit requirements of the UFC, N.J.A.C. 5:70-4.

Local officials need to be aware of the applicability of the requirements of both the UFC and the UCC in order to enforce these codes effectively. Any suspected lack of compliance with the UCC or change in the character of the use should be referred by the fire official to the construction official. The construction official should then cite any verified lack of compliance with the UCC, including any change in the character of the use as described in the rehabilitation subcode of the UCC, N.J.A.C. 5:23-6.31. A change in the character of the use is not necessarily a change in the group designation. For example, a change to a higher degree of hazard, as defined by NFPA 13, which would trigger a change in the required sprinkler protection, would be considered a change in the character of the use and should be cited under the UCC. (See N.J.A.C. 5:23-6.31(g)). Another example of a change in the character of the use is the introduction of equipment or operations that require local exhaust under the mechanical subcode of the UCC. (See N.J.A.C. 5:23-6.31(n)). As always, process equipment is a special case. The UCC applies to the installation of process equipment, but does not impose requirements on the equipment itself. The UFC does contain requirements applicable to process equipment.

See International Fire Code –page 6

2008 NEC and the Rehab Subcode

In a letter dated October 20, 2009 and updated February 3, 2010 Code Specialist Suzanne Borek wrote:

Updating the Rehabilitation Subcode to the NEC/2008 has been delayed. Therefore, the Department is hereby reminding all code users that any work done in an existing building or dwelling continues to be required to comply with the NEC/2005, which is referenced in the rehabilitation subcode, materials and methods, N.J.A.C. 5:23- 6.8(d).

For example, when an existing service panel is changed or upgraded, no AFCI is required.

However, an addition to an existing building is new construction. The addition ***only*** is required to comply with the 2008 NEC. Work in the existing building continues to be required to comply with NEC/2005. For dwelling units, AFCI for the addition will be required only ***if*** a new branch circuit is provided. It is important to remember that existing circuits in the existing dwelling may continue to be used.

Finally, if a permit applicant chooses to use the 2008 NEC, guidance is included in the Fall 2009 edition of the *Construction Code Communicator.*

Please contact me if you have any questions. Thank you.

Sincerely,

Suzanne Borek, Code Specialist
State of New Jersey, Div. of Codes and Standards
Code Assistance Unit (609) 984-7609

Concrete Testing Alert

In a letter dated September 16, 2009 Director Wilk wrote:

Dear Construction Official:

It has come to the attention of the Department that several special testing agencies have been indicted in New York City. One of the charges involves fraud in connection with the testing of concrete. Due to these allegations, I am requesting you to do the following:

Please review your files for all Class 1 buildings to determine the name of the special inspection testing agency for special inspections performed from January, 2006 to present. If Testwell Laboratories or Stallone Testing Laboratories did any of the concrete

See Concrete Testing Alert –page 6

Fire Alarm Transmission Channels and Managed Facilities (MFVNs)

In a letter dated November 1, 2010 Director Smith wrote:

Dear Construction Official and Fire Subcode Official:

An issue has arisen in reference to providing phone service to facilities that are required to have a fire alarm system. As many of you are aware, for a few years we have had questions about fiber optic service companies providing phone line service via a package deal with internet and/or television service. This letter provides guidance on whether a service provider can provide the required transmission means to a monitoring company.

Background

Starting in the early 1980's, fire alarm transmissions from protected premises to the supervising station were sent through Digital Alarm Communicator Transmitters (DACTs) over "Plain Old Telephone Service" (POTS). DACTs were originally designed to utilize POTS on the Public Switched Telephone Network (PSTN). POTS is the old copper line system that served every home or business with a telephone line. For many years, only this style of wiring was used and NFPA required that the primary transmission channel be a "telephone line (number)". This ensured that the transmission means was on a reliable circuit to the telephone company central office and then was switched to the number that the caller was trying to reach. Many times, when the signal left the telephone company office, it was carried on optical fiber. All POTS was on a battery backup power system. (Think about how many storms there were while you were growing up and your power went out, but you still had phone service.) POTS was and is a very reliable system, however the telephone company found a better way to transmit its communications and started using light over fiber optic service for telephone transmission. In many areas, POTS has been replaced with optical fiber, so your phone line (number) now comes to you by fiber optic service; you can also receive internet and television service, such as FIOS, by that means.

Code Requirements

The New Jersey Uniform Construction Code currently adopts the International Building Code (IBC)/2009. The IBC/2009 references the National Fire Protection Association (NFPA) 72/2007 standard, which requires that DACTs be connected to the PSTN.

The recently published NFPA 72/2010, which is not adopted by reference in the building subcode, contains a

See MFVNs –page 7

Concrete Testing Alert *continued from page 5*

testing, please contact Louis Mraw of the Office of Regulatory Affairs at 609-984-7672 for instructions as to how to proceed.

Be assured that the Division will work with your office to determine whether the test results are acceptable in accordance with the requirements of the Uniform Construction Code. Realizing that this is a very time-consuming task, please make every attempt to complete this review by the end of November, 2009.

Thank you in advance for your time and effort.

Sincerely,
Cynthia A. Wilk, Director
Division of Codes and Standards

International Fire Code *continued from page 5*

The new State Fire Prevention Code also contains requirements applicable to fire hazards at construction sites (Chapter 14 of the International Fire Code). The UCC governs construction with the ultimate goal of ensuring that structures build in this State are safe for occupancy. The UFC is based on a somewhat different mandate which includes fire prevention and firefighter safety. It is for this reason that the local fire official has jurisdiction to deal with fire safety at a construction site. The construction official's role at the site is to ensure that construction proceeds in compliance with the adopted subcodes of the UCC. The UCC does not address the safety of the building or site during construction beyond seeing that the site does not pose risks to the general public.

The New Jersey edition of the 2006 International Fire Code is available online in a view only format at http://www2.iccsafe.org/states/06NewJerseyFire/. In addition to a link to view the new code, the Division of Fire Safety's website has a mechanism to submit questions regarding the new code. Frequently asked questions and answers regarding the new State Fire Prevention Code also are posted on the Division's website at http://www.state.nj.us/dca/dfs/.

If there are any questions regarding the UCC, as always, please call the Code Assistance Unit at (609) 984-7607. If there are questions about the UFC, the Division of Fire Safety prefers that these questions be submitted electronically through the Division's website, or you may call the Division at (609) 633-6132.

See International Fire Code –page 7

MFVNs *continued from page 6*

new term "Managed Facilities Voice Networks" (MFVNs). This term has caused concern for some providers. However, MFVNs are the functional equivalent of PSTN. NFPA 72/2010 states that traditional POTS, Cable and FIOS are permitted for transmission channels as long as the signaling protocols are fully compatible with and equivalent to those of the PSTN. NFPA 72/2010 was amended before printing by a Tentative Interim Amendment (TIA) that clarified the definition in Chapter 3 and the requirements in Chapter 29.

Both NFPA 72/2007 and 2010 require that a secondary power supply be installed to provide a minimum of 24-hour standby power when a fire alarm system is installed. A battery backup unit (BBU) is a compliant secondary power supply. Most fiber optic service providers provide an eight hour BBU supply, in some cases, they provide four hours. So, a separate BBU is required to be installed wherever a monitored fire alarm system is installed.

Guidance

The term "Managed Facilities Voice Networks" was added to clarify that Cable or FIOS companies could provide the telephone line (number) required for DACTs. Because NFPA 72, Section 1.5., Equivalency, allows the local fire subcode official to accept systems that provide equivalent protection, NFPA 72/2007 already addresses this issue when the Cable or FIOS companies provide the telephone line service required by the standard. The Cable or FIOS companies need to provide a means of transferring the signal from the fire alarm communicator to their network and provide the required backup power supply on any interface equipment. MFVNs may be used provided that they offer demonstrated equivalent reliability. When the performance standard is met, the communication method is acceptable and the Local Enforcing Agencies can approve these installations. Attached is a matrix that should be used to evaluate various service providers.

If you have questions please call the Code Assistance Unit at (609) 984-7609 or email codeassist@dca.state.nj.us

Sincerely,

Edward M. Smith, Director
Division of Codes and Standards

International Fire Code *continued from page 6*

There are bound to be some adjustments needed as we make the transition to the new State Fire Prevention Code. We would encourage you to work together to continue to ensure the health and safety of the occupants of New Jersey's buildings.

Sincerely,

Cynthia A. Wilk, Director
Division of Codes and Standards

Lawrence Petrillo, Director
Division of Fire Safety

Installation of Renewable Energy Systems

In a letter dated February 4, 2009 Director Wilk wrote:

Dear Construction Official:

P.L. 2008, c. 90, signed into law by Governor Corzine last October, offers property tax relief for the installation of renewable energy systems. Under this statute, the assessed value of the property is not increased as a result of the installation of a renewable energy system. The law calls for the local construction official to certify that the system meets the requirements of the statute for a renewable energy system.

In order to implement this new law, the Division of Taxation must develop a form. The law also calls for us to work collaboratively with the Board of Public Utilities regarding technical standards for these systems. When the form, standards and rules are in place, we will advise you. Thereafter, the permit applicant will bring a completed form to you and you will certify, by signing the form, that the system has been installed as prescribed and that the required documentation has been submitted. There is nothing for you to do until such time as the form and rules are in place.

In the meantime, if you have any questions regarding this law, please contact the Code Assistance Unit at (609) 984-7607.

Sincerely,

Cynthia A. Wilk, Director
Division of Codes and Standards

Installation of Renewable Energy Systems

In a letter dated December 2, 2009 Director Wilk wrote:

Dear Construction Official:

On February 4, 2009, I sent you a letter concerning P.L. 2008, c.90, a law which offers property tax relief for the installation of renewable energy systems. Under this statute, a property owner who installs a renewable energy system in accordance with all applicable rules, standards and manufacturer's instructions can apply for approval to the local enforcing agency and, if the renewable energy system is approved, to the tax assessor.

I advised you in February that in order for the program to be implemented, the Division of Taxation would first have to adopt an application form. That form has now been adopted. It may be found online at http://www.state.nj.us/treasury/taxation/pdf/other_forms/lpt/cres.pdf.

The form provides a place for the construction official to certify that the application has been approved. The form may be presented to you by the applicant at the time of permit application or prior to final inspection. Once you have signed the form, it should be forwarded to the tax assessor.

We will be meeting with the Board of Public Utilities to determine what standards exist that are applicable to renewable energy systems and should be incorporated into the Uniform Construction Code (UCC). In the interim, the UCC already provided for the use of the manufacturer's instructions and standards. These should be used for plan review and inspection of renewable energy systems. The application may be approved provided that the system, as installed, conforms to these standards.

If you have any questions regarding the implementation of this law, please call the Code Assistance Unit at (609) 984-7607.

Sincerely,

Cynthia A. Wilk, Director
Division of Codes and Standards

Installation of Solar Photovoltaic Power

In a letter dated July 23, 2010 Director Wilk wrote:

Dear Construction Official:

Local code enforcement agencies are receiving an increasing number of applications for the installation of solar photovoltaic (PV) power generating equipment. With this influx of solar energy installations, there has been some confusion as to what constitutes an "electrical generating station" for purposes of determining whether this is an enforcement activity reserved to the State pursuant to N.J.A.C. 5:23-3.11. This letter is intended to clarify which installations should be submitted to the Department for review.

The operative question is whether the PV installation supplies electricity for a building or buildings on site and has net metering. (This is an arrangement through which any unused power generated by the solar panels is "sold" to the utility company.) The amount of electricity that may be generated by these PV installations is limited to the peak usage on the site. By contrast, PV installations that should be considered electrical generating stations for purposes of applying the above rule have no meters and no limits on the amount of power that may be generated. As with more traditional electrical generating stations, the electricity generated at the site is fed back into the grid for use elsewhere.

Should you have any questions, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Sincerely,

Cynthia A. Wilk, Director
Division of Codes and Standards

Satellite Dish Antenna Installations

In a letter dated June 23, 2010 Director Wilk wrote:

Dear Electrical Subcode Officials:

The Department has had discussions with the representatives of GTECH, who are performing the installation of satellite dish antennas and appurtenant wiring at lottery outlets throughout the State. The satellite systems in question are being installed under a contract with the State of New Jersey Lottery Commission.

See Satellite Dish Antennas -page 9

Satellite Dish Antennas *continued from page 8*

Minor Work and Inspections

The actual installation of the satellite dish antenna is exempt from permits as a result of a federal preemption. However, when the communication wiring connecting the satellite dish penetrates a rated assembly, the installation of the telecommunications wiring from the antenna to the terminal is considered minor work and thus requires a construction permit (N.J.A.C. 5:23-2.17A(c)4iv). The contractor (GTECH) is required to have its installers identify each retail location where a satellite installation is taking place that penetrates a fire-resistance rated assembly. In these instances, the contractor is required to contact the local code enforcement agency to apply for a permit and, once the work is completed, request an inspection. Because there were questions as to whether permits were required, there was a period of time where a number of satellite dish antennae were installed without obtaining construction permits. In the case of work performed before the issuance of this letter, the contractor is required to identify those installations that involved a penetration through a fire resistance rated assembly and apply for "Minor Work" construction permits for these installations. In cases where no penetration of a rated assembly is necessary, there are no permits required, and therefore, there is no notice required. If work is performed after the issuance of this letter that would require a construction permit, "Minor Work" or otherwise, and none is obtained, the construction official is authorized to issue the appropriate penalty.

The inspection performed is under the jurisdiction of the electrical subcode due to the fact that the communication wiring being installed is regulated by the electrical subcode. Inspectors should focus on Section 300.21 of the National Electrical Code entitled, "Spread of fire or products of combustion," which requires openings around electrical penetrations of fire resistance-rated assemblies to be fire-stopped using an approved method and on Chapter 8 for the material installation and the support of the wiring and the raceway. Again, this type of installation is "Minor Work" therefore, the inspection is based upon what is visible at the time of *New Jersey Is An Equal Opportunity Employer Printed on Recycled Paper and Recyclable* the inspection and the certificate of approval needs to state that the work performed substantially complies with the UCC. Finally, the Board of Examiners of Electrical Contractors requires that this work be performed either by a New Jersey licensed electrical contractor or by an installer who possesses a Telecommunications Wiring Exemption Certificate.

Fees

The fee calculation for the installation of telecommunications wiring falls within the electrical

See Satellite Dish Antennas -continued at right

Satellite Dish Antennas *continued from left*

technical section. The Uniform Construction Code provides that, for electrical fixtures and devices, the fees are to be based upon the number of electrical fixtures or rating of electrical equipment and devices to be installed. Therefore, in this case, the fee is based on the number of "communication points" which are the telecommunication wires installed and connected to the lottery equipment in the building. There is no additional fee that can be charged to look at the penetrations resulting from the installation. This is all part of the inspection related to the total number of "communication points."

Should you have any questions, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Sincerely,

Cynthia A. Wilk, Director
Division of Codes and Standards

Telecommunications Wiring and Fire Rated Assemblies

In a letter dated March 5, 2009 Director Wilk wrote:

Dear [Electrical] Subcode Officials:

This letter provides a clarification of the permit and inspection requirements for the installation of telecommunications wiring, which includes telephone, data and cable television. This type of work is minor work (in accordance with N.J.A.C. 5:23-2.17A) in Class 3 buildings where fire rated assemblies are penetrated, and in all Class 2 and Class 1 buildings, including multi-family residential high rise structures.

The Uniform Construction Code (UCC) states that notice of minor work must be given to the enforcing agency before the work commences (N.J.A.C. 5:23-2.17A(a). Oral notice meets this requirement and may be provided in person or by telephone before the work begins (N.J.A.C. 5:23-2.17A(b)1). In addition to providing notice to the enforcing agency, a permit application must be filed and fee paid within five business days of the date of oral notice (N.J.A.C. 5:23-2.17A(b)2).

Construction permit fees for the installation of telecommunications wiring should be charged based on the ownership of the building. For a building that has one owner with multiple tenants, the fee is the minimum fee for each floor penetration (located on the lower portion of the electrical technical section) and the total

See Telecommunications Wiring –page 10

Telecommunications Wiring *continued from page 9*

number of drops going to each individual tenant (on the upper portion of the electrical technical section, listed as "communications points"). For a building that contains individually owned units, a construction permit is issued for the core installation. The minimum fee is charged for penetrations through each floor. A permit and fee is also required for each individual unit that receives a drop and the fee is based on the number of drops to each unit; it is placed on the "communications point" line.

The inspections confirm compliance with the National Electrical Code (NEC)/2005 with specific attention to Section 300.21, Spread of Fire or Products of Combination. This section states that openings around electrical penetrations through fire-resistant-rated walls, partitions, floors, or ceilings are required to be fire-stopped using approved methods to maintain the fire-resistance rating. Chapter 8 of NEC/2005 applies to the specific type installation, typically the supporting and securing of the wiring.

Finally, any work being performed in or on a building or structure is subject to the regulations of the UCC. The Board of Examiners of Electrical Contractors requires that this work be performed either by a New Jersey licensed electrical contractor or by an installer who possesses a Telecommunications Wiring Exemption Certificate.

In summary, minor work is not exempt from the UCC. The requirements for minor work are in the UCC at N.J.A.C. 5:23-2.17A. Before work begins, oral notification is required to be given to the enforcing agency; the electrical technical section of the construction permit application must be signed by a New Jersey licensed electrical contractor or by an applicant who possesses a Telecommunications Wiring Exemption Certificate within five business days. By definition, "minor work" does not require a plan review; therefore, plans are not required to be submitted for this type of work.

A notice of violation for work performed without a permit is issued for any installations that are not in compliance with the UCC regulations. If compliance is not achieved, then a stop work order is posted and issued in accordance with regulations.

Should you be in need of further assistance on this issue, please contact Suzanne Borek of the Code Assistance Unit at (609) 984-7609.

Very truly yours,

Cynthia A. Wilk, Director

US EPA Lead-Based Paint Renovation, Repair and Painting (RRP) Rules

In an August 2010 Alert, the Division reported:

What are the RRP Rules?

The US Environmental Protection Agency (EPA) has adopted rules for contractors performing work that disturbs lead-based paint. The rules, known as the RRP rules, apply to renovation, repair, painting or any other activity that disturbs painted surfaces. These rules require that contractors performing work in housing built before 1978 or in child-occupied facilities (schools or day care centers) be certified by the EPA. The certified renovator must be trained in lead-safe work practices through completion of an EPA-accredited course and is responsible for compliance with the US EPA rules. The contractor is also required to distribute a lead pamphlet before starting work. The rules exempt work that will disturb six square feet or less of paint per room in the building's interior or 20 square feet of painted surface or less on the exterior. Work in buildings that have been tested and found to be free of lead-based paint is also exempt. ***The deadline for contractors to be certified has been extended to October 1, 2010.*** (Individuals must enroll in a certified class by September 30, 2010 and must complete the class by December 31, 2010.)

Who is responsible for enforcement of these rules?

States may apply to the US EPA for authorization to administer this program. The EPA is the enforcement agency in states that do not apply for authorization. New Jersey has *not* applied. This means that the EPA is the enforcement agency for the RRP rules in New Jersey.

Is the EPA certification to be treated as a prior approval for obtaining a permit under the UCC?

No.

Does the code official have any enforcement responsibility with regard to these EPA rules?

No. As stated above, enforcement rests with the EPA.

This information has been provided to you so that you are aware of the new EPA requirements and are able to respond to questions from homeowners or contractors. If anyone has further questions or would like additional information, you may direct them to the EPA website at http://www.epa.gov/lead/pubs/renovation.htm. There is also a link on the Division's webpage.

Outdoor Wood Boilers

In a letter dated June 3, 2009 Director Wilk wrote:

Dear Construction Official:

As you may recall, in November 2008, I sent a letter regarding issues that have arisen with outdoor wood boilers. As promised, we reached out to the Department of Environmental Protection (DEP) and discussed the difficulties inherent in issuing permits under the Uniform Construction Code to those who want to install outdoor wood boilers only to have enforcement action taken against them at some future date. Unfortunately, there is no ready solution to this problem. There is no way to predict whether a given outdoor wood boiler, once installed and in use, will comply with the DEP rules.

To ensure that any homeowner who applies for a permit to install an outdoor wood boiler is aware that this is the case, we are asking that local construction officials have permit applicants sign the attached acknowledgement and retain a copy in the permit file. A copy of the relevant section of the DEP rules also is attached for your reference (N.J.A.C. 7:27-3). Under these rules, smoke from outdoor wood boilers may be visible for not more than three minutes in any consecutive 30 minute period. These rules apply only to indirect heat exchangers. Outdoor wood boilers meet the definition of indirect heat exchanges. Chimineas, fireplaces, and traditional wood-burning stoves do not.

For your convenience, the November 2008 letter, the DEP rules and the acknowledgement to be signed by permit applicants all are available on the Division's website at www.state.nj.us/dca/divisions/codes. Should you have any questions, please feel free to contact the Code Assistance Unit at (609) 984-7607. Homeowners with questions regarding the DEP standards should be referred to the Air Compliance and Enforcement Unit within the DEP at (609) 633-7288.

Sincerely,

Cynthia A. Wilk, Director
Division of Codes and Standards

Outdoor Wood Boilers

Relevant section of the DEP rules:

7:27-3.1 Definitions
****

"Indirect heat exchanger" means equipment in which heat from the combustion of fuel is transferred by conduction through a heat-conducting material to a substance being heated, so that the latter is not contacted by, and adds nothing to, the products of combustion.

"Internal cross-sectional dimension" means any maximum linear perpendicular distance from an inside wall of a stack or chimney to the inside of an opposite wall, such as the diameter of a circular cross section or the length or width of a rectangular cross-section.
****

7:27-3.2 Smoke emissions from stationary indirect heat exchangers

(a) No person shall cause, suffer, allow or permit visible smoke to be emitted into the outdoor air from the combustion of fuel in any stationary indirect heat exchanger except as provided in (b) below.

(b) No person shall cause, suffer, allow or permit smoke the shade or appearance of which is darker than number 1 on the Ringelmann smoke chart or greater than 20 percent opacity, exclusive of visible condensed water vapor, to be emitted into the outdoor air from the combustion of fuel in any stationary indirect heat exchanger having a rated hourly capacity of 200 million BTU or greater gross heat input and discharging through a stack or chimney having all internal crosssectional dimensions of 60 inches or greater.

(c) The provisions of (a) and (b) above shall not apply to smoke which is visible for a period of not longer than three minutes in any consecutive 30-minute period.

Outdoor Wood Boiler Construction Code Permit Notice and Acknowledgement

Under the New Jersey Administrative Code, Title 7, Chapter 27 (N.J.A.C. 7:27), Air Pollution Control, the NJ Department of Environmental Protection (DEP) regulates smoke emissions from indirect heat exchangers. Outdoor wood boilers (OWB) and outdoor hydronic heaters (OHH) meet the definition of indirect heat exchangers and are therefore subject to the requirements of N.J.A.C. 7:27-3 "Prohibition of Smoke from the Combustion of Fuels."

Smoke from OWBs or OHHs have been known to exceed DEP's standards. The manufacturers are not required to label, document or otherwise disclose the quantity of smoke produced by these devices. There is no means to predict whether a given outdoor wood boiler, when in use, will violate the DEP smoke emission limit.

Issuance of a Uniform Construction Code (UCC) permit does not guarantee that a unit will meet the DEP requirements. An outdoor wood boiler that has been installed in accordance with all applicable requirements established under the UCC may still be subject to some future enforcement action by the NJDEP, including penalties to the vendor, installer and property owner.

Homeowners with questions about compliance with the emission standard are advised to contact the NJDEP at (609) 633-7288 or the county health department.

I acknowledge that I have been given a copy of this Notice

_____ _____

Property Owner or Authorized Representative Date

Permit Extension Act of 2008 Extension

In a letter dated January 25, 2010 Director Wilk wrote:

Dear Construction Official:

On January 18, 2010, former Governor Jon S. Corzine signed a bill into law to extend the expiration date of certain permits under the "Permit Extension Act of 2008," P.L. 2008, c.78, by an additional two and a half years. Under this new law, P.L. 2009, c. 336, only the dates have changed. All of the other terms and conditions of the Permit Extension Act remain as they were. Below please find updated guidance on the application of the Permit Extension Act which has been revised to reflect the new expiration dates.

As code officials, you will continue to deal with this law on two levels: its impact on permits issued under the UCC and its impact on prior approvals. The Act stops the clock on the running of approvals during the "extension period," which is now defined as January 1, 2007 through December 31, 2012. This means that any UCC permit that was valid as of January 1,2007 will still be valid on December 31, 2012. On December 31, 2012, when the clock starts again, the permit is valid for an additional six months or for the time that would have remained on January 1, 2007, **whichever is shorter.** Any permit issued **during** the extension period (between January 1, 2007 and December 31,2012) will be valid until June 30, 2013 (six months beyond the end of the extension period,) or until the date when it would have expired if the Permit Extension Act had not been passed, **whichever is longer.** (Some examples of how to apply the Permit Extension Act to UCC permits are enclosed.)

There continues to be an exclusion in the Act for permits issued for projects in environmentally sensitive areas. To determine whether your municipality or any portion of your municipality is an "environmentally sensitive area" as that term is defined in the Act, please refer to the enclosed attachment.

In order to determine whether a prior approval qualifies for extension under this Act, construction officials should check with the agencies and officials responsible for issuing those prior approvals to make sure that those prior approvals remain in effect. A list of the approvals included and of those excluded by the Act is enclosed.

Extension -continued at right

Ordinary Maintenance *continued from left*

In those cases where plan review was done by DCA, any plan release that was valid on or after January 1, 2007 may be used to support issuance of a permit through June 30, 2013. Once again, before issuing a permit, it is necessary to check with the agencies or officials involved to ensure that any required prior approvals remain valid.

Information, including the full text of the Act, is posted on the Division's website at www.nj.gov/dca/divisions/codes for your use. Should you have any questions about the application of the Permit Extension Act, please feel free to call the Code Assistance Unit at (609) 984-7607.

Sincerely,

Cynthia A. Wilk, Director
Division of Codes and Standards

Attachments: Definition of "Environmentally Sensitive Area"
Examples of Application to Permits Issued under the UCC
List of permits included and excluded

Permit Extension Act of 2008 - Definition of “Environmentally Sensitive Area”

“Environmentally sensitive areas” include areas designated in the State Development and Redevelopment Plan as Planning Area 4B (Rural/Environmentally Sensitive), Planning Area 5 (Environmentally Sensitive), or a critical environmental site (Plan can be viewed at www.nj.gov/dca/divisions/osg/plan/stateplan.shtml); the Highlands Region (excluding any area designated for growth in the Highlands regional master plan adopted by the Highlands Water Protection and Planning Council) (Plan can be viewed at http://www.nj.gov/njhighlands/master), and the Pinelands Area as per N.J.A.C. 13:18A-11 (excluding any growth area designated in the comprehensive management plan prepared and adopted by the Pinelands Commission, www.nj.gov/pinelands/images/pdf%20files/pinelandsprotectionact1.pdf).

Permit Extension Act of 2008 - Examples of Applying the Act to UCC Permits

The Permit extension Act extends all permits that were open and valid as of January 1, 2007. Under the UCC rules, a construction permit lapses if (1) no work is done for a year or (2) work, having been started, is discontinued for six months. (See N.J.A.C. 5:23-2.16(b)) The following are some examples of how certain scenarios would be affected by the Permit Extension Act:

Examples:

1. Construction permit was obtained prior to January 1, 2006 and no work was done. The permit has lapsed and is not revived by the Permit Extension Act because it was not a valid, open permit on January 1, 2007.
2. Construction permit was obtained on April 1, 2006 and no work was done. The permit was deemed to have lapsed as of April 1, 2007. However, the permit is now deemed to have been revived by the passage of the Permit Extension Act. Since it had been valid for three more months as of January 1, 2007, it will continue to be valid for three more months as of July 1, 2010, and its new expiration date, if it is not acted upon, will be October 1, 2010.
3. Construction permit was obtained on October 1, 2006 and no work was done. The permit was valid for nine more months as of January 1, 2007 and is now deemed to have been revived, and to continue to be valid as of July 1, 2010. However, since a permit that is only valid because it was extended by the Permit Extension Act can only remain valid for six months following the end of the extension period, the permit would only be valid for six more months, and would expire on January 1, 2011, if not used by then.
4. Construction permit is obtained between January 1, 2007 and January 1, 2010. Though the time would not begin to run until July 1, 2010, the permit would expire on January 1, 2011, since the Permit Extension Act does not allow any extensions beyond January 1, 2011 unless the permit would have continued in existence beyond that date had the Permit Extension Act not been adopted.
5. Construction permit is obtained after January 1, 2010. Since the permit is valid for a year, it is unaffected by the January 1, 2011 cut-off date and expires one year from the date of issuance, just as it would if the Permit Extension Act had not been adopted.

Permit Extension Act of 2008 - List of Permits and Approvals Included and Excluded

The law specifically includes UCC permits and includes the following:

- Any approval of a soil erosion and sediment control plan granted by a local soil conservation district,
- Any waterfront development permit,
- Any permit issued pursuant to "The Wetlands Act of 1970,"
- Any permit issued pursuant to the "Freshwater Wetlands Protection Act,"
- Any approval of an application for development granted by the Delaware and Raritan Canal Commission,
- Any permit issued by the New Jersey Meadowlands Commission,
- Any approval of an application for development granted by the Pinelands Commission and determination of municipal and county plan conformance pursuant to the "Pinelands Protection Act,"
- Any permit issued or center designations made pursuant to the "Coastal Area Facility Review Act,"
- Any septic approval,
- Any highway access permit or right-of-way permit granted by the Department of Transportation,
- Any approval granted by a sewerage authority*,
- Any approval granted by a municipal utilities authority,
- Any approval issued by a county planning board,
- Any preliminary and final approval granted in connection with an application for development pursuant to the "Municipal Land Use Law,"
- Any plan endorsement and center designations approved pursuant to the "State Planning Act,"
- Any permit or certification issued pursuant to the "Water Supply Management Act,"
- Any permit granted authorizing the drilling of a well, exemption from a sewerage connection ban granted*, wastewater management plan approved, and pollution discharge elimination system permit pursuant to the "Water Pollution Control Act,"
- Any certification granted pursuant to "The Realty Improvement Sewerage and Facilities Act,"
- Any certification or approval of water and sewerage facilities for 50 or more units granted pursuant to P.L.1971, c.386,
- Any certification issued and water quality management plan approved pursuant to the

See Included and Excluded -page 15

Included and Excluded *continued from page 14*

"Water Quality Planning Act,"

- Any approval granted pursuant to the "Safe Drinking Water Act,"
- Any permit issued pursuant to the "Flood Hazard Area Control Act," P.L.1962.

*Note: The continuation of an approval for connection to a sanitary sewer is contingent on the availability of sufficient capacity.

The law specifically excludes the following:

- Any permit or approval issued by the government of the United States or any agency or instrumentality thereof, or any permit or approval for which the expiration is determined under Federal law,
- Any permit or approval issued pursuant to the "Pinelands Protection Act," if the extension would result in a violation of federal law, or any State rule or regulation requiring Federal approval,

See Included and Excluded –continued at right

Included and Excluded *continued from left*

- Any permit or approval issued within an environmentally sensitive area;
- Any permit or approval within an environmentally sensitive area issued pursuant to the "Highlands Water Protection and Planning Act,"
- Any permit or approval issued by the Department of Transportation other than a right-of-way permit or a highway access permit,
- Any permit or approval issued pursuant to the "Flood Hazard Area Control Act," except where work has commenced in any phase or section of the development, on any site improvement or on any buildings or structures, and
- Any coastal center designated pursuant to the "Coastal Area Facility Review Act," that as of March 15, 2007 (a) had not submitted an application for plan endorsement to the State Planning Commission, and (b) was not in compliance with the provisions of the Coastal

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Division of Codes and Standards
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