

# Construction Code Communicator



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## Acceptance Testing – Single- and Multiple-Station Smoke Alarms

There have been several recent inquiries regarding the proper method used to conduct an acceptance test on non-system type, single- and multiple-station smoke alarms installed in Groups R-1, R-2, R-3, R-4, R-5, and I-1. The Uniform Construction Code (UCC) at N.J.A.C. 5:23-3.4(d)2 identifies these field inspections as a responsibility of the fire protection inspector as a provision of Chapter 9, including Section 907.2.10.4 in the International Building Code (IBC) and Section R317 in the International Residential Code (IRC).

It is the intent of both the IBC and IRC that each alarm and, if applicable, each interconnection be tested in accordance with the household fire warning equipment provisions in Chapter 2 of National Fire Protection Association (NFPA) 72, "National Fire Alarm Code," 1996 edition. During an initial acceptance test, the fire protection inspector must witness a functional test of all the devices installed in order to approve the installation. NFPA 72, Table 7-2.2 gives specific test methods that are acceptable as functional tests for single-station smoke detectors. The functional test must ensure smoke entry into the sensing chamber and an alarm response. Two of the permitted test methods to accomplish this are testing with smoke or with a listed aerosol approved by the manufacturer. However, other methods approved by the manufacturer that ensure smoke entry into the sensing chamber are also permitted. A detector sensitivity test, which measures the sensitivity range of individual detectors, is not

required as part of the acceptance test for single- and multiple-station smoke alarms.

If you have any questions, please feel free to contact me at (609) 292-7898.

Source: Carmine Giangeruso  
Construction Official






















## Accessible Parking Signs: Referenced Standard

As per N.J.A.C. 5:23-7.9(g), each accessible parking space shall be marked with an R7-8 sign, centered and mounted at the head of each parking space. The sign shall be mounted approximately 60 inches above the parking lot or sidewalk surface when the sign is parallel to the sidewalk and approximately 72 inches above the parking lot or sidewalk surface when the sign is perpendicular to the sidewalk.

Section 7.9(g) references the *Manual on Uniform Traffic Control Devices* from the United States Department of Transportation, Federal Highway Administration, <http://mutcd.fhwa.dot.gov/>. As per Section 2B.40 of the *Manual*, the signs should have a green legend (i.e., words) and border on a white background. The sign shall also display the international symbol of accessibility (normally blue), as per Section 7.9(g).

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Lastly, each accessible parking space shall also be marked with a 12-inch high by 10-inch wide R7-8P penalty sign, with a black legend and border on a white background (dimensions and colors as per New Jersey Department of Transportation), beneath the R7-8P sign. The R7-8 sign shall contain the following language:

|  |
|--|
| <p>PENALTY<br/>         \$250 FIRST OFFENSE<br/>         SUBSEQUENT OFFENSES<br/>         \$250 MINIMUM AND/OR<br/>         UP TO 90 DAYS COMMUNITY SERVICE<br/>         TOW-AWAY ZONE</p> |
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If you have any questions, please contact me at (609) 984-7609.

Source: Rob Austin  
Code Specialist

### Air Conditioners and Heat Pumps — New Standards

Recently, the United States Department of Energy (DOE) raised the energy efficiency standards to a 13.0 seasonal energy efficiency ratio (SEER), and a 7.7 heating seasonal performance factor (HSPF) for new central air conditioners and new central air-conditioning heat pumps, respectively. The standards apply to products manufactured for sale in the United States as of January 23, 2006.

As a result of the change in DOE standards, split-system air conditioners (the most common type of residential air-conditioning equipment) will see a 30 percent improvement in energy efficiency. For split-system heat pumps, the new standard will see a 30 percent improvement in cooling efficiency and a 13 percent improvement in heating efficiency. The standard will also increase the cooling efficiency of single-package air conditioners and single-package heat pumps by 34 percent, and the heating efficiency of single-package heat pumps by 17 percent.

The changes in the DOE standards affect the enforcement of the 1995 Council of American Building Officials Model Energy Code. Minimum performance of category "<65,000 Btu/h Cooling Capacity Heating Mode

(Heat Pump)" in Table 503.3.2a (Standard Rating Conditions and Minimum Performance Heat Pumps — Air Cooled, Electrically-Operated, <135,000 Btu/h Cooling Capacity) is now 7.7 HSPF for both split systems and single packages. Minimum performance of category "<65,000 Btu/h Cooling Capacity Cooling Mode" in Table 503.3.5a (Standard Rating Conditions and Minimum Performance Unitary Air Conditioners and Heat Pumps — Air Cooled, Electrically Operated, <135,000 Btu/h Cooling Capacity — Except Packaged Terminal and Room Air Conditioners) is now 13.0 for both split systems and single packages.

Note: New equipment with a rating less than 13.0 SEER or 7.7 HSPF manufactured before January 23, 2006 may still be sold and installed. For date verification, check the data nameplate attached to the equipment.

If you have any questions on this matter, please contact me at (609) 984-7609.

Source: Rob Austin  
Code Specialist

### Alarm Installers . . . What's Required

Recently, there have been several inquiries as to whether licensed electrical contractors are permitted to install alarms. The answer is a qualified "yes." Alarm installers need to submit one of the following in order to obtain a Uniform Construction Code (UCC) permit:

- ◆ Permit of Certification issued by the Division of Fire Safety (DFS); or
- ◆ Individual alarm installer license issued by the Board of Examiners of Electrical Contractors; or
- ◆ New Jersey electrical contractor license.

The Permit of Certification is a business permit issued by the DFS and is equivalent to the business license that will be issued in the future by the Division of Consumer Affairs.

Since business licenses for alarm contractor firms will be issued in the future, individual license holders from the Division of Consumer Affairs may apply for a UCC permit provided they complete the application with their individual license name/business name and the company address, along with providing a copy of their identification

card. The individual license holder is required to sign the UCC permit application.

An individual who has a DFS certificate may obtain a UCC permit for alarm installation only if the certificate holder has been issued a Permit of Certification for a business by DFS.

Because the wiring of alarms is covered in the National Electrical Code, a New Jersey licensed electrical contractor already meets the certificate requirements for alarm installers (see bullet three above). This means that a New Jersey licensed electrical contractor can obtain a UCC permit for alarm installation.

From now on, when an applicant files for a UCC permit to install a fire alarm system, the installer must possess one of the three items listed above.

If you have any questions on this matter, you may reach me at (609) 984-7609.

Source: Suzanne Borek  
Code Assistance Unit

### Bulletin No. 03-3 and OPRA

It has come to the Department of Community Affairs' attention that local enforcing agencies are citing Bulletin No. 03-3, Public Access to Building Plans, as the basis for denying requests for access to building plans and specifications made pursuant to the Open Public Records Act (OPRA), *N.J.S.A. 47:1A-1 et seq.*

Construction officials can and should continue to refer to Bulletin No. 03-3 for guidance on providing public access to plans. However, construction officials should cite OPRA and Governor McGreevey's Executive Order 21 as the legal basis for denying a request for access to building plans and specifications made under OPRA.

OPRA and executive orders with exemptions to disclosure may be downloaded from the Government Records Council's web site at [www.nj.gov/grc/](http://www.nj.gov/grc/).

If you have questions regarding enforcement of the Uniform Construction Code, contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Megan Sullivan Czyz  
Code Development Unit

### Concrete-Encased Electrodes: Plans vs. Inspections

Situation: The approved plans show the utilization of concrete-encased electrodes. However, at the time of inspection, the foundation has been poured and the concrete-encased electrodes are no longer available for use as the grounding electrode. What should the inspector do?

*N.J.A.C. 5:23-2.15(e)1* states, "Plans submitted shall be required to show only such detail and include only such information as shall be necessary to demonstrate compliance with the *requirements of the code* and these regulations, or to facilitate inspections for *code conformity . . .*" *N.J.A.C. 5:23-2.18(b)* states, "The construction official and appropriate subcode officials shall carry out inspections during the progress of the work to ensure that work inspected conforms to the *requirements of the code . . .*"

By now, you may be asking, "How do the above sections relate to the inspectors' duties regarding this situation?" The key here is that the sections above are looking for code compliance/conformity only. There are instances where code requirements can be met in various ways. As long as one option is properly met, it does not matter whether that method is the one shown on the plans. The inspector is to pass the inspection as long as the change complies with the Uniform Construction Code.

In the case described above, a grounding electrode can be established in seven ways, as per Section 250.52(A) of the National Electrical Code/2002. Therefore, if the concrete-encased electrode is no longer available to be used for grounding as shown on the plans and the installer has chosen another method from Section 250.52(A) at the time of inspection, that portion of the job should be passed. The inspector should then request a letter from the design professional stating that the change in method of compliance is acceptable.

If you have questions on this matter, you may contact me at (609) 984-7609.

Source: Rob Austin  
Code Assistance Unit

## Correction

In the Winter 2005 *Construction Code Communicator*, Volume 17, Number 3, there is a correction to the article entitled "ASHRAE Standard 90.1-1999: Energy Code Compliance." In the top paragraph of the second column on page 2, the heading "U-Factor (Thermal Resistance)" should actually read "U-Factor (Thermal Transmittance)."

We apologize for any inconvenience.

## Examination Rooms – Barrier Free

**Question:** In the case of multiple examination rooms for a single practitioner (e.g., medical, dental, etc.), how many exam rooms are required to meet the Barrier Free Subcode?

**Answer:** The Barrier Free Subcode does not answer this question directly. However, referring to *N.J.A.C. 5:23-7.11(a)1.i* and (f)1 for guidance, the appropriate application of the Barrier Free Subcode for this instance would be five percent of the rooms, but no less than one, to be designed as accessible.

**Note:** The above-referenced sections deal with clustered toilet rooms serving a common medical office area or suite and customer service facilities, respectively.

If you have any questions on this issue, you may reach me at (609) 984-7609.

Source: Rob Austin  
Code Assistance Unit

## Framing Inspection Checklist

As of February 21, 2006, new rules were adopted regarding the Framing Checklist to ensure that framing is done properly and is ready for inspections. *N.J.A.C. 5:23-2.18(b)1.iv(1)(E)* now states, "Prior to inspection, the responsible person in charge of work shall provide to the building inspector a signed Framing Checklist to be verified and initialed by the inspector, and then made part of the permit file."

What does this mean for you?

- ◆ **RESPONSIBLE PERSON IN CHARGE:** This is normally the builder, general contractor, or site supervisor. He or she should complete and sign the Framing

Checklist prior to the framing inspection. The building inspector will be using the same checklist for verification purposes.

- ◆ **BUILDING INSPECTOR:** The building inspector should arrive within three business days after a request for inspection. He or she should use the same checklist from the responsible person in charge. After verification, the building inspector will initial the checklist and file it in the construction office.

**Note:** As there will probably be no copiers on the construction site, it may be wise for the responsible person in charge to bring an extra copy of the Framing Checklist; two complete checklists can then be signed/initialed so that both parties may each have a copy for documentation purposes.

Lastly, the Framing Checklist has become Uniform Construction Code (UCC) Form F-390 and is listed at *N.J.A.C. 5:23-4.5(b)2*. A copy can be obtained at [www.state.nj.us/dca/codes](http://www.state.nj.us/dca/codes) under the heading "UCC Construction Permit Application and Related Forms" as "Framing Checklist."

Source: Rob Austin  
Code Specialist

## Inspector Trainee Requirements

It has come to the Licensing Unit's attention that there is confusion regarding what is required to be a properly registered Inspector Trainee and what duties a registered Trainee may perform. Be aware that no individual may perform any of the duties of a Trainee without first being registered with the Licensing Unit. Additionally, any experience gained while performing work as an unregistered Trainee will not be accepted for the purpose of obtaining an Inspector license. Individuals who want to register as a Trainee may obtain the necessary forms from the Licensing Unit.

The following requirements are needed prior to becoming registered as a Trainee Inspector with the State:

1. Submission of a complete application, along with the required \$20 non-refundable application fee.
2. Provision of documentation of at least one year of acceptable experience related to the subcode area of registration sought (building, electrical, fire protection, plumbing). Please note that there are only three types of acceptable experience: self-employment as a contractor, journeyman level experience in a trade related to a particular subcode, and inspector-type experience.



3. Sponsorship from the construction official and appropriate subcode official in the town where the Trainee will be employed.

The duties of a Trainee are limited and require constant supervision by an individual with a valid license in the same subcode area as the Trainee. Supervisors stay with Trainees throughout inspections. The Office of Regulatory Affairs has, from time to time, investigated the actions and conduct of Trainees. One recurring problem is that the Trainees are not renewing their registrations annually. Another problem is that Trainees are signing documents. Trainees *are not* to sign plan releases, stickers, or technical sections.

Trainees must be evaluated by their supervisors quarterly and only Trainees who receive a satisfactory performance evaluation can credit their experience towards their Inspector licenses. Trainees are required to renew their registrations annually; however, Trainees may only renew their registrations **one** time without taking the required entry-level Inspector course and passing the required National Inspector examinations appropriate to their subcode area. The role of a Trainee is limited to those duties referenced above. Please be careful not to exceed those limits. It is the subcode official's responsibility to ensure that the Trainee follows the regulations.

If you have any questions on this issue, please call Patrick Ryan at (609) 984-7834.

Source: Patrick Ryan, Licensing Unit  
Gerry Grayce, Office of Regulatory Affairs

## Manufactured Homes

The construction of manufactured homes, also referred to as mobile homes, is regulated by the Federal Manufactured Home Construction and Safety Standards (Part 3280). The foundation/stabilization (e.g., straps and anchors) system for a manufactured home, including its installation and assembly, is required to conform to the New Jersey Uniform Construction Code (UCC). Various issues related to this category of premanufactured construction have been the subject matter of past *Construction Code Communicator* articles. This article reinforces the following frequently raised issues:

1. The requirements for documents to be submitted with the construction permit application; and
2. The municipal enforcing agency's responsibilities with respect to inspection(s) and the issuance of a Certificate of Occupancy.

**Question:** What are the requirements for filing documents at the time of application for a construction permit for a manufactured home?

**Response:** The documents required at the time of application for a construction permit are:

1. A statement that the work to be performed is to include the installation of a labeled manufactured home. (The label is the Federal Manufactured Home Certification label per Part 3280). The statement is to be signed by the applicant or his agent.
2. The schematic floor plan layouts and typical elevations showing the arrangement and layout of the manufactured home. Such schematic floor plan layouts and typical elevations do not include sections; construction details; or structural, plumbing, mechanical, and electrical layouts. These schematic plans are not required to be prepared or sealed by an architect or engineer.
3. Detailed plans for any site-built construction (e.g., the foundation/stabilization system) related to the installation of the manufactured home. The design of the foundation/stabilization system is to be based on the manufacturer's recommended foundation design and the actual site-specific soil conditions. These plans shall be prepared, signed, sealed, and dated by a New Jersey licensed professional engineer or a registered architect, and shall meet the applicable requirements of the UCC.  
*Note:* A homeowner who has prepared the construction documents of a single-family home, which is to be used as his own principal residence, is not required to submit signed and sealed plans [N.J.A.C. 5:23-2.15(e)].
4. The manufacturer's installation instructions for the manufactured home.

**Question:** What are the municipal enforcing agency's responsibilities with respect to inspections and the issuance of a Certificate of Occupancy?

**Response:** This is covered in N.J.A.C. 5:23-2.22. Following is a summary of the requirements:

1. Verification/confirmation of an attached Certification Label [see sample Federal Department of Housing and Urban Development (HUD) Certification Label on page 6]. Per Section 3280.11, Certification Label, of the Federal Manufactured Home Construction and Safety Standards, "This label shall be approximately two inches by four inches in size and . . . shall be etched or stamped with a three-letter designation which

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identifies the . . . inspection agency.“ Section 3280.11 additionally states, “The label shall be located at the taillight end of each transportable section of the manufactured home, approximately one foot up from the floor and one foot in from the road side, or as near that location on a permanent part of the exterior of the manufactured home unit . . . .”

2. Verification/confirmation of an attached Manufacturer's Data Plate (see sample on opposite page). The information (roof load zone, wind load zone, etc.) on the Data Plate (per Section 3280.5 of the Federal Manufactured Home Construction and Safety Standards) determines the suitability of the manufactured home for the particular location.
3. Inspection of the manufactured home unit(s) to ascertain any visible signs of damage and/or visible code violations. For this purpose, the code is the Federal Manufactured Home Construction and Safety Standards.
4. Inspection of the installation of the manufactured home unit(s) or assembly, and all work installed or completed on site (including but not limited to foundations, and the structural, mechanical, plumbing, and electrical connections) to determine compliance with the regulations, approved plans, and manufacturer's installation instructions.
5. Witness of performance of nondestructive tests (e.g., plumbing, electrical).
6. Issuance of a Certificate of Occupancy for the certified manufactured home(s) after it has been installed and properly inspected pursuant to *N.J.A.C. 5:23-2.22*, provided that any manufactured home unit(s) found not to comply with the plans filed with the permit shall be brought into compliance before such Certificate of Occupancy shall be issued.

When the local enforcement agency is making an inspection and finds that the factory-built portion of the manufactured home contains violations of the Federal Manufactured Home Construction and Safety Standards, it should report the details of such violations, in writing, to the Department of Community Affairs, Bureau of Code Services, Industrialized Buildings Unit, Post Office Box 816, Trenton, New Jersey 08625-0816, *Attention:* Paul Sachdeva. Where

violations are hazardous to occupants, a Certificate of Occupancy should not be issued and the building should not be occupied before such hazards are corrected. If the violations are not hazardous, a Temporary Certificate of Occupancy shall be issued. It is suggested that the Certificate of Occupancy indicate “Manufactured Home” and list the “HUD Certification Label Number.”

It is highly recommended that code officials, designers, builders, and installers familiarize themselves with the Federal Manufactured Home Construction and Safety Standards. The HUD regulations web site, which includes Part 3280 - Federal Manufactured Home Construction and Safety Standards, is <http://www.hud.gov/offices/hsg/sfh/mhs/mhshome.cfm>.

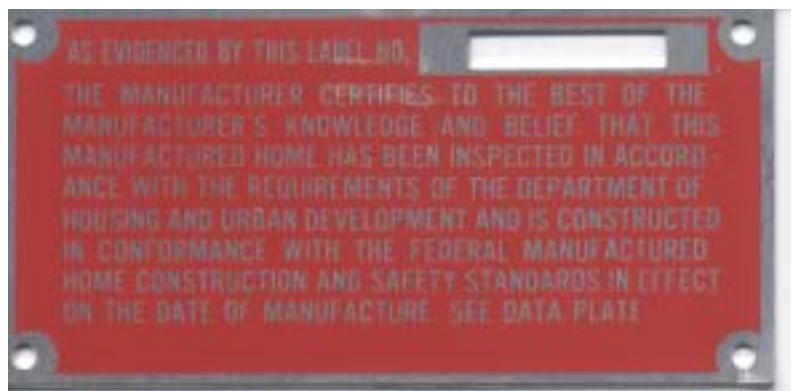
The following articles, which have appeared in previous editions of the *Communicator*, provide additional useful information related to this subject:

1. “Warranty Stories,” Summer 1992
2. “Premanufactured Construction Fees,” Fall 1995
3. “Manufactured Homes: Foundation and Support,” Winter 1997
4. “Manufactured (HUD) Homes: Installation and Assembly,” Summer 2001
5. “Manufactured Homes: Permanent Foundations,” Winter 2002
6. “Manufactured Housing – Permanent Foundation Guide,” Spring 2003
7. “Manufactured Homes Installation and Assembly: Common Instances of Nonconformance,” Winter 2004

UCC Bulletin Nos. 80-6, Manufactured Homes, and 88-2, Manufactured Housing, provide additional information related to manufactured homes.

If you have any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva, P.E.  
Industrialized Buildings Unit  
Bureau of Code Services



**HUD Certification Label**





### Plumbing Work that May be Performed by Master Plumbers Who are Not Registered as Home Improvement Contractors

Recently, a question came up regarding what work may be performed by New Jersey licensed master plumbers who are not registered with the State as home improvement contractors. For clarification, New Jersey licensed master plumbers in good standing may perform work listed in *N.J.A.C. 13:32-1.4(c)* and (d) without being registered as a home improvement contractor.

The following plumbing work is described in Section (c):

1. Performance of plumbing work, including minor work, and ordinary repairs (even though a permit is not required for ordinary repairs);
2. Installation and service of storm, sanitary, and water piping to the final point of connection within three feet of the exterior of a building or structure located on private property;
3. Installation of the water service and backflow preventer for fire suppression systems and water sprinkler systems;
4. Performance of plumbing work at a place of business by employees of that business on property owned by the business;
5. Disconnection and sealing of water and sewer lines;
6. Installation and service of all direct and indirect drain piping associated with mechanical equipment that is connected to a sewer system;
7. Installation and completion of plumbing, at no cost, notwithstanding that the property is owned by a nonprofit organization;
8. Installation or disconnection of water-filtration or water-softening equipment, water heaters, humidifiers, ice-making equipment, or backflow preventers;
9. Installation of water piping on the house side of a well-water compression tank; and
10. Installation and service of storm, sanitary, and water piping between buildings or structures on a property.

The following work, as described in Section (d), does not fall within the scope of the practice of plumbing, but may be performed by a New Jersey licensed master plumber in good standing without registering as a home improvement contractor:

1. The clearance of stoppages and installation or removal of a cleanout or cleanout equivalent necessary to clear the stoppage;
2. The installation and service of storm, sanitary, and water piping from the final point of connection more than three feet from the exterior of a building or structure located on private property;
3. The installation, service, and maintenance of fire suppression systems and lawn sprinkler systems downstream from a backflow prevention device;
4. The installation, service, and maintenance of gas and hydronic piping;
5. The demolition or removal of plumbing, provided the water and sewer utilities are first disconnected and sealed outside the building;
6. The installation and service of transmission piping by water or sewer utilities; and
7. The installation and service of water lines to mechanical equipment downstream from a backflow prevention device.

If you have any questions about this matter, please contact me at (609) 984-7609.

Source: Thomas C. Pitcherello  
Code Specialist  
Code Assistance Unit

### Modular Buildings

Questions continue to be asked that relate to:

- ◆ The requirements for submission of documents with the construction permit application, and
- ◆ The responsibilities of the municipal enforcing agency with respect to inspections and the issuance of Certificates of Occupancy (in regards to industrialized/modular buildings).

Below is another frequently asked question and the appropriate method for addressing the situation.

**Question:** What are the requirements for performing “corrective repairs” in modular buildings for which the manufacturer is responsible?

**Response:** The following policy and procedures shall be followed:

1. Identify the code violation(s) and/or defect(s).
2. Create a step-by-step method of corrective repairs with design/specifications by a New Jersey



licensed professional engineer. This requires review and approval by the third-party evaluation agency.

3. Apply for a construction permit from the local code enforcement agency, enclosing the above design/specifications.
4. The local code enforcement agency reviews and issues the construction permit.
5. Initiate corrective work only after the permit is issued.
6. The local code enforcement agency makes the necessary inspections during and/or after completion of the corrective repairs.
7. The third-party inspection agency makes the necessary inspections during and/or after completion of the corrective repairs.
8. The unit(s) is re-certified (re-validated).
9. The local code enforcement agency issues a Certificate of Approval to close the permit.

If there are any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva, P.E.  
Industrialized Buildings Unit  
Bureau of Code Services

### New Jersey Register Adoptions

**Date:** September 19, 2005  
**Adoption:** 37 NJR 3729(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:10-27.1, 27.4, and 27.6 clarify that, in multiple dwelling units, window guards must be installed upon the request of the tenant in any unit in which a child ten years of age or younger is regularly present for a substantial amount of time. The amendments also establish window guard specifications, inspection requirements, and record-keeping requirements.

**Date:** November 7, 2005  
**Adoption:** 37 NJR 4216(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-3.4 reformat the requirements entitled "Responsibilities" into chart form for ease of reference. In addition, the proposed amendments revise the assignment of enforcement responsibilities for certain subcodes of the Uniform Construction Code (UCC) and assign enforcement responsibilities for code sections that were not assigned previously.

**Date:** November 21, 2005  
**Adoption:** 37 NJR 4399(b)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-3.14, 3.21, and 4.26 establish live load requirements for attics based on the likelihood of items being stored in the space by setting forth dimensional criteria for attics with space for storage. In addition, the amendments include requirements to facilitate the placement of trusses.

**Date:** December 5, 2005  
**Adoption:** 37 NJR 4531(b)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:18-1.6, 3.1, 3.3, 3.4, 3.6, 5.1, and Appendix A update the editions of National Fire Protection Association (NFPA) 58 and the American Petroleum Institute standards referenced in the liquefied petroleum gas (LPG) rules, and amend the compliance dates for requirements phased in under NFPA-58. Also, the amendments require an additional label for propane cylinders that warn against bringing the tank indoors, change the voltage threshold for prohibiting electric lines installed above or adjacent to an LPG tank from 600 to 240 volts, amend property line distance requirements, amend tracer wire gage, amend storage requirements of LPG cylinders on roofs and balconies, and increase the distance requirement between building doors and cylinder exchange cabinets to 20 feet.

**Date:** December 19, 2005  
**Adoption:** 37 NJR 4907(a)  
**Summary:** The adopted amendment at *N.J.A.C.* 5:23-2.28 replaces language to provide clear direction on how to perform volume calculations.

**Date:** December 19, 2005  
**Adoption:** 37 NJR 4907(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-3.11 and 3.14 reserve high-level alarms as an enforcement activity for the Department of Community Affairs for plan review, as provided at *N.J.A.C.* 5:72. In addition, the adopted amendments clarify the definitions for Groups R-3 and R-5.

**Date:** December 19, 2005  
**Adoption:** 37 NJR 4907(a)  
**Summary:** The adopted amendment at *N.J.A.C.* 5:23-3.4 assigns plumbing inspectors the responsibility for inspecting the installation of bonding jumpers when water heaters are replaced.

**Date:** December 19, 2005  
**Adoption:** 37 NJR 4907(a)  
**Summary:** The adopted amendment at *N.J.A.C.* 5:23-4.5 requires construction officials to report suspensions or dismissals of subcode officials or inspectors for failure to properly enforce the UCC.

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**Date:** December 19, 2005  
**Adoption:** 37 NJR 4907(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-4.18 and 4.20 establish permit fees to be charged by local enforcing agencies and by the Department for retaining walls subject to the UCC.

**Date:** December 19, 2005  
**Adoption:** 37 NJR 4907(a)  
**Summary:** The adopted amendment at *N.J.A.C.* 5:23-8.11 requires all licensed asbestos safety control monitors to provide the Department with the name and address of a registered agent in the State upon whom service of process may be made.

**Date:** January 17, 2006  
**Adoption:** 38 NJR 484(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-2.15 incorporate contractor certification requirements for work involving fire-protection equipment, alarm installations, and landscape irrigation equipment. In addition, the adopted amendments require proof of certification as part of the construction permit.

**Date:** January 17, 2006  
**Adoption:** 38 NJR 485(a)  
**Summary:** The adopted new rule at *N.J.A.C.* 5:23-2.16A modifies the records retention requirements of the UCC to require fewer records be retained for the life of the building and to address records retention for revoked or cancelled permits. The adoption also requires that plans and specifications for certain essential facilities be retained for the life of the structure, and that they be retained for ten years for all other buildings and structures.

**Date:** January 17, 2006  
**Adoption:** 38 NJR 485(b)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-3.14 and 3.21 regulate pools with the capability of holding water 24 inches or more in depth, regardless of the area of the pool. The adopted amendments also eliminate redundant testing requirements for automatic sprinkler systems and revise the requirements for elevator cars to accommodate ambulance stretchers.

**Date:** February 21, 2006  
**Adoption:** 38 NJR 1183(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-2.18 and 4.5 require the use of a framing checklist by the responsible person in charge of construction of one- and two-family homes.

**Date:** February 21, 2006  
**Adoption:** 38 NJR 1183(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-3.20 and 3.21 require the installation of a safety valve or control switch to manually stop the flow of oil from a tank to an oil burner.

**Date:** February 21, 2006  
**Adoption:** 38 NJR 1183(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23A-2.4 establish standards for the retention of records for construction boards of appeal.

**Date:** April 3, 2006  
**Adoption:** 38 NJR 1567(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-2.6, 4.18, 6.5, 6.6, 6.7, 6.8, 6.9, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.23, 6.24, 6.25, 6.26, 6.27, 6.28, and 6.31 incorporate annual changes to the Rehabilitation Subcode of the UCC.

**Date:** April 3, 2006  
**Adoption:** 38 NJR 1567(a)  
**Summary:** The adopted repeal at *N.J.A.C.* 5:23-9.8 (Interpretation: Bed and Breakfast Guest Houses -- Change in Group Requirements) is the result of moving it to *N.J.A.C.* 5:23-6.31(p), the change of use to a bed and breakfast section of the Rehabilitation Subcode.

**Date:** April 3, 2006  
**Adoption:** 38 NJR 1572(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-2.15 require contractors subject to licensing under the "Contractors' Registration Act" -- and contractors who are exempt from that act, but subject to municipal licensing, certification, or registration -- to include their license or registration number on the application for a building permit.

**Date:** April 3, 2006  
**Adoption:** 38 NJR 1573(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-4.14 and 4.18 require contractors subject to licensing under the "Contractors' Registration Act" -- and contractors who are exempt from that act, but subject to municipal licensing, certification, or registration -- to include their license or registration number on the application for a building permit.

**Date:** April 3, 2006  
**Adoption:** 38 NJR 1573(a)  
**Summary:** The rule at *N.J.A.C.* 5:23-4.5A has been repealed because the authority for this rule no longer exists due to new statute P.L. 2005, c. 212.

Source: Denise L. Jones  
Code Development Unit

## Party Time

It's party time. Spring is in the air and tents will soon be in bloom. This year, most of the party-givers will be going to the fire official, not to the construction official, to get their permits.

Tents and tensioned-membrane structures give rise to a number of safety concerns, and have caused the following question to be asked: "Is a permit required?" The enforcement responsibilities have been shifted to the fire official for all but those tents where there are structural considerations. The shift of enforcement responsibility for most tents from the local construction official to the local fire official should result in more efficient enforcement of the requirements because the fire official is better able to deal with weekend events.

As a part of the rule changes, the Uniform Construction Code (UCC) permitting requirements for these types of structures (which are administrative requirements) were relocated from the Building Subcode, *N.J.A.C. 5:23-3.14*, to the administrative requirements at *N.J.A.C. 5:23-2.14*. Also, the temporary greenhouse requirements were moved from *N.J.A.C. 5:23-3.14* to the UCC's commercial farm building section at *N.J.A.C. 5:23-3.2(d)*.

The new rules specify that tents, tensioned-membrane structures, and canopies require UCC permits under the following conditions: 1) they are greater than 140 feet in any dimension, or greater than 16,800 square feet in area; 2) they remain in place for 180 days or more; 3) they are used or occupied between December 1 and March 31 (and therefore might be subject to a snow load); 4) they have a permanent anchoring system or foundation; or 5) they contain platforms or bleachers greater than 11 feet in height.

The requirements specify that tents and tensioned-membrane structures require a fire permit, issued under the Uniform Fire Code (UFC), if they are greater than 900 square feet and more than 30 feet in any dimension; but, are 16,800 square feet or less in area and 140 feet or less in any dimension. If there is electrical or mechanical equipment installed other than cord-and-plug connected utilizing an existing permanently installed receptacle, a UCC permit is required.

The new rules also address outdoor mazes. Outdoor mazes are defined as attractions that lack roofs and are designed to disorient patrons, reduce vision, present barriers, or otherwise impede the flow of traffic, and do not consist solely of corn stalks; trees; or similar living, rooted plants. Under the requirements, outdoor

mazes that are greater than six feet in height or contain electrical equipment require a construction permit under the UCC. Outdoor combustible mazes with vertical dimensions less than six feet in height with no electrical equipment require a fire permit under the UFC. The UFC exempts mazes created of bales not more than 42 inches in height from the requirements for a permit. Party on!

*Note:* These amendments at *N.J.A.C. 5:23-2.14*, 3.1, 3.14, and 5:70-2.7 were adopted on March 21, 2006, and will appear in the May 1, 2006 *New Jersey Register*.

If you have any questions on this matter, you may reach me at (609) 984-7609.

Source: Suzanne Borek  
Code Assistance Unit

## Peer Review Activities

About one year ago, I wrote a *Construction Code Communicator* article entitled "Peer Review is Overworked." The Office of Regulatory Affairs had brought 33 licensed individuals before Peer Review in the Years 2003 and 2004, and an additional 36 licensed individuals were forced to retire, or received letters of warning or reprimands. The purpose of sharing this information was the hope of creating a deterrent which would have a positive effect on the number of sanctions issued to licensed officials. Unfortunately, there was little change in 2005. The Office of Regulatory Affairs brought before Peer Review 15 individuals; an additional 16 individuals either surrendered their licenses, or received various letters of warning or reprimands. Following are eight brief synopses of cases brought before the Peer Review Committee and its recommended sanctions:

1. While serving as a construction official, an individual accepted free construction work on his home, as well as other gifts and gratuities, from a contractor over whom he enforced the code. The construction official also issued a Certificate of Occupancy to this contractor without all the inspections being completed and without subcode approvals. The Office of Regulatory Affairs recommended revocation of all Uniform Construction Code (UCC) licenses. The Building Peer Review Committee affirmed this recommendation.
2. While serving as an Electrical Inspector, an official approved numerous electrical installations that contained serious electrical violations. The Office of Regulatory Affairs proposed revocation of all licenses. The Electrical Peer Review Committee affirmed the recommendation.

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3. While serving as a construction official, an individual signed off on footing and foundation inspections on at least four occasions without the proper licenses. The Office of Regulatory Affairs recommended a \$1,000 penalty. The Electrical Peer Review Committee recommended a \$600 penalty and also required that the official retake the construction official course. The Deputy Director affirmed the Electrical Peer Review Committee's recommendation.
4. While serving as an electrical subcode official for a third-party agency, an individual ran an electrical business in the State of New Jersey. This is a violation of the conflict-of-interest provision in the UCC. The Office of Regulatory Affairs recommended revocation of all licenses. The Electrical Peer Review Committee affirmed the recommendation.
5. While serving as a construction official/building subcode official, an individual solicited a job for his son with a contractor over whom he enforces the UCC. This official subsequently inspected his son's work. The Office of Regulatory Affairs recommended revocation of all of the official's licenses. The Building Peer Review Committee affirmed the recommendation.
6. While serving as a building inspector, an individual accepted three bribes and admitted to negotiating a higher amount. The Office of Regulatory Affairs recommended revocation of all of the official's licenses. The Building Peer Review Committee affirmed the recommendation.
7. While serving as a building subcode official, an individual performed final inspections and gave subcode approval to a construction official for issuance of a Certificate of Occupancy without evidence of footing and foundation inspections. The Office of Regulatory Affairs recommended a \$2,500 penalty. The Building Peer Review Committee affirmed the recommendation.
8. While serving as a building subcode official, an individual constructed a new home in the municipality in which he worked and had subordinates inspect the construction. This individual subsequently sold the home without ever living there. The Office of Regulatory Affairs recommended revocation of all licenses. The Building Peer Review Committee recommended a 60-day license suspension, a \$500 penalty, and the retaking of the construction official course. The Deputy Director affirmed the Building Peer Review Committee's recommendations.

If you are not sure what to do in a certain situation, give us a call. We will resolve any ambiguities and we will provide counsel to ensure that the issues you face do not escalate into problems that could result in sanctions.

If you have any questions, please call the Office of Regulatory Affairs at (609) 984-7672.

Source: Lou Mraw  
Office of Regulatory Affairs

### Radon — Vent Pipe Support

Lately, there have been questions with regard to vent piping in *N.J.A.C. 5:23-10*, the Radon Hazard Subcode. As we all know, this subcode pertains to the new construction of all Group E (Educational) and Group R (Residential) buildings located in Tier One municipalities. The "Construction Techniques" of the Radon Hazard Subcode, Section 10.4, govern the installation of radon-resistant construction features and their components in new construction. More specifically, *N.J.A.C. 5:23-10.4(b)12* requires vent pipe for radon mitigation to be "adequately supported."

Adequate support can be obtained by using the pipe manufacturer's installation instructions or by using the industry standard, Radon Mitigation Standards (RMS), EPA 402-R-93-078. Section 14.2.4 of the RMS states, "Supports for radon vent pipes shall be installed at least every six feet on horizontal runs. Vertical runs shall be secured either above or below the points of penetration through floors, ceilings, and roofs, or at least every eight feet on runs that do not penetrate floors, ceilings, or roofs." To view the RMS, you may visit the United States Environmental Protection Agency (EPA) web site at <http://www.epa.gov/radon/pubs/mitstds.html>.

Plumbing subcode officials, please note that radon vent piping does not follow the same installation methods of the Plumbing Subcode, Mechanical Subcode, or Fuel Gas Subcode. Therefore, only the Radon Hazard Subcode should be referenced for radon vent piping installations as indicated above.

If you have any questions about this matter, please contact me at (609) 984-7609.

Source: Rob Austin  
Code Specialist



## Swimming Pool: New Definition

As of January 17, 2006, Section 3109.2 of the International Building Code (IBC) 2000 and Section AG102.1 of the International Residential Code (IRC) 2000 define a swimming pool as "any structure intended for swimming or recreational bathing that can hold water 24 inches or more in depth. This includes in-ground, above-ground, and on-ground swimming pools, hot tubs, and spas." In the past, only pools with a surface area of 250 square feet and greater than 24 inches in depth were regulated. Now, all pools -- regardless of their size -- are regulated. This definition includes the commonly used blow-up pool that is 24 inches or more in depth.

When applying the definitions in both IBC/2000 and IRC/2000 to the construction of swimming pools, spas, and hot tubs, the applicable standards from the American National Standard Institute/National Spa and Pool Institute (ANSI/NSPI) are as follows:

- ◆ In-ground public pools shall be designed and constructed in conformance with ANSI/NSPI-1, 1991 edition;
- ◆ Permanently installed public spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-2, 1992 edition;
- ◆ Permanently installed residential spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3, 1992 edition;
- ◆ Above-ground/on-ground residential pools shall be designed and constructed in conformance with ANSI/NSPI-4, 1992 edition;
- ◆ In-ground residential pools shall be designed and constructed in conformance with ANSI/NSPI-5, 1995 edition;
- ◆ Portable residential spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6, 1992 edition.

*Note: At N.J.A.C. 5:23-3.14(b)21.iii, Section 3109.6 of IBC/2000 should reference ANSI/NSPI-6 and will be corrected upon the adoption of IBC/2006.*

Finally, NSPI has changed its name to the Association of Pool and Spa Professionals. However, its web site still uses the old name at <http://www.nspi.org>.

If you have any questions on this matter, please contact me at (609) 984-7609.

Source: Rob Austin  
Code Specialist

## Transition Solvent Cement: Permitted or Not Permitted?

Is transition solvent cement permitted to be used for the transition joints between ABS and PVC non-pressure piping?

In the National Standard Plumbing Code (NSPC) 2003, Table 3.1.3, "Standards for Approved Plumbing Materials and Equipment," Section IV, "Pipe Joints, Joining Materials, Coupling, Gaskets," Item 21 lists "Solvent Cements for Transition Joints Between (ABS) and (PVC) Non-Pressure Piping Components," and refers to the American Society for Testing and Materials (ASTM) D3138-95 standard.

In the standard, Note 1 states: "This specification was developed to provide a means for joining an ABS to a PVC non-pressure piping system using a solvent-cemented transition joint (for example, joining an ABS building drain to a PVC sewer system). The intention was not to create a specification for an all-purpose ABS-PVC solvent that would be used for mixing of ABS and PVC piping materials, nor to specify cement that could generally be used for either material. Specific cements for ABS and PVC components should be used."

Based on Note 1 of the ASTM D3138 standard, transition solvent cement for the joining of an ABS to a PVC non-pressure piping system may be used only for the connection of the building drain to the building sewer; this would occur three feet outside the building. Therefore, the use of transition cement for joining ABS to PVC would not be permitted within the building.

Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello  
Code Assistance Unit

## Who's Got the Bonding Jumper?

The December 19, 2005 *New Jersey Register*, at 37 NJR 4907, contained an adoption making the inspection of the bonding jumper for the replacement of **only** gas water heaters the responsibility of the plumbing inspector. This is no longer the electrical inspector's responsibility!

The plumbing inspector will now inspect for the bonding jumper on gas water heater replacements only. The bonding jumper does not require an electrical permit and is to be included on the Plumbing Subcode Technical Section with the gas water heater replacement fee. The

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plumbing inspector will check for the bonding jumper and sign off on the Plumbing Subcode Technical Section on the line for "other," inserting "water heater bonding jumper."

The bonding jumper, Section 250.104(B) of the 2002 National Electrical Code (NEC), is to be sized in accordance with Table 250.122 of the 2002 NEC using the rating of the circuit that may energize the piping system. This means, if the water heater is in a structure that has a 200-AMP service with a 200-AMP main breaker, this is the rating of the circuit which could energize the piping system and then the size of the bonding jumper in Table 250.122 would be a 6-AWG copper, or 4-AWG aluminum or copper-clad aluminum, conductor.

The clamps installed on the water pipes must be approved and listed, as stated in Sections 250.70 and 110.3(B) in the 2002 NEC. The clamps may be of dissimilar metals, provided they are approved and listed for the use.

#### To sum it up . . .

##### Gas Water Heater Replacement:

- ◆ No electrical permit
- ◆ Plumbing Subcode technical fee includes the bonding jumper
- ◆ Plumbing inspector signs off for the bonding jumper on the "other" line on the technical section

If you have any questions on this matter, you may reach me at (609) 984-7609.

Source: Suzanne Borek  
Code Assistance Unit

#### TIA Alert! Equipotential Bonding Grid for Pools

The 2005 National Electrical Code (NEC) contains a gap in its requirements that would impact swimming pool safety. That gap has been closed, and the error corrected, by the issuing of a Tentative Interim Amendment (TIA) that revises the code language in Sections 680.26(C) and 680.26(C)(1) of the 2005 NEC. These sections contain the requirements for the Equipotential Bonding Grid for pools.

Because the TIA language was not included in the text of the 2005 NEC, it is not part of the Electrical Subcode in the Uniform Construction Code, *N.J.A.C. 5:23-3.16*, as adopted May 1, 2006. The language changes are below in bold, underlined type.

(C) Equipotential Bonding Grid. The parts specified in 680.26(B) shall be connected to an equipotential bonding grid with a solid copper conductor, insulated, covered, or bare, not smaller than 8 AWG or rigid metal conduit of brass or other identified corrosion-resistant metal conduit. Connection shall be made by exothermic welding or by listed pressure connectors or clamps that are labeled as being suitable for the purpose and are of stainless steel, brass, copper, or copper alloy. The equipotential bonding grid shall **conform to the contours of the pool and shall extend within or under paved walking surfaces for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall be permitted to be any of the following:**

**Exception: The equipotential bonding grid shall not be required to be installed under the bottom of or vertically along the walls of vinyl lined polymer wall, fiberglass composite, or other pools constructed of nonconductive materials. Any metal parts of the pool, including metal structural supports, shall be bonded in accordance with 680.26(B). For the purposes of this section, poured concrete, pneumatically applied (sprayed) concrete, and concrete block, with painted or plastered coatings, shall be considered conductive material.**

(1) Structural Reinforcing Steel. The structural reinforcing steel of a concrete pool **or deck** where the reinforcing rods are bonded together by the usual steel tie wires or the equivalent. **Where deck reinforcing steel is not an integral part of the pool, the deck reinforcing steel shall be bonded to other parts of the bonding grid using a minimum 8 AWG solid copper conductor. Connection shall be per 680.26(D).**

The Department of Community Affairs advises that, for new pools that are constructed during the six-month grace period immediately following the adoption of the 2005 NEC (until November 1, 2006), this TIA should be applied. An amendment to the Electrical Subcode implementing this TIA is forthcoming.

If you have any questions on this matter, you may reach me at (609) 984-7609.

Source: Suzanne Borek  
Code Assistance Unit

# NOTES

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