

# 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).

(continued on page 2)

### In This Issue

Acceptance Testing -- Single- and Multiple-Station Smoke Alarms  . . . 1	Modular Buildings  . . . 8
Accessible Parking Signs: Referenced Standard  . . . 1	New Jersey Register Adoptions . . . 9
Air Conditioners and Heat Pumps -- New Standards  . . . 2	Party Time     . . . 11
Alarm Installers . . . What's Required   . . . 2	Peer Review Activities . . . 11
Bulletin No. 03-3 and OPRA . . . 3	Plumbing Work that May be Performed by Master Plumbers Who are Not Registered as Home Improvement Contractors  . . . 8
Concrete-Encased Electrodes: Plans vs. Inspections  . . . 3	Radon -- Vent Pipe Support . . . 12
Correction  . . . 4	Swimming Pool: New Definition  . . . 13
Examination Rooms -- Barrier Free  . . . 4	TIA Alert! Equipotential Bonding Grid for Pools  . . . 14
Framing Inspection Checklist  . . . 4	Transition Solvent Cement: Permitted or Not Permitted?  . . . 13
Inspector Trainee Requirements . . . 4	Who's Got the Bonding Jumper?   . . . 13
Manufactured Homes  . . . 5	

(continued from page 1)

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          \$250 FIRST OFFENSE          SUBSEQUENT OFFENSES          \$250 MINIMUM AND/OR          UP TO 90 DAYS COMMUNITY SERVICE          TOW-AWAY ZONE</p>
--

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

(continued from page 5)

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>.

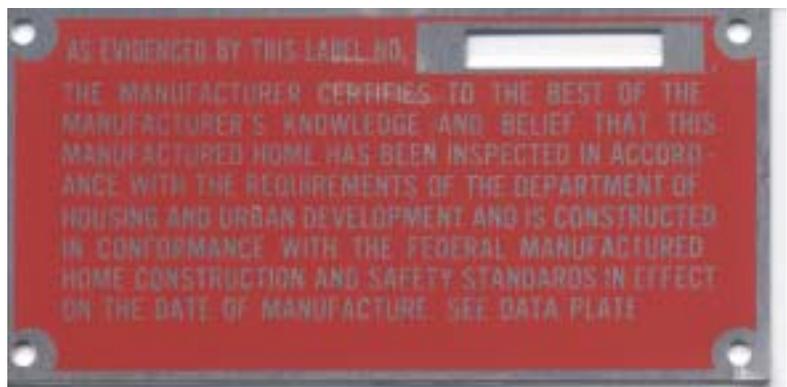
The following articles, which have appeared in previous editions of the *Communicator*, provide additional useful information related to this subject:

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.

(continued from page 9)

**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.

(continued from page 11)

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

*(continued on page 14)*

(continued from page 13)

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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# Construction Code Communicator



State of New Jersey  
Jon S. Corzine, Governor  
Volume 18 Number 2

Department of Community Affairs  
Susan Bass Levin, Commissioner  
Summer/Fall 2006

## Highlights of the 2005 New Jersey Construction Reporter

- ✓ Construction activity was at a record level in 2005, due mainly to new home construction.
- ✓ The estimated cost of work authorized by building permits was \$15.4 billion. Residential construction (new and rehabilitation) was \$8.2 billion, 53.1 percent of all activity. New home construction totaled \$5.6 billion.
- ✓ The amount of work was \$1.1 billion more than last year's record level, an increase of 7.9 percent. In real terms, based on an inflation rate of 3.4 percent, construction activity grew by more than 4 percent between 2004 and 2005.

(continued on page 2)

Housing's (COAH's) fair-share requirements be adaptable. The components of an adaptable townhouse for which COAH credit is sought are spelled out in the statute. The townhouse must have:

1. An adaptable entrance, with the plans for the adaptation to provide an accessible entrance. It is important to note that, for the purposes of fulfilling this requirement, the use of an exterior ramp, a platform lift, or a limited-use/limited-application elevator is acceptable;
2. An adaptable toilet and bathing facility on the first floor;
3. An adaptable kitchen on the first floor;
4. An accessible interior route of travel through the entry level of the dwelling unit (it is important to note that an interior accessible route to other stories of the dwelling unit is not required); and
5. An adaptable room that can be used as a bedroom, with a door or the casing for the installation of a door, on the first floor.

## Barrier Free-COAH Law: Accessible Townhouses in New Jersey

P.L. 2005, c. 350 amended the Uniform Construction Code (UCC) statute to require that townhouses for which municipal credit is sought under the Council on Affordable

### WHY THIS LAW WAS NEEDED:

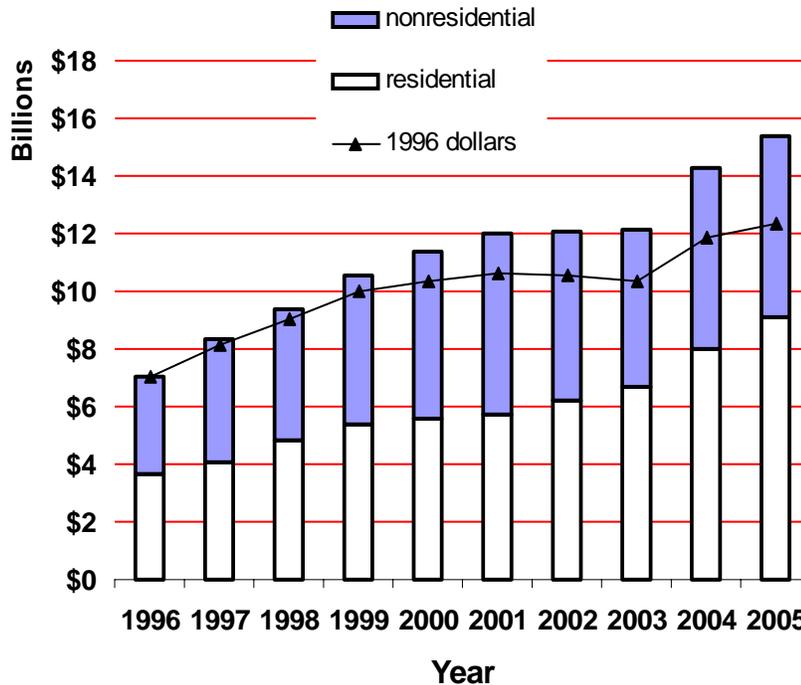
There are approximately 1.8 million people with disabilities who live in New Jersey. Of that number, (continued on page 8)

## In This Issue

Barrier Free-COAH Law: Accessible Townhouses in New Jersey   . . . 1	Home Improvement Contractors' Registration Denial List . . . . . 12
CELEBRATION -- 25 YEARS, New Jersey Building Safety Conference . . . 18	Index to the 2005 <i>Construction Code Communicator</i> (Volume 17) . . . . . 13
"Coming Attractions" -- Code Adoptions Planned for this Year . . . . . 5	Installing Fire Sprinklers Throughout Is Not Always <i>Throughout</i>  . . . . . 11
Correction: Accessible Parking Signs  . . . . . 6	Moisture-Vapor Retarder Requirements  . . . . . 14
Corrective Repair Procedures for Modular Buildings  . . . . . 7	New Homebuilder Information Available Online . . . . . 14
Discount on the 2006 National Standard Plumbing Codes . . . . . 7	<i>New Jersey Register</i> Adoptions . . . . . 18
Domestic Water Heaters in Residential Garages   . . . . . 9	Nonmetallic-Sheathed Cable and Garages  . . . . . 15
Energy -- Wood vs. Metal Construction (ASHRAE Standard 90.1-1999)   . . . . . 10	Private Residence Elevators  . . . . . 15
Expedited Workable Relocation Assistance Plans . . . . . 11	Prohibited: Urea-Formaldehyde Foam Insulation   . . . . . 16
Fire Department Connections for Standpipes and Fire Sprinklers -- How Many?  . . . . . 9	Radon and Crawl Spaces  . . . . . 16
Fire Sprinkler Hydrostatic Testing: Is the Test Always Required?  . . . . . 11	Residential Basement Insulation  . . . . . 16
Group Homes Are Not Therapeutic Residences  . . . . . 12	"Walk-Out" Basements and High-Efficiency Heating Equipment  . . . . . 17
Highlights of the 2005 <i>New Jersey Construction Reporter</i> . . . . . 1	Warning: Automatic Fire Sprinklers Bearing Counterfeit UL Mark  . . . . . 17

(continued from page 1)

### Estimated Cost of Construction Authorized by Building Permits, 1996-2005



- √ The number of new houses authorized for construction was 39,688,434 more units than in 2004, an increase of 1.1 percent.
- √ Office construction declined by 1.2-million square feet, almost 10 percent less than in 2004. Retail space was up by 1-million square feet, a 21.5-percent increase.
- √ Jersey City in Hudson County and the City of Newark in Essex County had the most construction and the most new houses in 2005. Jersey City led all communities with \$707.5 million of construction and 3,776 authorized housing units. Newark ranked second in both categories with \$344.6 million of work and 2,611 authorized dwellings. Over 73 percent of the construction activity in Jersey City was for new houses. New homes accounted for 45.6 percent of the work authorized by permits in Newark. Just over 16 percent of all the new houses authorized for construction in 2005 were in Jersey City and Newark.
- √ Northern New Jersey had \$6.5 billion of construction, 42.3 percent of all activity in the State. Jersey City, Newark, and other northern communities accounted for 15,982 authorized houses, over 40 percent of the total for the State.
- √ Central New Jersey had \$5.1 billion of construction — 33.1 percent of all construction — and 12,734 authorized housing units, 32.1 percent of all new houses.
- √ Southern New Jersey had \$3.2 billion of commercial and residential construction, and 10,972 authorized housing units, accounting for 21 percent of all the construction activity in the State and 27.6 percent of all authorized housing.
- √ Although new homes were the driving force behind the construction industry's strong performance, accounting for \$5.6 billion of activity, the estimated cost of new construction for commercial and other nonresidential structures increased at

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<b>New Jersey Construction Indicators</b>				
	<b>Estimated Construction Costs</b>	<b>Authorized Housing Units</b>	<b>Authorized Office Space (square feet)</b>	<b>Authorized Retail Space (square feet)</b>
1996	\$7,028,424,990	27,577	6,229,515	4,880,139
1997	\$8,346,533,144	30,017	10,409,171	5,688,955
1998	\$9,396,755,517	35,676	12,703,824	7,921,892
1999	\$10,584,167,530	37,536	13,237,891	6,229,471
2000	\$11,387,683,514	38,065	15,531,039	6,063,412
2001	\$12,007,456,630	35,680	19,134,533	7,244,833
2002	\$12,079,942,099	34,589	9,261,054	6,560,913
2003	\$12,148,747,807	35,171	9,744,146	6,038,428
2004	\$14,274,331,850	39,254	12,219,068	4,911,257
2005	\$15,397,507,147	39,688	11,038,132	5,965,258
<b>Change Between 2004 and 2005</b>				
2004-2005	\$1,123,175,297	434	-1,180,936	1,054,001
Percent Change	7.9%	1.1%	-9.7%	21.5%
Source: N.J. Department of Community Affairs, 5/8/06				

a faster rate. New home construction grew by \$809.3 million, 16.8 percent, while new nonresidential structures increased by \$834.1 million, 31.4 percent more than last year.

- √ New home construction made up just over one-third of all authorized work. New commercial buildings and other new nonresidential structures accounted for less than one-quarter of all activity (24.2 percent or \$3.5 billion). Tenant fit-ups for commercial buildings and other nonresidential additions and alterations accounted for another \$3.7 billion, 24.2 percent of all authorized work. Rehab work on existing houses made up \$2.5 billion, 16.5 percent of construction activity in 2005.
- √ Housing rehab was the only component of the construction industry that declined in 2005. In 2004, the estimated cost of additions and alterations to existing dwellings was \$3.1 billion. In 2005, it was \$2.5 billion, a decline of 19.2 percent.
- √ One of the bigger commercial projects to break ground in 2005 was the Borgata Hotel Casino & Spa north expansion in Atlantic City, Atlantic County. About half of the \$310 million of construction reported by Atlantic City was for the new Borgata addition. Atlantic City ranked third behind Jersey City and Newark with the most activity in 2005.
- √ Two other communities with strong activity in 2005 were Bernards Township and Warren Township, both in Somerset County. Over \$52 million of the work reported in Bernards was to refurbish a complex of existing buildings for an office campus for Verizon Communications. In Warren Township, over \$41 million was authorized for a new special education center.
- √ "State buildings" refers to a category of buildings built on behalf of State government agencies or their instrumentalities, like New Jersey Transit or the New Jersey Sports & Exposition Authority. This category of construction accounted for

(continued from page 3)

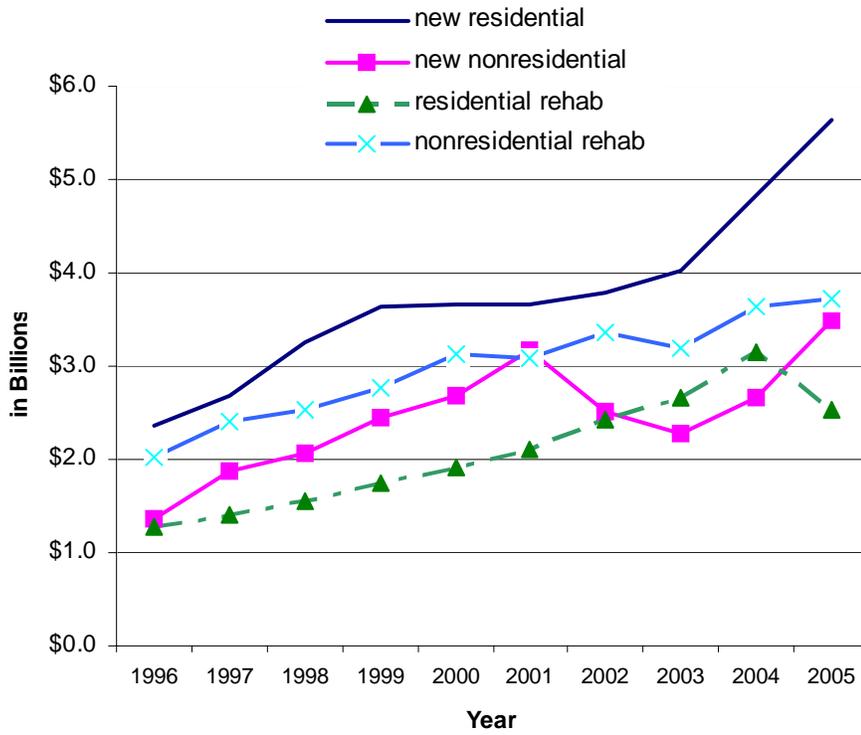
<b>Major Construction Indicators by Region</b>				
<b>Region</b>	<b>Estimated Cost of Construction</b>	<b>Authorized Housing Units</b>	<b>Authorized Office Space (square feet)</b>	<b>Authorized Retail Space (square feet)</b>
North	\$6,508,235,134	15,982	4,474,379	2,345,236
Central	5,100,559,035	12,734	4,079,046	1,965,117
South	3,234,476,044	10,972	2,133,440	1,565,370
State Buildings	554,236,934	0	351,267	89,535
<b>New Jersey</b>	<b>\$15,397,507,147</b>	<b>39,688</b>	<b>11,038,132</b>	<b>5,875,723</b>
<b>Percent Distribution by Region</b>				
North	42.3%	40.3%	40.5%	39.3%
Central	33.1%	32.1%	37.0%	32.9%
South	21.0%	27.6%	19.3%	26.2%
State Buildings	3.6%	0.0%	3.2%	1.5%
New Jersey	100.0%	100.0%	100.0%	100.0%
Source: N.J. Department of Community Affairs, 5/8/06				
Northern New Jersey: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties				
Central New Jersey: Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset Counties				
Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties				

\$554.2 million. Among the bigger projects reported were four new construction permits for the Meadowlands Xanadu retail and entertainment complex. The estimated cost of work reported on these permits was \$160 million.

- √ Building permits also showed major expansions on New Jersey State college and university campuses. Over \$180 million of activity was reported for work at Rutgers University (New Brunswick), New Jersey City University (Jersey City), Rowan University (Glassboro), William Paterson University (Wayne), the University of Medicine & Dentistry of New Jersey (Newark), Ramapo College (Mahwah), and Stockton State College (Galloway Township).
- √ It cost more to buy a new home in New Jersey. The median sale price of the 24,571 new houses that began enrollment in a new home warranty program in 2005 was \$378,992. This was 8.3 percent more than 2004.
- √ Hunterdon County had the most expensive new houses. Half of the 349 houses that began enrollment in a new home warranty program in 2005 cost more than \$644,002. Cumberland County had the least expensive new houses. The median sales price was \$232,000.

*Information in this report is from the 2005 Annual issue of The New Jersey Construction Reporter, a publication of the New Jersey Department of Community Affairs that examines construction statistics derived from building permits and certificates issued throughout the State. The Reporter can be viewed online at <http://www.nj.gov/dca/codes/cr/conrep.shtml>. If you have any questions about the information in this report, contact John Lago at (609) 984-7609.*

**Estimated Cost of Construction Authorized by Building Permits**



(continued on page 6)

**“Coming Attractions” – Code Adoptions Planned for this Year**

For those of you who have not heard, the State of New Jersey is planning to adopt the 2006 codes in the not-to-distant future. Planned for adoption are the following: the 2006 International Building Code (IBC/2006), the 2006 International Residential Code (IRC/2006), the 2006 International Fuel Gas Code, the 2006 International Mechanical Code, the 2006 International Energy Conservation Code (IECC/2006), and the 2006 National Standard Plumbing Code.

It is our goal to have these codes adopted in Calendar Year 2006. Please watch the *New Jersey Register* for the proposal in September. We look forward to your comments on this very important code adoption.

We are currently working with the International Code Council (ICC) to publish New Jersey editions of the IBC/2006, IRC/2006, and IECC/2006, which will be available through the ICC after the codes have been adopted.

In the meantime, please visit our web site at: <http://www.nj.gov/dca/codes>

for updates on the adoption of the 2006 codes and other useful tools. The web site will also provide the proposal and adoption dates.

Lastly, as with every new adoption of a model code, there will be a six-month “grace period” to allow for the finalization of projects designed under the previous model codes, as per *N.J.A.C. 5:23-1.6*.

Source: John N. Terry  
Code Assistance Unit

(continued from page 5)

Construction Indicators Top New Jersey Municipalities					
Municipality	County	Estimated Cost of Construction (dollars)	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jersey City	Hudson	\$707,459,081	3,776	438,879	0
Newark City	Essex	344,588,628	2,611	134,021	148,871
Atlantic City	Atlantic	308,275,936	116	3,012	2,800
Hoboken City	Hudson	173,736,936	443	0	0
Monroe Twp.	Middlesex	147,581,898	666	85,262	15,216
Paramus Boro.	Bergen	139,055,545	47	29,413	247,707
Franklin Twp.	Somerset	136,958,035	498	112,625	0
Jackson Twp.	Ocean	132,933,494	746	36,050	4,680
Ocean City	Cape May	130,712,287	539	0	36,723
Hamilton Twp.	Mercer	124,598,370	340	559,673	37,384
Englewood City	Bergen	122,208,506	685	37,768	16,964
Bernards Twp.	Somerset	118,004,475	23	2,836	0
Dover Twp.	Ocean	116,604,654	275	207,802	111,680
Warren Twp.	Somerset	115,556,601	30	6,883	22,915
South Brunswick Twp.	Middlesex	112,589,057	213	143,989	127,233
Top Municipalities		\$2,930,863,503	11,008	1,798,213	772,173
<b>New Jersey</b>		<b>\$15,307,574,897</b>	<b>39,395</b>	<b>11,010,724</b>	<b>5,935,626</b>
Top as % of New Jersey		19.1%	27.9%	16.3%	13.0%

Source: N.J. Department of Community Affairs, 5/8/06

**Correction: Accessible Parking Signs** 

In the Spring 2006 *Construction Code Communicator*, Volume 18, Number 1, the third paragraph of the "Accessible Parking Signs: Referenced Standard" article misstates the placement of the R7-8P sign. The paragraph should actually read as follows:

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 **R7-8** sign. The **R7-8P** sign shall contain the following language . . . .

We apologize for any inconvenience.

If you have any questions, please contact Rob Austin in the Code Assistance Unit at (609) 984-7609.

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%
1st Quarter 2004	4,924	\$326,652	
2nd Quarter 2004	6,350	\$350,000	7.1%
3rd Quarter 2004	6,219	\$350,539	0.2%
4th Quarter 2004	6,351	\$365,000	4.1%
1st Quarter 2005	5,205	\$367,900	0.8%
2nd Quarter 2005	6,564	\$379,954	3.3%
3rd Quarter 2005	6,207	\$378,554	-0.4%
4th Quarter 2005	6,595	\$387,709	2.4%
Source: N.J. Department of Community Affairs, 5/8/06			

### Corrective Repair Procedures for Modular Buildings

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

**RESPONSE:** This is covered in Part IV, Section 6(E) of the Uniform Administrative Procedures of the Industrialized Buildings Commission adopted at *N.J.A.C. 5:23-4A.10* and *N.J.A.C. 5:23-2.22*. Following is a summary of the requirements:

**CORRECTIVE REPAIR PROCEDURES**

1. Code violation(s) and/or defect(s) are identified.
2. The step-by-step method of corrective repairs (design/specifications) is reviewed and approved by the evaluation (third-party) agency.
3. Necessary inspections are performed by the inspection (third-party) agency during and/or after completion of the corrective repairs.
4. The unit(s) is recertified (revalidated).

Because these are corrections to the labeled unit, the same entity responsible for ensuring compliance in the factory and affixing the label in the first place is responsible for the corrective work. Any repairs to the foundation or other site work under the jurisdiction of the local enforcing agency should be handled by the local enforcing agency.

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

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

### Discount on the 2006 National Standard Plumbing Codes

The New Jersey Chapter of the Plumbing-Heating-Cooling Contractors Association (PHCC-NJ) has extended to municipalities the “member” price for the new 2006 editions of the National Standard Plumbing Code, both the non-illustrated and illustrated versions. The 2006 edition is tentatively scheduled to be adopted in New Jersey by the end of 2006. (Visit our web site at <http://www.nj.gov/dca/codes> for updates on the adoption of the 2006 codes.)

In order to receive the discount, a municipality must submit the request on official municipal letterhead and must include the inspector’s name(s). The purchase order and/or check should be made payable to “PHCC-NJ.” Each

(continued from page 1)

approximately 45 percent (or 810,000) have a physical disability that requires the use of an accessible route, including an accessible building entrance. People with disabilities are more likely to be of low and moderate income than is the population generally, yet little of the housing built pursuant to the Fair Housing Act (commonly known as COAH housing) has been accessible. Traditional townhouses -- single-family attached dwellings, which are constructed in greater density than single-family detached homes -- became the most common design for affordable housing. Because townhouses are exempt from State and Federal accessibility requirements, there was little affordable housing being constructed that was accessible to people with disabilities. This meant that, for an entire segment of New Jersey's citizens who needed accessible affordable housing, options were few, even though requirements for accessible dwelling units in multifamily dwellings had been part of the UCC since the mid-1970s.

The Barrier Free-COAH law, which corrects this problem by requiring townhouse units that are counted toward a municipality's fair-share obligation under the New Jersey Fair Housing Act be adaptable for people with disabilities, creates an incentive for the first time to build accessible and affordable townhouses.

#### **WHAT IS A TOWNHOUSE?**

When determining whether a dwelling is a townhouse, the following definition, which may be found at *N.J.A.C. 5:23-7.3(b)1i*, is applied: "A townhouse shall be 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. The dwelling unit shall have an independent entrance that shall serve one dwelling unit only at or near grade; most or all of the sleeping rooms shall be on one story; and most or all of the remaining habitable space, such as kitchen, living, and dining areas, shall be on another story." This describes the traditional, single-family townhouse, attached to other dwelling units on one or both sides. It does not include all the designs that have recently been called "townhouses." For example, it does not include one multistory dwelling unit stacked on top of another. Similarly, it does not include a multistory dwelling unit on top of a flat (a single-story dwelling unit). The traditional townhouse has been exempt from the Barrier Free Subcode since its inception and is the type of dwelling unit covered by the Barrier Free-COAH law. The other designs are multistory dwelling units and, as is clear in the Barrier Free Subcode [at *N.J.A.C. 5:23-7.5(b)1* and (c)2] where there are four or more dwelling units in a single structure, they are – and have been – required to be accessible.

#### **ADAPTABLE ENTRANCE:**

Townhouses for which COAH credit is sought may have an adaptable (rather than an accessible) entrance.

In order to ensure the entrances that are constructed to be adaptable can, in fact, be adapted when there is a need, a plan for an accessible entrance must be submitted as part of the permit application, and must be reviewed and approved by the local code enforcement agency. The means of making the entrance accessible can include the use of an accessible ramp, a platform lift, or a limited-use/limited-application elevator.

#### **FUNDS TO ADAPT THE ENTRANCE:**

In addition, in order to ensure that the planned adaptation can be made when needed, the builder must deposit in the Affordable Housing Trust Fund sufficient funds to adapt ten percent of the townhouse units for which COAH credit is sought that were not constructed with an accessible entrance. This fund is managed by the municipality. Residents must be informed that the entrance can be made accessible and that there is a fund managed by the municipality dedicated to that purpose.

#### **ENFORCEMENT:**

How will the Barrier Free/COAH law be enforced? The UCC permit application includes a check-off box that requires the permit applicant to indicate whether the housing planned for construction is low- and moderate-income housing. When that box is checked, the local code official will ask whether the housing is designated for COAH credit. When the answer is yes, the local code official will make that note in the file. When plans are submitted, they will be reviewed for the adaptability of the entrance and the interior space. Plan review and inspections will ensure that the townhouse meets the requirements of P.L. 2005, c. 350, which will become part of the Barrier Free Subcode. A proposal to amend the Barrier Free Subcode is planned for publication in the *New Jersey Register* before the end of this year.

#### **PENALTY FOR NONCOMPLIANCE:**

What is the penalty for noncompliance? If the townhouse for which COAH credit is sought is not constructed with a code-compliant, adaptable entrance and interior, the COAH credit will be withdrawn and any townhouses constructed without adaptability will be ordinary market-rate, single-family townhouses.

#### **QUESTIONS:**

If there are questions about the interaction of the Barrier Free and the COAH parts of this law, please contact Emily Templeton in the Division of Codes and Standards at (609) 984-7609, or Larissa DeGraw in COAH at (609) 292-3000. If there are questions about compliance with the requirements of the Barrier Free Subcode, please contact the Code Assistance Unit at (609) 984-7609.

(continued from page 7)

municipality may order up to four codebooks at the member price.

Please call PHCC-NJ at (609) 499-8070 for the member price, and shipping and handling charges.

Your order should be mailed to:

PHCC-NJ  
1305 Maple Avenue  
Roebling, New Jersey 08554

**Attention:** Denise Voorhees, Executive Director

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

Source: Thomas C. Pitcherello  
Code Assistance Unit

### Domestic Water Heaters in Residential Garages

The Department of Community Affairs has received many questions pertaining to the application of the 18-inch elevation requirement to the installation of the new flammable-vapor-resistant type water heaters when a heater is replaced or a new water heater is installed in a residential garage. For the following reasons, the Department recommends that flammable-vapor-resistant listed water heaters be approved for installation in residential garages without the 18-inch elevation requirement.

When the water heater is located in a residential garage, the installation requirements must comply with Section G2408.2, Elevation of Ignition Source, of the 2000 International Residential Code (IRC). The water heater ignition source is to be elevated so that it is not less than 18 inches above the floor. The 2003 and 2006 editions of the IRC have added an exception to Section G2408.2 to address these new types of water heaters. The exception states: "Elevation of ignition source is not required for appliances that are listed as flammable vapor resistant and for installation without elevation." This exception is also listed in the New Jersey adopted 2003 International Fuel Gas Code (IFGC), which is used for nonresidential projects.

New Jersey did not and will not adopt the 2003 edition of the IRC. The 2006 edition of the IRC is proposed for adoption later this year. The adoption of the IRC/2006, which includes the exception, will eliminate this installation requirement issue.

In the meantime, refer to the third paragraph of the IRC/2000, Section G2401.1, Application, which states: "The omission from this chapter of any material or method of installation provided for in the International Fuel Gas Code shall not be construed as prohibiting the use of such material or method of installation." Because New Jersey has adopted the IFGC/2003, flammable-vapor-resistant listed water heaters should be permitted to be installed without the 18-inch elevation in residential garages.

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

Source: Thomas C. Pitcherello  
Code Assistance Unit

### Fire Department Connections for Standpipes and Fire Sprinklers -- How Many?

A question has been raised regarding the number of fire department connections (FDCs) required for a building protected by a fire sprinkler system and standpipe system having a common riser. Does each system require a separate FDC, or is a common FDC appropriate?

The answer is simple. One FDC is code compliant. The 2000 International Building Code, New Jersey edition, Section 906, Fire Department Connections, cites requirements for FDCs. Section 906.1, Required, requires a single FDC for all water fire-extinguishing and standpipe systems.

If that's not clear enough, Section 906.8, Signs, requires a sign to read "Automatic Sprinkler" or "Standpipe," or both, as applicable.

Clearly, one FDC supplying both fire sprinklers and standpipes from a common riser is code compliant.

Any questions, please contact me at (609) 984-7672.

Source: Gerry Grayce  
Office of Regulatory Affairs

### Energy – Wood vs. Metal Construction (ASHRAE Standard 90.1-1999)

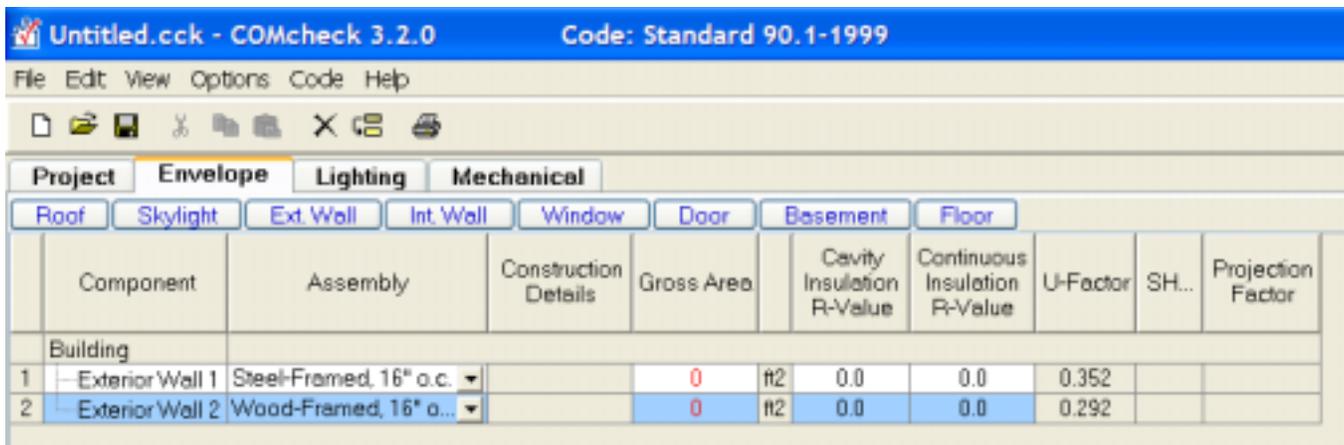
When incorporating wood or metal construction into an assembly of the building thermal envelope, keep in mind that these components function very differently in terms of thermal transmittance (U-factor). Take a look at Table B-13 of your American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1999, or refer to your Winter 2005 *Construction Code Communicator* article, “ASHRAE Standard 90.1-1999: Energy Code Compliance.” Under the “Nonresidential” column and at the “Walls, Above Grade” row, the following is listed:

	Nonresidential	
Opaque Elements	Assembly Maximum	Insulation Minimum R-Value
<b>Walls, Above Grade</b>		
--Mass	U - 0.151*	R - 5.7 ci*
--Metal Building	U - 0.113	R - 13.0
--Steel Framed	U - 0.124	R - 13.0
--Wood Framed and Other	U - 0.089	R - 13.0

\*Exception to 5.3.1.2a applies.

As you can see, metal-, steel-, and wood-constructed assemblies all require R-13 as the minimum insulation value. However, the assembly maximum U-factor is different due to the actual thermal transmittance value of the metal, steel, or wood combined with the insulation. This may look odd and, for those of you not using the COMcheck software, it can get confusing. If you are doing your energy calculations manually, consult Appendix A, Assembly U-Factor, C-Factor, and F-Factor Determination, which contains pre-calculated, typical construction assemblies. It also provides the means to calculate the U-Factor for specific assemblies. Because metal-/steel-framed walls do not perform as efficiently as wood-framed walls, when calculating the overall thermal transmittance value for a building, the framing chosen can dramatically help or hinder your energy code compliance.

Lastly, below is an example of how COMcheck automatically performs the calculations for the user based on construction type (in this case, steel-framed wall and wood-framed wall). On the right-hand side is the “U-Factor” column, which shows a 0.06 difference for calculation purposes between wall assemblies. This, in turn, affects the overall thermal transmittance value.



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

Source: Rob Austin  
Code Assistance Unit

## Expedited Workable Relocation Assistance Plans

On May 1, 2006, the Department of Community Affairs adopted rules at *N.J.A.C. 5:11-1 et seq.* that establish a procedure for submitting Workable Relocation Assistance Plans (WRAPs) to the Department on an expedited basis when displacement of residential occupants by a municipality is sudden, could not have been anticipated, is of an emergency nature due to imminent hazard conditions, and is limited to a single occurrence. This will enable towns to expeditiously receive assistance with relocation.

The new expedited WRAP procedure, which includes a preliminary notice requesting the Department's consent to emergency displacement due to an imminent hazard condition and a simplified checklist intended to demonstrate that appropriate relocation assistance is being provided to displacees, provides added safeguards to ensure that relocation assistance is provided to individuals or families endangered by imminent hazard conditions that are entitled by law to receive relocation assistance. In addition, the procedure provides municipalities with clear direction on how to comply with the relocation assistance statutes and rules to expedite the relocation process. Finally, under the expedited process, a municipality can request funding over and above the 50 percent allowed under the normal WRAP process provided that funding cannot be obtained or recovered from any other source, such as from the owners of properties from which displacement occurred. If the funding request is approved, the Department reimburses eligible relocation expenses incurred by the municipality.

Expedited WRAPs are case specific and funds are not required to be set aside in advance.

For more information about the expedited WRAP procedure or about the Relocation Assistance Program in general, please call (609) 984-7609.

Source: Megan Sullivan Czyz  
Code Development Unit

## Fire Sprinkler Hydrostatic Testing: Is the Test Always Required?

I have received numerous telephone calls over the years from both fire sprinkler contractors and fire protection inspectors asking for guidance regarding when a hydrostatic test is needed for a fire sprinkler system which has undergone modifications.

Acceptance testing requirements for a fire sprinkler system are referenced in the National Fire Protection Association's (NFPA's) Standard 13. In Section 10-2.2, Hydrostatic Tests, of the 1999 edition of NFPA 13, all piping and attached appurtenances are required to be hydrostatically tested at 200 psi without a loss of pressure or visible leakage. The standard also provides six exceptions, of which Exceptions 4 and 5 apply to the above question.

**EXCEPTION 4** – This exception requires additions or modifications made to an existing system, which affect more than 20 sprinklers, to be isolated and tested at not less than 200 psi for two hours.

**EXCEPTION 5** – This exception states that modifications which cannot be isolated, such as relocated drops, shall not require testing in excess of system working pressure.

Therefore, if a contractor has relocated drops on existing branch lines (regardless of how many), it is not necessary for this work to be hydrostatically tested. It only needs to be tested at the system working pressure.

If you have any questions, please contact me at (609) 984-7672.

Source: Gerry Grayce  
Office of Regulatory Affairs

## Installing Fire Sprinklers Throughout Is Not Always Throughout

Various sections of Chapter 9 of the 2000 International Building Code (IBC), New Jersey edition require a building to be protected "throughout" with fire sprinklers. What does this really mean?

Some fire subcode officials believe throughout means *completely* throughout. It does not. It means in accordance with the code text in the IBC and the referenced National Fire Protection Association (NFPA) standards, NFPA 13 and 13R. Both the IBC and the standards provide exemptions for some areas, and are silent on other areas.

I recently received a telephone call from a sprinkler contractor saying a local official was requiring sprinklers in a noncombustible, concealed space between a suspended acoustical ceiling and the floor above. No excessive wiring was in this space. The official stated the code requires the building to be protected throughout; therefore, he believed this space needed protection. This

(continued from page 11)

is not correct because NFPA 13 does not require sprinklers in the space described above. In addition, IBC Section 903.3.1.1.1, Exempt Locations, provides five exemptions where sprinklers are not required in a building considered to be protected throughout.

Another example: NFPA 13, Sections 5-13.9.1 and 5-13.9.2 exempt sprinklers in dwelling unit bathrooms not exceeding 55 square feet with noncombustible or limited-combustible walls and ceilings, and in small closets less than 24 square feet and not exceeding 3 feet in the least dimension.

Throughout does have meaning in a mixed-use application. For example: A non-sprinklered Group B is located in a building also occupied by an R-2 and the appropriate fire separations are present. Code text requires a sprinkler system be provided throughout all buildings with an occupancy in Group R-2. Therefore, both the Group B and R-2 would be required to have sprinklers installed. The system is to be installed as required by the IBC and applicable NFPA standard.

So, you see, throughout doesn't always mean *throughout*. It means in accordance with the appropriate code or standard.

Any questions, please contact me at (609) 984-7672.

Source: Gerry Grayce  
Office of Regulatory Affairs

### Group Homes Are Not Therapeutic Residences

It has come to the Department of Community Affairs' attention that "group homes" are sometimes being classified as "therapeutic residences." The two should not be used interchangeably.

Section 310.2, Definitions, of the 2000 International Building Code (IBC), as amended by *N.J.A.C. 5:23-3.15(b)4vii*, defines a therapeutic residence as "a residence for adults, each of whom is capable of prompt evacuation (three minutes or less), and who live within a single dwelling unit for therapeutic purposes, without a resident landlord or operator, but with some government or private social service provider oversight." Section 310 of the IBC/2000, as amended by *N.J.A.C. 5:23-3.14(b)3viii*, classifies a therapeutic residence as Residential Group R-4 when there are more than five but not more than 16 occupants, excluding staff, capable of prompt evacuation.

The definition of therapeutic residence includes three criteria that must be met:

- (1) It is a residence for adults – facilities housing children would not be classified as Residential Group R-4;
- (2) Each resident must be capable of prompt evacuation – this means evacuation within three minutes or less without staff assistance; and
- (3) The residence does not have a resident landlord or operator – homes with staff constantly present would not qualify.

In short, group homes serving children are not Residential Group R-4, group homes with residents incapable of prompt evacuation are not Residential Group R-4, and group homes with staff constantly present are not Residential Group R-4.

If you have any further questions on how to classify a particular facility, please contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin  
Code Assistance Unit

### Home Improvement Contractors' Registration Denial List

The Division of Consumer Affairs has published a list of home improvement contractors whose applications for registration have been denied or withdrawn and who are therefore not eligible to receive permits to perform home improvement work in New Jersey. This list can be viewed at: <http://www.njconsumeraffairs.gov/contractors/denial.htm>.

It is ultimately the applicant's responsibility if false information is provided on the permit application and it is not the construction official's responsibility to check this list every time a permit application is submitted. However, this information is useful for the construction official to know.

If you have any questions on the Home Improvement Contractors' Registration program, please contact the Division of Consumer Affairs at 1-888-656-6225. If you have questions about this article, please contact me at (609) 984-7609.

Source: Denise L. Jones  
Code Development Unit

## Index to the 2005 Construction Code Communicator (Volume 17)

<b>Article</b>	<b>Subcode</b>	<b>Issue</b>	<b>Page</b>
24th Annual Building Safety Conference of New Jersey - 2005	All	2	1
Accessible Parking: Check Out the Closest Parking Space	Barrier Free	3	1
Air-Conditioning Disconnects	Electrical	2	2
ASHRAE Standard 90.1-1999: Energy Code Compliance	Energy	3	1
Attention: Code Instructors Wanted	All	1	8
Barrier Free Subcode: A Few Changes and A Clarification	Barrier Free	2	5
Breaker, Breaker — Problem with Solar PV System Installations	Electrical	1	15
Bulletins on the Web	All	3	2
Certification Presentation Highlights Restructuring of Camden Building Department	Administrative	1	12
Code Requirements for Office Partitions	Building	1	14
Combination Domestic/Fire Protection Service — Who Reviews, Inspects, and Approves?	Plumbing/Fire	1	18
Correction	Administrative	2	6
Defining Project Classification for Plan Review	Administrative	2	5
Do You Know Your NRTLs?	All	3	5
Drawings Based on Class	All	1	5
Drilling and Notching Wood Members: Who's Responsible?	Building/Electrical	2	6
Ducts: Can They Be Submarine Ducts?	Building/Mechanical	2	7
Employment Opportunities at Continuing Education Courses	All	1	6
Employment Opportunities for Code Officials	All	1	3
Energy -- REScheck and COMcheck Internet Links	Energy	2	7
Fenestration Area	Energy	3	6
Fire Sprinkler Flexible Piping Systems	Fire	2	6
Flexible Air Ducts and Flexible Air Connectors	Mechanical	2	8
Foundation Drains in Residential Crawl Spaces: Are They Needed?	Building	2	8
Garage Separations and Penetrations — International Residential Code/2000	Building	1	6
Gas Pipe Sizing Confusion	Plumbing/Mechanical	3	5
Glazing and COMcheck-EZ	Building/Mechanical	3	7
Gypsum Board Screws	Building	1	7
Handicapped Parking Fines Increased	Barrier Free	2	9
Here Come the Home Improvement Contractor Registration Requirements!!	All	3	6
Home Improvement Contractor Registration Deadline Looms Near	All	2	9
IRC -- Mechanical/Fuel Gas Requirements, Contents Inside	Mechanical	2	9
Index to the 2004 Construction Code Communicator (Volume 16)	All	1	8
Industrialized/Modular Buildings: Frequently Asked Questions	Building	3	9
Ladders, Lighting, and Time Clocks . . . Oh, My!	Electrical	3	12
Licensing Update	Administrative	1	10
Location of Equipment Gas Shut-Off Valves	Mechanical	1	10
Moisture Vapor Retarder Installation and the Energy Subcode	Mechanical	3	10
Mortgagors, Mortgagees, and Unfinished Buildings	All	2	9
New Code Adoptions	All	1	11
New Fire Extinguisher Requirements and the UCC: How are They Enforced?	Fire	3	5
New Jersey Association of Technical Assistants Goes National	Administrative	2	10
New Jersey Register Adoptions - Spring	All	1	2
New Jersey Register Adoptions - Summer/Fall	All	2	10
New Jersey Register Adoptions - Winter	All	3	11
New Radon Hazard Areas in the State	Administrative	1	14
Non-Required Fire Protection Systems: How Much is Enough?	Fire	3	12
Occupant Intervention and ASHRAE Standard 90.1-1999	Electrical/Energy	3	11

(continued from page 13)

Article	Subcode	Issue	Page
Oh Where, Oh Where Does the Bond Wire Go?	Electrical	2	12
Parking Garages: Minimum Entrance Height	Barrier Free	3	12
PermitsNJ . . . What Will It Require?	Administrative	1	4
PermitsNJ . . . Will Its Use be Mandatory?	Administrative	1	11
PermitsNJ . . . Will UCCARS Permit Records be Converted?	Administrative	1	3
Plan Review Authority for Residential Health Care Facilities	Administrative	2	12
Plumbing Fixture Count	Plumbing	1	14
Propane Counter Documents	Administrative	1	2
Public Alarms — Where They are Required	Building/Fire	1	13
Purple Wire Connectors	Electrical	2	12
Replacement Electrical Panels	Electrical	1	15
REScheck-Web: Starting Point	Energy	3	13
Shop Drawing Revisited	Administrative	2	12
Slab-on-Grade Floors — Perimeter Insulation	Mechanical	1	16
Special Alert: Special Alerts to be Published in the DCA Document Library	All	3	13
Standard Forms Camera-Ready Art Now Supplied through the DCA Document Library	Administrative	3	13
Supporting Recessed Lighting Fixtures	Electrical	2	13
The DCA Document Library: Codes and Standards' Online Reference Room	All	3	15
UL Classified Breakers	Electrical	1	17
Update on New COAH Rules	Administrative	1	17
Use Group Classification and Sprinkler Exceptions for Residential Buildings	Building/Fire	3	14
Visible Alarm Notification – IBC/2000 and ICC/ANSI A117.1-1998	All	3	16
What's Your Rating?	Electrical	1	1
Which Way Does It Go? . . . The Emergency Lighting Branch Circuit	Electrical	2	13
Who's Checking?	Electrical/Barrier Free	1	1
Yesterday's and Today's Model Codes	All	1	18
Your Service . . . and Stucco?	Electrical	2	13

## Moisture-Vapor Retarder Requirements

The requirements for moisture-vapor retarders are located in two areas of the International Residential Code 2000. Section R322, Moisture-Vapor Retarders, contains the requirements for framed construction. Section R506.2.3, Vapor Retarder, addresses slab-on-grade construction. This section requires an approved vapor retarder with joints lapped not less than six inches to be placed between the concrete floor slab and the base course, or the prepared subgrade where no base course exists. Please visit these sections for further clarification and exceptions.

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

Source: Rob Austin  
Code Assistance Unit

## New Homebuilder Information Available Online

Information on new homebuilders is now available online through the Department of Community Affairs' web site. Available information includes a database of registered new homebuilders and a database of warranty claims filed.

The database of registered new homebuilders includes the company's name, its New Jersey builder registration number, the name of the builder's warranty plan, and the status of the builder (i.e., if the builder's registration is revoked or suspended). This list of New Jersey builders can be accessed at:

[http://www.nj.gov/dca/codes/newhome\\_warranty/builder-list\\_toc.shtml](http://www.nj.gov/dca/codes/newhome_warranty/builder-list_toc.shtml)

Another useful tool available to you is the New Jersey New Home Builder Claim and Default Report for 2005. This report lists the number of formal warranty claims submitted by registered builders. The report includes, by

company, the number of new homes for which warranties were issued, the number of claims submitted by homeowners to the warranty company, and the number of cases where it was decided that the defect was the builder's responsibility and the builder did not correct the defect. Also listed for each company is a summary of total claims for all companies sharing the same principals. For the purposes of the report, a claim is a formal filing with the warranty company for the correction of defects in materials or workmanship, or a claim for a major structural defect. Items which a new homeowner reports to the builder that are promptly corrected are not included in this report. This report can be accessed at:

[http://www.nj.gov/dca/codes/newhome\\_warranty/pdf/claim\\_report\\_2006-05.pdf](http://www.nj.gov/dca/codes/newhome_warranty/pdf/claim_report_2006-05.pdf)

Source: Denise L. Jones  
Division of Codes and Standards

### **New Jersey Register Adoptions**

**Date:** May 1, 2006  
**Adoption:** 38 NJR 1824(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-2.14, 3.2, 3.14, and 5:70-2.7 shift the enforcement responsibilities from the construction official to the fire official for all tents other than those involving structural considerations. The amendments relocate the construction permitting requirements for these structures from the Building Subcode to the administrative requirements and move the temporary greenhouse requirements to the commercial farm building section. Additionally, the proposed amendments outline permitting requirements for tents, tensioned-membrane structures, and outdoor mazes.

**Date:** May 1, 2006  
**Adoption:** 38 NJR 1827(a)  
**Summary:** The adopted amendments at *N.J.A.C.* 5:23-3.16(a)2.i reference the codes and standards referenced in the Fine Print Notes of the Electrical Subcode (National Electrical Code 2005). Additionally, the amendment updates Bulletin No. 05-2 to 06-2.

**Date:** June 5, 2006  
**Adoption:** 38 NJR 2418(a)  
**Summary:** This adoption at *N.J.A.C.* 5:23-4.21 amends the rule concerning private on-site inspection agency authorization and reauthorization fees to reduce the percentage of gross revenue from construction code enforcement that is required to be paid to the Department of Community Affairs from five to two percent. This fee reduction is retroactive to November 1, 2005.

Source: Denise L. Jones  
Code Development Unit

### **Nonmetallic-Sheathed Cable and Garages**

**QUESTION:** Is a 15-minute finish rating required with the installation of nonmetallic-sheathed cable in a one- or two-family dwelling garage?

**BACKGROUND REFERENCES:** Section 334.10, Uses Permitted, and Article 100, Definitions, specifically "Dwelling Unit," "Dwelling, One-Family," "Dwelling, Two-Family," and "Garage" of the National Electrical Code (NEC) 2005.

**ANSWER:** The dwelling unit definitions in NEC/2005 do not define a "garage" or a similar space as part of the dwelling. Because an attached or detached garage is defined as a building or portion thereof, it is considered an "other structure" as per Section 334.10. Therefore, garages require cables to be concealed within walls, floors, and ceilings that provide a thermal barrier of material that has a minimum 15-minute finish rating.

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

Source: Suzanne Borek  
Code Assistance Unit

### **Private Residence Elevators**

There have been some questions regarding the installation of private residence elevators. In the American Society of Mechanical Engineers (ASME) 17.1 code, the Safety Code for Elevators and Escalators, under Part V, entitled Private Residence Elevators, the scope of work states: "This Part applies to elevators installed in or at a private residence. This Part also applies to similar elevators installed in buildings as a means of access to private residences within such buildings provided the elevators are so installed that they are not accessible to the general public or other occupants in the building."

The scope of the code is clearly for elevators that serve a single dwelling unit. The use of one private residence elevator is not acceptable for two-family homes where it serves both units. One elevator must be installed for each unit in a two-family home. This applies regardless of whether the dwelling units are located side by side or one on top of another. The building subcode official of the town must check this on his building review.

If there are any questions, please call the Elevator Safety Unit at (609) 984-7833.

Source: Alfred Zipf and Ed Donovan  
Elevator Safety Unit

## Prohibited: Urea-Formaldehyde Foam Insulation

All officials should know that urea-formaldehyde foam insulation is on the list of products violating the code (*N.J.A.C. 5:23-3.8*) and therefore prohibited in the State of New Jersey.

It has come to the Department of Community Affairs' attention that urea-formaldehyde foam insulation is beginning to be used in buildings being constructed in New Jersey. Some builders are submitting urea-formaldehyde foam insulation to the architect or construction manager as an "or-equal" substitute for a code-compliant product that has already been specified as the insulation inserts for block walls. Thus, the urea-formaldehyde foam insulation is installed before the code official knows it has been used.

Code officials need to be aware of this developing practice and enforce the prohibition of this product.

If you have any questions regarding this issue, contact me at (609) 984-7609.

Source: Jeffrey Applegate  
Code Assistance Unit

## Radon and Crawl Spaces

*N.J.A.C. 5:23-10.4*, Construction Techniques, specifies the minimum radon protection features required in Group E (educational) and Group R (residential) buildings located in Tier One municipalities. The requirements for radon venting for basements and slab-on-grade construction seem clear; however, questions do arise about crawl spaces.

If you take a close look at Section 10.4, you will see that crawl spaces are only referenced in Construction Techniques 1, 6, 9, 10, and 15. Essentially, these techniques require crawl spaces to be provided with continuous vapor barriers, and all adjacent spaces are to be sealed and taped to prevent radon gas entry. The techniques listed do not require a vent stack pipe unless there is a combination basement/crawl space or slab-on-grade/crawl space as stated in Technique 15.

The reason for the above is that Section R408.1, Ventilation, of the International Residential Code (IRC) 2000 requires "under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement or cellar) to be provided with ventilation openings through the foundation walls or

exterior walls." Because these areas should already be ventilated, there is no need for a radon stack vent. The exceptions to this case are as follows:

- √ **CRAWL SPACE THAT COMMUNICATES WITH A BASEMENT:** Here, the exceptions from IRC/2000, Section R408.2, Openings for Under-Floor Ventilation, allow the openings to be eliminated so that, for example, the space could be mechanically ventilated or conditioned.
- √ **CRAWL SPACE NEXT TO SLAB ON GRADE:** A stack vent(s) should be installed under the slab-grade portion only because the crawl space should be ventilated as per R408.1 of IRC/2000.

Keep in mind, every building is different. *Typically*, crawl spaces do not require radon stack vents. The other construction techniques of Section 10.4 could be required, depending on the building's design.

*NOTE:* Compliance with the construction techniques in Section 10.4 is not fully required for additions. In such cases, those construction techniques that are feasible should be incorporated into the design.

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

Source: Rob Austin  
Code Assistance Unit

## Residential Basement Insulation

When applying *N.J.A.C. 5:23-3.18(b)1ii*, the basement wall insulation exception, Sections 502.2.3 and 502.2.6 of the Council of American Building Officials Model Energy Code (MEC) 1995 should be consulted to explain why no insulation is required for the basement wall or basement floor/ceiling assembly. Here's the explanation:

When completing a residential building thermal envelope, Section 502.2.3 of MEC/1995 requires floors over unheated spaces to be insulated. Examples of this are ventilated crawl spaces and unconditioned basements. However, a design professional may choose not to insulate the floor above the basement. If this is the case, Section 502.2.6 of MEC/1995 requires basement walls to be insulated to complete the thermal envelope. The reason for this is in Section 502.2.6, which states that walls of basements below UN-INSULATED floors shall be insulated. When applying the exception from *N.J.A.C. 5:23-3.18(b)1ii*, ALL heating equipment installed must be rated high-efficiency [90 percent annual fuel utilization

efficiency (AFUE) for furnaces, 85 percent AFUE for boilers, and 8.0 heating seasonal performance factor (HSPF) for an air-source heat pump] and then the basement wall insulation can be eliminated.

**Please visit my Summer/Fall 2003 *Construction Code Communicator* article, “Energy Code – Residential Basement Wall Insulation Trade-Off,” for this application, in conjunction with the REScheck software. Additional guidance for basement wall insulation in walk-out basements can be found in the article below: “‘Walk-Out’ Basements and High-Efficiency Heating Equipment.”**

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

Source: Rob Austin  
Code Assistance Unit

### “Walk-Out” Basements and High-Efficiency Heating Equipment

As per *N.J.A.C.* 5:23-3.18(b)1ii, residential buildings provided with high-efficiency equipment throughout [90 percent annual fuel utilization efficiency (AFUE) for furnaces, 85 percent AFUE for boilers, and an 8.0 heating seasonal performance factor (HSPF) for air-source heat pumps] shall be exempt from the requirement to insulate basement walls. However, it has come to our attention that, in the case of “walk-out” basements, this exemption is not always applied correctly.

When you have high-efficiency equipment and a walk-out basement, you should consult the definition of “Gross Area of Exterior Walls” from the 1995 Council of American Building Officials Model Energy Code. Here it states, “For each basement wall with an average below-grade area less than 50 percent of total basement wall area, including openings, the entire wall, including the below-grade portion, is included as part of the gross area of exterior walls.”

Therefore, if a basement wall meets the criteria defined in Gross Area of Exterior Walls, insulation is required because the basement wall exemption of *N.J.A.C.* 5:23-3.18(b)1ii no longer applies.

For additional guidance regarding basement wall insulation and exceptions, refer to the article “Residential Basement Insulation” in this issue of the *Construction Code Communicator*.

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

Source: Rob Austin  
Code Assistance Unit

### Warning: Automatic Fire Sprinklers Bearing Counterfeit UL Mark

Underwriters Laboratories, Inc. (UL) has issued a notice regarding chrome-plated automatic fire sprinklers that bear a counterfeit UL mark for the United States and Canada. Although marked with the word “Globe,” these sprinklers are not manufactured by Globe Fire Sprinkler Corporation and have not been evaluated for safety by UL.

Identifying descriptions and marks for this particular fire sprinkler are as follows:

**MODEL OF PRODUCT:** GL 5651  
**DATE OF MANUFACTURE:** 2005 to present  
**IDENTIFICATION:** Pendent-type automatic fire sprinkler  
**MARKING ON FRAME:** “GLOBE”  
**MARKINGS ON THE DEFLECTOR:** “SSP,” “cULus” in a circle, “GL 5651, 2005,” and “155°F/68°C”

Sprinklers with the counterfeit UL mark are manufactured with a slot-head screw and a Job F5 glass bulb. UL-listed sprinklers manufactured by Globe Fire Sprinkler Corporation contain a hex-head screw and a Job G5 glass bulb.

If you come across sprinklers with the counterfeit UL mark, UL recommends that the sprinklers be replaced by qualified service personnel and returned to the place of purchase. Code enforcement officials should not allow these sprinklers to be utilized.

To view a picture of this sprinkler, go to:  
<http://www.ul.com/media/newsrel/nr071406.html>  
For additional information, contact Joe Hirschmugl at UL in Illinois by telephone at 1-847-664-1508 or by e-mail at [Joseph.F.Hirschmugl@us.ul.com](mailto:Joseph.F.Hirschmugl@us.ul.com).

Source: John Terry  
Division of Codes and Standards

**CELEBRATION — 25 YEARS**  
**New Jersey Building Safety Conference**

What a conference we had! The 25<sup>th</sup> Annual New Jersey Building Safety Conference was the event of the year! The seminars and the instructors were top shelf! The food was outstanding and the entertainment received rave reviews. The word most used on the opinion poll was “excellent;” thus, a job well done. What more could we ask for? The service from Bally’s staff was the best yet. We will see them next year when we return for the 2007 conference on May 2-4.

Our focus was clear. This conference is our opportunity to highlight the importance of safe buildings, recognize the professionals responsible for making and keeping buildings safe, and provide training of the highest caliber. We did it this year in the grandest of styles!

A Proclamation from our Governor, Jon S. Corzine, publicly recognized and commended all local and State construction code enforcement officials and their support staff for their commitment, dedication, and untiring efforts in ensuring the health, safety, and welfare of every citizen of this State.

The award recipients of the 2006 Building Safety Conference are:

**Joseph Albanese, Jr.** – Plumbing Inspector of the Year  
Wayne Township, Prospect Park Borough, and Wanaque Borough

**Anthony Saccomanno** – Building Inspector of the Year  
Cherry Hill Township and Berlin Borough

**Richard M. Marshall** – Electrical Inspector of the Year

**John J. Drucker, Jr.** – Fire Protection Inspector of the Year  
Red Bank Borough and Little Silver Borough

**Judith Russo** – Technical Assistant of the Year  
Montvale Borough

Congratulations to all!

Source: Susan H. McLaughlin  
Supervisor, Education Unit  
Bureau of Code Services

# NOTES

FIRST-CLASS MAIL

Department of Community Affairs  
Division of Codes and Standards  
101 South Broad Street  
PO Box 802  
Trenton, NJ 08625



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# Construction Code Communicator



State of New Jersey  
Jon S. Corzine, Governor  
Volume 18 Number 3

Department of Community Affairs  
Susan Bass Levin, Commissioner  
Winter 2006

## Demolition Permits

Ever play the kid's game, "Telephone?" Someone whispers a message. It gets repeated and the last person says what she heard, usually to the amusement of all. Every month when I review demolition permits, I play Telephone. Construction officials and technical assistants start with a simple message, something like: "Mike likes to wear boots when it floods." Only, I hear "I like Milk Duds."

Demolitions are significant events. They are very important to demographers, who like to count things. They want to know what gets built, when, and where. They also want to know when something is torn down. They are crazy for information on dwelling units, a fancy term for places where people live — houses, apartments, and condominiums. Hotels, hospital beds and nursing-home rooms, time-shared apartments, college dormitories, prison cells, and extended-stay suites are not dwellings. They look like them, but because a person may stay in them for a short time, they should not be counted or reported as dwellings, either on construction or demolition permits.

Too many confuse dwellings with buildings. Don't report a lost dwelling when you mean building. You enter a "1" to let me know a building was lost. I know that. You can't have a demolition without doing so. A tear down without the

loss of a structure is an alteration. If you demolish an "M" use (mercantile) and report "1" for-rent unit lost, I see the removal of a store with an apartment.

A big source of confusion comes from the wrong use group. Report only the use of the building to be demolished. That sounds simple, but too many enter "U" for accessory or miscellaneous structures, such as detached garages, sheds, swimming pools, and fences, and also report the loss of a dwelling. I see a tear down of a detached garage with an apartment over top. Thus far in 2006, there were over 260 demolitions of "U" buildings that had dwellings. Sorry, these aren't all detached garages with apartments. Most of them are mistakes.

If the building is empty or abandoned, report the last known use. Don't use "U" as a catchall. For a tear down of a vacant building last used to make horse harnesses, enter "F" for factory. Also, don't confuse a change of use with a demolition. A demolition permit is not a change of use. Don't report the use group of the building you expect to replace the one torn down.

Most everyone knows oil tanks and other underground tanks are accessory structures, and report the proper use group, "U." Still, each month, some misclassify

*(continued on page 2)*

## In This Issue

A Low-Voltage Wiring License . . . Not! 	6	Home Improvement Contractor Registration Abandonment List . . . 6	
Child-Care Centers 	5	Home Improvement Contractors' Registration Denial List Alternate Web Site Address . . . . . 7	
Demolition Permits . . . . . 1		LP-Gas Installation Notice Requirements Reduced . . . . . 7	
Design Professionals and "Other" Documents . . . . . 2		Minimum Rating/Maximum Setting . . . Huh? 	7
DOT Curb Ramps 	3	<i>New Jersey Register</i> Adoptions . . . . . 8	
Emergency Rule Regarding Day-Care Centers 	4	Nonresidential Child-Care Facilities and FTO-9 	8
Energy Efficiency Tax Credits -- Information to Pass Along . . . 3		UL Product Database Available Online . . . . . 10	
Energy Requirements Revisited: Documentation 	2	Updated Reprint: Proper Disposal of Construction Material and Debris . . . . . 10	
Equipotential What? 	12	Variation for Gas-Fired, Category 1 Equipment  	7
Fire Separation Distance Measurement in the One- and Two-Family Dwelling Subcode 	14	Warning: <i>More</i> Counterfeit Automatic Fire Sprinklers  	9
Free Online Access to the <i>New Jersey Administrative Code</i> . . . . 6		What's New in the 2006 IBC and IRC? 	11
FTO-8 Withdrawn 	6		

(continued from page 1)

tank removals with “R-2,” “R-3,” “R-4,” or “R-5” designations. Software developers are logical people. When you issue a demolition permit for a residential use, the reporting software prompts you for the number of dwellings lost. An underground tank is not a house. By misapplying the “R” uses, some of you report a lost house every time a tank is removed. Stop that. If you don’t, I will publish a list of towns where people live in underground tanks.

Accurate construction data are important for many reasons. At the top of the list of reasons is your job. You can’t keep track of what needs to be done, when, and where without good records. Construction data also are used by others. Most recently, they are used by planners who calculate affordable housing obligations. Your town’s fair share of regional affordable housing needs depends on how much it grows. Planners use building permits and demolitions to measure growth. Get it right. If you have questions, call me at (609) 292-7898 or e-mail me at [jlago@dca.state.nj.us](mailto:jlago@dca.state.nj.us), anytime, as often as needed.

Source: John Lago  
Division of Codes and Standards

### Energy Requirements Revisited: Documentation

The Code Assistance Unit has received many inquiries as to why some municipalities are requiring energy compliance documentation and some are not. As a reminder, *N.J.A.C. 5:23-2.15(e)1.vi* requires the submission of calculations showing compliance with the Energy Subcode for all new buildings and additions that are heated or cooled. Additions should be analyzed by themselves. However, as an alternative, when the addition taken by itself does not comply, the entire existing building including the addition may be analyzed if the proper information is available for the existing building.

Newly constructed, detached, one- and two-family residential buildings and other residential buildings three stories or less in height shall demonstrate compliance by the submission of a *REScheck* software compliance certificate (visit <http://www.energycodes.gov> for the New Jersey-specific version), proof of conformance with the prescriptive packages (see Bulletin No. 03-2), submission

of “hand” calculations, or for new homes only, submission of New Jersey Energy Star® Homes compliance documentation (see the Spring 2004 *Construction Code Communicator* article, “New Jersey Energy Star® Homes and the Energy Subcode”).

For all other buildings, compliance shall be demonstrated by submission of a *COMcheck* software compliance certificate [visit <http://www.energycodes.gov> for the American Society of Heating, Refrigerating, and Air-Conditioning Engineers’ (ASHRAE) 1999 version] or “hand” calculations.

As per *N.J.A.C. 5:23-2.15(e)1.vii*, all building calculations shall be signed and sealed by the design professional, with the exception of calculations for class III structures [as defined at *N.J.A.C. 5:23-4.3A(d)*], which may be submitted by the mechanical contractor or a single-family homeowner as per *N.J.A.C. 5:23-2.15(e)1.ix*.

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

*Note:* As a reminder, the Department of Community Affairs anticipates the adoption of the 2006 International Energy Conservation Code and the 2004 ASHRAE 90.1, as amended at *N.J.A.C. 5:23-3.18*, on February 20, 2007.

Source: Rob Austin  
Code Assistance Unit

### Design Professionals and “Other” Documents

*N.J.A.C. 5:23-2.15(e)1.xi(1)* 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 of this code requirement are:

1. A New Jersey State licensed architect chooses to use pre-engineered lumber in his design. After review of the specifications of the pre-engineered lumber (normally certified by a licensed engineer), the architect must supply a letter, including his seal,

attesting to the lumber's appropriate use in the design. Please keep in mind, the architect is not sealing "over" the engineer's seal; he is simply stating he has reviewed the material and that it "works" in the design.

2. A licensed electrician proposes to install wiring through a fire-rated assembly in a new structure. The design professional must review this proposal to make sure the penetration does not jeopardize the rating of the wall. If the proposed installation is acceptable, the design professional must submit a signed and sealed letter stating that the electrical plans meet the intent of his design. (A fire-alarm system is a good example; this situation can also be applied to the proposed installation of piping by a master plumber.)

Please keep in mind that this is not an all-inclusive list. There are a multitude of situations to which the above-referenced section can be applied. These examples are intended as a reminder as to when further documentation is required.

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

Source: Rob Austin  
Code Assistance Unit

### Energy Efficiency Tax Credits – Information to Pass Along

The Federal Energy Policy Act of 2005 provides a variety of tax credits for homeowners, businesses, and manufacturers for purchase of energy-efficient equipment, completion of new energy-efficient buildings, and improvements to existing buildings which were made or are to be made after January 1, 2006 and before December 31, 2007. The United States Department of the Treasury has amended Tax Form 1040 to include a line for energy tax credits in the tax credit section, and issued regulations in early 2006 specifying the energy efficiency equipment and which improvements to existing buildings or new building designs qualify for the credits. The Energy Efficiency and Renewable Energy Information Center hotline is collecting information on the tax credits, and will be updating same as it becomes available. The hotline number is (877) 337-3463.

#### ADDITIONAL RESOURCES

- > Tax incentives for buildings and other efficiency improvements:

<http://www.energytaxincentives.org>

- > Commercial building provisions:  
<http://www.efficientbuildings.org>

- > Residential building provisions:  
[http://www.energystar.gov/index.cfm?c=products.pr\\_tax\\_credits](http://www.energystar.gov/index.cfm?c=products.pr_tax_credits)

- > IRS tax credit rules and information for homeowners:

<http://www.irs.gov/newsroom/article/0,,id=154657,00.html>

- > IRS tax credit rules and information for home builders:

<http://www.irs.gov/newsroom/article/0,,id=154658,00.html>

Source: Rob Austin  
Code Specialist

### DOT Curb Ramps

It has come to the Department of Community Affairs' (DCA's) attention that sometimes curb ramp specifications provided by the New Jersey Department of Transportation (DOT) are submitted with permit applications. The DCA has reviewed the DOT curb ramp specifications. There are more design configurations included in the DOT specifications than are included in the International Code Council/American National Standards Institute Standard A117.1; this is due, in part, to the application of DOT specifications to existing streets. The DOT curb ramp specifications provide an accessible route and should be accepted by code officials.

For some curb ramp designs, the DOT specifications do not include dimensions for cross slope. In the absence of dimensions for cross slope, the standard cross slope of 1:48 should apply.

If you have questions about whether a DOT curb ramp may be used, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily Templeton  
Division of Codes and Standards

## Emergency Rule Regarding Day-Care Centers

This is a reprint of a letter sent on October 27, 2006.

Dear Construction Official:

Last week, the Governor authorized the adoption of an emergency rule by the Department of Children and Families. This rule seeks to address the licensing of child-care centers on contaminated sites. The emergency rule arises out of a case that came to light this summer where children were exposed to mercury because a day-care center had been allowed to open in a former thermometer factory.

The emergency rule triggers requirements for additional environmental investigation on the past use(s) of the building based on Uniform Construction Code (UCC) group classifications. Under this new rule, applications for a child-care center license or license renewal must now include a certification as to whether the building ever was classified as one of the following uses: Group F (factory/industrial), Group H (high hazard), Group S (storage), or nail salons or dry cleaners of Group B. If the building predates the UCC, then the certification should be based on what the group classification would have been had the UCC been in effect. The applications go to the Department of Children and Families, but it is likely that you will receive inquiries from child-care center operators about the past group classifications of the buildings that they are using or considering using.

The emergency rule establishes environmental requirements to be met by child-care center providers as follows:

1. Child-care centers located or to be located in buildings that were classified in Group F, H, S, or that were dry cleaners or nail salons (Group B) must meet Department of Environmental Protection (DEP) soil guidelines for child-care centers. Child-care providers using such buildings must also contact the Department of Health and Senior Services (for indoor environmental conditions) and the DEP to determine what additional steps, if any, must be taken to address any risks posed by the past use of the property.
2. The operator must certify that the child-care center has a potable water supply that meets safe drinking water standards. For child-care centers using private wells, this means that the well must be tested.
3. The operator must certify that the facility complies with the Department of Children and Families' regulatory requirements for radon, asbestos, and lead.

Additionally, after January 1, 2007, all child-care centers located in the same building as a dry cleaner or nail salon will need to have indoor-air sampling. And effective June 1, 2007, all child-care center license or license renewal applications will need to include a No Further Action letter from the DEP covering the site on which the center is located.

The Department of Children and Families' *Manual of Requirements for Child-Care Centers* requires a valid Certificate of Occupancy, so this is not a prior approval issue. As stated above, these new requirements will be enforced by the Department of Children and Families as part of their child-care licensing requirements. But I did want to make you aware of these new rules because I expect that many of you will receive inquiries.

The full text of the rule may be viewed on the Department of Children and Families' web site:

**<http://www.state.nj.us/dcf/notices/10-122PhysPIntReq.pdf>**

Should you have any questions regarding this new rule, please feel free to contact the Code Assistance Unit at (609) 984-7607.

Sincerely,

William M. Connolly  
Director  
Division of Codes and Standards

*Note:* An information web site page including links to this letter, the group descriptions, and the emergency rule can be accessed at:

**[http://www.nj.gov/dca/codes/misc/childcare\\_providers\\_emergency\\_rule/child\\_care\\_providers\\_secondary\\_page.htm](http://www.nj.gov/dca/codes/misc/childcare_providers_emergency_rule/child_care_providers_secondary_page.htm)**

## Child-Care Centers

This is a reprint of a letter sent on January 31, 2007.

Dear Construction Official:

On January 11, 2007, the Governor signed a bill into law requiring environmental investigations prior to the issuance of a permit or of a Certificate of Occupancy for child-care centers or for schools where certain conditions are met (P.L. 2007, c. 1). The purpose of the new law is to ensure that buildings and building sites with a history that might include contamination undergo an environmental investigation to ensure that they are safe prior to becoming child-care centers or schools. I am writing to inform you of the new law, and of how to proceed with the issuance of permits and Certificates of Occupancy in these cases.

The emergency rules adopted by the Department of Children and Families, which were the subject of my October 27, 2006 letter (*see facing page*), are still in force and effect. These rules apply to applications for a license to operate a child-care center and to license renewals. The new statute governs new construction, rehabilitation, or changes of use on sites or in buildings with an industrial past that create a new child-care center or school. Please note that my October 27, 2006 letter states clearance of the property and of any existing building for use as a child-care center is not a prior approval. With the passage of the new law, this has changed. These environmental clearances are now required prior approvals. (A copy of the October 27, 2006 letter is also available on the Division's web site at [http://www.nj.gov/dca/codes/misc/childcare\\_providers\\_emergency\\_rule/child\\_care\\_providers\\_secondary\\_page.shtml](http://www.nj.gov/dca/codes/misc/childcare_providers_emergency_rule/child_care_providers_secondary_page.shtml).)

Under the new statute, the Department of Environmental Protection (DEP) is responsible for determining whether the site is safe for a child-care center or for a school. The Department of Health and Senior Services (DHSS) is responsible for making a determination as to whether an existing building (interior) is safe for reuse as a child-care center or as a school. Like the emergency rule, the new statute triggers requirements for additional environmental investigation based on the past use(s) of the building or property. The following is an outline for use in determining whether a prior approval pursuant to this statute is needed for a particular project. Please note that, in accordance with the framework of the statute, two separate approvals are required: one for the site and one for the building interior.

**BUILDING SITE** – A Remedial Action Workplan approved by the DEP or a No Further Action letter from the DEP must be obtained prior to the issuance of a permit if one of the three conditions listed below is met:

1. The property was the site of one of the following uses:
  - > Factory/Industrial (Group F)
  - > High Hazard (Group H)
  - > Storage (Group S)
  - > Nail Salon or Dry Cleaner (Group B)
  - > Gasoline Station (Group M)

If the use of the property predates the Uniform Construction Code (UCC), then the determination should be based on what the group classification would have been had the UCC been in effect.

2. The property is on a list of contaminated sites maintained by the DEP, or is subject to the Industrial Site Recovery Act. To assist you in determining whether a site is a known contaminated site or a site suspected of contamination, you can review the DEP Site Remediation & Waste Management (SRWM) Program web site at <http://www.nj.gov/dep/srp>, specifically the SRWM data resources links.
3. The construction official knows or has been advised by other local officials that the property has been used for dumping, or there is some other factual basis for believing that there may be "suspected contamination."

For construction on properties that fall into any of the above categories, if a Remedial Action Workplan was submitted prior to issuance of a permit, a No Further Action letter from the DEP is required prior to issuance of a Certificate of Occupancy. If a No Further Action letter was submitted prior to issuance of the permit, then as the name suggests, nothing further is required prior to issuance of the Certificate of Occupancy.

When the site proposed for reuse has no building on it at the time of application, then the DEP prior approval is the only one required.

### Free Online Access to the New Jersey Administrative Code

The New Jersey Office of Administrative Law and LexisNexis have created a web site for the *New Jersey Administrative Code (N.J.A.C.)* and the *New Jersey Register (NJR)* at <http://www.lexisnexis.com/njoal>. The full *N.J.A.C.*, along with historical annotations, is available and will be updated quarterly. Documents can be browsed by title, chapter, subchapter, and section, and can be searched by keywords. The documents may also be printed and e-mailed and, although the *N.J.A.C.* cannot be downloaded, sections may be copied and pasted into word documents. Hyperlinks are permitted to be created to a title, chapter, subchapter, or section.

A database of notices from current and past *NJRs* dating back to mid-1995 is also available through the web site. This database is fully searchable, and the documents may be printed and downloaded, but hyperlinks are not permissible.

Source: Denise L. Jones  
Code Development Unit

### FTO-8 Withdrawn

Effective November 6, 2006, Formal Technical Opinion 8, "Use Group Classification — Department of Human Services Residential Programs," was withdrawn. FTO-8 provided direction to code officials regarding the group classification of group homes licensed by the New Jersey Department of Human Services (DHS). Since the publication of FTO-8, some of the programs in the DHS have been reorganized into the Department of Children and Families (DCF).

There are two divisions in the DHS that license group homes: the Division of Developmental Disabilities (DDD) and the Division of Mental Health and Hospitals. The DCF also licenses group homes through the Division of Youth and Family Services. Of these divisions, the DDD licenses the largest number of group homes.

Now that the FTO has been withdrawn, code officials are to determine the group classification by applying the provisions of the Building Subcode.

The DDD is installing sprinklers in all its newly licensed group homes. The Department of Community Affairs (DCA) recognizes, however, that it is likely code officials will have to make judgments in the case of group homes that were "in the pipeline" at the time of the

withdrawal of this FTO. The DCA is prepared to provide guidance on code requirements for group homes. When the DCA becomes aware that a group home is "in the pipeline" in a specific municipality, a letter will be sent to the construction official providing guidance. In addition, code officials may direct any questions to the Code Assistance Unit at (609) 984-7609.

Source: John Terry  
Division of Codes and Standards

### Home Improvement Contractor Registration Abandonment List

The Division of Consumer Affairs has published a list of home improvement contractors whose applications for registration have been abandoned and who are, therefore, not eligible to receive permits to perform home improvement work in New Jersey. This list can be viewed at:

<http://www.njconsumeraffairs.gov/contractors/abandoned.htm>

If you have any questions on the Home Improvement Contractors' Certification program, please contact the Division of Consumer Affairs at (888) 656-6225.

Source: Denise L. Jones  
Code Development Unit

### A Low-Voltage Wiring License . . . Not!

The Board of Examiners of Electrical Contractors has been receiving numerous inquiries regarding a "Low-Voltage Wiring License" that municipalities are requiring in order for contractors to install items such as speakers, central vacuum systems, etc. Such a license does not exist. However, a Limited Telecommunications Wiring Exemption Certificate is available to persons or businesses exempt from electrical contractor licensure requirements when they are engaged in telecommunication wiring as covered in the Board of Examiner's regulations at *N.J.A.C. 13:31-4.1*. The exemption certificate application can be downloaded at:

<http://www.state.nj.us/lps/ca/electric/telewire.pdf>

A permit is not required for telecommunication wiring in any Class 3 structure provided the fire-rated assemblies are not penetrated as per *N.J.A.C. 5:23-2.7(c)3.iii* of the Uniform Construction Code. Other low-voltage wiring requires an electrical permit and may only be performed by a licensed electrical contractor, a

homeowner in their own single-family dwelling, or someone otherwise exempted from licensure by the Board.

Now, the point of all this is . . . make sure you ask for the right thing when requesting a license or other information. If you have any questions on this matter, please contact me at (609) 984-7609.

Source: Suzanne Borek  
Code Specialist

**Home Improvement Contractors' Registration Denial List Alternate Web Site Address**

The web site address in the Home Improvement Contractors' Registration Denial List on page 12 of the Summer/Fall 2006 edition of the *Construction Code Communicator* is listed as:

<http://www.njconsumeraffairs.gov/contractors/denial.htm>

If you are having difficulties accessing this address, try the alternate address at:

<http://www.njconsumeraffairs.com/contractors/denial.htm>

Source: Denise L. Jones  
Division of Codes and Standards

**Variation for Gas-Fired, Category 1 Equipment** 

Gas-fired, Category I equipment (water heaters, furnaces, or boilers) installed in multistory residential and other multistory occupancies and connected to a common venting system is permitted by the International Fuel Gas Code (IFGC) 2000, 2003, and 2006 when the combustion air is obtained from the exterior of the building, and not from the interior habitable space.

However, there are many existing buildings where the furnace room is located in the middle of the units with no access to an exterior wall. Here the combustion air is taken from an adjacent interior habitable space. This type of installation was permitted before the adoption of the IFGC.

Today, many water heaters and furnaces are being replaced due to the age of the equipment. The replacement of this equipment is considered a renovation project under the Rehabilitation Subcode (*N.J.A.C. 5:23-6.5*). Section 5:23-6.5(h) requires all materials and methods used in the renovation to comply as specified in *N.J.A.C. 5:23-6.8, Materials and Methods*.

**LP-Gas Installation Notice Requirements Reduced**

The Department of Community Affairs has proposed to eliminate the requirement for Liquefied Petroleum Gas installation notices to be filed for most installations.

The LP-Gas installation notice will still be required for all temporary heating installations using one or more tanks of 250 gallons or more water capacity and remaining in place for six months or less (temporary installations).

If you have any questions, please contact the Code Assistance Unit at (609) 984-7609 or the LP-Gas Unit at (609) 633-6835.

Source: Denise L. Jones  
Code Development Unit

**Minimum Rating/Maximum Setting . . . Huh?** 

The confusion of the label on air conditioners has raised questions regarding the conductor sizing, circuit breaker rating, and disconnect rating.

Section 440.4(C), Branch-Circuit Selection Current, of the 2005 National Electrical Code (NEC) states that equipment having a protection system which is approved for use with the motor-compressor it protects and which permits continuous current in excess of the specified percentage of the nameplate rated-load current given in Subsection 440.52(B)(2) or (B)(4) shall also be marked with a branch-circuit selection current that complies with 440.52(B)(2) or (B)(4). The marking shall be provided by the equipment manufacturer and shall be on the nameplate(s) where the rated-load current(s) appears.

Section 440.6, Ampacity and Rating, (A), Hermetic Refrigerant Motor-Compressor, states that the rated-load current marked on the nameplate of the equipment in which the motor-compressor is employed shall be used in determining the rating or ampacity of the disconnecting means, the branch-circuit conductors, the controller, the branch-circuit short-circuit and ground-fault protection, and the separate motor overload protection. If there is no rated-load current shown on the equipment nameplate, the rated-load current shown on the compressor nameplate shall be used.

**EXCEPTION NUMBER ONE:** Where so marked, the branch-circuit selection current shall be used instead of the rated-load current to determine the

(continued from page 7)

rating or ampacity of the disconnecting means, the branch-circuit conductors, the controller, and the branch-circuit short-circuit and ground-fault protection.

Section 440.21, General, states that Part III specifies devices intended to protect the branch-circuit conductors against overcurrent due to short-circuits and grounds. They are in addition to, or amendatory of, the provisions of Article 240.

Section 440.22(A), Rating or Setting for Individual Motor-Compressor, states that the motor-compressor branch-circuit short-circuit and ground-fault protective device shall be capable of carrying the starting current of the motor. A protective device having a rating or setting not exceeding 175 percent of the motor-compressor rated load current or branch-circuit selection current, whichever is greater, shall be permitted provided that, where the protection specified is not sufficient for the starting current of the motor, the rating or setting shall be permitted to be increased, but shall not exceed 225 percent of the motor rated-load current or branch-circuit selection current, whichever is greater.

Section 440.31 states that Part IV and Article 310 specify the ampacities of conductors.

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

Source: Suzanne Borek  
Code Assistance Unit

### New Jersey Register Adoptions

**Date:** October 2, 2006  
**Adoption:** 38 NJR 4175(a)  
**Summary:** As a result of the Supreme Court decision in the case of *DKM Residential Properties Corporation v. the Township of Montgomery and the Construction Board of Appeals of the Township of Montgomery* and Governor Richard J. Codey's Executive Order #33 of May 9, 2005, the following amendments and new rules have been adopted.

**Permits:** At N.J.A.C. 5:23-2.14, a permit is required for any work resulting from a Notice of Violation and Order to Terminate (F213) issued to the builder after the issuance of the Certificate of Occupancy.

**Enforcement and Administration:** The adopted new rules at N.J.A.C. 5:23-2.35 set requirements to ensure all homes in a development are inspected for similar violations when a substantial code violation, as defined within this new rule,

is found; the municipality will be allowed to charge the developer for the costs of these enforcement actions. The adopted rules enable municipalities to hire licensed engineers or architects to assist with the enforcement of development-wide actions, address their qualifications, and stipulate that the work performed is subject to the supervision and control of the construction official. Three new forms have been added at N.J.A.C. 5:23-4.5: a "Consent to Undertake Proposed Work" (Form F101), a "Notice of Violation and Order to Terminate" (Form F213), and a "Notice and Order of Penalty" (Form F214).

**Fees:** Adopted amendments at N.J.A.C. 5:23-4.17, 4.18, and 4.20 establish fees for development-wide actions. The amendments at N.J.A.C. 5:23-4.17 mirror or reference the provisions of the Municipal Land Use Law for establishing and maintaining an escrow, making charges to the escrow, and accounting for the escrow charges associated with development-wide actions.

**Hearing Procedures:** The amendment at N.J.A.C. 5:23A-2.2 establishes that the filing of an appeal by any party in a dispute related to violations found after the issuance of a Certificate of Occupancy constitutes consent to entry by the members of the Board of Appeals and that all parties must be notified of any planned visit by any member(s) of the Board of Appeals.

**Date:** November 6, 2006

**Adoption:** 38 NJR 4691(a)

**Summary:** The amendments at N.J.A.C. 5:23-2.20, 3.14, 5.3, 5.4, 5.21, 5.22, and the new rules at N.J.A.C. 5:23-5.19G and 5.23B specify certification and education requirements for special inspectors. The categories of special inspectors are as follows: structural steel and welding special inspector, concrete special inspector, structural masonry special inspector, spray-applied fireproofing special inspector, and exterior insulation finish system special inspector.

Source: Denise L. Jones  
Code Development Unit

### Nonresidential Child-Care Facilities and FTO-9

It has come to the Department of Community Affairs' attention that there is some confusion about the application of Formal Technical Opinion (FTO) 9, Use Group Classification -- Department of Human Services Nonresidential Child Care Programs. The rule of thumb is that an FTO continues in force and effect until it is officially withdrawn. Therefore, FTO-9 remains enforceable. Some of the information in FTO-9, however, is a little out of date and therefore needs some explanation.

With the adoption of the International Building Code (IBC) 2000, some of the group categories changed. A new category, Group I-4, Day Care Centers, was introduced and a single-family home with not more than three stories became Group R-5. The IBC/2000 also contained some changes in code requirements. The combination of new group designations and new code requirements has apparently caused confusion about how to apply FTO-9. A summary of the group designations for day care centers follows.

#### RESIDENTIAL DAY CARE --

##### Group R-5 or Group R-3: Family Day Care

BOCA: In 1995, when FTO-9 was published, the Building Officials and Code Administrators (BOCA) National Building Code designated all single-family homes as Group R-3. So, that is the group designation included in the FTO. Family day care for up to five children of any age could be established in a home with no change in the Group R-3 designation.

IBC: The International Code Council (ICC) now covers single-family homes in two codes: (1) those that are three stories or less are Group R-5 and are contained in the International Residential Code (IRC), (2) those that are more than three stories are designated as Group R-3 and are covered in the IBC. A family day care with up to five children of any age may be established in either a Group R-5 or Group R-3 residence with no change in the group designation. The presence of more than one child under 2½ years of age does not change the group designation.

#### COMMERCIAL DAY CARE --

##### Group I-4: Day Care Centers for Children Under the Age of 2½

BOCA: The BOCA National Building Code designated day care centers with six or more children under 2½ years of age as Group I-2. The presence of one child under the age of 2½ did not change the group designation.

IBC: The IBC/2000 included a group designation specifically for day care centers. It designates commercial day care centers with any number of children under the age of 2½ years as Group I-4. The presence of one child under the age of 2½ years in a commercial day care setting establishes the designation as Group I-4.

##### Group E: Day Care Centers for Children Over the Age of 2½

BOCA: The BOCA National Building Code allowed commercial child care centers that served fewer than 50 children ages 6-13 years to be accessory to another group and to be considered part of the main use. BOCA designated commercial child care centers with 50 or more children ages 6-13 years as Group E.

IBC: The IBC/2000 designates commercial day care centers serving more than five children older than 2½ years as Group E.

**Existing Day Care Centers:** The IBC/2000 has no provisions for commercial day care centers to be treated as accessory to the main group designation and considered as part of that group. Existing commercial day care centers serving fewer than 50 children ages 6-13 years that were accessory to a main group designation and that were classified as part of that use when the BOCA National Building Code was the Building Subcode in New Jersey may continue in that group designation.

**IBC/2006:** The Department has proposed the IBC/2006 as the Building Subcode. The proposal was published in the *New Jersey Register* on September 5, 2006; the comment period ended November 4, 2006; it will be published as an adoption on February 20, 2007. Group designations and code requirements for day care centers are unchanged from the IBC/2000 to the IBC/2006.

The Department is in the process of revising FTO-9 to ensure its accuracy.

If you have questions about the applicability of the Uniform Construction Code to day care centers, contact the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton  
Code Development Unit

### Warning: More Counterfeit Automatic Fire Sprinklers

Underwriters Laboratories, Inc. (UL) is again notifying consumers, distributors, and property owners of chrome-plated, automatic fire sprinklers that bear a counterfeit UL Mark for the United States. Although marked with the word "TYCO," these sprinklers are not manufactured by Tyco Fire Products, and have not been evaluated for safety by UL.

**MODEL OF PRODUCT:** Not provided on product

**UNITS:** Unknown

**MANUFACTURER:** Unknown

**DATE OF MANUFACTURE:** Not provided on product

**IDENTIFICATION:** Pendent-type, automatic fire sprinkler

**MARKING ON FRAME:** TYCO

**MARKING ON DEFLECTOR:** SSP, a UL Mark (which is UL in a circle), 155°F/68°C

To view pictures of the product, go to:

<http://www.ul.com/newsroom/newsrel/nr092106.html>

## UPDATED REPRI NT

## Proper Disposal of Construction Material and Debris

*This article is a reprint with updates from the Fall 1996 Construction Code Communicator (Volume 8, Number 3)*

Over the past few years, there has been increasing concern about the reuse of construction debris from a demolition project as “fill” on the site of origin. The Department of Community Affairs (DCA) requested and received guidance on this issue from the New Jersey Department of Environmental Protection (DEP). The purpose of this article is to provide you with the DEP’s position on this issue.

Concrete, brick, and block are classified as Class B recyclables and are regulated by the DEP, Division of Solid and Hazardous Waste, Recycling Regulations (N.J.A.C. 7:26A). People who generate Class B recyclables have two options for disposal. The first is to transport the material to a recycling center; the second is to reuse the material on-site as clean fill.

The recycling or reuse of these materials that are generated, processed, and reused on-site is exempt from the approval requirements of the DEP [N.J.A.C. 7:26A-1.4(a)2]. To qualify for this exemption, the DEP, the host county, and the host municipality must be provided with written notification of the activity, as per N.J.A.C. 7:26A-1.4(b)5. Notification to the DEP should be sent to: State of New Jersey, Department of Environmental Protection, Division of Solid and Hazardous Waste, PO Box 414, Trenton, New Jersey 08625-0414. *(A fax number was provided in the 1996 edition of this article. Notification by fax is no longer accepted.)*

To be considered for an exemption, all of the following conditions must be met:

1. The material being used for clean fill is generated at the site. Materials may not be imported from other locations.
2. The material is not contaminated by exposure to chemicals from industrial processes or exposure to other contaminants.
3. The clean fill is not mixed with other materials such as wood, glass, plastic, etc.
4. The material is processed to reduce its size in order to minimize voids in the fill.

What effect do these requirements and exemptions have in the “real world?” An example may

help: A homeowner wants to demolish his swimming pool and reuse the debris as fill in its place. He comes to your office to find out what he needs to do. You tell him he must get a demolition permit. He must also provide you with a site plan (not signed and sealed, just a sketch on an existing plot plan that shows where he is going to fill, which is – most likely – the site of the pool). He must provide evidence that he notified the DEP at the above address as well and evidence that he notified the county (usually the recycling or solid waste coordinator). He must also notify the municipality (the construction office). Now work may start. Any debris that is not concrete, brick, or block must be removed from the demolition debris. This includes removal of any rebar, vinyl (from the liner), or wood from the debris. The concrete, block, or brick must be broken up to the point where it will minimize voids in the fill. Although this size is interpretative, a good rule of thumb is three to four inches in diameter. *(The suggested minimal diameter of debris in the 1996 article was eight inches. This has changed to three to four inches.)*

Should you have any questions regarding the DEP requirements or exemptions, please contact the DEP’s Bureau of Recycling and Planning at (609) 984-3438.

Source: John N. Terry  
Code Assistance Unit

## UL Product Database Available Online

Underwriters Laboratories, Inc. (UL) has announced the introduction of a new online tool for regulatory authorities.

The “Category Code/Model Code Database” is a search engine that links code sections to UL product categories. To view this new database, visit:

<http://www.ul.com/regulators/codelink>

Enter a code section from the International Building Code, International Mechanical Code, International Fuel Gas Code, or the National Electrical Code for a list of the corresponding UL product category and listing information.

This database also provides hyperlinks to the UL Guide Information and other specific information pertaining to each UL Category Code.

For more information, contact Bob Eugene in Seattle, Washington by telephone at (360) 593-2152 or by e-mail at [Robert.Eugene@us.ul.com](mailto:Robert.Eugene@us.ul.com).

Source: John Terry  
Division of Codes and Standards

(continued from page 7)

Subsection 5:23-6.8(f)3 states that all requirements of Chapter 5, Chimneys and Vents, shall be applied to the renovation project. IFGC Section 503.6.10.1, Equipment Separation, requires all equipment connected to the common vent to be located in rooms separated from habitable spaces. Each room is required to have provisions for an adequate supply of combustion, ventilation, and dilution air that is not supplied from habitable space.

This requirement can create hardships when renovating older, multistory buildings with common systems. As an example, based on the adopted Mechanical Subcode, in a first-floor furnace room located in the middle of the unit of a multistory condominium building, where each furnace room is located directly above the other, the flue connector from the replacement equipment would not be permitted to reconnect into the existing chimney. As you can see, this creates a hardship for the resident replacing the equipment on the first level because they would have to run a new flue vent which passes through the other units to get to the outdoors.

Because the original installations were code compliant at the time of the installation, the Department of Community Affairs will be proposing an exemption to IFGC Section 503.6.10 for the replacement of equipment of like or lesser capacity. The proposed amendment will also require that a carbon-monoxide detector be installed when equipment is replaced. This exemption is part of the annual amendments to the Rehabilitation Subcode, which were published in the *New Jersey Register* as a proposal on December 4, 2006.

It is recommended that a variation be granted until the change to the Rehabilitation Subcode is adopted.

Source: Thomas C. Pitcherello  
Code Assistance Unit

(continued from page 9)

Legitimate, UL-listed sprinklers manufactured by Tyco Fire Products are manufactured with a Job G5 glass bulb. There is also a date code molded into the frame and the Sprinkler Identification Number (SIN) is stamped on the deflector. The identification number is TY followed by four digits 0 through 9. Sprinklers with the counterfeit UL Mark are manufactured without a date code or identification number and are manufactured with a Job F5 glass bulb.

Location: According to Tyco Fire Products, government officials in Delhi, India seized approximately 1,100 of these sprinklers, which were illegally imported from China. These sprinklers have only been found in India and Asia to date.

If you come across sprinklers with the counterfeit UL Mark, UL recommends that the sprinklers be replaced by qualified service personnel and returned to the place of purchase. Code enforcement officials should not allow these sprinklers to be utilized.

For more information, contact Joe Hirschmugl in Northbrook, Illinois by telephone at (847) 664-1508 or by e-mail at [Joseph.F.Hirschmugl@us.ul.com](mailto:Joseph.F.Hirschmugl@us.ul.com).

Source: John Terry  
Division of Codes and Standards

## What's New in the 2006 IBC and IRC?

The purpose of this article is to make you aware of some of the major differences between the 2000 editions and the 2006 editions of the International Building Code (IBC) and the International Residential Code (IRC). This is not an all-inclusive list; it is merely the "big ticket items" that differ.

### **IBC:**

- > Group A occupancies used by less than 50 persons are classified as Group B. For those of you who are familiar with the 1987 Building Officials and Code Administrators (BOCA) National Building Code, this will sound familiar. Section 303.1, Exceptions 1-3 now address this issue.
- > Section 507.3, Exception 3 now allows Group A-1 and Group A-2 occupancies in unlimited area buildings, such as shopping centers. There are limitations on the area of the Group A occupancies, as well as fire-protection and egress restrictions.
- > Mixed use and occupancy have been relocated. The requirements for these have been moved from

(continued on page 12)

(continued from page 11)

Section 302 to Section 508. Along with this move, Table 508.3.3 has been amended. This table no longer contains the fire-resistance rating for the separation of the same occupancy; these requirements are now found in Section 706.3.9.

- > Table 803.5 has been amended. The requirements for exit passageways are now the same as those for vertical exit enclosures, instead of corridors (as in the 2000 IBC).
- > The occupant load threshold for automatic fire sprinklers in Group A-2 has been reduced from 300 occupants to 100 occupants.
- > All Group R buildings, other than Group R-5, are required to be provided with an automatic fire-sprinkler system. There are no exceptions.
- > The Portable Fire Extinguisher requirements in Section 906 have been adopted.
- > Chapter 10, Means of Egress, has been completely revised. Chapter 10 in the 2006 edition of the IBC looks more like the 1996 BOCA National Building Code. You should find it easier to use than the 2000 edition.
- > The occupant load threshold for the installation of panic hardware in Section 1008.1.9 for Group A and Group E occupancies has been reduced from 100 to 50 occupants.
- > Section 1405.12.2 establishes a minimum window sill height for Group R-2 and R-3 occupancies.

#### **IRC:**

- > Section R301.2.1.1 requires construction, in regions where the basic wind speed is equal to or greater than 100 miles per hour, to be designed in accordance with one of the listed documents (for high-wind design) and not the IRC structural requirements. In the State of New Jersey, the 100 mph line is roughly east of the New Jersey Turnpike. Detached one- and two-family dwellings and attached single-family townhouses that are being constructed east of the Turnpike must also have their structure designed using one of the documents listed in R301.2.1.1. One of the listed documents is the American Forest & Paper Association's *Wood Frame Construction Manual*. This manual is similar to the IRC in format and is very user friendly.
- > In the 2000 IRC, exterior walls with a fire-separation distance of three feet or less were required to be fire-resistance rated. In Section

R302.1 and Table R302.1 of the 2006 IRC, this distance has been increased to five feet.

- > In Section R403.1.4.1, as amended by the New Jersey adoption in *N.J.A.C. 5:23-3.21*, frost protection is not required for foundations for utility structures of up to 600 square feet of light-framed construction or 400 square feet for other than light-framed construction.
- > Tables have been added to Chapter 4 to address reinforced masonry and concrete foundation walls. In the past, reinforced walls were required to be designed. These new tables provide code requirements without engineering being required.
- > Tables have been added to Chapters 5, 6, and 8 to address steel framing code requirements.
- > Section R613.2 establishes a minimum window sill height.

Again, this is only a list of the major changes from the 2000 IBC to the 2006 IBC. Should you have any questions regarding these or any other changes in the code, please contact me at (609) 984-7609.

Source: John N. Terry  
Code Assistance Unit

#### **Equipotential What?**



The topic of "equipotential bonding grid" is back! This time, it is in the form of a solution rather than a problem. Section 680.26(C) of the 2005 National Electrical Code (NEC) requires that the parts specified in Section 680.26(B), which include the deck of the pool, shall be bonded and Section 680.26(B)1 states that the usual steel tie wires shall be considered suitable for bonding the reinforcing steel together.

There have been questions as to what material is acceptable for use in the bonding grid. Section 680.26(C)(1) of the Tentative Interim Amendment (TIA) states that, where the 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.

The Department of Community Affairs has determined that the deck reinforcing steel (wire mesh) is acceptable to be utilized for the bonding grid. This determination is based on the TIA language and Section 547.10(B) which requires the wire mesh to be bonded to the grid as part of the equipotential bonding grid.

(continued from page 5)

**BUILDING INTERIOR** – A certification from the DHSS that an existing building is safe for reuse as a child-care center is required prior to the issuance of a permit or of a Certificate of Occupancy for a proposed child-care center (Group I-4 or Group E) if the building previously housed one of the following uses:

- > Factory/Industrial (Group F)
- > High Hazard (Group H)
- > Storage (Group S)
- > Nail Salon or Dry Cleaner (Group B)
- > Gasoline Station (Group M)

Again, if the building predates the UCC, then the determination should be based on what the group classification would have been had the UCC been in effect.

Similar to the requirements described above for building sites, if a certification from the DHSS that the building is safe for the proposed use is submitted prior to issuance of the permit, then nothing further is required for issuance of a Certificate of Occupancy. If additional environmental testing or remedial work is required by the DHSS, the requirements set by the DHSS must be submitted in writing with the permit application. If they are, then the permit may be issued. The Certificate of Occupancy cannot be issued until a written certification from the DHSS that all testing and/or remediation has been properly completed is submitted.

It should be noted that, when a building is proposed for reuse, the prior approval of both the DHSS (for the building) and the DEP (for the site) is required before a permit can be issued.

If remediation work is required, then both the DEP and the DHSS prior approvals will specify the nature of the work. The permit issued will cover both the remedial work (to the extent that the remedial work is work covered by the code) and the UCC work needed to construct or alter the building. Inspections to ensure that the remedial work is properly completed are the responsibility of the DEP and the DHSS, not the local enforcing agency. The local enforcing agency's obligation is to make sure they have the written DEP and the DHSS approvals of the remedial work in hand before issuing a Certificate of Occupancy.

The statute calls for the DHSS to develop rules for these interior environmental investigations and gives DHSS a year to put these rules in place. For child-care centers, the DHSS already is making these determinations because they are required to do that under the rules adopted by the Department of Children and Families. Accordingly, this prior approval is in effect now for child-care centers. For schools (Group E, Grades K through 12), we will have to await adoption of rules by the DHSS. We will notify you when those rules are in place. This directive to wait applies only to building interiors for existing buildings that previously had been one of the above uses that are being converted to schools. The requirement for a prior approval issued by the DEP for the building site for a child-care center or for a school should be enforced now. And, the requirement for a prior approval issued by the DHSS for the building interior for a proposed child-care center also should be enforced now.

Should you have any questions regarding the enforcement of this new law, please feel free to contact the Code Assistance Unit at (609) 984-7607.

Sincerely,

William M. Connolly  
Director  
Division of Codes and Standards

(continued from page 12)

If used as the bonding grid, the wire mesh must be connected to the grid with a listed clamp or connector. The NEC does not specify the size of the deck reinforcing steel. The deck reinforcing steel is not permitted to be used under pavers due to the listing of the material. Under pavers, a grid of 8 AWG bare, solid-copper conductors, 12 inches by 12 inches, with a 4-inch tolerance would be required.

Multiple bonding inspections will now have to be performed in order to ensure that the grid has been installed in accordance with the code.

*Note:* The TIA states that the equipotential bonding grid shall extend within or under paved walking surfaces. This includes pavers of conductive material such as brick and concrete.

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

Source: Suzanne Borek  
Code Specialist

### Fire Separation Distance Measurement in the One- and Two-Family Dwelling Subcode

Section R302.1 of the International Residential Code (IRC) 2000 requires exterior walls with a fire-separation distance less than three feet to have at least a one-hour, fire-resistive rating. However, we receive many questions on how fire-separation distance is measured. Fire-separation distance is defined in Chapter 2 of the IRC/2000 as “the distance measured from the building face to the closest interior lot line, to the centerline of the street, alley, or public way, or to an imaginary line between two buildings on the property. The distance shall be measured at right angles from the lot line.”

Projections, or overhangs, shall not extend into the fire-separation distance unless either (1) the projection is no more than 1/3 the distance to the property line from an assumed vertical plane located where protected openings are required, or (2) the projection is 12 inches or less, whichever of the two results in a lesser projection. A projection extending into the fire-separation distance shall have not less than one-hour, fire-resistive construction on the underside.

*Note:* Sections R302.2 and R302.3 do not allow openings or penetrations, respectively, with a fire-separation distance less than three feet.

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

Source: Rob Austin  
Code Assistance Unit

# NOTES

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