

NEW JERSEY DEPARTMENT OF
COMMUNITY AFFAIRS



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What's Your Rating?

Should interrupting and short-circuit ratings be included on drawings for plan review? Can calculations be requested?

The National Electrical Code (NEC)/2000, Section 110.9, "Requirements for Electrical Installations, Interrupting Rating," requires that "equipment intended to interrupt current at fault levels shall have an interrupting rating sufficient for the nominal circuit voltage and the current that is available at the line terminals. Equipment intended to interrupt current at other than fault levels shall have an interrupting rating at nominal circuit voltage sufficient for the current that must be interrupted."

Section 110.10, "Requirements for Electrical Installations, Circuit Impedance and Other Characteristics," requires that "electrical components of the circuit to be protected shall be selected and coordinated to permit the circuit-protective devices to clear a fault without damage to the equipment. Faults are assumed to be either between two or more of the circuit conductors, or between any circuit conductor and the grounding conductor or the enclosing metal raceway."

N.J.A.C. 5:23-2.15(e)vii, "Construction Permits -- Application," provides that the appropriate subcode official may require adequate details of electrical work, including computations and other essential technical data.

Therefore, the answer to both questions is **YES**. Interrupting and short-circuit ratings should be provided with the permit application when necessary. These ratings not only apply to panels and breakers, but to transfer switches and fire-pump controllers, as well.

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

Source: Suzanne Borek
Code Assistance Unit

Who's Checking?

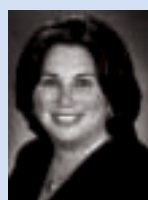
There seems to be an issue concerning who should check the height of electrical devices pertaining to the Barrier Free Subcode.

According to *N.J.A.C. 5:23-7.14(a)2*, "Barrier Free Subcode, Enforcement," operable parts that are regulated by the Electrical Subcode are the responsibility of the corresponding subcode official to meet the plan review and inspection requirements of ICC/ANSI A117.1/1998, Section 309, "Operable Parts."

(continued on page 2)



Richard J. Codey
Acting Governor



Susan Bass Levin
Commissioner

(continued from page 1)

Section 309.3, "Operable Parts, Height," requires that operable parts be placed in one or more of the reach ranges specified in Section 308, "Reach Ranges."

Therefore, the electrical devices installed and required to meet the Barrier Free Subcode should be inspected for the proper reach ranges by the electrical subcode official.

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

Source: Suzanne Borek
Code Assistance Unit

New Jersey Register Adoptions

Date: December 20, 2004
Adoption: 36 *N.J.R.* 5709(b)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.7, "Ordinary Maintenance," and *N.J.A.C.* 5:23-2.17A, "Minor Work," establish when a Uniform Construction Code (UCC) permit is required for the installation of cable television and low-voltage communication wiring based on the building type. In addition, the adopted amendments provide that the installation of cable TV or low-voltage communication wiring in Class 3 buildings is considered ordinary maintenance and would not require a UCC permit or inspection. Finally, these adopted amendments define communication wiring as that covered by Chapter 8 of the Electrical Subcode, the 2002 edition of the National Electrical Code.

Date: December 20, 2004
Adoption: 36 *N.J.R.* 5711(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.22, "Fuel Gas Subcode," *N.J.A.C.* 5:23-6.6, "Alterations," and *N.J.A.C.* 5:23-6.7, "Reconstruction," revise the Fuel Gas Subcode and Rehabilitation Subcode of the UCC to require that indoor or outdoor gas meters, regulators, and gas piping be protected by vehicle impact barriers in accordance with the International Fire Code whenever the work performed would expose these components to vehicular impact.

Date: January 3, 2005
Adoption: 37 *N.J.R.* 47(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.14, "Building Subcode," *N.J.A.C.* 5:23-6.5, "Renovations," *N.J.A.C.* 5:23-6.6, "Alterations," and *N.J.A.C.* 5:23-6.7, "Reconstruction," require the use of standardized fire service keys in newly installed elevators and in elevators undergoing work other than ordinary maintenance or minor work.

Date: January 18, 2005
Adoption: 37 *N.J.R.* 267(a)
Summary: These amendments to *N.J.A.C.* 5:23-3.15, "Plumbing Subcode," *N.J.A.C.* 5:23-3.20, "Mechanical Subcode," and *N.J.A.C.* 5:23-3.22, "Fuel Gas Subcode," adopt the 2003 editions of the National Standard Plumbing Code, the International Mechanical Code, and the International Fuel Gas Code as the Plumbing, Mechanical, and Fuel Gas Subcodes of the UCC, respectively. In addition, the adopted amendments to the Plumbing Subcode of the UCC assign enforcement responsibilities for combined domestic and fire water service lines.

Date: March 7, 2005
Adoption: 37 *N.J.R.* 771(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-6 incorporate annual code changes to the Rehabilitation Subcode of the UCC.

Source: Megan K. Sullivan
Code Development Unit

Propane Counter Documents

The Department of Community Affairs and the New Jersey Liquefied Petroleum Gas Education and Safety Board have reproduced a number of consumer safety pamphlets by the National Propane Gas Association, entitled "Using Propane Safely," to help make consumers aware of the dangers and necessary safety practices associated with propane use. Since the use of propane as a source of heat is somewhat isolated in New Jersey, the Department has not distributed the documents to all municipal building departments for distribution to the public. If there are any municipalities that are interested in using the pamphlets as counter documents, please contact Mike Baier of the Liquefied Petroleum Gas Safety Unit at (609) 633-6835.

Source: Mike Baier
LP Gas Safety Unit

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Employment Opportunities for Code Officials

The New Jersey Department of Community Affairs, Division of Codes and Standards has employment opportunities available for licensed subcode and construction officials for both in-house plan review and field inspection positions. Employment opportunities are also available for individuals with at least one Uniform Construction Code (UCC) technical license, but lacking a subcode or construction official license.

Candidates for the plan review positions will be required to review construction plans for projects such as casinos, schools, multifamily high-rise structures, correctional facilities, stadiums, and other large public assembly structures. The Division is also seeking qualified candidates to review plans for hospital and health-care facility projects.

Candidates for field positions will be required to have at least one UCC technical license and will be required to make inspections throughout the State or from one of the regional local enforcement offices.

Full-time, permanent employees of the State of New Jersey are provided a full benefits package including medical, dental, and prescription drug coverage for employees and their beneficiaries; leave time; and pension program. State vehicles may be available for field positions only. Starting salaries range from \$43,869.07 to \$60,773.24, depending upon level of licenses and past salary history.

Interested candidates can forward resumes to:

Esther Hilzer
Manager, Personnel Services
Division of Codes and Standards
New Jersey Department of Community Affairs
Post Office Box 802
Trenton, New Jersey 08625-0802

or send by fax:
(609) 633-6729

For additional information, please contact Esther Hilzer or Mary Ann DiMattia at (609) 292-7899.

PermitsNJ . . . Will UCCARS Permit Records be Converted?

The Department of Community Affairs has considered very carefully the practicality of converting existing Uniform Construction Code Administrative Records System (UCCARS) Permit records to *PermitsNJ* and has concluded it to be a highly impractical, if not impossible, endeavor for the local enforcing agency. Thus, the Department is not planning to support or require conversion of open UCCARS files to *PermitsNJ*.

Municipalities switching over to *PermitsNJ* at this time should use *PermitsNJ* to track and issue all new

applications and permits, but should continue to use UCCARS to close out existing open permit records.

Closed UCCARS records may continue to be accessed through UCCARS for look-up purposes by storing municipal UCCARS instances on a local or network drive accessible to the individual(s) who typically does such look-ups.

While it would seem to have been more convenient from a look-up standpoint to have UCCARS-based permit records available from within *PermitsNJ*, the measures that would have to be taken by you, the user, to prepare each and every permit record for conversion would be enormous.

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PermitsNJ records vastly more data than UCCARS since it is a full processing system, not just a partial one.

Many, if not most, UCCARS records would require the local user to provide additional field information which may not be readily available, if available at all, for each permit record to be converted. Because it is a full processing system, *PermitsNJ* has far more data fields, edit checks, and controls. For example, you could not issue a Certificate of Occupancy (CO) or Certificate of Approval for a “converted” file unless you had also entered all subcode inspection information for that file. Remember, UCCARS did not store all that data, so the “conversion” of the UCCARS file would not populate the *PermitsNJ* database with the needed information; therefore, you would have to do it – by hand.

PermitsNJ was designed to prevent inadvertent mistakes, such as the issuance of a CO without all subcode sign-offs being in place. Errors such as that have caused serious problems for local enforcing agencies and licensed officials. *PermitsNJ* protects you because it just won’t print the document (such as a CO) unless all the sign-offs are recorded. This is just one example of the many ways in which *PermitsNJ*’s edit criteria protects you from inadvertent administrative errors.

Besides, converting UCCARS records would not have placed all permit data in the same location, anyway. Do not lose sight of all those pre-UCCARS permit records, which only reside in manual file systems; they will never be accessible through *PermitsNJ*.

So, when looking up the permit history of a property, users must look in both the UCCARS and *PermitsNJ* electronic files, which can be done from the same desktop if you store your UCCARS instance on a local or network drive accessible to the individual(s) who typically do such look-ups. And in addition, users must continue to physically search the manual system for the very oldest information.

If you have further questions concerning the conversion of UCCARS data, or if you need assistance with moving your UCCARS instance to your new personal computer’s local drive or to a network drive, as always, please telephone us at (609) 292-7899. We may also be reached via Internet e-mail at: permitsnj@dca.state.nj.us.

But as for UCCARS/*PermitsNJ* conversion, be careful what you wish for, and be happy you didn’t get it.

Source: Berit Osworth
Division of Codes and Standards

This article originally appeared in the Spring/Summer 2002 edition of the Construction Code Communicator. With the implementation of PermitsNJ, we are reprinting the article in this edition for your use and information.

***PermitsNJ* . . . What Will It Require?**

Many of you have recently asked, “What kind of computer equipment and communications service must our offices purchase in order to use *PermitsNJ*?” In turn, we have asked our application development team. Here’s what they said

PermitsNJ will be a web-based application accessed through a web browser on the desktop. Because all files and screens will be stored at the system level and processing will *not* be done on the desktop, a number of personal computers of various sizes and configurations will do.

The more important aspect to consider when using a web-based application is transmission speed. The speed at which you will transmit and receive information is influenced by three components: 1) your connection mode, 2) your Internet Service Provider (ISP), and 3) your modem.

With regard to your connection mode, the best choice is a Digital Subscriber Line (DSL), which may be ordered through your telephone company. Second to a DSL is a cable connection. This is *much* faster than an ordinary dial-up phone line, which of course would be your last choice.

In terms of selecting an ISP, Giga Information Group®, a leading global information technology advisory firm, suggests asking the following questions before committing to one of the many companies that offer this service:

1. What is the ISP’s busy-free dial rate? (This is the ratio of subscribers to the number of the ISP’s server ports; the lower the ratio of subscribers to server ports, the better.)
2. Does the ISP have tiered services and is there a business class available? (Yes is the answer you’ll want to hear.)
3. Does the ISP prioritize traffic for customers? (Again, Yes is the correct answer.)
4. Does the ISP have asynchronous dial bonding inverse multiplexing? (This is a device on the ISP’s end that doubles the speed of the line. Again, the correct answer is Yes.)

Concerning your modem, we have found that a better modem than that provided with most new PCs may be very helpful in increasing the speed of the transmission of information. A good choice on today's market is the US Robotics 56K external modem, which retails for around \$86.

Thus, if you are considering or are in the process of purchasing the components necessary for participation in *PermitsNJ* this fall, please consider the foregoing, as well as the following guidelines.

PC

Current industry standard, which at present is:

- Pentium 4
- 128 MB RAM
- 20 GB hard drive
- MS Windows 98 or higher operating system.

Internet Browser

Microsoft's Internet Explorer 4.0 or higher. MS Internet Explorer comes packaged with MS Windows.

Update: For best results, update your browser to Internet Explorer 6. This is a free download from Microsoft's web site.

Modem

Minimum 56K. The size and quality of the modem affects the speed of the transmission. A modem of better quality than the one typically bundled with the PC would be a wise investment.

Monitor

17" is now standard, but larger (19", 21") or smaller (15") will work, too.

Telephone Line or Cable Connection

Again, a DSL is the best alternative. If DSL is not an option, however, remember that cable is about 10 to 20 times faster for transmission than a phone line with a 56K modem.

Internet Service Provider (ISP)

If a cable connection is used, the cable company becomes your ISP; otherwise, select wisely based upon the answers to those questions outlined above.

Printer(s)

Laser printers are now fairly standard and fairly common; you may even already have one, as many municipalities do. Any relatively new printer, however, should work. Whether a given model is adequate depends more upon your office's level of activity, i.e., how much printing you expect to do.

So, there you have it. Again, if you are in the process of purchasing computer equipment and are planning to use it with *PermitsNJ*, consider this advice.

On a related note, if your office is presently equipped with a late-model PC, it may also be adequate for use with *PermitsNJ*. We are presently testing application performance with various combinations of memory, speed, and operating systems. The results will enable us to identify minimum system requirements.

In the meantime, if you have further questions concerning equipment and/or communications requirements, as always, please telephone us at (609) 292-7898. We may also be reached via e-mail at bosworth@dca.state.nj.us.

Source: Berit Seiple Osworth
Division of Codes and Standards

Drawings Based on Class

N.J.A.C. 5:23-2.15(e)vi, "Construction Permits – Application," and *N.J.A.C. 5:23-4.3A(d)*, "Enforcing Agency Classification," are to be used in conjunction with each other when applying the provisions of the Uniform Construction Code to plumbing, electrical, and mechanical plans.

Section 2.15(e)vi requires that all engineering plans and computations bear the seal and signature of the licensed engineer or registered architect responsible for the design. However, there are three exceptions to this rule:

1. Plumbing plans for Class III structures may be prepared by persons licensed pursuant to the Master Plumber Licensing Act, *N.J.S.A. 45:14C-1 et seq.*;
2. Electrical plans for Class III structures may be prepared by persons licensed pursuant to the Electrical Contractors Licensing Act, *N.J.S.A. 45:5A-1 et seq.*;
3. Mechanical plans for Class III structures may be prepared by mechanical contractors.

To determine which class applies, consult Section 4.3A(d). [Yes, "Classes I, II, and III" of Section 2.15(e)vi are the same as "Classes 1, 2, and 3" of Section 4.3A(d).] Please note that the exceptions to Section 2.15(e)vi only apply to Class III, which will be the focus of this article.

Class 3 buildings include the following:

- * Business Group B less than 7,200 square feet, two stories, 40 feet high;

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- * Mercantile Group M less than 4,800 square feet, one story, 40 feet high;
- * Storage Group S-1 less than 4,200 square feet, one story, 40 feet high;
- * Storage Group S-2 less than 7,200 square feet, two stories, 40 feet high;
- * Residential Group R-3 as permitted in the Building Subcode, and including accessory private garages, radio and television antennae, and swimming pools;
- * Residential Group R-4 as permitted in the Building Subcode, and including accessory private garages, radio and television antennae, and swimming pools; and
- * Residential Group R-5 as permitted in the Building Subcode, and including accessory private garages, radio and television antennae, and swimming pools.

So, if the project under review at your local construction department is a Class III structure as mentioned above, then the plumbing, electrical, and mechanical plans may be submitted by a licensed master plumber, licensed electrical contractor, and mechanical contractor, respectively to Section 2.15(e)vi.

Source: Rob Austin
Code Assistance Unit

Employment Opportunities at Continuing Education Courses

Employment opportunities are available for retired New Jersey State licensed Uniform Construction Code (UCC) inspectors to facilitate continuing education seminars for New Jersey code enforcement officials. The seminars are sponsored by the Department of Community Affairs and Rutgers, the State University.

The position requires that the facilitator be on site from 7:30 a.m. until 4:00 p.m. to execute the following duties: set up audio/visual equipment, ensure the facility is properly arranged according to specifications, register students, introduce the seminars, be available for questions, validate CEU cards upon completion of the seminars, and break down audio/visual equipment at the end of the day. The pay rate for the position is \$12 an hour for a fixed 8.5-hour work day, plus travel. Candidates should be available Tuesday through Friday during the regular semesters. The spring semester runs from the first week in March until the end of June; the fall semester runs from the end of August until mid-December. Facilitators have the opportunity to

select the weeks in which they would like to work and should be able to commit at least two to three weeks per month to facilitate within their region. Also, candidates must be eligible to work in the United States and be able to lift at least 20 lbs.

PLEASE NOTE: *There will be a considerable amount of travel involved with the positions.*

Opportunities are available for the northern, central, and southern New Jersey regions. Qualified persons should send a letter of interest to Sherry Saperstein, Center for Government Services, Rutgers University, Suite 200, 33 Livingston Avenue, New Brunswick, New Jersey 08901-1979. You may call (732) 932-3640, Ext. 626 if you require additional information.

Source: Sherry Saperstein
Associate Program Specialist
Rutgers University

Garage Separations and Penetrations – International Residential Code/2000

N.J.A.C. 5:23-3.21(c)3ix, "One- and Two-Family Dwelling Subcode," amends the International Residential Code (IRC)/2000, Section R309.2, "Separation Required," to delete the original text and insert the following:

(#1) Private garages located beneath rooms shall have walls, partitions, floors, and ceilings separating the garage from the adjacent interior spaces constructed with not less than a one-hour fire-resistance rating (see FTO-13, "Fire Separation Between Dwelling Units and Attached Private Garages").

(#2) Attached private garages shall be completely separated from the adjacent interior spaces and the attic area by means of 1/2-inch gypsum board or equivalent applied to the garage side."

The goal of #1 above is to provide a one-hour fire-resistance-rated wall and ceiling assembly when there is living space above a garage. Any penetration in these assemblies must maintain the fire-resistance rating as per (1) the listed/labeled assembly or (2) FTO-13. Since a listed/labeled assembly has its own requirements for penetrations, the focus of this article will be how penetrations relate to FTO-13.

FTO-13 references old Section 714.1.6 of the Building Officials and Code Administrators National Building Code (BOCA)/1996 for vertical assemblies (garage walls), and old Section 714.2.6 of BOCA/1996 for horizontal

assemblies (garage ceilings). As we all know, the current building code is the International Building Code (IBC)/2000, and its corresponding sections for membrane penetrations in horizontal assemblies and vertical assemblies are Sections 711.3.2 and 711.4.2, respectively. Both sections state, "Where walls and partitions (Section 711.3.2) or floor/ceiling assemblies (Section 711.4.2) are required to have a minimum one-hour fire-resistance rating, recessed fixtures shall be installed such that the required fire resistance will not be reduced." However, both sections have three distinct exceptions that allow penetrations without jeopardizing the fire-resistance rating. These exceptions are as follows:

Garage Wall Exception #1:

Steel electrical boxes that do not exceed 16 square inches in area, provided that the total area of such openings does not exceed 100 square inches for any 100 square feet of wall area. Outlet boxes on opposite sides of the wall shall be separated as follows:

- 1.1. By a horizontal distance of not less than 24 inches (610 mm);
- 1.2. By a horizontal distance of not less than the depth of the wall cavity where the wall cavity is filled with cellulose loose-fill or mineral fiber insulation;
- 1.3. By solid fire-blocking in accordance with Section 716.2.1; or
- 1.4. By other listed materials and methods.

Garage Wall Exception #2:

Membrane penetrations for listed electrical outlet boxes of any material are permitted, provided such boxes have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing.

Garage Wall Exception #3:

The annular space created by the penetration of a fire sprinkler, provided it is covered by a metal escutcheon plate.

Garage Ceiling Exception #1:

Membrane penetrations by steel, ferrous, or copper conduits; electrical outlet boxes; pipes; tubes; vents; or concrete or masonry penetrating items where the annular space is protected in accordance with Section 711.4.1, or is protected to prevent the free passage of flame and the products of combustion. Such penetrations shall not exceed an aggregate area of 100 square inches (64 500 mm²) in any 100 square feet (9.3 m²) of ceiling area in assemblies tested without penetrations.

Garage Ceiling Exception #2:

Membrane penetrations by listed electrical outlet boxes of any material are permitted, provided such boxes have been tested for use in fire-resistance-

rated assemblies and are installed in accordance with the instructions included in the listing.

Garage Ceiling Exception #3:

The annular space created by the penetration of a fire sprinkler, provided it is covered by a metal escutcheon plate.

Examples of where these exceptions would apply include wall outlets (receptacles, switches, and luminaires). The exceptions apply since the penetration is only on one side of the assembly (a membrane penetration, not through penetration).

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

Source: Rob Austin
Code Assistance Unit

Gypsum Board Screws

Not all screws are created equal. Though a deck screw tends to look like a gypsum board screw, it is not listed for fastening gypsum boards to a structure; only gypsum board screws can be used for this purpose. The gypsum board screw has a special design that permits the head of the screw to recess below the board's paper surface without tearing the paper, and the screws are tested for effectiveness.

Actually, gypsum board screws are not all created equal, either; they come in different types for different uses. The classification system is found in American Society for Testing and Materials (ASTM) C1002-98, "Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases," which is referenced in the International Building Code (IBC)/2000, Table 2506.2, "Gypsum Board and Plaster," and the International Residential Code (IRC)/2000, Table R702.3.5, "Minimum Thickness and Application of Gypsum Board."

There are three classifications: Type G, Type S, and Type W. Type G is for fastening gypsum panels to other gypsum products, Type S is for fastening gypsum panels to light-gauge steel members, and Type W is for fastening gypsum panels to wood members.

Further, when the steel structural member exceeds the classification of light gauge (steel thickness 0.033 inch or greater), the Type S screw specified in ASTM C1002-98 is not appropriate. The code user is now referred to ASTM C954-98, which is also referenced in Tables 2506.2 and R702.3.5. These screws are meant to be used when the

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thickness of the steel making up the structural member is between 0.033 inch and 0.112 inch.

Most of the information in these two standards applies to the manufacturer of the screws; however, there is information the code user needs as well, such as the type of screw to be used in fastening the gypsum panels to the structural members and the required length of the screw to fasten the gypsum panels. The only length requirement given in ASTM C1002-98 is for the Type W screw; this requires the screw to penetrate the wood member to a depth of 5/8 of an inch. Thus, the minimum length of the screw is the thickness of the gypsum board being fastened plus 5/8 of an inch. IRC/2000, Table R702.3.5 goes further when indicating where Type S screws are used. They must penetrate the metal framing member by 3/8 of an inch.

Finally, the code user needs to know how many screws are required to fasten a given size panel. This information is found in the Table R702.3.5 for Group R-5 buildings; a fastening schedule is not included in the IBC. For buildings that are constructed under the IBC, the fastening schedule should be found in the construction documents or in the manufacturer's recommended installation instructions.

Source: Jeffrey Applegate
Code Assistance Unit

Attention: Code Instructors Wanted

At this time, we are seeking individuals who are interested in becoming instructors for courses for people seeking Uniform Construction Code (UCC) licenses. We are looking for instructors for all UCC subcode areas and all levels of licensure, RCS through HHS, throughout the State. However, the greatest need for instructors is in the northwest and southern portions of the State, and we are in need of plumbing and fire protection instructors. In addition, we are attempting to create a pool of instructors that would be willing to be "on call" for situations where the colleges are unable to locate instructors on their own or when an instructor is needed to fill in for an emergency situation. Please be aware that the compensation for instructors is negotiated between the individual instructor and the college for which the course is offered. Course hours run between 45 and 120 hours per course, with classes generally meeting one or two nights per week. Scheduling is arranged between the colleges and the individual instructors.

The requirements for becoming an instructor are: holding a subcode official license in the subcode area you would like to teach, and completion of an approved train-the-trainer educational program. Train-the-trainer programs are offered at various institutions of higher learning throughout

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the State. Please contact our office to obtain more information on approved train-the-trainer programs.

If you have already been authorized by the Division of Codes and Standards as an instructor, please be aware that your authorization remains valid at this time, provided you meet the requirement of holding a subcode official license in the area you would like to instruct. While there are many approved instructors, there are few active in the program. We would like to strongly encourage those already approved to become more active, and contribute their talents and expertise to the code enforcement students.

If working as an instructor to improve the educational aspect of code enforcement in New Jersey sounds appealing to you and you would like more information on this exciting opportunity, please contact the Licensing Unit at (609) 984-7834.

Source: Patrick Ryan
Licensing Unit

Licensing Update

There are two notable changes that have recently taken place within the Licensing Unit. Both concern the addition of the multiple dwelling program into the Unit, but concern construction code officials as well.

First, the overwhelming majority of multiple dwelling licensees also hold construction code licenses. To accommodate this convergence of programs and to better serve both overall groups of licensees, the Unit has combined the multiple dwelling licenses into the existing construction code database.

The result of this arrangement is the abandonment of the "MD" license nomenclature replaced by the traditional "00" numbers used in the construction code program. For those holding both construction code and multiple dwelling code licenses, this means that all of your multiple dwelling information will be contained within your (original) construction code records and will be similar to holding licenses within more than one construction code discipline (building and fire protection, for example). For those holding only the multiple dwelling licenses, this change affords you the benefit of uniformity within our overall program and the opportunity to more seamlessly move into the construction code program, should you decide to do so at some future point, and to keep the same license number. Recording continuing education information and licenses held was also vastly improved by this change.

Second, continuing education for the multiple dwelling program will be provided through Middlesex County College beginning in the very near future. This change will specialize training in multiple dwelling code enforcement, and will better serve the licensees and the public at large. Please be advised and assured that any and all continuing education courses previously completed through Rutgers University will continue to be credited towards the first renewal of your license. In sum, locations, times, and hours will remain similar to the Rutgers' offerings.

If you have any questions regarding these changes and their effect on your particular situation, please contact my office at (609) 984-7834 or by e-mail at codeslicensing@dca.state.nj.us.

Source: John A. Delesandro
Supervisor of Licensing

Location of Equipment Gas Shut-Off Valves

With the recent adoption of the International Fuel Gas Code (IFGC)/2003 (adopted January 18, 2005), a welcome change is the deletion of the word "ready" from Section 409.5, "Equipment Shut-Off Valve," pertaining to access to the shut-off valve.

In the 2000 edition of the IFGC, it was required that the gas shut-off valve be located in the same room as the appliance and not further than six feet away. Also, the shut-off valve had to be provided with "ready" access.

IFGC/2003, Section 409.5 requires that such shut-off valve be provided with access.

The difference between ready access and access is that "ready access" must be directly reached without requiring the removal or movement of any panel, door, or similar obstruction; whereas, "access" can be gained by ready access, or by removing or moving a panel, door, or similar obstruction.

With this change, a fireplace insert with the gas shut-off valve located below the firebox and access through a pull-down door would comply with the code. This would also apply to all appliances that require a gas shut-off valve to be accessible.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

PermitsNJ . . . Will Its Use be Mandatory?

Many of you have asked, "Will using *PermitsNJ* be mandatory and, if so, when will that be?" The short answer is "no," the Department of Community Affairs is not planning to mandate the use of its new construction code enforcement management software. The longer, more detailed answer, however, follows

There are four important changes with regard to issuing, managing, and reporting construction permit activity that will be required. We are publishing this information now as a "heads-up" and will supply the timeframes on it in the Summer/Fall 2005 issue of the *Construction Code Communicator*. The four changes are as follows:

1. Discontinuance of the Use of the Uniform Construction Code Administrative Records System (UCCARS)

UCCARS users will be required to switch to an alternative method of managing and reporting construction permit activity. The Department will cease to provide for the technical support of UCCARS and will also cease to administer the UCCARS bulletin board.

2. Electronic Transmission of Permit and Certificate Activity

At present, the Uniform Construction Code permits municipalities issuing less than 200 permits per year to provide the Department with monthly activity reports via mail and only requires the transmitting of data electronically where annual permit activity meets or exceeds 200 in number. In the future, however, this will change and all municipalities will be required to use *PermitsNJ* or an equivalent software product transmitting permit and certificate data electronically, regardless of activity level.

3. Increased Data Upload Requirements

The data file transmitted to the Department from alternative construction code enforcement software products will increase both in scope and frequency of transmission. All municipalities using alternative products will be required to conform to the new upload standards.

4. Increased Construction Permit Services Access for New Jersey Residents

The Department is presently working with its *PermitsNJ* developer to deliver construction permit services to New Jersey residents in a way that goes beyond traditional delivery methods and normal hours of operation; in other words, the New Jersey construction permit applicant will be able to apply for his/her construction permit from the comfort of his/her own home or office, and at any hour, by way of the Internet. Doing so must be possible for

any New Jersey resident regardless of which construction code enforcement software product his/her municipality has chosen to use. Thus, at the time that the Department makes such service available through *PermitsNJ*, those municipalities using a software product other than *PermitsNJ* must also offer a comparable service.

In the meantime, if you have further questions concerning migrating to *PermitsNJ*, as always, please telephone us at (609) 292-7899. We may also be reached via Internet e-mail at: permitsnj@dca.state.nj.us.

Source: Berit Osworth
Division of Codes and Standards

New Code Adoptions

ATTENTION – ATTENTION – ATTENTION

This is to advise code officials, architects, engineers, etc. that the adoption of the 2003 editions of the National Standard Plumbing Code (NSPC), the International Mechanical Code (IMC), and the International Fuel Gas Code (IFGC) appeared in the January 18, 2005 *New Jersey Register*.

Therefore, as of January 18, 2005, compliance with the 2003 editions of the NSPC, IMC, and IFGC is accepted.

Also, between January 18 and July 18, 2005, compliance with the 2000 editions of the NSPC, IMC, and IFGC is still permitted. For new projects that are submitted for review after July 18, 2005, compliance with the 2003 editions of the NSPC, IMC, and IFGC will be required.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Certification Presentation Highlights Restructuring of Camden Building Department

On Thursday, February 17th, at a ceremony in the Camden City Council chambers, certificates for successful completion of the Technical Assistant course were presented to six members of the Building Bureau support staff — Ingrid Hartman, Sadie Smith, Ronica Solla, Melissa Snype, Gwendolyn Nock, and Lindia Lewis — and to Assistant Director Warren Sykes of the Camden Department of Code Enforcement, who is the head of the Building Bureau.

Division of Codes and Standards Director William M. Connolly praised the officials and staff of the Building Bureau for all of the work that has gone into making the Building Bureau a professional organization that the people of the City and of the State can be proud of. With its full team of officials, inspectors, and clerical staff now qualified as technical assistants, Camden has a local enforcing agency that is prepared to do its part in making it a better city for all of its residents. Camden is already experiencing a rapid rise in new construction and rehabilitation work, and this workload will increase significantly once redevelopment plans that are now under review reach the stage of actual construction. With its well-trained and highly motivated staff, the Camden Building Bureau stands prepared to meet this challenge.

Others praising the accomplishments of the clerical staff who are now new technical assistants included Mayor Gwendolyn Faison (who commended the awardees for their efforts in upgrading their skills and declared her strong support for the code enforcement program), Director Roberto Feliz of the Department of Code Enforcement, Assistant Director Sykes, and Construction Official Robert Scouler.

Source: Michael Ticktin
Chief, Legislative Analysis



Pictured from left to right are: Mayor of Camden, Gwendolyn Faison; City of Camden Construction Official, Robert Scouler; Assistant Director of Code Enforcement, L. Warren Sykes; DCA Director of the Division of Codes and Standards, William M. Connolly.

Pictured below from left to right are: Ingrid Hartman; Sadie Smith; Ronica Sollas; Melissa Snype; Gwendolyn Nock; Mayor of Camden, Gwendolyn Faison; Director of Code Enforcement, Roberto Feliz; Lindia Lewis.



Public Alarms – Where They are Required

Apparently, there is some confusion in the field as to where visible alarms are required. The International Building Code (IBC)/2000, Section 907.9, “Alarm Notification Appliances,” details code requirements for such devices.

Visible alarms are required in public and common areas, and for Groups I-1, R-1, and R-2 (Sections 907.9.1.1 to 907.9.1.3 of IBC/2000). The questions we frequently respond to are, “What are public and common areas?” “Is an office a public and common area?” “Is a corridor a public and common area?”

Common areas are those areas accessible to the general public, including corridors and lobbies. Offices, stockrooms, and equipment rooms are not public areas, and therefore do not require visible alarms. Devices are required in the lobbies, corridors, etc., but not in the office space or stockroom.

Hopefully, this clarifies the issue. Should you have any questions, you may contact me at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

New Radon Hazard Areas in the State

There has been a recent amendment to the regulations of the New Jersey Department of Environmental Protection (DEP) regarding radon (*N.J.A.C. 7:28-27*). After a reevaluation of radon levels throughout the State, DEP has amended its regulations to reflect its findings.

The tier ratings for radon have changed for some municipalities. The change in regulations adds eight new municipalities to Tier One. These municipalities are Washington Township (Burlington County), Greenwich Township (Cumberland County), Swedesboro Borough (Gloucester County), Woolwich Township (Gloucester County), Mine Hill Township (Morris County), Riverdale Borough (Morris County), Pilesgrove Township (Salem County), and Hardyston Township (Sussex County). Note: All previous Tier One municipalities are still Tier One.

The Radon Hazard Subcode (*N.J.A.C. 5:23-10*), Appendix 10-A, "New Jersey Municipalities in Tier One," is being amended to reflect the DEP changes. In the eight new Tier One municipalities, the requirements set forth for radon mitigation in the Radon Hazard Subcode must be met in newly constructed educational and residential buildings. Projects for which a permit application has not yet been submitted are required to comply with the regulations of *N.J.A.C. 5:23-10*. Projects for which applications already have been submitted and those with open permits may be allowed to proceed without being required to comply with the provisions of *N.J.A.C. 5:23-10*. However, code officials should advise permit applicants that have open permits to include a passive radon mitigation system if it is still early enough in construction to do so. This could save the applicant money in the long run.

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

Source: Rob Austin
Code Assistance Unit

Code Requirements for Office Partitions

Over the past several years, there have been a multitude of different interpretations regarding the building code requirements applicable to office partitions. The provisions in the International Building Code (IBC)/2000 should eliminate any interpretive problems that we may have had in the past.

As per IBC/2000, Section 603, entitled "Combustible Materials in Type I and II Construction," there is a list of items that are permitted in buildings with these

types of construction. Number 8 of this section states "partitions that divide portions of stores, offices, or similar places occupied by one tenant only and which do not establish a corridor serving an occupant load of 30 or more may be constructed of fire-retardant-treated wood, one-hour fire-resistance-rated construction, or wood panels or similar light construction up to six feet in height."

There are several limitations in this text that might be overlooked. The first limitation is this exception applies only to spaces occupied by one tenant; therefore, these types of walls may not be used to separate tenancies. Additionally, the exception applies only to layouts that do *not* establish a corridor that serves an occupant load of 30 or more. The last limitation is that these partitions may not be greater than six feet in height. Any partition that exceeds the limitations of Section 603 is required to be constructed of materials consistent with the construction type of the building.

Once the limitations of the exception are established, we must then look at the material that is used to construct the partition. The code permits the use of wood panels, fire-retardant-treated wood panels, or one-hour rated construction; simply put, any approved construction material. *Because the code regulates these types of partitions, interior finish and trim requirements set forth in IBC/2000, Chapter 8, "Interior Finishes," apply.*

For these types of partitions in buildings constructed of Type III, IV, and V construction, any approved material, either combustible or noncombustible, may be used. Interior finish and trim requirements of Chapter 8 are also applicable.

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

Source: John N. Terry
Code Assistance Unit

Plumbing Fixture Count

Since the International Building Code (IBC)/2000 was adopted on May 5, 2003, the Department of Community Affairs has received many calls pertaining to the differences in use group classifications between those cited in the IBC/2000 and the National Standard Plumbing Code (NSPC)/2000, which was adopted on September 17, 2001, and the NSPC/2003, which was adopted on January 18, 2005.

NSPC/2000 and NSPC/2003, Table 7.21.1 cite the same use group classifications as the Building Officials and Code Administrators National Building Code (BOCA)/

1996. However, the IBC/2000 has changed some of the use group classifications from those provided in BOCA/1996.

To determine the proper plumbing fixture count, and to avoid any misinterpretation between the building and plumbing codes, it is recommended that the descriptions of the building use as set forth in both the building and plumbing codes be used, and NOT simply the use group classification.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Breaker, Breaker – Problem with Solar PV System Installations

Warning! The installation of solar photovoltaic systems requires that a back-fed breaker be installed.

The National Electrical Code (NEC)/2002, Section 690.64(b)(5), "Solar Photovoltaic Systems, Point of Connection," requires that equipment such as circuit breakers, if back-fed, shall be identified for such operation. Not only does the equipment need to be identified, it also must meet the requirements of NEC/2002, Section 408.16(F), "Switchboards and Panelboards, Overcurrent Protection, Back-Fed Devices."

Remember, Chapters 1 through 4 of NEC/2002 are mandatory unless modified by Chapters 6 through 8.

With that said, yes, the breaker would have to meet the requirements of Section 408.16(F), "Overcurrent Protection, Back-Fed Devices." "Plug-in type overcurrent protection devices that are back-fed and used to terminate field-installed, ungrounded supply conductors shall be secured in place by an additional fastener that requires something other than a pull to release the device from the mounting means on the panel."

So, when you are inspecting these system installations, don't forget to check the breaker for the additional fastening means and be sure that it is identified as being back-fed.

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

Source: Suzanne Borek
Code Assistance Unit

Replacement Electrical Panels

Newly installed versus replacement. Never installed versus upgrade. What am I getting at, you ask? Well, I'm referring to an electrical panel installed in an existing home. But, what rules apply from the National Electrical Code (NEC)/2002?

The requirements in *N.J.A.C. 5:23-6*, New Jersey's Rehabilitation Subcode, are in two specific sections: *N.J.A.C. 5:23-6.8*, "Materials and Methods," and *N.J.A.C. 5:23-6.9*, "New Building Elements."

For an upgrade/replacement, the panel is allowed to remain in its existing location and may be upgraded, for example, from 100 amps to 200 amps. At *N.J.A.C. 5:23-6.8(d)*, the Materials and Methods requirements reference specific sections of NEC/2002 that are to be followed when a building owner upgrades/replaces the electrical panel. *N.J.A.C. 5:23-6.8(d)* also specifies that Sections 110.26, "Spaces About Electrical Equipment," 110.32, "Work Space About Equipment," 110.33, "Entrance and Access to Work Space," 404.8, "Accessibility and Grouping," and 408.8, "Clearances," of the NEC/2002 are not required to be followed. Further, *N.J.A.C. 5:23-6.8(d)10* states, "Existing working clearances, clear space, access and entrance dimensions to working spaces, illumination, headroom clearances, and location of overcurrent protection devices shall be allowed to remain without modification."

When a brand-new electrical panel is being installed in a location other than the original panel, the "New Building Elements" Section at *N.J.A.C. 5:23-6.9(a)19* states, "Newly installed (not replacing an existing device) electrical service equipment, switchboards, panelboards, motor control centers, and other electrical equipment containing overcurrent, switching, or control devices likely to require examination, adjustment, servicing, or maintenance while energized shall conform with the requirements specified in *N.J.A.C. 5:23-6.8*, Materials and Methods, and in addition shall conform with Sections 110.26 (Space About Electrical Equipment — 600 Volts, Nominal or Less), 110.32 (Work Space About Equipment — Over 600 Volts, Nominal), 110.33 (Entrance and Access to Work Space), 404.8 (Accessibility and Grouping — Switches), and 408.8 (Clearances — Switchboards and Panelboards), as applicable, of the Electrical Subcode."

As you can see, all of the NEC/2002 sections deleted by *N.J.A.C. 5:23-6.8(d)* apply to the brand-new installation of an electrical panel. If you have any questions on this matter, you may reach me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

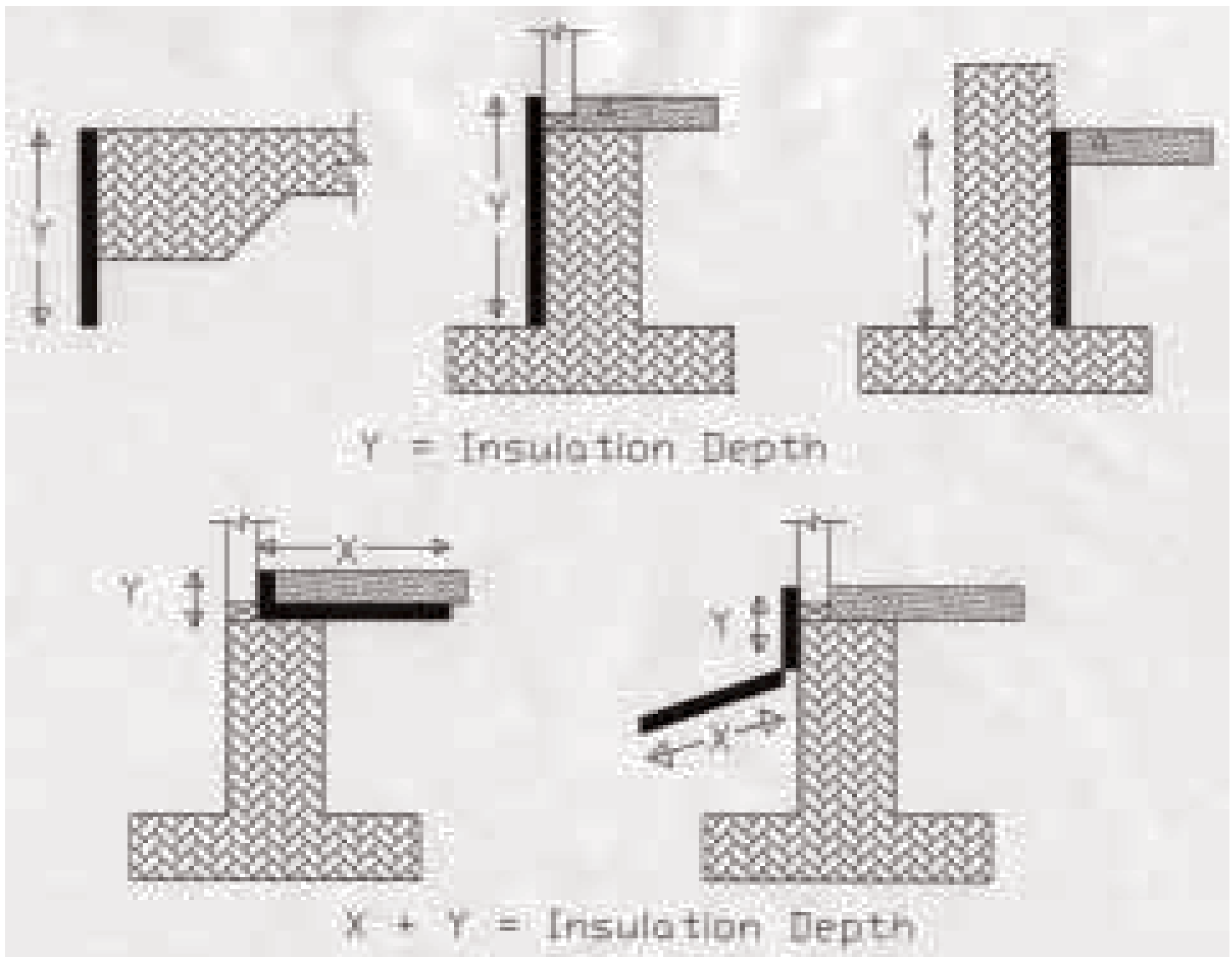
Slab-on-Grade Floors – Perimeter Insulation 

When a design utilizes slab-perimeter insulation based on the Council of American Building Officials Model Energy Code (CABO MEC)/1995, Section 502.2.4 or Section 602.4.4, both entitled “Slab-on-Grade Floors,” the insulation may be placed on the outside OR on the inside of the foundation wall. Since the entire State of New Jersey is below 6,000 annual Fahrenheit heating degree days, all slab-perimeter insulation is required either to (1) extend downward from the elevation of the top of the slab for a minimum distance of 24 inches, OR (2) extend downward to at least the bottom of the slab and then horizontally to the interior or exterior for a minimum total distance of 24

inches. Also, the horizontal insulation extending outside of the foundation wall must be covered with a minimum of 10 inches in thickness of pavement and/or soil. Lastly, the top edge of the insulation installed between the exterior wall and the edge of the interior slab shall be permitted to be cut at a 45-degree angle away from the exterior wall. NOTE: All insulation shall be of an approved type.

Since the CABO MEC/1995 does not provide similar guidance in the Appendix as it does for crawl-space wall insulation, the attached drawing should be helpful in checking for the installation of slab-perimeter insulation.

Source: Rob Austin
Code Assistance Unit



UL Classified Breakers

What are UL Classified breakers, you ask? They are molded-case circuit breakers that have been classified for use in specified panelboards in accordance with the details described on the circuit breaker.

The National Electrical Code/2002, Section 110.3(B), "Requirements for Electrical Installations, Installation and Use," requires that listed or labeled equipment be installed and used in accordance with any instructions included in the listing and labeling.

UL, Underwriters Laboratories, Inc., has Classified molded-case circuit breakers for use in place of other listed circuit breakers in specific listed panelboards.

A circuit breaker that is UL Classified only is marked on the side with the statement: "Classified for use only in specified panelboards where the available short-circuit current is 10 kA, 120/240 volts ac or less. Do not use in equipment connected to circuits having an available system short-circuit current in excess of 10 kA, 120/240 volts ac. For catalog numbers (or equivalent) of specified panelboards, refer to Publication No. _____ provided with this circuit breaker. If additional information is necessary, contact [Classified circuit-breaker manufacturer's name]."

A circuit breaker that is both UL Classified and UL Listed is marked on the side with the statement: "This circuit breaker is Listed for use in circuit breaker enclosures and panelboards intended and marked for its use. This circuit breaker is Classified for use, where the available short-circuit current is 10 ka, 120/240 volts ac or less, in the compatible panelboards shown in Publication No. _____ provided with this circuit breaker. When used as a Classified circuit breaker, do not use in equipment connected to circuits having an available system short-circuit current in excess of 10 kA, 120/240 volts ac. If additional information is necessary, contact [Classified circuit-breaker manufacturer's name]."

The Classification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Classification and Follow-Up Service. It appears on the side of the circuit breaker and consists of the words "Underwriters Laboratories, Inc. Classified Circuit Breaker" together with a control number. It may be abbreviated "Underwriters Lab. Inc." or "Und. Lab. Inc."

There will be a circular mark on the front, visible surface of the circuit breaker.

All of this means that these breakers are acceptable and in accordance with Section 110.3(B). Under the specified conditions, the installation is acceptable and any terms on the panel with regards to the warranty are not the code official's responsibility.

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

Source: Suzanne Borek
Code Assistance Unit

Update on New COAH Rules

In the Summer/Fall 2004 issue of the *Construction Code Communicator*, there was an article about new rules for the Council on Affordable Housing (COAH). COAH is the New Jersey housing agency responsible for assigning affordable housing obligations for every municipality in the State. Sometimes this obligation is called a "fair-share" number. Fair-share is the number of affordable housing units a municipality must allow for in its master plan and zoning regulations. This number is based on present and future regional needs.

COAH determines fair-share allocations. The New Jersey State Supreme Court ruled that all localities have a constitutional obligation to provide a realistic opportunity to meet present and future affordable housing needs. "Affordable" is defined as a percentage of median family income in the county where the municipality is located. COAH rules and the Supreme Court decisions require that a specified number of houses and apartments be affordable to low- and moderate-income families. Low-income generally means 50 percent of median family income or less, while moderate income refers to earnings between 50 and 80 percent of median family income.

As a construction official or technical assistant, you may receive calls from housing advocates, planners, or developers asking about the number of housing units that were issued a Certificate of Occupancy (CO), or the square footage of nonresidential development reported on the COs issued by your office. You also may be asked about any residential and nonresidential demolitions.

The reason for these inquiries is the new COAH rules, which took effect this year. These rules introduce a "growth-share" methodology to determine fair-share housing obligations. Put simply, the number of affordable housing units a town must allow in its planning and zoning regulations is tied to how much growth the town has, and growth is measured by the COs issued by your office.

(continued from page 17)

This is an important, new use of the construction statistics you provide each month. You may have more people asking for information. The Department of Community Affairs will publish summary statistics on the COs and building permits you issue online, so people can easily look up and download construction statistics. Look for this information soon on the Division of Codes and Standards' web site: <http://www.state.nj.us/dca/codes/>.

Be prepared for more inquiries from planning officials, housing advocates, and other interested citizens. Your work will be reviewed closely, because what you report directly determines the amount of affordable housing your town must allow for in its planning and zoning rules. For example, if your town builds a new WalMart, it will have an affordable housing obligation. It is very important for your monthly reports to be accurate and complete.

For more information on the COAH rules, check out its web site at <http://www.state.nj.us/dca/coah>.

Source: John Lago
Division of Codes and Standards

To Enforce or Not to Enforce?

The utility companies have certain installation requirements with regard to electrical services. Is it the local electrical inspector's responsibility to enforce a utility company's requirements as well as those of the Electrical Subcode, *N.J.A.C. 5:23-3.16*?

Per *N.J.A.C. 5:23-3.16(a)1*, the model code of the National Fire Protection Association, known as "The National Electrical Code 2002" is the Electrical Subcode for New Jersey; it does not incorporate utility company requirements.

Therefore, the answer to the question is **NO**; the utility company requirements are its own responsibility. The local electrical inspector enforces only the requirements of the Electrical Subcode of the Uniform Construction Code.

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

Source: Suzanne Borek
Code Assistance Unit

Combination Domestic/Fire Protection Service -- Who Reviews, Inspects, and Approves?

This article is a heads-up for fire and plumbing officials. For some time, confusion has existed as to who inspects, witnesses tests, and approves the installation of a single water service supplying both domestic and fire protection. In some municipalities, it has been the plumbing inspector and in others it has been the fire inspector.

This issue has been clarified. The January 18, 2005 Uniform Construction Code update modifies the National Standard Plumbing Code, Chapters 2, 3, and 15, to reflect National Fire Protection Association requirements for pipe depth, thrust blocks, flushing, and testing. Limited-area fire sprinklers are exempted. The specific requirements are referenced in the Plumbing Subcode at *N.J.A.C. 5:23-3.15(b)*.

Plan review is done by both officials. The fire subcode official reviews sprinkler design calculations for compliance and the plumbing subcode official reviews the design for compliance with the modified section referenced above.

It is the plumbing inspector's responsibility to inspect, test, and approve the combination water service. The fire inspector continues to have inspection and testing responsibility for a dedicated fire service. Should you have any questions, I may be reached at (609) 984-7672.

Source: Gerald Grayce
Office of Regulatory Affairs

Yesterday's and Today's Model Codes

The chart on page 19 displays all of the codes the State of New Jersey has adopted since the adoption of the Uniform Construction Code on January 1, 1977. Various editions of the model codes date back to 1975.

The chart now includes the latest additions: the 2003 National Standard Plumbing Code, the 2003 International Mechanical Code, and the 2003 International Fuel Gas Code (the Plumbing Subcode, Mechanical Subcode, and Fuel Gas Subcode, respectively).

All three 2003 editions were adopted on January 18, 2005. Keep in mind that, from this date, the six-month grace period (see *N.J.A.C. 5:23-1.6*) for the 2000 National Standard Plumbing Code, the 2000 International Mechanical Code, and the 2000 International Fuel Gas Code has begun, and will end on July 18, 2005.

Source: Rob Austin
Code Assistance Unit

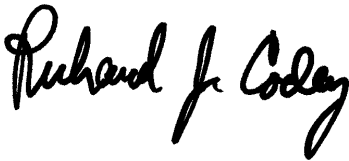
Greetings from Acting Governor Richard J. Codey and Commissioner Susan Bass Levin

One fundamental principle of the New Jersey State Uniform Construction Code (UCC) is that New Jersey citizens are provided with safe and affordable housing and buildings. This is achieved through local code enforcement agencies working in partnership with design professionals, builders and developers.

Three times per year, the Department of Community Affairs' (DCA) Division of Codes and Standards publishes the *Construction Code Communicator*. This newsletter provides subscribers - both public and private - with information on emerging construction issues. It also provides code officials with guidance on UCC administration and enforcement.

Through the *Construction Code Communicator* and all of our programs and services, we remain committed to providing safe and affordable housing and buildings to New Jersey citizens.

With all good wishes,

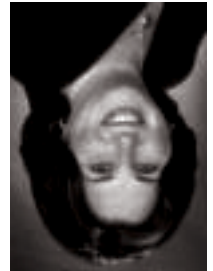


Richard J. Codey
Acting Governor



Susan Bass Levin
Commissioner

Susan Bass Levin
Commissioner
NJ Department
of Community Affairs



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State of New Jersey

Richard J. Codey, Acting Governor

Volume 17 Number 2

Department of Community Affairs

Charles A. Richman, Acting Commissioner

Summer/Fall 2005

24th Annual Building Safety Conference of New Jersey - 2005

This is the 24th year we have been celebrating building safety in New Jersey. The Building Safety Conference of New Jersey was held May 4-6, 2005 in Atlantic City at Bally's Atlantic City. As building safety professionals, we have an ongoing obligation to help make the world a safer place. We are the key players in our efficient and effective enforcement programs throughout the State. This conference gave us an opportunity to highlight the importance of safe buildings, and to recognize the outstanding professionals responsible for making and keeping them that way.

As always, our focus is on education. The Crackerbarrel Roundtables allow our attendees to discuss topics of general interest in the area of building codes and code enforcement. This year, there were 32 roundtables. Additionally, there were 21 seminars that provided up-to-date information on various subjects. An evening reception was also enjoyed by all.

Recognition was given to the following at this year's Awards Luncheon:

- John A. D'Ascensio** -- Fire Inspector of the Year
Presented by: New Jersey Fire Prevention & Protection Association
- Seymour Goldstern** -- Plumbing Inspector of the Year
Presented by: New Jersey Plumbing Inspectors Association
- Edward A. Vanderberg** -- Building Inspector of the Year
Presented by: Building Officials Association of New Jersey
- Alan Wilkins** -- Electrical Inspector of the Year
Presented by: Municipal Electrical Inspectors Association
- Patricia Famularo** -- Technical Assistant of the Year
Presented by: New Jersey Association of Technical Assistants

Many favorable comments were received in the evaluations: "Great seminars," "informative and insightful," "good opportunity to meet and greet new and old friends," "speeches were short," "excellent meal," "a great year!"

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Now we look forward to next year. William Williams, Jr., Construction Official for the Village of Tuckahoe in Cape May County, was the lucky person selected to receive a complimentary registration for next year's event. Mark your calendar now for the grand celebration of our 25th year for Building Safety, May 3-5, 2006, to be held at Bally's Atlantic City.

Source: Susan H. McLaughlin, Supervisor
Education Unit



From left to right: James McGlynn, Municipal Electrical Inspectors Association; Alan Wilkins, Electrical Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.

Air-Conditioning Disconnects

Does Section 110.26 of the 2002 National Electrical Code (NEC) apply when an air-conditioning unit is being replaced?

N.J.A.C. 5:23-6.8(d)2 in the Rehabilitation Subcode excludes Section 110.26 of the 2002 NEC. This applies to working clearance space around electrical equipment. However, Section 440.14 of the 2002 NEC is not excluded under *N.J.A.C. 5:23-6.8(d)5*. This section states that the disconnecting means shall be located within sight of, and readily accessible from, the air-conditioning or refrigerating equipment. The disconnecting means is permitted to be

installed on or within the air-conditioning or refrigerating equipment.

Therefore, the answer is **NO**, Section 110.26 of the 2002 NEC is not applicable to units that are being replaced. Any existing disconnect shall be permitted to remain, provided that the disconnect is in sight of the unit and readily accessible; i.e., nothing has to be moved to access it.

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

Source: Suzanne Borek
Code Assistance Unit

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From left to right: Steve Jones, President of the Building Officials Association of New Jersey; Edward A. Vanderberg, Building Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.



From left to right: Patricia Famularo, Technical Assistant of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.

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From left to right: Joseph Albanese, New Jersey Plumbing Inspectors Association; Seymour Goldstern, Plumbing Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.



From left to right: Arthur Londensky, President of the New Jersey Fire Prevention & Protection Association; John A. D'Ascensio, Fire Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.

Barrier Free Subcode: A Few Changes and a Clarification

On June 20, 2005, a few changes to the Barrier Free Subcode were adopted. With a brief explanation for each, they are:

- **ASSISTED-LIVING FACILITIES:** This rule amendment provides that, when an apartment or room that was constructed to be adaptable is made available for respite care (short-term stays), those features required to make that apartment or room accessible be adapted. This will enable people with disabilities to use the services offered by the assisted-living facility.
- **TOWNHOUSES AND MULTISTORY DWELLING UNITS:** The definition of “townhouse” in the Barrier Free Subcode is amended to provide that the townhouse unit must extend from foundation to roof. This eliminates any apparent disconnect between the Barrier Free Subcode and the International Residential Code, and it makes clear that townhouses are side-by-side, attached, single-family dwellings. Other configurations, with shared entrances or units that are stacked one on the other, for example, are multistory dwellings. A cross-reference to the accessibility requirements for multistory dwelling units has been added for clarity.
- **FIREWALLS AND PARTYWALLS:** A reference to “partywall” has been added to the Barrier Free Subcode to ensure that the application of a firewall and a partywall is clearly understood. When counting the number of dwelling units in a single structure, a firewall or a party wall does not designate separate buildings.
- **DORMITORIES:** This rule amendment requires that five percent of newly constructed dormitory rooms must be accessible; the remaining 95 percent must be adaptable. This rule codifies two Federal laws — the Rehabilitation Act of 1973 and the Federal Fair Housing Amendments Act of 1988 — as they apply to dormitories.
- **FINES FOR VIOLATING THE RESTRICTIONS ON AN ACCESSIBLE PARKING SPACE:** The fine for violating the restrictions on an accessible parking space has been changed to reflect the statutory change of P.L. 2003, c. 161, which increased the fine from \$100 to \$250. (See companion article in this newsletter.)
- **ACCESSIBLE HOTEL ROOMS:** This rule provides requirements for an accessible bed in an accessible hotel room. The required bed is on a standard bed

frame, and will allow a guest who uses a lift to transfer to the bed and use the room.

If you have questions about the Barrier Free Subcode, please call the Code Assistance Unit at (609) 984-7609.

Source: Emily Templeton
Code Development Unit

Defining Project Classification for Plan Review

A contractor submitted plans and permit applications to a Class 2 Local Municipality for a 21,000-square-foot, Group M drugstore and a 2,300-square-foot, Group A-2 restaurant. The construction official directed the contractor to submit the plans to the Department of Community Affairs' Bureau of Construction Project Review (BCPR) for the plan review. Was the construction official correct in doing so? The answer is “Yes.”

Both projects were to be tenant fit-outs in a 125,000-square-foot, mixed-use shopping center. Although the tenant areas did not exceed the allowables of a Class 2 agency, each fit-out was part of a larger “structure” exceeding the limits as defined in *N.J.A.C. 5:23-4.3A(a), (d), and (e)*. The area of the total structure defines the project classification and not the size of the individual project spaces for review by the local municipality or BCPR.

The contractor then asked if the adjacent Class 1 local enforcing agency could perform the review. The answer is “No.” Only those construction officials and subcode officials appointed by that municipality are allowed to review work for that municipality, per *N.J.A.C. 5:23-4.4*.

Upon submission of a written request by the local construction official with the project plans for review to the BCPR, a “Return to Local” authorization letter may be issued by the BCPR, per *N.J.A.C. 5:23-4.3A(e).1*, to the local enforcing agency allowing them to perform the plan review and issue the permits. A telephone call to the BCPR to inquire about a particular structure or plan review is always welcome.

Source: Emile Kolick, R.A., Supervisor
Bureau of Construction Project Review
(609) 633-7461

Correction

In the Spring 2005 *Construction Code Communicator*, Volume 17, Number 3, the second paragraph of the "What's Your Rating?" article referred to the 2000 National Electrical Code instead of the 2002 National Electrical Code. The sentence should have read, "The National Electrical Code (NEC)/2002, Section 110.9, . . ."

We apologize for any inconvenience.

Fire Sprinkler Flexible Piping Systems

I have received a number of calls asking about the use of fire sprinkler flexible piping systems. In the event you are not familiar with the system, it is a flexible, braided, leak-tested sprinkler drop with a minimum internal corrugated hose diameter of one inch. The flexible pipe attaches to a branch line at one end and to a fire sprinkler at the other. Hose lengths are from two feet to six feet, with both ½-inch and ¾-inch outlets. The advantage the sprinkler contractor has when using this system is he can place the sprinkler in the desired position by merely bending the flexible pipe. At least one manufacturer's system is UL and FM listed, and intended for use in NFPA 13, 13R and 13D, wet, dry, pre-action, and deluge systems.

Why am I bringing this to your attention? First, to let you know the system can be used. Second and perhaps more importantly, to make you aware of the friction loss. This piping is generally a drop. Friction loss is routinely not calculated for a drop. That's the potential problem. One manufacturer's specifications show a significant friction loss through the flexible pipe. For example, a 2-foot pipe having a ½-inch outlet has an equivalent length of 17 feet, while a 6-foot pipe has an equivalent length of 28 feet. A 2-foot pipe having a ¾-inch outlet has a 9-foot equivalent; and the 6-foot pipe has a 25-foot equivalent length. (Equivalent lengths reflect three bends.) The manufacturer also specifies a minimum bend radius.

If you see this system during plan review or when inspecting a job, you need to make sure the hydraulic calculations take into consideration the equivalent length of pipe. You also need to check the manufacturer's listing to ensure the proper application.

Should you have any questions, I may be reached at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

Drilling and Notching Wood Members: Who's Responsible?

Because the Building Subcode [International Building Code (IBC) 2000], the One- and Two-Family Dwelling Subcode [International Residential Code (IRC) 2000], and the Electrical Subcode [National Electrical Code (NEC) 2002] all have requirements for the drilling/boring of holes and notching of wood members, the question has been asked, "Who is responsible for conducting the inspections?" The answer is: both building and electrical inspectors, but for different reasons.

Here's where they are the same: All three subcodes contain the dimension and placement requirements for a hole and notch [IBC/2000 sections 2308.9.10 and 2308.9.11; IRC/2000 section R602.6; and NEC/2002 section 300.4(A), with technical amendment *N.J.A.C. 5:23-3.16(b)5i*]. These are the building inspector's responsibility.

Here's where they are different: NEC/2002 section 300.4(A) requires that any hole or notch be protected against nails or screws by a steel plate that is at least 1/16 inch thick before the building finish is applied. This is the electrical inspector's responsibility.

Note: The steel plates described above appear to be an easy inspection item that the building inspector could check for during his or her framing inspection. However, because not all wiring methods are easily distinguishable and not all wiring methods require steel-plate protection, this portion remains the electrical inspector's responsibility.

Lastly, if the hole or notch penetrates a rated assembly or passes through a space that is to be draftstopped or fireblocked, the materials to fill the void created by the penetration are inspected by the building inspector so that the integrity of the rating, draftstopping, or fireblocking is maintained.

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

Source: Rob Austin
Code Assistance Unit

Ducts: Can They Be Submarine Ducts?

Some construction just shouldn't hold water. This statement applies to duct systems in buildings constructed in compliance with the One- and Two-Family Dwelling Subcode [International Residential Code (IRC) 2000, New Jersey edition] and buildings constructed in compliance with the Building Subcode and the Mechanical Subcode [International Building Code (IBC) 2000, New Jersey edition/International Mechanical Code (IMC) 2003] that are in a flood zone. There are a few differences between these. The IRC has a requirement that forbids ducts from being placed below the design flood elevation (Section R-327.1.5), but the IMC permits ducts to be below the design flood elevation as long as these ducts are designed and constructed to prevent water from entering and accumulating within the ducts (Section 603.13). In essence, the duct needs to be constructed as a boat; more specifically, as a submarine. Also addressed in the IMC are identical requirements that address plenums (Section 602.4).

The requirement for the design of the ducts to address hydrostatic and hydrodynamic loadings is interesting. Hydrostatic loading is the pressure applied to the duct or plenum when the water is stationary or static; a hydrodynamic loading is the pressures applied when the water is moving or flowing. Thus, hydrostatic design is for floodwaters that just rise and fall with little horizontal movement, and hydrodynamic design is for floodwaters that

have a horizontal velocity. The intent of these designs is to keep the duct from being torn away during the flooding event. This should explain the submarine analogy. There is also a requirement for the design to address the effects of buoyancy or "will the submerged duct cause the building or part of the building to move due to floating."

These requirements (IRC versus IMC) are not contrary to each other. Each applies to different building types and only to new building construction. The IRC requirement only applies to new one- and two-family buildings. The IMC requirements apply to all new buildings designed using the IBC/IMC combination. If the designer of a new one- or two-family building wants to use a design that has ducts below the design flood elevation, this may be accomplished through a variation. The ducts should be designed and constructed to prevent water from entering and accumulating within the ducts, in accordance with the minimum requirements found in the Mechanical Subcode (IMC 2003). This is prudent because the IMC 2003 has been adopted and contains new technical requirements that were not included in the 2000 IRC, but are included in the 2003 IRC (though not adopted by New Jersey.)

If there are any questions concerning this article, please contact the Code Assistance Unit at (609) 984-7609.

Source: Jeffery Applegate
Code Assistance Unit

Energy – REScheck and COMcheck Internet Links

New releases for both the REScheck and COMcheck energy compliance tools have been added to the United States Department of Energy's web site, <http://www.energycodes.gov>. Included in the latest versions of REScheck, REScheckWeb, and COMcheck-EZ, is the addition of COMcheck-EZ Web. The links are as follows:

REScheck for Windows, Version 3.6, Release 2 (*runs on Windows 98, 2000, and XP*)
*<http://www.energycodes.gov/rescheck/download.stm>

REScheck for Macintosh, Version 3.6, Release 1a (*runs on Mac OS X*)
*<http://www.energycodes.gov/rescheck/download.stm>

REScheck Web, no download required (*requires Netscape or Internet Explorer*)
*<http://energycode.pnl.gov/REScheckWeb/>

COMcheck-EZ for Windows, Version 3.0, Release 2a (*runs on Windows 98, 2000, and XP*)
*http://www.energycodes.gov/comcheck/ez_download.stm

COMcheck-EZ for Macintosh, Version 3.0, Release 1a (*runs on Mac OS X*)
*http://www.energycodes.gov/comcheck/ez_download.stm

COMcheck-EZ Web, no download required (*requires Netscape or Internet Explorer*)
*<http://energycode.pnl.gov/COMcheckWeb/>

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New Jersey-specific Prescriptive Packages, for one- and two-family detached dwellings and all other residential buildings three stories or less in height only (there are no prescriptive packages recognized for all other buildings), can be found at: [*http://www.state.nj.us/dca/codes/energycodes/index.shtml](http://www.state.nj.us/dca/codes/energycodes/index.shtml).

NOTE: Use the 4500 packages for Atlantic, Camden, Cape May, Cumberland, Gloucester, and Salem Counties; use the 5000 packages for Burlington, Essex, Hudson, Mercer, Middlesex, Monmouth, Ocean, and Union Counties; use the 5500 packages for Bergen, Hunterdon, Morris, Passaic, Somerset, Sussex, and Warren Counties.

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

Source: Rob Austin
Code Assistance Unit

Flexible Air Ducts and Flexible Air Connectors

There is still some confusion regarding the difference between a flexible air duct and a flexible air connector. I will try to clear up some of the questions I have been receiving.

Air ducts and air connectors are typically factory-made assemblies. Flexible air ducts and air connectors are generally used in air distribution systems for relatively short runs of duct.

One of the main problems is that a flexible air duct and a flexible air connector can look exactly alike. However, the markings on the material will identify it as either a flexible air duct or a flexible air connector. Both the flexible air duct and flexible air connector must comply with the requirements of UL 181 for Class 0 or Class 1. Flexible air ducts require more extensive testing (flame-penetration, puncture, and impact tests) than flexible air connectors. This difference in testing is what determines the markings on the material and whether or not it is classified as a flexible air duct or a flexible air connector.

The labeling on an air duct is rectangular and states, "LISTED AIR DUCT." The labeling on an air connector is round or oval and states, "LISTED AIR CONNECTOR." Also, the label for an air connector states, "For installation in length not over 14 feet." Because the testing for flexible air connector material is less stringent than for flexible air duct material, the length for a flexible air connector is limited to 14 feet.

International Mechanical Code/2003, Section 603.6.1.1, "Duct Length," states: "Flexible air ducts shall not be limited in length." Therefore, if a flexible air duct were used as a flexible connection, the 14-foot limitation would not apply.

So, it is very important to check the labeling of the flexible duct or connector to determine whether it is an air duct or air connector before making your determination as to whether or not the 14-foot maximum length is required.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Foundation Drains in Residential Crawl Spaces: Are They Needed?

Section 406.1 of the New Jersey Edition of the 2000 International Residential Code requires walls or portions thereof that retain earth, and that enclose interior spaces and floors below grade, to be waterproofed or dampproofed in accordance with Section 406. This applies only when the floor of the crawl space is below the adjacent grade. Assuming there is no hydrostatic pressure condition, Section 406.4 requires dampproofing and also requires a drain to be installed around the foundation perimeter. The requirements for the drain are found in Section 406.4.2. Remember, the drain does not always require a pipe.

So, the short answer to the question "Are foundation drains needed in residential crawl spaces?" is yes. If you have any questions regarding this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Handicapped Parking Fines Increased

P.L. 2003, c. 161 increased the fine for violating the restrictions on an accessible parking space from \$100 to \$250. In order for the \$250 fine to be enforceable, the fine amount posted on each sign must be changed to \$250. There are companies (I do not have names) that make stickers that can be put over the existing numbers.

The Handicapped Parking Act, which was passed in 1989, designated the "reserved parking" signs as the required signs and also required the penalty signs. The responsibility for ensuring that the signs are updated is as follows:

- Signs that are posted at parking spaces that serve an accessible building entrance are considered to be "UCC spaces" and the construction official is responsible for ensuring that the amount of the penalty shown on the sign is increased.
- Signs that are posted at spaces on a municipal street are the responsibility of the municipal engineer — or another designated municipal official.
- Signs that are posted at spaces in a municipal parking lot that does not serve a specific building entrance are also the responsibility of the municipal engineer — or another designated municipal official.

If you have any questions about the Barrier Free Subcode, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily Templeton
Code Development Unit

Home Improvement Contractor Registration Deadline Looms Near

As the end of 2005 draws near, so does the Division of Consumer Affairs' registration deadline for all home improvement contractors in the State of New Jersey. Like it or not, December 31, 2005 is the deadline for home improvement contractors to be registered with Consumer Affairs in order to perform work in the State. Additionally, these contractors must be registered prior to the issuance of a construction permit.

Consumer Affairs cannot possibly register all of the contractors in the State during the month of December; therefore, they are requesting that construction departments help them with getting the word out. When a contractor comes to the counter to obtain a construction permit, please remind him or her of the contractor registration requirements.

Applications may be obtained by logging onto <http://www.njconsumeraffairs.com/contractor.htm>, or calling toll-free (888) 656-6225.

Consumer Affairs has published a poster for you to display in your office. If you have not received one, please contact Soraya Westerband by e-mail at soraya.westerband@lps.state.nj.us, or by telephone at (973) 504-6543. Thank you for your assistance.

Source: John N. Terry
Code Assistance Unit

IRC – Mechanical/Fuel Gas Requirements, Contents Inside

In the case of one- and two-family detached dwellings and townhouses, all three stories or less, have you been citing the mechanical and fuel gas sections (Chapters 12 through 24) of the International Residential Code (IRC) for code compliance? If you have, keep up the good work. For those of you who have been citing the International Mechanical Code (IMC) and International Fuel Gas Code (IFGC) for one- and two-family detached dwellings and townhouses, all three stories or less, please take note of the above. There are some differences between residential applications (IRC) and commercial applications (IMC and IFGC) for mechanical and fuel gas installations, therefore requiring you as the code official to cite the permit applicant the appropriate section.

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

Source: Rob Austin
Code Assistance Unit

Mortgagors, Mortgagees, and Unfinished Buildings

In 2001, the New Jersey Legislature passed an amendment to the State Uniform Construction Code Act that added a new paragraph c. to *N.J.S.A. 52:27D-131*. This new provision authorizes an enforcing agency to revoke or cancel a construction permit if the project is not completed by the third anniversary of the date of issuance of the construction permit. This provision became operative on the third anniversary of the amendment to the statute, January 14, 2005; an implementing Department of Community Affairs' rule, at *N.J.A.C. 5:23-2.16(f)*, also became operative on that date.

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Both the statute and rule provide for three exceptions to the authority of the construction official to revoke or cancel permits. These exceptions are: (1) permits for construction improvements to the interior of a house in which the permit holder resides that are not visible from the exterior; (2) permits for any building for which the exterior and all required site improvements are complete; and (3) permits for projects under control of a mortgagee in possession.

It has come to our attention that there is some confusion among code officials as to who qualifies as a mortgagee in possession. A mortgagee in possession is a bank or other lender who has foreclosed on a mortgage, accepted a deed in lieu of foreclosure, or otherwise taken control of a property from the borrower, who is also known as the mortgagor.

The **mortgagor** is the property owner who gives a mortgage, which is an interest in real property, to a mortgagee, who is the lender, as security for a loan. Because people commonly speak of "getting a mortgage" from a bank, the terminology is easy to misunderstand. However, it is more accurate to say that what a property owner (mortgagor) **gets** is a loan; what he or she **gives** to the mortgagee to get that loan is a mortgage, which is the right to take ownership of the property in the event of default.

This raises the question as to why that last provision is in the law and therefore in the rule. The answer, quite simply, is that the banks did not want to risk having properties on which they might foreclose be demolished and, not being in the business of finishing houses, they successfully lobbied the sponsor of the bill to exempt them.

Source: Michael Ticktin, Esq.
Chief, Legislative Analysis

New Jersey Register Adoptions

Date: July 5, 2005
Adoption: 37 N.J.R. 2474(a)
Summary: These adopted amendments to N.J.A.C. 5:23-2.23 tie temporary Certificates of Occupancy to the soil district's Conditional Report of Compliance. In addition, the adopted amendments require Temporary Certificates of Occupancy to include a list of any work that is to be completed before the issuance of a Final Certificate of Occupancy.

Date: June 20, 2005
Adoption: 37 N.J.R. 2201(b)
Summary: These adopted amendments to N.J.A.C. 5:23-6.31, 7.3, 7.5, 7.7, 7.9, and 7.10 revise the requirements of the Barrier Free Subcode of the Uniform Construction

Code for assisted-living facilities, townhouses, boarding homes, dormitories, accessible beds in hotel rooms, firewalls and partywalls, accessible entrances, and accessible parking.

Source: Megan K. Sullivan
Code Development Unit

New Jersey Association of Technical Assistants Goes National

During this year's Building Safety Conference, held May 4-6 in Atlantic City, the New Jersey Association of Technical Assistants (NJATA) invited a representative from the Washington State Association of Permit Technicians (WSAPT) to speak at our State technical assistants association meeting. Shawna Gossett, 2nd Vice-President of WSAPT, provided an overview of their association, followed by a question-and-answer period in which we discussed some of our similarities and differences.

This exchange presented a great opportunity for us to build a working relationship with an established organization. We hope to continue to build towards a national conference for "Permit Technicians," as they are known nationally. Shawna took home a lot of information from her visit and we gained some great information from her, as well.

The following is some brief information on the WSAPT. I am including their web address and encourage all of you to browse their web site.

WSAPT was begun in 1995 by a group of people interested in forming an association to provide support for the city and county workers who are commonly referred to as "front-counter staff" from the building, planning, and engineering departments. This group formed an interim board of executive officers and began to work on bylaws. In January 1999, they became an official chapter of the International Council of Building Officials (ICBO). With the merger of the three national model codes into a single international code, the ICBO chapter elected to become a chapter of the International Codes Council (ICC). They are now recognized by the ICC, and are continuing with their educational programs and support for their members.

The WSAPT association is composed of people who currently work for a municipality (which includes city and county governments). Their board consists of a president, 1st vice-president, 2nd vice-president, recorder, and treasurer. Each of those board members is a liaison to chairs of various WSAPT committees including

Administration, Bylaws, Code Development, Education/Certification, Membership, Newsletter, and Peer.

In the early years, this group's main goal was to establish a Certified Permit Technician test through ICBO. Members of WSAPT have been obtaining this certification since September 1998. Today, Washington has 136 certified members, the second highest number in the country.

We in New Jersey believe there is a lot to learn from such an accomplished group. Many thanks to the WSAPT members for working with us and sharing in our conference. We look forward to continuing our relationship. For more information, please visit <http://www.wabo.org> and click on the WSAPT link.

Source: Dawn M. Neil
President
New Jersey Association of Technical Assistants



From left to right: Shawna Gosset, 2nd Vice-President of the WSAPT; Dawn Neil, President of NJATA; Debbie Timko, Secretary of NJATA; Linda Aiello, VP/Treasurer of NJATA.



From left to right: Dawn Neil, President of the NJATA, is presented with WSAPT membership materials from Shawna Gosset, 2nd Vice-President of the WSAPT.

Oh Where, Oh Where Does the Bond Wire Go?

The pool season has done it again! It has brought more questions like, “Does the bond wire get connected to motor control panels or sub-panels?”

Section 680.26(B)(4) of the 2002 National Electrical Code states that metal parts of electrical equipment associated with the pool water circulating system (including pump motors) and metal parts of equipment associated with pool covers (including electric motors) shall be bonded. Where double-insulated pump motors are utilized, the bonding is not required.

Therefore, the answer is **NO**; the bond wire does not get connected to the motor control panel or sub-panel. Unlike the motor, these panels are not associated with the pool water circulating system.

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

Source: Suzanne Borek
Code Assistance Unit

Plan Review Authority for Residential Health Care Facilities

On March 14, 2005, Acting Governor Richard J. Codey issued Reorganization Plan No. 002-2005. This plan transfers responsibility for all license, regulatory, and enforcement activities related to free-standing residential health care facilities, as defined in P.L. 1953, c. 212, §1, as amended (C. 30:11A-1), from the New Jersey Department of Health and Senior Services (DHSS) to the Department of Community Affairs (DCA). This transfer does not apply to residential health care facilities located within, or functioning as part of, another licensed health care facility such as a nursing home, assisted-living facility, or hospital.

Since both free-standing residential health care facilities and boarding houses provide services to similar populations, the Bureau of Rooming and Boarding House Standards (BRBHS) will now be the agency within the DCA with authority over residential health care facilities.

For over 30 years, while the residential health care program was under the DHSS authority, these free-standing facilities were considered “licensed health care facilities.” At that time, per *N.J.A.C. 5:23-3.11(a)8*, plan review for these facilities was reserved to the DCA Health Care Plan Review Unit as the sole plan review agency for health care facilities. With the transfer of authority for free-standing residential health care facilities to the DCA, these facilities

are no longer “licensed health care facilities” and, as such, there is no longer any need for plan review to be reserved to the DCA Health Care Plan Review Unit.

Therefore, appropriately licensed municipalities may now review plans for construction projects within their jurisdiction that involve free-standing residential health care facilities. Municipalities shall apply the New Jersey Uniform Construction Code and its associated adopted standards (IBC, IMC, NSPC, NEC), as appropriate, when reviewing such projects.

Local officials who are unfamiliar with these types of facilities can receive guidance in applying the codes by calling our offices at (609) 984-7850.

Source: David B. Uhaze, RA
Chief
Bureau of Construction Project Review

Purple Wire Connectors

There have been some questions as to whether or not there is a wire connector listed and labeled for connecting aluminum to copper wire. The answer is yes.

The wire connectors that are listed and labeled for this specific use are purple, and can be used only once. They cannot be reused like standard wire connectors due to the antioxidant compound contained within the connector.

There is only one manufacturer at present who has the wire connectors for this purpose; it is a model #65. *Do not confuse these with standard purple wire connectors!*

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

Source: Suzanne Borek
Code Assistance Unit

Shop Drawing Revisited

Over the past few years, code officials have handled the submittal of documents for engineered lumber in a multitude of ways. The following are three separate scenarios that are intended to provide direction as to how design documents or shop drawings should be handled.

In the first scenario, the design professional of record has provided sufficient detail on the original design documents to determine compliance with the requirements of the code for the engineered wood product. If the design

professional provides sufficient specification and detail (depth, width, joist series, on-center spacing), there is no need for a shop drawing to be submitted by the manufacturer. Any additional information that is needed to determine compliance with the code should be requested of, and provided by, the design professional of record.

In the second scenario, the design professional of record does not provide sufficient information on the design documents to determine compliance with the requirements of the code. When the design professional of record does not include detail on the original design documents, signed and sealed shop drawings are required. As per *N.J.A.C. 5:23-2.15(e)1xi*, any deferred submittal must be reviewed and accepted by the design professional of record.

In the third scenario, engineered wood products are used in place of other specified products. In this instance, the documents submitted by the engineered wood product manufacturer are required to be signed and sealed. This is a deviation from the original design and must be approved by the design professional of record.

These three scenarios should guide you in determining the need for your documents to be signed and sealed, as well as by whom. If you have further questions on this matter, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Supporting Recessed Lighting Fixtures

Article 410, Part IV of the 2002 National Electrical Code (NEC/2002), specifically Sections 410.15 and 410.16, contains the requirements for the support of lighting fixtures. When installing *recessed lighting fixtures* in a suspended ceiling, Section 410.16(C) and Section 410.15(A) of the NEC/2002 contain specific requirements for the means of support.

Section 410.16(C): The framing members of a suspended ceiling may support recessed lighting fixtures as long as the fixtures are fastened by mechanical means (i.e., screws, rivets, and/or listed clips) to the framing members. The framing members shall be fastened together and attached to the building structure appropriately.

Section 410.15(A): This section is key. The suspended ceiling framing members can be properly attached to the building structure and the recessed lighting fixtures properly attached to the suspended ceiling; but, *if*

the weight of the fixtures is not accounted for, the ceiling could fail. To help prevent failure, the building subcode official shall verify the design specifications for the maximum weight allowance of the ceiling assembly with all lighting fixtures installed.

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

Source: Rob Austin
Code Specialist

Which Way Does It Go? . . . The Emergency Lighting Branch Circuit

The question keeps arising: "On which branch circuit is the emergency lighting required to be installed?"

Section 700.12(E) of the 2002 National Electrical Code states that the branch circuit for unit equipment, such as an exit sign with battery-powered backup, shall be the same branch circuit as that serving the normal lighting in the area and is to be connected ahead of any local switches. The branch circuit that feeds the unit equipment shall be clearly identified at the distribution panel.

This means that, wherever the emergency lighting unit equipment is installed, it is required to be on the normal lighting circuit in the area. The overcurrent protective device has to be clearly identified in the panel that is feeding the unit equipment.

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

Source: Suzanne Borek
Code Assistance Unit

Your Service . . . and Stucco?

That's right . . . the latest and greatest stylish thing to do to your house is stucco! Does this mean that the service may be encapsulated or covered in its entirety by stucco? The answer is no.

Section 230.6 of the 2002 National Electrical Code (NEC/2002) states that service conductors shall be considered outside of the building where they are installed under 2 inches or more of concrete; where they are installed within a building in a raceway that is encased in concrete or brick that is 2 inches thick; where they are installed in a vault that meets the construction requirements of Article

(continued from page 13)

450, Part III; or where they are installed in conduit and under not less than 18 inches of earth beneath a building.

Section 110.3(B) of the NEC/2002 states that listed or labeled equipment shall be installed and used in accordance with the instructions included in the listing or labeling.

Service conductors *are not* considered outside of the building when they are contained within a building finish. The listing and labeling of the service conductors is not approved for being installed in stucco. And, just like painted service conductors, Underwriter's Laboratories, Inc. has not tested the conductors under these conditions.

Therefore, service conductors shall not be installed in or behind stucco.

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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State of New Jersey

Richard J. Codey, Acting Governor

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Department of Community Affairs

Charles A. Richman, Acting Commissioner

Winter 2005

Accessible Parking: Check Out the Closest Parking Space

It has come to the Department of Community Affairs' attention that there is at least one nationally known small business that has a standard building and site design currently being submitted to municipalities throughout the State. There is a problem, however, with the site design — the accessible parking spaces are often not the closest parking spaces on the shortest accessible route to the accessible building entrance. In fact, in many cases, the accessible spaces can be as many as three parking spaces from the accessible entrance.

Both the Department and the Division of Civil Rights have received complaints from people with disabilities regarding this area of noncompliance, and have been working toward a resolution. Although the complaint is focused on newly constructed stores belonging to a national pharmacy chain, the problem could exist at other, similar sites.

To ensure that the noncompliant parking does not remain, the building subcode official should check the accessible parking spaces at all newly constructed stores. If the accessible parking spaces are not the closest spaces on the shortest accessible route to the accessible building

entrance, the building subcode official should order that the noncomplying spaces be corrected.

If there are questions about this initiative, please contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Emily Templeton
Code Development

ASHRAE Standard 90.1-1999: Energy Code Compliance

For those of you having difficulty using the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1999 for energy code compliance, this article will be helpful for the building envelope portion.

Chapter 5 of the ASHRAE 90.1/1999 is divided into four sections: 5.1 – General, 5.2 – Mandatory Provisions, 5.3 – Prescriptive Building Envelope Option, and 5.4 – Building Envelope Trade-Off Option. From these sections, the end result will be to go to Tables B-13 and B-14 in the back of the standard. These tables contain the prescriptive requirements for building envelope design only.

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The breakdown on how to use the tables is as follows: Section 5.1.3 sends the user to Table D for New Jersey requirements, which lists Table B-13 for Newark, and Table B-14 for Atlantic City, Long Branch, and Oakhurst. As per Section 5.3, Tables B-13 and B-14 shall be inserted into Table 5.3 to be used for the Prescriptive Building Envelope Option. Since only four municipalities are listed, the design professional has to base the energy design criteria on the closest listed municipality.

Table 5.3 (from Tables B-13 or B-14) provides the minimum building envelope requirements, very much like a prescriptive package for low-rise residential, but it does not cover the electrical and mechanical provisions of ASHRAE 90.1/1999. The most direct method is to use these tables as a baseline for design criteria by inserting their values into the *COMcheck-EZ* software package (www.energycodes.gov) and letting the program do all the calculations for not only the building envelope, but the electrical and mechanical portions as well.

Tables B-13 and B-14 follow this article on pages 3 and 4. The symbols below are used in the tables; their corresponding definitions have been inserted for use with the tables.

C-Factor (Thermal Conductance)

Time rate of steady-state heat flow through unit area of a material or construction, induced by a unit temperature difference between the body surfaces. Units of C are Btu/h* ft^2 *°F. Note that the C-factor does not include soil or air films.

F-Factor

The perimeter heat loss factor for slab-on-grade floors, expressed in Btu/h* ft^2 *°F.

Rated R-Value of Insulation

The thermal resistance of the insulation alone as specified by the manufacturer in units of h* ft^2 *°F/Btu at a mean temperature of 75°F. Rated R-value refers to the thermal resistance of the added insulation in framing cavities or insulated sheathing only and does not include the thermal resistance of other building materials or air film. (See thermal resistance.)

Thermal Resistance (R-Value)

The reciprocal of the time rate heat flow through unit area induced by a unit temperature difference between two defined surfaces of material or construction under steady-state conditions. Units of R are h* ft^2 *°F/Btu.

U-Factor (Thermal Resistance)

Heat transmission in unit time through unit area of a material or construction and the boundary of air films induced by unit temperature difference between environments on each side. Units of U are Btu/h* ft^2 *°F.

NR = no insulation requirement

ci = continuous insulation

Lastly, if one chooses not to follow the above, Section 5.4 – Building Envelope Trade-Off Option may be used. This requires hand calculations using Appendix C. These calculations can be tedious to do as a design professional and even more tedious to review as a code official. This will leave the electrical and mechanical portions to factor into the equation, and again leads to the recommendation of using the *COMcheck-EZ* software package, as it is FREE.

NOTE: Unlike the Council of American Building Officials' Model Energy Code 1995 that requires slab insulation for all low-rise residential structures, ASHRAE 90.1/1999 only requires slab-perimeter insulation for heated slabs in New Jersey. Unheated slabs under ASHRAE 90.1/1999 are not required to have perimeter insulation (unless the design utilizes the insulation to pass the overall energy code compliance in a *COMcheck-EZ* report).

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

Source: Rob Austin
Code Specialist

Bulletins on the Web

Are your Uniform Construction Code (UCC) bulletins looking tattered and old? Do some of the code references look a little dated? Well, have I got good news for you: We are now in the process of revising all UCC bulletins. Each bulletin will be placed on the Internet as it is formatted, complete with up-to-date code references and new revised dates or updated code reference dates so you can tell what is old, what is new, or what was updated to reflect current model codes. Currently, there are only a handful of bulletins online, but please bear with us as we are working diligently to accomplish this project. In your free time, please visit our web site at www.state.nj.us/dca/codes and view, print, download, etc. the available bulletins to update your UCC.

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ASHRAE 90.1-1999, Table B-13						
Building Envelope Requirements (HDD65: 3601-5400, CDD50: 3601+)						
(Based on Table D-1, US Climatic Data: Newark and Neighboring Municipalities)						
Opaque Elements	Nonresidential		Residential		Semi-Heated	
	Assembly Maximum	Insulation Minimum R-Value	Assembly Maximum	Insulation Minimum R-Value	Assembly Maximum	Insulation Minimum R-Value
Roofs						
--Insulation Entirely Above Deck	U - 0.063	R - 15.0 ci	U - 0.063	R - 15.0 ci	U - 0.218	R - 3.8 ci
--Metal Building	U - 0.065	R - 19.0	U - 0.065	R - 19.0	U - 0.097	R - 10.0
--Attic and Other	U - 0.034	R - 30.0	U - 0.027	R - 38.0	U - 0.081	R - 13.0
Walls, Above Grade						
--Mass	U - 0.151*	R - 5.7 ci*	U - 0.104	R - 9.5 ci	U - 0.580	NR
--Metal Building	U - 0.113	R - 13.0	U - 0.113	R - 13.0	U - 0.134	R - 10.0
--Steel Framed	U - 0.124	R - 13.0	U - 0.064	R - 13.0 plus R - 7.5 ci	U - 0.124	R - 13.0
--Wood Framed and Other	U - 0.089	R - 13.0	U - 0.089	R - 13.0	U - 0.089	R - 13.0
Wall, Below Grade						
--Below Grade Wall	C - 1.140	NR	C - 1.140	NR	C - 1.140	NR
Floors						
--Mass	U - 0.107	R - 6.3 ci	U - 0.087	R - 8.3 ci	U - 0.322	NR
--Steel Joist	U - 0.052	R - 19.0	U - 0.038	R - 30.0	U - 0.069	R - 13.0
--Wood Framed and Other	U - 0.051	R - 19.0	U - 0.033	R - 30.0	U - 0.066	R - 13.0
Slab-On-Grade Floors						
--Unheated	F - 0.730	NR	F - 0.730	NR	F - 0.730	NR
--Heated	F - 0.950	R - 7.5 for 24 inches	F - 0.840	R - 10 for 36 inches	F - 1.020	R - 7.5 for 12 inches
Opaque Doors						
--Swinging	U - 0.700		U - 0.700		U - 0.700	
--Non-Swinging	U - 1.450		U - 0.500		U - 1.450	
<i>Fenestration</i>	<i>Assembly Maximum U (Fixed/ Operable)</i>	<i>Assembly Maximum SHGC (All Orientations/ North-Oriented)</i>	<i>Assembly Maximum U (Fixed/ Operable)</i>	<i>Assembly Maximum SHGC (All Orientations/ North-Oriented)</i>	<i>Assembly Maximum U (Fixed/ Operable)</i>	<i>Assembly Maximum SHGC (All Orientations/ North-Oriented)</i>
Vertical Glazing, % of Wall						
-- 0 - 10.0%	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 1.22 U _{oper} - 1.27	SHGC _{all} - NR SHGC _{north} - NR
-- 10.1 - 20.0%	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 1.22 U _{oper} - 1.27	SHGC _{all} - NR SHGC _{north} - NR
-- 20.1 - 30.0%	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 1.22 U _{oper} - 1.27	SHGC _{all} - NR SHGC _{north} - NR
-- 30.1 - 40.0%	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 1.22 U _{oper} - 1.27	SHGC _{all} - NR SHGC _{north} - NR
-- 40.1 - 50.0%	U _{fixed} - 0.46 U _{oper} - 0.47	SHGC _{all} - 0.25 SHGC _{north} - 0.36	U _{fixed} - 0.46 U _{oper} - 0.47	SHGC _{all} - 0.25 SHGC _{north} - 0.36	U _{fixed} - 0.98 U _{oper} - 1.02	SHGC _{all} - NR SHGC _{north} - NR
Skylight with Curb, Glass, % of Roof						
-- 0 - 2.0%	U _{all} - 1.17	SHGC _{all} - 0.49	U _{all} - 1.17	SHGC _{all} - 0.36	U _{all} - 1.98	SHGC _{all} - NR
-- 2.1 - 5.0%	U _{all} - 1.17	SHGC _{all} - 0.39	U _{all} - 1.17	SHGC _{all} - 0.19	U _{all} - 1.98	SHGC _{all} - NR
Skylight with Curb, Plastic, % of Roof						
-- 0 - 2.0%	U _{all} - 1.30	SHGC _{all} - 0.65	U _{all} - 1.30	SHGC _{all} - 0.62	U _{all} - 1.90	SHGC _{all} - NR
-- 2.1 - 5.0%	U _{all} - 1.30	SHGC _{all} - 0.34	U _{all} - 1.30	SHGC _{all} - 0.27	U _{all} - 1.90	SHGC _{all} - NR
Skylight without Curb, All, % of Roof						
-- 0 - 2.0%	U _{all} - 0.69	SHGC _{all} - 0.49	U _{all} - 0.69	SHGC _{all} - 0.36	U _{all} - 1.36	SHGC _{all} - NR
-- 2.1 - 5.0%	U _{all} - 0.69	SHGC _{all} - 0.39	U _{all} - 0.69	SHGC _{all} - 0.19	U _{all} - 1.36	SHGC _{all} - NR

* Exception to 5.3.1.2a applies.

(continued from page 3)

ASHRAE 90.1-1999, Table B-14						
Building Envelope Requirements (HDD65: 3601-5400, CDD50: 1801-3600)						
(Based on Table D-1, US Climatic Data: Atlantic City, Long Branch, Oakhurst, and Neighboring Municipalities)						
Opaque Elements	Nonresidential		Residential		Semi-Heated	
	Assembly Maximum	Insulation Minimum R-Value	Assembly Maximum	Insulation Minimum R-Value	Assembly Maximum	Insulation Minimum R-Value
Roofs						
--Insulation Entirely Above Deck	U - 0.063	R - 15.0 ci	U - 0.063	R - 15.0 ci	U - 0.218	R - 3.8 ci
--Metal Building	U - 0.065	R - 19.0	U - 0.065	R - 19.0	U - 0.097	R - 10.0
--Attic and Other	U - 0.034	R - 30.0	U - 0.034	R - 30.0	U - 0.081	R - 13.0
Walls, Above Grade						
--Mass	U - 0.151*	R - 5.7 ci*	U - 0.104	R - 9.5 ci	U - 0.580	NR
--Metal Building	U - 0.113	R - 13.0	U - 0.113	R - 13.0	U - 0.134	R - 10.0
--Steel Framed	U - 0.124	R - 13.0	U - 0.084	R - 13.0 plus R - 3.8 ci	U - 0.124	R - 13.0
--Wood Framed and Other	U - 0.089	R - 13.0	U - 0.089	R - 13.0	U - 0.089	R - 13.0
Wall, Below Grade						
--Below Grade Wall	C - 1.140	NR	C - 1.140	NR	C - 1.140	NR
Floors						
--Mass	U - 0.107	R - 6.3 ci	U - 0.087	R - 8.3 ci	U - 0.322	NR
--Steel Joist	U - 0.052	R - 19.0	U - 0.052	R - 19.0	U - 0.069	R - 13.0
--Wood Framed and Other	U - 0.051	R - 19.0	U - 0.033	R - 30.0	U - 0.066	R - 13.0
Slab-On-Grade Floors						
--Unheated	F - 0.730	NR	F - 0.730	NR	F - 0.730	NR
--Heated	F - 0.950	R - 7.5 for 24 inches	F - 0.840	R - 10 for 36 inches	F - 1.020	R - 7.5 for 12 inches
Opaque Doors						
--Swinging	U - 0.700		U - 0.700		U - 0.700	
--Non-Swinging	U - 1.450		U - 0.500		U - 1.450	
Fenestration						
	Assembly Maximum U (Fixed/Operable)	Assembly Maximum SHGC (All Orientations/ North-Oriented)	Assembly Maximum U (Fixed/Operable)	Assembly Maximum SHGC (All Orientations/ North-Oriented)	Assembly Maximum U (Fixed/Operable)	Assembly Maximum SHGC (All Orientations/ North-Oriented)
Vertical Glazing, % of Wall						
-- 0 - 10.0%	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.49 SHGC _{north} - 0.49	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.49 SHGC _{north} - 0.49	U _{fixed} - 1.22 U _{oper} - 1.27	SHGC _{all} - NR SHGC _{north} - NR
-- 10.1 - 20.0%	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 1.22 U _{oper} - 1.27	SHGC _{all} - NR SHGC _{north} - NR
-- 20.1 - 30.0%	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 1.22 U _{oper} - 1.27	SHGC _{all} - NR SHGC _{north} - NR
-- 30.1 - 40.0%	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 0.57 U _{oper} - 0.67	SHGC _{all} - 0.39 SHGC _{north} - 0.49	U _{fixed} - 1.22 U _{oper} - 1.27	SHGC _{all} - NR SHGC _{north} - NR
-- 40.1 - 50.0%	U _{fixed} - 0.46 U _{oper} - 0.47	SHGC _{all} - 0.26 SHGC _{north} - 0.36	U _{fixed} - 0.46 U _{oper} - 0.47	SHGC _{all} - 0.26 SHGC _{north} - 0.36	U _{fixed} - 0.98 U _{oper} - 1.02	SHGC _{all} - NR SHGC _{north} - NR
Skylight with Curb, Glass, % of Roof						
-- 0 - 2.0%	U _{all} - 1.17	SHGC _{all} - 0.49	U _{all} - 1.17	SHGC _{all} - 0.36	U _{all} - 1.98	SHGC _{all} - NR
-- 2.1 - 5.0%	U _{all} - 1.17	SHGC _{all} - 0.39	U _{all} - 1.17	SHGC _{all} - 0.19	U _{all} - 1.98	SHGC _{all} - NR
Skylight with Curb, Plastic, % of Roof						
-- 0 - 2.0%	U _{all} - 1.30	SHGC _{all} - 0.77	U _{all} - 1.30	SHGC _{all} - 0.27	U _{all} - 1.90	SHGC _{all} - NR
-- 2.1 - 5.0%	U _{all} - 1.30	SHGC _{all} - 0.62	U _{all} - 1.30	SHGC _{all} - 0.27	U _{all} - 1.90	SHGC _{all} - NR
Skylight without Curb, All, % of Roof						
-- 0 - 2.0%	U _{all} - 0.69	SHGC _{all} - 0.49	U _{all} - 0.69	SHGC _{all} - 0.36	U _{all} - 1.36	SHGC _{all} - NR
-- 2.1 - 5.0%	U _{all} - 0.69	SHGC _{all} - 0.39	U _{all} - 0.69	SHGC _{all} - 0.19	U _{all} - 1.36	SHGC _{all} - NR

* Exception to 5.3.1.2a applies.

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Also in the future, we will be updating the formal technical opinions.

NOTE: Bulletins that have updated code references will not be republished; they will be posted on our web site only. Bulletins that needed extensive revisions or substantive changes will be mailed as part of your update package at a later date and then placed on our web site.

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

Source: Rob Austin
Code Specialist

Do You Know Your NRTLs?

There are references to Nationally Recognized Testing Laboratories (NRTLs) in all of the adopted subcodes of the Uniform Construction Code and at *N.J.A.C. 5:23-3.7(a)*, which provide for the local enforcing agency to accept an NRTL report when an alternative material, equipment, or a method of construction is used for all of the subcodes. Acceptance of the NRTL is up to the local code enforcement agency.

The following is a list of organizations currently recognized by the Occupational Safety and Health Administration as NRTLs that may be helpful:

- Applied Research Laboratories, Inc. (ARL)
- Canadian Standards Association (CSA)
(also known as CSA International)
- Communication Certification Laboratory, Inc. (CCL)
- Curtis-Straus LLC (CSL)
- Electrical Reliability Services, Inc. (ERS)
[also known as ETI Conformity Services and formerly Electro-Test, Inc. (ETI)]
- Entela, Inc. (ENT)
- FM Global Technologies LLC (FM)
(also known as FM Approvals and formerly Factory Mutual Research Corporation)
- Intertek Testing Services NA, Inc. (ITSNA)
(formerly ETL)
- MET Laboratories, Inc. (MET)
- NSF International (NSF)
- National Technical Systems, Inc. (NTS)

- SGS U.S. Testing Company, Inc. (SGSUS)
(formerly UST-CA)
- Southwest Research Institute (SWRI)
- TUV America, Inc. (TUVAM)
- TUV Product Services GmbH (TUVPSG)
- TUV Rheinland of North America, Inc. (TUV)
- Underwriters Laboratories, Inc. (UL)
- Wyle Laboratories, Inc. (WL)

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

Source: Suzanne Borek
Code Assistance Unit

New Fire Extinguisher Requirements and the UCC: How are They Enforced?

Recently, there was an amendment to the Uniform Fire Safety Act requiring portable fire extinguishers to be installed in one- and two-family residences. Be advised that this is to be enforced at change of ownership under the Uniform Fire Code (UFC). This requirement is not to be enforced under the Uniform Construction Code (UCC). There are no requirements contained in the UCC regarding this recent amendment. The requirement does not apply to a transfer between a new home builder and the first buyer. The UFC regulation was required by a recently enacted law. That law does not require fire extinguishers to be provided by the seller in the first sale of a new home.

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

Source: Carmine Giangeruso
Division of Codes and Standards

Gas Pipe Sizing Confusion

In the Fall 2001 edition of the *Construction Code Communicator*, an article appeared entitled "Sizing of Gas Piping." This article updated the sizing tables for iron piping and schedule 40 standard piping that are listed in Bulletin No. 94-1.

The article stated which tables should be used for gas pipe sizing when the utility supplier provides gas with a specific gravity of 0.6, a system pressure of 0.5 PSIG or less, and a pressure drop of 0.3 inches of water column.

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Fenestration Area

Section 5.3.2.1 of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1999 contains the glazing requirements for energy code compliance in all new buildings except one- and two-family detached dwellings, and multifamily buildings three stories or less in height. This section states, "The total vertical fenestration area, including both fixed vertical fenestration and operable vertical fenestration, shall be less than 50% of the gross wall area. The total skylight area, including glass skylights, plastic skylights with a curb, and all skylights without a curb, shall be less than 5% of the gross roof area." When applying the definition of "fenestration, vertical," the user must go to the definition of "fenestration." Fenestration is all areas (including the frames) in the building envelope that let light in including: windows, plastic panels, clerestories, skylights, glass doors that are more than one-half glass, and glass-block walls.

So, in short, all glazing in the building envelope that lets light in must meet the area requirement of Section 5.3.2.1:

- Less than 50% of the gross wall area may allow light in
- Less than 5% of the gross roof area may allow light in

Note: When one sees an italicized word in a section requirement of ASHRAE 90.1/1999, this is a reminder to the user that the word is defined in Chapter 3.

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

Source: Rob Austin
Code Specialist

Here Come the Home Improvement Contractor Registration Requirements!!

As most of you have heard, the Home Improvement Contractor Registration requirements are effective starting January 1, 2006. Beginning on this date, construction permits may not be issued to any home improvement contractor who is not registered with the Division of Consumer Affairs.

The Division of Consumer Affairs has issued every registered contractor a wallet card as proof of registration. Prior to the issuance of a construction permit for a home improvement project, it will be necessary for the permit applicant to present verification of his registration. The

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The article also stated, "When natural gas is delivered under conditions other than those described above, the appropriate gas pipe sizing table should be used."

The tables in that article are to be used as a guide, and do not preclude the use of other tables as listed in the International Fuel Gas Code (IFGC) for other gas pressures and piping materials. Also, the manufacturer's sizing tables may be used.

The IFGC/2003, Section 402.3, Sizing, states three sizing methods that may be used to size gas piping. They are:

1. Pipe sizing tables or sizing equations in accordance with Section 402.4;
2. The sizing tables included in a listed piping system's manufacturer's installation instructions; or
3. Other approved engineering methods.

The 0.3 pressure drop was agreed to by the four gas suppliers in New Jersey at the time Bulletin No. 94-1 was approved. Since that time, some gas suppliers are now permitting the use of a 0.5 pressure drop. If a 0.5 pressure drop is used, then the appropriate table should be used. It is not mandatory that the 0.3 pressure drop be used. Have the contractor supply a letter from the gas supplier stating that the 0.5 pressure drop is acceptable in their service area.

Also, remember that the manufacturer's sizing tables are an acceptable sizing method, especially for sizing corrugated stainless-steel tubing.

As another point of interest, the IFGC/2000 has tables for sizing gas piping for one- and two-pound pressures with a ten percent pressure drop. The IFGC/2003 omitted these two tables from the code. Therefore, it is recommended that Tables 402.3(7) and 402.3(8) from the IFGC/2000 be permitted to be used to size gas piping for one and two pounds with a pressure drop of ten percent.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Glazing and COMcheck-EZ 

When inserting or verifying glazing data (windows, doors, skylights) into COMcheck-EZ for all new buildings (except one- and two-family detached dwellings, and multifamily buildings three stories or less in height), you should know the following:

1. *Total window components, total glazed door components, and total skylight components.*
2. *Type of assemblies* (wood, vinyl, metal, etc.) *for #1.*
3. *Construction details* (i.e., clear/tinted, operable/ fixed) *for #1.*
4. *U-factors (values) for #1.* U-factors are developed by the National Fenestration Rating Council (NFRC) using a whole product (glazed assembly) performance energy rating system. For additional information, visit its web site at www.nfrc.org.
5. *Solar heat gain coefficients (SHGCs) of #1.* These are also developed by the NFRC.

A typical window label from the NFRC (see Figure 1) clearly states the U-factors and SHGCs. If a window, glazed door, or skylight does not contain a label, the information can usually be obtained from the manufacturer.

		<p>World's Best Window Co. Millennium 2000+ Vinyl-Clad Wood Frame Double Glazing • Argon Fill • Low E Product Type: Vertical Slider (per NFRC 100-97)</p>	
ENERGY PERFORMANCE RATINGS			
U-Factor (U.S./I-P)		Solar Heat Gain Coefficient	
0.35		0.32	
ADDITIONAL PERFORMANCE RATINGS			
Visible Transmittance		Air Leakage (U.S./I-P)	
0.51		0.2	
<small>Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. Consult manufacturer's literature for other product performance information. www.nfrc.org</small>			

Figure 1

6. *Projection factors (if applicable) for windows and glazed doors.* Windows and glazed doors with overhangs will produce a projection factor. A

projection factor is nothing more than a ratio; length of the overhang measured from the building surface to the edge of the overhang furthest away from the building (dimension A) divided by the height of the overhang measured from the bottom of the window or glazed door (dimension B). (See Figure 2.)

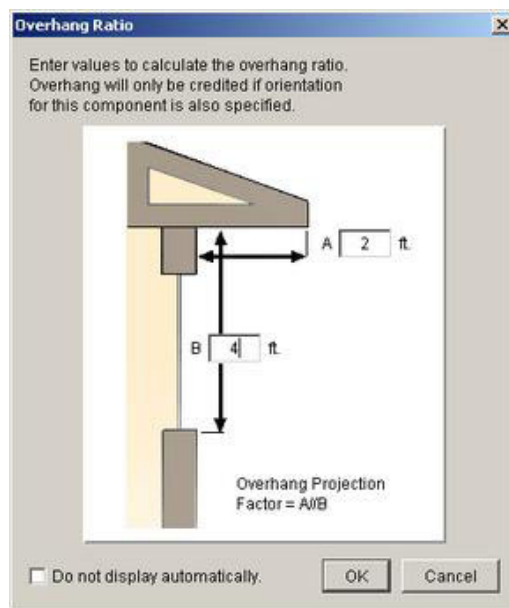


Figure 2

7. *Individual or total gross areas of #1* (i.e., windows, glazed doors, or skylights may be combined if all previous statements have the same values). An example of this would be multiple, double-pane, vinyl windows that are clear and operable, with a 0.35 U-factor, 0.32 SHGC, and 0.50 projection factor. If any of these components differ from another window, then that window must be entered separately.

For additional glazing information, refer to the article entitled "Fenestration Area" in this issue of the *Construction Code Communicator*.

NOTE: COMcheck-EZ can be downloaded for free at www.energycodes.gov. After installation, make sure the program is using ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) Standard 90.1-1999 (this can be verified in the menus at the top of your screen under the heading "Code").

If you have any questions, please call me at (609) 984-7609.

Source: Rob Austin
Code Specialist

(continued from page 6)

contractor must present his wallet card and his certification number must be recorded on the permit application. There are, however, certain instances and types of projects where the contractor is not required to be certified. Any permit applicant who is claiming an exemption shall identify the exemption being claimed in place of the registration number. When a contractor is claiming the "licensed trade" exemption, his licensed trade number should also be recorded in the appropriate section of the permit application. The list of exemptions and codes are as follows:

EXEMPTIONS FROM THE REQUIREMENT FOR CONTRACTOR REGISTRATION	
Exemption	Definition
Registered Builder	Any person required to register pursuant to "the New Home Warranty and Builders' Registration Act," P.L. 1977, c. 467
Homeowner	Any person performing a home improvement upon a residential or noncommercial property he owns, or that is owned by a member of his family, a bona fide charity, or other nonprofit organization
Licensed Trade	Any person regulated by the State as an architect, professional engineer, landscape architect, land surveyor, electrical contractor, master plumber, or any other person in any other related profession requiring registration, certification, or licensure by the State who is acting within the scope of practice of his profession
Condo	Any person who is employed by a community association or cooperative corporation
Utility	Any public utility as defined under R.S. 48:2-13
Contractor with Financing	Any person licensed under the provisions of Section 16 of P.L. 1960, c. 41 (C. 17:16C-77) (Note: These are contractors licensed by the New Jersey Department of Banking and Insurance to offer financing.)
Big-Box Store	Any home improvement retailer with a net worth of more than \$50,000,000, or employee of that retailer who is making or selling home improvements within the person's scope of employment

Should you have any questions on the Home Improvement Contractor Registration requirements, please contact the Division of Consumer Affairs at 1-888-656-6225.

If you have any questions regarding the relationship of this law to the Uniform Construction Code, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Industrialized/Modular Buildings: Frequently Asked Questions

Questions related to the requirements for submission of documents with the construction permit application, and the municipal enforcing agency's responsibilities with respect to inspection(s) and the issuance of Certificates of Occupancy (COs) (in regards to industrialized/modular buildings) continue to be asked. Although this topic was covered in a previous (Spring 1997) *Construction Code Communicator* article, the questions that continue to be asked frequently are provided below:

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

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

1. A statement that the work to be performed under such permit is to include the installation of a certified industrialized/modular building. The statement is to be signed by the applicant or his agent.
2. Schematic floor plan layouts and typical elevations showing the arrangement and layout of the specific building to be manufactured and installed wherein the manufacturer references the building's or building system's approvals of the evaluation agency. Such schematic floor plan layouts and typical elevations need not include sections; construction details; or structural, plumbing, mechanical, and electrical layouts or details typical to the building's or building system's approvals of the evaluation agency. These schematic plans do not need to be prepared or sealed by an architect or engineer.
3. Additionally, the following shall be submitted as required by *N.J.A.C. 5:23-4A.9(a)1*:
 - Structural connections and connections of systems, equipment, and appliances to be performed on site shall be identified, detailed,

and distinguished from work to be performed in the manufacturing facility.

- The method of interconnection between industrialized/modular buildings and the location of connections shall be indicated.
- Documents shall indicate the location of the certification label(s).
- Documents shall provide or show, as appropriate, occupancy or use, area, height and number of stories, type of construction, and loads (wind, floor, snow, and seismic).

4. Detailed plans shall be prepared for any site-built construction (e.g., foundation system) related to the *installation of industrialized/modular buildings*. These plans shall be prepared, signed, sealed, and dated by a New Jersey P.E. or R.A., and shall meet the applicable requirements of the New Jersey Uniform Construction Code. However, a homeowner who is planning to construct a single-family home himself 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)*].

5. Manufacturer's installation instructions for the *industrialized/modular building* as set forth at *N.J.A.C. 5:23-4A.9(a)2.i(1)*: "Details and methods of installation of industrialized/modular buildings . . . on foundations and/or attachment to each other."

Question: What are the municipal enforcing agency's responsibilities with respect to inspection(s) and the issuance of a CO?

Response: This is covered in Part IV, Section 6(B), (C), (D), and (E) of the UAP of the Industrialized Buildings Commission, and *N.J.A.C. 5:23-2.22*. Following is a summary of the requirements:

1. Verification/confirmation of attachment of insignia (label) of certification; i.e., Industrialized Building Commission's label.

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2. Verification/confirmation of attachment of the manufacturer's data plate (product control and identification - *N.J.A.C. 5:23-4A.8*) to evaluate the suitability of the modular building for the particular location.
3. The local enforcement agency shall inspect work performed on site including foundations and structural, mechanical, plumbing, and electrical connections for compliance with the UAP.
4. The local enforcement agency shall inspect all industrialized/modular buildings upon, or promptly after, installation at the building site to determine whether all site-built work is in accordance with the plans filed with the permit application, the manufacturer's installation instructions, and the conditions listed on the manufacturer's data plate. This may include tests for tightness of plumbing connections done on site, for malfunctions in the electrical system (nondestructive testing by appropriate subcode official), and a visual inspection for damage and obvious nonconformity with the approved plans or the code.
5. The local enforcement agency shall issue a CO for the certified industrialized/modular building after it has been installed and inspected pursuant to the UAP, provided that any industrialized/modular building found not to comply with the code shall be brought into compliance before such CO shall be issued.
6. When the local enforcement agency is making an inspection and finds that the building contains violations to the UAP in work covered by the third-party inspection agency's approval, it shall report the details of such violations in writing to that inspection agency. Where violations compromise the life safety of occupants, a CO shall not be issued and the building shall not be occupied before such hazards are corrected. If the violations do not compromise the life safety of occupants, a Temporary Certificate of Occupancy shall be issued.

For the UAP of the Industrialized Buildings Commission, a list of approved inspection and evaluation agencies, and a list of approved manufacturers, visit its web site at www.interstateibc.org.

In case of any questions, please contact me at (609) 984-7974.

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

Moisture Vapor Retarder Installation and the Energy Subcode

Recently, questions have arisen about moisture vapor retarder (MVR) (vapor barrier) installation, how it relates to *N.J.A.C. 5:23-3.18* (the Energy Subcode), and how it relates to the New Jersey Energy Star® Homes program.

As stated in the Spring 2004 *Construction Code Communicator* article, "New Jersey Energy Star® Homes and the Energy Subcode," the local construction department needs to look for only two things: 1) The "Builder Acknowledgement Form" at the time of permit application and 2) the "Home Energy Rating Scale" (HERS) compliance certificate, or a "passing" final inspection report in lieu of the HERS certificate. This eliminates the need for the local construction department to inspect items covered by the Energy Subcode.

MVRs are a requirement of Section R322 of the International Residential Code (IRC) 2000, which is the adopted One- and Two-Family Dwelling Subcode (*N.J.A.C. 5:23-3.21*). In addition, MVRs are required by the Building Subcode (*N.J.A.C. 5:23-3.4*) regardless of the method chosen for Energy Subcode compliance.

Therefore, based on the information above, the obligation of the local construction department to inspect for MVRs remains, even in New Jersey Energy Star® Homes.

As stated above, MVRs are required by IRC/2000, Section R322, and are to be installed on the "warm-in-winter" side of the insulation in all framed walls, floors, roofs, and/or ceilings comprising elements of the building thermal envelope. MVRs are defined in Chapter 2 of the IRC/2000; however, the definition is a little confusing. The MVR definition has been clarified in the IRC/2003. The IRC/2006 retains the IRC/2003 definition. Because the State of New Jersey will adopt the IRC/2006 in the near future, the MVR definition in the IRC/2003 may be used to provide clearer, more complete information.

The IRC/2003 defines MVRs as "a vapor-resistant material, membrane, or covering such as foil, plastic sheeting, or insulation facing having a permeance rating of 1 perm or less when tested in accordance with the desiccant method using Procedure A of ASTM E96. Vapor retarders limit the amount of moisture vapor that passes through a material of wall assembly." The definition defines materials that are placed *behind* the wallboard; therefore, an MVR is required to be on the inside of the framed wall in order not to allow moisture to enter the wallboard. Lastly, this definition does not define permeance-rated paint because paint is traditionally placed on the interior side of wallboard (facing a room).

Note: Per the IRC/2000, Section R322, installation of cellulose insulation must have a separate material, membrane, or covering installed on the warm-in-winter side having a permeance rating of 1 perm or less.

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

Source: Rob Austin
Code Specialist

Wall Sheathing Fasteners

It has been brought to the Department of Community Affairs' attention that some fasteners used for the installation of wall sheathing to framing are not of adequate size as per the International Residential Code (IRC) 2000, Tables R602.3(1) and R602.3(2).

Table R602.3(1) of the IRC/2000 requires that wood structural panels which are 5/16 and 1/2 inch in thickness be fastened with 6d common nails (0.113 inch in diameter) minimum. Table R602.3(2) of the IRC/2000 allows for the use of nails between the diameters of 0.097- to 0.099-inch thick. Furthermore, International Code Council Evaluation Report ESR-1539, which was reissued on September 1, 2005, continues to allow the use of alternate fasteners equal to or exceeding the lateral strength of connections found in the IRC/2000. ESR-1539 lists the smallest nail diameter as 0.092 inch with a length of 2-1/4 inches. Additionally, all power gun manufacturers listed in ESR-1539 specify a minimum nail diameter of 0.092 inch in their specifications.

Through investigation, the Department has found some fasteners that are undersized (typically 0.085 inch in diameter) as per the IRC/2000 and ESR-1539. Please be advised, contractors are not permitted to use the undersized nails unless the design professional submits a testing report prepared by a nationally recognized testing agency. The only way to determine the size of the fasteners is to look at the label on the fastener box. The label should clearly state the diameter and length of the fastener. If the fastener is undersized, inform the contractor of this violation and contact me with the manufacturer's information. We will contact the manufacturer and notify them of the problem.

If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

New Jersey Register Adoptions

Date: July 18, 2005
Adoption: 37 NJR 2673(b)
Summary: The adopted amendment at *N.J.A.C. 5:23-2.14* revises the rule concerning construction permits to require permits for the construction, enlargement, alteration, reconstruction, or demolition of a retaining wall or series of retaining walls having a total height of four feet or greater, or a retaining wall less than four feet providing structural support for a foundation.

Date: October 17, 2005
Adoption: 37 NJR 3974(a)
Summary: The adopted amendments at *N.J.A.C. 5:23-3.13* allow the submission of State-sponsored model code change proposals by the general public. In addition, the adopted amendments change the submission period for State-sponsored model code change proposals to coincide with the development cycle of the model codes. Finally, the adopted amendments provide a process for submitting code change proposals for other State-developed subcodes.

Date: October 17, 2005
Adoption: 37 NJR 3974(b)
Summary: The adopted amendment at *N.J.A.C. 5:23-3.15* requires a minimum earth cover of six inches for building sewers that discharge to private sewage disposal systems.

Source: Megan Sullivan Czyz
Code Development Unit

Occupant Intervention and ASHRAE Standard

90.1-1999

Chapter 9, the lighting section of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1999, contains a section for automatic lighting shutoff (Section 9.2.1.1). This provision applies to interior lighting in buildings larger than 5,000 ft². The lighting is to be controlled with an automatic control device to shut off the building lighting in all spaces by one of three options: 1) a time-of-day operated control device that turns the lighting off at specific programmed times (an independent program schedule is required for areas of more than 25,000 ft², but not more than one floor); 2) an occupant sensor that turns the lighting off within 30 minutes of the last occupant's departure; or 3) occupant intervention.

The question arises as to what is "occupant intervention?" As used in the ASHRAE standard, occupant intervention is not what you or I would call occupant intervention. This option is listed under automatic lighting

Non-Required Fire Protection Systems: How Much is Enough?

I get calls from contractors, as well as officials, asking what requirements need to be complied with when an applicant voluntarily chooses to install a fire protection system (non-required systems).

I direct them to International Building Code Section 901.2, Fire Protection Systems. The exception commenting on non-required systems points out that only the work being performed needs to comply with code. For example, if a tenant having five offices wishes to install a fire detection system in three of them, then wiring, spacing of detectors, etc. must comply with the applicable code in the three offices. The official does not have the authority to require additional detectors in the other two offices. Simple, isn't it?

Should you have any questions, I can be reached at (609) 984-7672.

Source: Gerald E. Grayce
Office of Regulatory Affairs

Parking Garages: Minimum Entrance Height

Recently, the Department of Community Affairs has received several complaints about vehicular entrances to parking garages that have not been constructed to meet the height requirements of the Barrier Free Subcode. The technical design standard adopted for use in the Barrier Free Subcode is the International Code Council/American National Standards Institute (ICC/ANSI) A117.1.

ICC/ANSI A117.1, Section 502.5, entitled "Parking Spaces — Vertical Clearance," requires that "parking spaces for vans shall have a vertical clearance of 98 inches minimum at the space and along the vehicular route thereto."

Once the parking garage has been constructed, it is simply not possible to correct an entrance that is too low, but the low entrances prevent the use of the garage by people with disabilities who rely on vans. The Barrier Free Subcode (at *N.J.A.C. 5:23-7.9*) allows accessible van spaces to be clustered on a single parking level; there is no permission for drivers of vans to be precluded from using a parking garage at all.

Any questions about the requirements for accessible parking — in or out of parking garages — should be directed to the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

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shutoff. The definition of an automatic control device is a device capable of **automatically** turning loads off and on without manual intervention; it is definitely not a typical light switch. Essentially, occupant intervention is another form of a sensor. Since option 2 implies that an occupant sensor is some type of motion sensor, option 3 was meant as a catch-all statement for other signaling control devices or alarms that indicate the area is unoccupied and automatically shut off the lighting.

Note: Per Section 9.2.1.1, there is an exception that states lighting intended for 24-hour operation does not require an automatic control device.

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

Source: Rob Austin
Code Specialist

Ladders, Lighting, and Time Clocks . . . Oh, My!

Warning: The installation of certain pool items have been found not to be what you think they are!

The 2002 National Electrical Code (NEC), Section 110.3(B), "Installation and Use," requires that equipment be installed and used in accordance with the instructions included in the listing and labeling.

Currently, some pool equipment supplied by pool installers is listed and labeled, but is not being installed for its listed use. For example, installers have been supplying plastic and fiberglass ladders with metal handrails to customers, and stating that, because they are all plastic or fiberglass, there are no requirements for bonding. This is not always the case. Section 680.26(B)(3) states that all metal fittings within, or attached to, the pool structure shall be bonded. Isolated parts that are not over 100mm (four inches) in any dimension and do not penetrate into the pool more than 25mm (one inch) shall not require bonding. Therefore, any plastic or fiberglass ladder that has metal handrails which exceed the four inches and are within the pool by more than one inch as specified in Section 680.26(B)(3) **ARE NOT** isolated and **ARE** required to be bonded.

Another item not always being used in accordance with the listing and labeling instructions is a light that is being sold to be installed over the side wall of permanently installed, above-ground pools. There's only one small catch . . . these lights are listed to be used on storable pools, **NOT** on permanently installed, above-ground pools!

The third piece of equipment is an Intermatic Timeclock that is listed and labeled for portable and storable pools. The time clock by Intermatic is being installed in permanently installed, above-ground pools.

The point of all this, you ask? . . . Check the manufacturer's installation instructions! There is more to equipment than meets the eye!!

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

Source: Suzanne Borek
Code Assistance Unit

REScheck-Web: Starting Point

It has come to our attention that there is confusion with the initial code selection when using the web-based version of REScheck, REScheck-Web. The following instructions should be helpful in choosing the correct "Code" in the drop-down menu.

The web-based version requires the user to start at the same place as the downloadable version, the "Code" menu. The user should start by visiting the REScheck-Web homepage at <http://energycode.pnl.gov/REScheckWeb/>. In the "Select Code and Location" box in the "Code" drop-down menu, select "New Jersey" (*do not select* "1995 MEC"). Once this is chosen, the second drop-down menu, "State," will become gray so that no other state can be selected, as the New Jersey Code is specific. Next, click on "Start REScheck-Web." You will notice that the "Code" and "State" drop-down menus have been automatically updated in the "Project" section of the new page.

Note: The "Code" menu in the downloadable version of REScheck is located on the menu bar. Again, New Jersey should be selected and not 1995 MEC.

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

Source: Rob Austin
Code Specialist

SPECIAL ALERT

Special Alerts to be Published in the DCA Document Library

Over the years, the Department of Community Affairs has provided code clarification, subject-specific instruction, and other important information to New Jersey's licensed construction code community by way of a mass U.S. Postal Service mailing.

Beginning in the very near future, the Department will use e-mail alerts through the Document Library to provide such clarification, instruction, or otherwise important information, and will no longer send this information to you in paper form through the U.S. Postal Service.

In order to continue receiving this important information, you will need to subscribe to the Document Library. The subscription instructions are provided in the article entitled, "The DCA Document Library: Codes and Standards' Online Reference Room," which appears elsewhere in this newsletter. Please subscribe at your earliest opportunity to avoid missing out on important information from the Department.

If you have questions regarding this article or experience problems with the Document Library, please feel free to e-mail the PermitsNJ Technical Support Team at permitsnj@dca.state.nj.us.

Source: Berit Osworth
PermitsNJ Technical Support Team

Standard Forms Camera-Ready Art Now Supplied through the DCA Document Library

When substantive changes were made to a Uniform Construction Code (UCC) Standard Form in the past, camera-ready art was sent via U.S. Postal or special messenger service to each and every municipal construction code enforcement office.

Due to the sizable nature of such an undertaking, the Department of Community Affairs refrained from making the little changes that cropped up, and simply waited until modifications of substance were needed before undertaking the full production and distribution of camera-ready art.

With the advent of PermitsNJ, the Department's new construction code enforcement management system, and its companion Document Library, the Department is able to make all changes -- big and small -- to the Standard Forms and post the updated camera-ready art in the

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Document Library, ready for downloading as your individual needs arise.

For this reason, the Department will no longer be sending UCC Standard Form camera-ready art to municipal construction code enforcement offices via U.S. Postal or special messenger service. When you need to reorder preprinted stock from your local printing supplier, simply log onto the MyNewJersey portal and download camera-ready art for the form or forms you need.

To access the Document Library, follow the instructions provided in the article entitled, "The DCA Document Library: Codes and Standards' Online Reference Room," which appears on the next page.

If you have questions regarding this article or experience problems with the Document Library, please feel free to e-mail the PermitsNJ Technical Support Team at permitsnj@dca.state.nj.us.

Source: Berit Osworth
PermitsNJ Technical Support Team

Use Group Classification and Sprinkler Exceptions for Residential Buildings

The above-titled article was originally written in 1999 due to the discovery of residential buildings having incorrect Use Group (the term in 1999, now just Group) classifications. These problems occurred in various sections of the State. The design professional's R-3 Group classification was being wrongly accepted by some officials, when the correct classification was Group R-2. As a result, required fire sprinkler systems were not installed.

Additionally, in some cases, the design professional correctly designated buildings as R-2s. Some fire subcode officials incorrectly interpreted Section 904.9 of the 1996 Building Officials and Code Administrators (BOCA) National Building Code, and again did not require fire sprinkler systems.

I had hoped the article clarified these issues. Unfortunately, it did not for all officials.

My office has recently discovered buildings having incorrect Group (the new term) classifications. The result: required fire sprinklers were not installed. A few officials are still neglecting to enforce 2000 International Building Code (IBC) Section 903.2.8. It is the exact same language as was in the 1996 BOCA. Required fire sprinklers are again not being required by officials. These issues were

discovered in both the northern and southern areas of the State.

The 1999 article has been updated and the substance of it is being reprinted. Please take heed of the issues. Failure to properly enforce these sections was, and is, a very serious matter.

USE GROUP CLASSIFICATION AND SPRINKLER EXCEPTIONS FOR RESIDENTIAL BUILDINGS:

There have been errors made in applying the sprinkler exception for certain residential buildings. There are two steps to deciding whether a residential building is exempt from the suppression requirement contained in Section 903.2.8 of the IBC/2000. The first step is to determine the proper use group classification for the building. The second is to check whether the conditions for exemption in Section 903.2.8 have been met.

1. Is it (Use) Group R-3 or R-2?

It is clear that a two-story residential building having two or more dwelling units per floor and having a means of egress through an enclosed corridor or stair is Group R-2. Take the same building and eliminate the front exterior wall, making the means of egress an exterior stair open in the front and enclosed on three sides. Architects sometimes erroneously classify these buildings as Group R-3. The means of egress includes exit access, exit, and exit discharge. If any portion of a means of egress of a unit is shared with more than two units, the use group is not R-3; it is R-2.

Example: Two families living on the second floor exit their units and egress via a stair to a first-floor landing. Two families living on the first floor exit their units and also egress onto a common landing, and then use a single stair to grade. The commonality of the egress is a factor to be evaluated when determining the (use) group of a residential building.

2. Are the conditions for sprinkler exception met?

Section 903.2.8 requires that "an automatic fire suppression system shall be provided throughout all buildings with an occupancy in Group R-2." The exception to Section 903.2.8 has been read incorrectly by some readers. The exception plainly states that it applies only to "buildings which do not exceed two stories, including basements which are not considered as a story above grade, and with a maximum of 12 dwelling units per fire area. Each dwelling unit shall have at least one door opening to an exterior exit access that leads directly to the exits required to serve the dwelling unit."

To qualify for the exception, the building must meet all elements of the exception. If the building meets only one element, the exception cannot be applied. For

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Source: Berit Osworth
PermitsNJ Technical Support Team

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(continued from page 14)

example, a two-story Group R-2 building with a basement does not fall under the exception. Any building that exceeds two stories requires a fire sprinkler suppression system. The basement, while not a story above grade, is considered a story for the purpose of applying this section. Therefore, in the above example, the building has three stories and a fire sprinkler is required.

The exception also states that egress from a dwelling unit must go to an exterior exit access. In most cases, this means that the door to the dwelling unit opens onto an exterior landing or balcony, onto an exterior stair to grade, or directly to grade. If the exit path is not an exterior exit access, this part of the exception is not met and fire sprinklers are required.

This code section has been in the BOCA National Building Code since the adoption of the 1993 edition. I hope this clarifies the application of the sprinkler exception. If you have any questions, please contact me at (609) 984-7672.

Source: Gerald Grayce
Office of Regulatory Affairs

Visible Alarm Notification – IBC/2000 and ICC/ANSI A117.1-1998



Section 907.9.1.3 of the International Building Code 2000 requires occupancies of Group R-2 that are required to have a fire alarm system as per Section 907.2.10.1.2 to be provided with the capability to support visible alarm notification appliances within all of the dwelling units.

This means that the wiring methods associated with the visible alarm notification appliance are to be treated as an adaptable feature. This is similar to providing grab bars, which are an adaptable feature; the supportive blocking is installed in the wall and the actual grab bar is installed when needed by the occupant. Based on the same principle, the wiring for the existing notification appliance must be provided for the future installation of a visible alarm notification appliance.

Note: Section 907.2.10.1.2 requires Groups R-2, R-3, R-4, and I-1 to have single- or multiple-station smoke alarms installed and maintained regardless of occupant load.

Source: John N. Terry
Code Assistance Unit

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