Construction Code Communicator

State of New Jersey
James E. McGreevey, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

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HAPPY NEW YEAR

Corrections to the CABO One- and Two-Family Dwelling Code

The Code Assistance Unit of the Department of Community Affairs recently received a telephone call that created quite a stir. The caller indicated that he had constructed a home with a spiral stair that has a riser height of 9½ inches, in accordance with Section 314.5 of the 1995 edition of the Council of American Building Officials One- and Two-Family Dwelling Code (CABO/1995). However, upon inspection, the code official cited the builder for having a spiral stair with a riser height of greater than 7¾ inches, in accordance with Section 314.5 of CABO/1995.

By now, you have noticed that both the builder and the code official referenced the same section of the same edition of the code. However, the builder is quoting language from the *first printing* of CABO/1995 and the code official is citing from the *second printing* of the code.

The Department has determined that, when the second printing was published, an error was made and the wrong dimension was given. Therefore, the first printing is accurate and the correct dimension for the riser height of a spiral stair is 9½ inches. This has been confirmed through an errata sheet provided by Building Officials and Code Administrators (BOCA) for the second printing.

If you own the *second printing*, please make this correction to your copy of the code. Those who have a copy of the first or third printing do not need to do anything, because these printings were correct upon publication.

One more correction, which needs to be made in both the first and second printing, should be noted. This is also on the errata sheet. On page 26, in Note 5 of Figure 403.1a, "Concrete and Masonry Foundation Details," the code states, "Bolts shall extend a minimum of 15 inches into masonry or 7 inches into concrete." This statement should read, "Bolts shall extend a minimum of 7 inches into masonry or concrete." If you own either the *first printing* or *second printing*, please make this correction to your copy of the code.

If you have questions about code requirements, please contact the Code Assistance Unit at (609) 984-7609. If you have questions about the errata sheet, or about which edition or which printing you have, please contact BOCA at (708) 799-2300.

Sources: Jeffrey Applegate and Marcel Iglesias
Code Assistance Unit

In This Issue

Pressure-Assisted Water Closets

The purpose of this article is to remind Uniform Construction Code officials that, as of December 16, 2002, the requirement at *N.J.A.C.* 5:23-3.15(b)8.ii, Plumbing Subcode, for the installation of pressure-assisted water closets in commercial buildings of Use Groups A, E, B, and M that require more than two water closets to be connected to the building sewer is no longer mandatory. This provision was deleted, as adopted in the *New Jersey Register* on December 16th. The type of water closets to be used for a project is at the discretion of the design professional.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Egress Door Hardware

The Code Assistance Unit of the Department of Community Affairs has become aware that some clarification concerning the use of egress door hardware is necessary in respect to panic hardware, and manually operated flush bolts and surface bolts.

One of the most frequently asked questions about egress door hardware is: "If the egress door is a double-leaf door (e.g., two 3' 0" doors in the same frame), may there be an inactive leaf? We would like to have a 6' 0" opening, but only a 3' 0" door is required for egress."

The answer is "NO." This would entail the use of manually operated flush bolts on the egress doors, which is prohibited by Section 1017.4.1.1, "Flush and Surface Bolts," of the 1996 edition of the Building Subcode, the Building Officials and Code Administrators National Building Code/1996. People who are exiting during an emergency should not be required to determine which door of a pair is the active egress door.

The appearance of an inactive leaf can be accomplished through the use of automatic flush bolts. These are designed to unlatch when the active door leaf is opened and latch automatically when the active door leaf is closed. Of course, the installation of panic hardware on one door with an automatic flush bolt or both doors is also code compliant.

Panic hardware is used to allow quick and easy operation of egress doors in a time of panic during emergencies from places that normally have a large occupancy, such as assembly halls. If no one is able to operate the latching mechanism, the force of the crowd will eventually cause the panic hardware to be activated. The automatic flush bolt allows the inactive leaf to open when the panic hardware on the active leaf is operated.

Please note, in order to prevent confusion during an emergency, no hardware of any type (e.g., a door knob) is permitted on the door that is equipped with the automatic flush bolt.

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

Source: Jeffrey Applegate
Code Assistance Unit

Energy – Enforce Only What Is Referenced

N.J.A.C. 5:23-3.18, Energy Subcode, adopts the 1995 edition of the Council of American Building Officials (CABO) Model Energy Code with technical amendments. Chapter 7 of CABO references the American Society of Heating, Refrigeration, and Air-Conditioning Engineers 90.1, the1999 edition (ASHRAE 90.1-1999) as the standard for "Building Design For All Buildings Other Than Residential Buildings." In other words, ASHRAE 90.1-1999 is a referenced standard and is to be used for the design of all buildings except residential buildings of three or fewer stories in height.

It is important to remember that only those portions of the referenced standard that address building design are applicable. This applies to the building itself, including the building envelope, percent glazing, R-values, and U-values. This does not include the performance of the equipment installed. Equipment is required to be listed and labeled with a percentage AFUE (furnaces and boilers), HSPF (air source heat pumps), and/or SEER (air-conditioning) efficiency; however, it does not require "system commissioning" (ASHRAE 90.1-1999, Section 6.2.5.4). An inspector must make sure the equipment is listed and

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labeled as required by the Energy Subcode, but does not need to ensure that the owner/operator is aware of the operating and maintenance requirements for the equipment. Requirements for Use Groups B and E are different. *N.J.A.C.* 5:23-2.23(h)7, "Certificate Requirements," does require a "Test and Balance" report for mechanically ventilated Class I and II buildings of Use Groups B and E, but other portions of the commissioning process are outside of the scope of the Uniform Construction Code.

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

Source: Rob Austin
Code Assistance Unit

Opening Communication on NJDEP's Septic Rules 

The Department of Community Affairs (DCA) and the New Jersey Department of Environmental Protection (DEP) initiated a dialogue to increase communication between the two agencies to better enforce regulations that pertain to similar technical issues.

Items that were discussed included a review of inconsistencies between the Uniform Construction Code (*N.J.A.C.* 5:23) and the Standards for Individual Subsurface Sewage Disposal Systems (*N.J.A.C.* 7:9A). Mechanisms to increase communication between the Departments and local building and health officials were also explored. Specifically, the following issues were discussed:

- When accepting a building permit application, the code official should verify whether the facility utilizes a public sewer, or if it is connected to a septic system. If a project is on a property that is connected to a septic system, it is important the local or county health office that reviews septic plans is involved. This is fundamental to ensure that all applicable requirements are met including the required capacity of the septic system, the maintenance of any required setbacks, and the protection of the septic system from construction activities (such as heavy equipment rolling over and crushing components, excavating near another utility line, etc.). This is of greater concern in areas where local building officials must coordinate with county-level health departments. The above require prior approval per *N.J.A.C.* 5:23-1.4, "Definitions."
- There is a difference in the separation distance required between a building sewer to a septic system and potable water service lines from a public water service main. Currently, DEP septic and water supply rules at *N.J.A.C.* 7:9A require a five-foot separation. However, the Plumbing Subcode at *N.J.A.C.* 5:23-3.15 only requires a one-foot separation. Plumbing subcode officials have jurisdiction in this matter; therefore, a one-foot separation should be enforced.
- If a project entails reconfiguring existing space to incorporate an additional bedroom(s) or constructing an addition that includes bedrooms, then the septic system typically requires an evaluation. Further, additions to the structure outside the existing footprint may require relocation of the system to maintain the required setbacks. The local health office responsible for septic system review must be contacted when any of the noted activities are proposed.

By opening the dialogue between State agencies and continuing communication lines to all building and health officials, we hope to make everyone's job a little easier by promoting the exchange of information. If you have any questions, please contact the Code Assistance Unit at (609) 984-7609, or the DEP's Bureau of Non-Point Pollution Control at (609) 292-0407.

Sources: Thomas C. Pitcherello
Code Assistance Unit

and

Mark Miller
DEP, Bureau of Non-Point Pollution Control

Duct Tape — What a Sticky Mess! 

This is a follow-up to the duct tape article that appeared in the Spring/Summer 2002 edition of the *Construction Code Communicator*. The Code Assistance Unit of the Department of Community Affairs has received many telephone calls pertaining to this article. The most frequently asked question is, "What is the proper type of pressure-sensitive (duct) tape sealant that would be permitted to be used on ductwork for residential installations that would comply with the 1995 Council of American Building Officials Model Energy Code (CABO MEC)?"

As stated in Section 503.8.2, "Duct Sealing," of the 1995 CABO MEC (residential), "Duct tape is not permitted as a sealant on any ducts." In other words, the everyday, run-of-the-mill, "You-can-buy-me-at-any-hardware-section-of-many-home-improvement-or-discount-centers" gray duct tape is not permitted as a sealant on any ductwork.

However, there has been some confusion with the use of the term "duct tape," because some products that actually do meet the duct sealant requirements of

(continued on page 4)

(continued from page 3)

Underwriters Laboratories (UL) 181, "Standard for Factory-Made Air Ducts and Air Connectors," are labeled "duct tape," even though CABO MEC/1995 prohibits the use of duct tape as a sealant on ductwork.

There are two specific UL 181 standards for different types of ductwork: UL 181B-FX, "Standard for Closure Systems for Use with Flexible Air Ducts and Air Connectors," which is the appropriate testing standard for flex ducts; and UL 181A-P, "Closure Systems for Use with Rigid Air Ducts and Air Connectors," which is the appropriate testing standard for rigid fiberglass air ducts. UL 181A-P can also be used for flex ducts. In addition, although UL 181A-P is not specifically tested for metal ductwork, it is the appropriately labeled tape to use for metal ducts. (Please keep in mind that the UL label must be visible at all times – it should be printed directly on the face of the sealant.)

Therefore, if a duct tape has a visible label that "certifies" it meets either of the UL 181 requirements, then it is acceptable to use as a duct sealant.

Please note, this article pertains to pressure-sensitive tapes only. There are many other types of sealant products that are permitted as well. Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Escalators as Building Stairs

On November 4, 2002, the Department of Community Affairs proposed an amendment that would enhance the level of public safety for individuals using escalators. This proposal, at *N.J.A.C.* 5:23-12.12, Special Safety Equipment, requires a sign at the top and bottom landings of each escalator to prohibit standing escalators from being used as building stairs.

The Department is aware that, prior to 1987 (when the Building Officials and Code Administrators National Building Code was revised to prohibit it), an escalator was allowed to be part of a second means of egress, provided it was enclosed. The Department believes that there are not many (possibly not any) enclosed escalators that were constructed prior to 1987 as part of a second means of egress. Those that do exist, however, must be regarded as hazardous because the escalator device was not designed to support the loads that result from a fully loaded escalator being used as stairs. In those cases where there is an enclosed escalator that is part of a second means of egress, the fire official must identify/require another second means of egress.

If you have questions on this issue, please contact John Terry, Jeffrey Applegate, Marcel Iglesias, or Rob Austin of the Code Assistance Unit. They may be reached at (609) 984-7609.

Source: Emily Templeton
Code Development Unit

Gas Piping Protection – Above and Below Ground

Since the adoption of the 2000 edition of the International Fuel Gas Code (IFGC/2000), there have been questions on the proper means of protection for ferrous metal gas piping that is installed outdoors above ground.

Section 404.8, "Protection Against Corrosion," states in the third sentence: "Ferrous metal exposed in exterior locations shall be protected from corrosion in a manner satisfactory to the code official." This provision is intended to allow the use of a rust-prohibitive primer and paint to protect gas piping from corrosion. Zinc coatings (galvanizing) are allowed to be used to protect gas piping above ground, provided the exposed threads are properly painted to protect against corrosion. However, zinc coating is not an adequate means of protection for gas piping underground.

Factory-applied protective coatings and wrappings, per Section 404.8.2, must be approved for application, and shall be used for gas piping installed underground. Approved factory-applied protective coatings and wrappings may be used for above-ground gas piping as well.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

New Jersey Model Code Adoptions

On page 9 is a chart that provides the history of all of New Jersey's model code adoptions. This was intended to accompany the article printed in the Fall 2002 edition of the *Construction Code Communicator* entitled "History Lesson: Adoption of New Jersey's Model Codes." The chart was inadvertently omitted; however, it has been printed in this issue for your convenience.

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

Source: Rob Austin
Code Assistance Unit

(continued on page 9)

Fire Escapes -- Signing and Sealing of Construction Documents

There have been a number of inquiries as to when a licensed design professional is required to sign and seal construction documents for a fire escape. Guidelines for this requirement are provided in Formal Technical Opinion (FTO) 3, "Fire Escapes."

According to FTO-3, the two methods that may be used to comply with the Building Officials and Code Administrators (BOCA) National Building Code/1996 requirements are: a specification methodology and a design methodology.

1. Specification Methodology
Construction documents submitted to show compliance with the specification methodology are not required to be signed and sealed by a design professional licensed in the State of New Jersey. The specification methodology provided in FTO-3 standardizes the requirement to indicate compliance with BOCA/1996.

For example, FTO-3, "Method One (Specification Methodology), Part B, Landing Platform Components," states, "Floor surface support members shall be a minimum of 2½-inch x 2½-inch x ¼-inch steel plate angles, 50 inches in length maximum, and not spaced over 24 inches on center." The specification methodology identifies the components of the fire escape that are needed to comply with BOCA/1996. Therefore, when using the specification method in FTO-3, the construction documents are not required to be signed and sealed.

2. Design Methodology
Construction documents submitted under the design methodology must be signed and sealed by a licensed design professional. This method requires a design professional to apply the code requirements specified in FTO-3 to design the fire escape.

For example, FTO-3, "Method Two (Design Methodology), Part A, Construction," states, "The fire escape shall be designed to support a live load of 100 pounds per square foot." Because the design methodology provides the criteria necessary to design a fire escape that would comply with the applicable requirements, documents are required to be signed and sealed when utilizing the design methodology.

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

Source: Marcel Iglesias
Code Assistance Unit

ICC/ANSI A117.1-98 – What's New?

On November 4, 2002, the Department of Community Affairs adopted amendments to the Barrier Free Subcode at *N.J.A.C.* 5:23-7, which included a change of the edition of the Accessible and Usable Buildings and Facilities Standard that is referenced in the regulations. Specifically, the reference to the Council of American Building Officials/American National Standards Institute (CABO/ANSI) A117.1-1992 has been replaced with a reference to the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-1998. The purpose of this article is to highlight the major differences between these two standards.

1. The first major difference between the two editions of the Accessible and Usable Buildings and Facilities Standard is the format. CABO/ANSI A117.1-1992 contains text in the front of the publication and the illustrations are located in the back. In ICC/ANSI A117.1-1998, each illustration is contained next to the text that it depicts. However, the role of the illustrations has not changed. Remember, the illustrations do not contain additional requirements that are not contained within the text. Should there be a difference between the text and the illustration, the text applies.

2. Another formatting difference is the chapter styles of the standards. Take one look at the ICC/ANSI A117.1-1998 table of contents, and you will see the numbering is much easier to use and to cite than that provided in CABO/ANSI A117.1-1992.

3. Chapter 3 of ICC/ANSI A117.1-1998, "Building Blocks," is a new concept to the Barrier Free Subcode. This chapter contains the dimensions that are repeated and unchanged throughout the remainder of the standard. For example, the clear floor space for a wheelchair is 30 inches by 48 inches. This dimension remains the same throughout the standard, regardless of the subject matter; the clear floor space is the same for accessible routes, building elements, and plumbing fixtures. Therefore, each section that contains a requirement for clear floor space refers to the "Building Blocks" chapter. This is intended to be only one example of the many fundamental dimensions contained in Chapter 3.

4. From a technical standpoint, in ICC/ANSI A117.1-1998, the side-reach range is consistent with the front-reach range, both being 48 inches, whereas these ranges differed in CABO/ANSI A117.1-1992. (The side-reach range was 54 inches and the front-reach range was 48 inches.)

(continued on page 6)

(continued from page 5)

5. It is important to note that the requirements for maneuvering clearance at doors are the same in both standards. However, a table has been provided in ICC/ANSI A117.1-1998 for easy understanding. Please refer to Table 404.2.4.1, Maneuvering Clearances for Manual Swinging Doors.

6. ICC/ANSI A117.1-1998 provides that doors are not permitted to swing into the clear floor space or clearance for toilet and bathing facility fixtures. Although this provision is not different from the requirement of CABO/ANSI A117.1-1992, the exception differs. In the 1992 edition, toilet rooms designed for individual use (known as "knock-and-locks"), or toilet rooms with a 30-inch by 48-inch space provided outside of the swinging door, were permitted to have the door swing in. In the 1998 edition, both of these conditions must be present. That is, the room must be a knock-and-lock, and a 30-inch by 48-inch space must be provided outside of the swinging door.

7. The requirements for clearances around water closets differ dramatically between the two standards. CABO/ANSI A117.1-1992 requires 48 inches of clearance in front of the water closet. Instead of the 48-inch dimension, ICC/ANSI A117.1-1998 requires a minimum of 56 inches of clearance perpendicular to the rear wall. This dimension is consistent with toilet compartment spacing required for wall-hung fixtures. Impact: The room is smaller by approximately one foot.

8. One of the biggest differences between the 1992 and 1998 editions of the standard is a difference of only two inches. However, the two inches in question involve the 16-inch to 18-inch range that is now allowed for the required distance between the centerline of the water closet and the adjacent wall. The two-inch range provides some flexibility for this very important dimension.

9. Section 604.3.1, "Clearance," of ICC/ANSI A117.1-1998 makes it very clear that no fixtures are permitted to impinge upon the water closet clearance. This issue has been the Number One source of Code Assistance calls since July 1, 1995, the day the Department adopted CABO/ANSI A117.1-1992.

10. Section 604.6, "Flush Controls," of ICC/ANSI A117.1-1998 provides that flush controls may be located on either side of the water closet. This issue accounts for the Number Two source of Code Assistance calls over the last seven years.

11. ICC/ANSI A117.1-1998 provides dimensions for alternate roll-in shower stalls in Section 608.2.3, "Alternate Roll-In-Type Shower Compartment."

12. ICC/ANSI A117.1-1998 sets forth requirements for "Special Rooms and Spaces" in Chapter 8. These spaces include assembly areas, dressing and fitting rooms, and most importantly, kitchens. This pertains to kitchens that are not contained within dwelling units. CABO/ANSI A117.1-1992 did not have requirements for kitchens, other than those located in dwelling units. Therefore, the Department had advised that required clear floor space and reach ranges must be provided for all fixtures and appliances contained within kitchens provided in buildings and spaces other than dwelling units. With the adoption of ICC/ANSI A117.1-1998, this has changed; the standard now clearly requires knee space at sinks and work spaces in kitchens that are provided with a conventional range or cook top (see Section 606.2, exception number one).

13. The requirements for adaptable dwelling units are contained in Chapter 10. It is important to know that the Department deleted the requirements for "Type B" dwelling units upon adoption. This means that there is only one type of adaptable dwelling unit in the State of New Jersey – a Type A dwelling unit.

14. The requirements for Type A dwelling units provided in ICC/ANSI A117.1-1998 are similar to the dwelling unit requirements set forth in CABO/ANSI A117.1-1992. The biggest difference is the requirements for residential bathrooms, which are provided in Section 1002.11.5.2, "Clearance," of ICC/ANSI A117.1-1998. As with nonresidential toilet rooms, the clearance around the water closet has been reduced. The 48-inch dimension in front of the water closet is not required in the 1998 edition of the standard. However, in Section 1002.11.5.2, there is a requirement for a five-foot turning radius within the residential bathroom. The end result is a bathroom that is almost the same size as required by CABO/ANSI A117.1-1992, with more flexibility for the design professionals as to where to provide the clear floor space.

This list is not intended to be all-inclusive; rather, it provides a list of the "big-ticket" differences between the two editions of the A117.1 Accessible and Usable Buildings and Facilities Standard. Should you have any questions regarding the requirements contained in ICC/ANSI A117.1-1998, please feel free to call the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

ISO is Reevaluating: What You Should Remember

The Department of Community Affairs has recently learned that the Insurance Services Office (ISO) is reevaluating code enforcement offices in New Jersey. During the initial evaluation, local code enforcement offices scored very well. We have discovered that, during the reevaluation, municipalities are not faring nearly as well. There are two main reasons for the lower scores during the reevaluation.

First, the State has not yet adopted the building and residential codes published by the International Code Council. This is a temporary situation. On December 16, 2002, the proposal to adopt the International Building Code (IBC)/2000, International Residential Code (IRC)/2000, and National Electrical Code (NEC)/2002 was published in the *New Jersey Register*. Following a 60-day public comment period, these codes will be published as an adoption in the *New Jersey Register* early in the spring of 2003. The Department plans to meet with representatives of the ISO to determine whether the reevaluations could be scheduled to follow, rather than precede, the adoption of the IBC/2000 and IRC/2000.

Second, in the evaluations that we have seen, local code officials are responding to some of the questions in terms of the Uniform Construction Code and not in the broad-based terms of the Building Code Effectiveness Grading System (BCEGS) questionnaire. For example, there is a question about "training." The BCEGS specifies 96 hours of training in a year. The questionnaire does not explain that, in the BCEGS system, "training" includes discussions about codes and code enforcement. According to this definition, any meeting (on the telephone or in person) where code requirements are discussed or explained, any code discussions within the office among code enforcement personnel, and any meetings of professional associations for code enforcement personnel all count as training. By this broad definition, it is hard to imagine that there is a code enforcement office in the State of New Jersey that does not exceed 96 hours each year!

Following the meeting with the ISO, we plan to publish in the *Construction Code Communicator* a guide to answering the BCEGS questionnaire. This guidance will be similar to that provided in the *Communicator* in 1996 and 1997, when the first evaluations were performed.

In the meantime, if you have any questions about the ISO, please contact Lou Mraw at (609) 984-7672 or me at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Barrier Free Subcode: Large Building/Small Building

On August 5, 2002, a revision to the Barrier Free Subcode, Subchapter 7 of the Uniform Construction Code, was published in the *New Jersey Register*. The result of a decision by the Appellate Division of the Superior Court of New Jersey, this rule applies to multifamily residences the same large building/small building requirements that have applied to commercial buildings since 1986.

For multifamily residential buildings, the large building/small building distinction applies to buildings with four or more dwelling units. The rule provides that, in small buildings (which are less than 10,000 square feet total gross enclosed floor area), an accessible route and accessible building features are required for ground-floor dwelling units. In large buildings (which are 10,000 square feet or more total gross enclosed floor area), an accessible route (an elevator) and accessible building features are required throughout the building.

The rule further provides that, when deciding whether a building is a large building or a small building, firewalls that are penetrated for human passage do not designate separate buildings. This distinction is important when determining whether an elevator is needed to provide an accessible route.

Also, the rule provides that, for either a large building or a small building, when counting the number of dwelling units in a structure, firewalls do not designate a separate building. This distinction is important when determining whether the multifamily residential structure is subject to the Barrier Free Subcode.

The Barrier Free Subcode continues to require that [unless exempted by *N.J.A.C.* 5:23-7.3(b), "Exemptions"], in an elevator-serviced building, all (100 percent) of the dwelling units must be accessible. In a building without an elevator, ground-floor dwelling units must be accessible. The Barrier Free Subcode also now specifies that an accessible dwelling unit is one with an accessible entrance, an accessible interior route, one full accessible bathroom on an accessible route, required clear floor spaces and reach ranges, and maneuvering spaces at doorways. Adaptable features are permitted in the kitchen and in the accessible bathroom that is on the accessible route.

NOTE: Although an elevator is not required in a small building, if one is provided, all dwelling units must be accessible. Multifamily residential structures with fewer than four dwelling units in a single structure are exempt.

(continued on page 8)

(continued from page 7)

A chart summarizing the requirements for large buildings and small buildings as they apply to the accessibility of multifamily residential structures might help.

Category of Residential Building	Size of Building	Number of Dwelling Units	Accessible Route	Required Accessible Dwelling Units
Large Building	10,000 square feet or more*	4 or more dwelling units**	elevator required	100%
Small Building	less than 10,000 square feet*	4 or more dwelling units**	no elevator required	ground floor
*When determining square footage of a building, firewalls not penetrated for human passage designate separate buildings. **When counting the number of dwelling units in a single structure, firewalls do not designate separate buildings.				

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

Source: Emily W. Templeton
Code Development

New Jersey Register Adoptions

Date: August 19, 2002
Adoption: 34 *N.J.R.* 2965(a)
Summary: This adopted amendment corrects several cross-references. At *N.J.A.C.* 5:23-2.14(b)4, "Construction Permits – When Required," the cross-references to the provisions of *N.J.A.C.* 5:23-3.14(b)22 have been updated to *N.J.A.C.* 5:23-3.14(b)23, which provides amendments to the Building Subcode pertaining to "Special Construction."

Date: October 7, 2002
Adoption: 34 *N.J.R.* 3497(b)
Summary: This adopted amendment at *N.J.A.C.* 5:23-9.1, "Interpretations: Plumbing Subcode," allows attached, single-family dwelling units in groups of three or more to be served by common water lines and building sewers, provided the common water service is located on a property that is subject to an (association) easement or is located on common property. Also, a homeowner's association or some other entity must be responsible for maintenance.

Date: November 4, 2002
Adoption: 34 *N.J.R.* 3771(b)
Summary: This adopted amendment corrects a typographical error in the codification of a provision in the Building Subcode regarding elevator car size and accommodation of a 24-inch by 76-inch ambulance stretcher.

Date: November 4, 2002
Adoption: 34 *N.J.R.* 3772(a)
Summary: These adopted amendments revise the Barrier Free Subcode, Subchapter 7 of the Uniform Construction Code, by adopting the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-1998 as the technical standard for accessible design and construction. In addition, the adopted amendments recodify and clarify the accessibility requirements for large buildings, small buildings, and multifamily residences.

Source: Megan K. Sullivan
Code Development Unit

(continued from page 4)

New Jersey Model Code Adoptions

(Revised 11/4/02)

Building Subcode		Electrical Subcode	Energy Subcode			Fire Subcode		Mechanical Subcode		Fuel Gas Subcode	Plumbing Subcode	1 & 2 Family	Barrier Free (Sub 7)		Rehab (Sub 6)	Effective Date
BOCA	IBC	NEC	BOCA	CABO MEC	ASHRAE Std. 90.1	BOCA/ NFPA	IBC/ NFPA	BOCA	IMC	IFGC	NSPC	CABO IRC	CABO/ ANSI A117.1	ICC/ ANSI A117.1		(date when six month grace period began)
1975		1975				1975					1975					01-01-77
1976/S						1976/S										12-01-77
1978		1978				1978					1978					10-01-78
1981		1981				1981					1980					05-07-81
1983/AS						1983/AS					1981/82/S					02-22-83
1984		1984				1984		1984			1983					08-06-84
1985/S						1985/S		1985/S								04-01-85
												1983				07-01-85
											1984/85/S					02-03-86
1986/AS						1986/AS		1986/AS								09-22-86
1987		1987				1987		1987								04-01-87
											1987	1986				09-21-87
1988/S						1988/S		1988/S								06-20-88
												1987/88/A				08-15-88
			1987													09-06-88
											1988/S					02-06-89
1989/AS						1989/AS		1989/AS			1989/S					11-01-89
												1989				05-21-90
1990		1990	1990			1990		1990			1990					07-01-90
1991/S						1991/S		1991/S								03-04-91
											1991/S	1990/91/A				05-20-91
1993		1993	1993			1993		1993			1993	1992				05-01-93
					1989								1992			07-01-95
															1998	01-05-98
1996		1996	1993			1996		1993			1996	1995				07-06-99
		1999														02-07-00
															Revised	12-18-00
									2000	2000						06-18-01
											2000					09-17-01
															Revised	01-07-02
				1995	1999											01-16-02
														1998		11-04-02

S = Supplement AS = Accumulative Supplement A = Amendments

Licensing Update

On August 5, 2002, the Department of Community Affairs adopted new regulations at *N.J.A.C.* 5:23-5.20, "Standards for Educational Programs," concerning the subjects to be covered in the Building Inspector RCS, ICS, and HHS courses, and the Plumbing Inspector ICS and HHS courses. These changes are the result of a comprehensive review of the prior standards by broad-based committees comprised of active code officials, instructors, and the respective inspector associations. The result of the committees' work is a much more standardized and specific course of study in areas that are vitally important to students pursuing a career in construction code enforcement. Additional items of importance that have presented themselves since the initial standards were promulgated have also been developed and incorporated into the course standards.

The Department is currently evaluating the fire protection inspector courses. Changes in course requirements are anticipated to be proposed in the spring or summer of 2003. After the fire protection course review is completed, we will move on to a review of the standards for the electrical inspector licensing courses.

The most notable change in the courses for building and plumbing inspectors is the number of course hours required. The Building Inspector RCS course will require a minimum of 90 hours of instruction, as opposed to the former 60-hour requirement. The Building Inspector ICS course will now require a minimum of 75 hours of instruction, whereas the former standard required 90 hours of instruction. Also, the Plumbing Inspector ICS course now requires a minimum of 120 hours of instruction, as opposed to the former 90-hour requirement. Finally, the Building Inspector HHS and Plumbing Inspector HHS courses remain unchanged at a minimum of 60 hours of instruction each. These changes will be in effect for the Spring 2003 semester. Anyone who completes any of the affected courses prior to the Spring 2003 semester will continue to receive credit for the course, subject to the five-year limitation on the validity of construction code courses.

As a result of the changes in course standards, changes to which examinations are required for licensure were also necessary. These changes were based upon the duties of inspectors at the various levels of licensure. The Building Inspector RCS level will require examinations in "building, one- and two-family dwellings," as well as "mechanical, one- and two-family dwellings." The Building Inspector ICS level will require examinations in "building, general" and "mechanical, general." The Plumbing Inspector ICS license will now require examination in "plumbing, general" and "mechanical, general."

The changes in required examinations will take effect February 5, 2003. Those who have completed the examinations required under the old regulations must submit an application for the affected license before this date. Those who apply for licensure on or after February 5th will be required to complete the examinations as noted above.

If you have any questions regarding the above changes, please contact me at (609) 984-7834, or by e-mail at codeslicensing@dca.state.nj.us.

Source: John A. Delesandro
Supervisor of Licensing

Prohibited Paint Removal Methods

The Department of Community Affairs has a chapter of regulations (*N.J.A.C.* 5:17, Lead Hazard Evaluation and Abatement Code) which deals specifically with lead paint testing and abatement by licensed abatement and evaluation contractors. A permit for lead abatement is obtained from the local construction official. All inspections of lead abatement work are performed by State inspectors. In order to close out the permit for the abatement work, a clearance certificate must be obtained from the local construction official.

Sometimes, however, the Department receives questions about work practices in buildings where there is no "lead abatement" under *N.J.A.C.* 5:17. There are questions about whether there is too much paint debris or dust generated and whether anything can be done. Under the Rehabilitation Subcode of the Uniform Construction Code (UCC), *N.J.A.C.* 5:23-6, there are certain paint removal methods which are prohibited in buildings in certain use groups.

In all Use Group R buildings built prior to 1978, in all Use Group E buildings, and in Use Group I-2 buildings used for childcare, there can be no uncontained water blasting or power washing, open flame burning, use of high-temperature (more than 1100°F) heat guns, or dry scraping or sanding more than two square feet per room. (Proposed amendments to the Rehabilitation Subcode would prohibit dry scraping or sanding more than two square feet per room, interior; and ten square feet or more per building, exterior.) Please see *N.J.A.C.* 5:23-6.4(d)5 for prohibitions in repairs, *N.J.A.C.* 5:23-6.5(d)6 for renovations, *N.J.A.C.* 5:23-6.6(d)6 for alterations, and *N.J.A.C.* 5:23-6.7(d)5 for reconstruction.

If officials observe violations of these code sections, violators should be cited under the UCC. If there is a problem that involves a State-licensed lead abatement contractor,

please inform the Asbestos/Lead Unit at (609) 984-7815 of any action you take.

Source: Chrystene Wyluda
Asbestos/Lead Unit

Park Model Trailers Support and Stabilizing System

The Department of Community Affairs has recently been informed that several manufacturers of park model trailers and owners/residents of campgrounds are claiming park model trailers are not required to have any type of support or stabilizing (anchoring) system. This is not accurate.

Uniform Construction Code (UCC) Bulletin No. 93-6, "Label Requirements for Park Models," states that, wherever park model trailers are located, they are subject to the requirements of the UCC. It does not matter whether they are used for vacation purposes or as permanent residences. Therefore, properly designed foundation stabilization systems must be provided for each park model trailer.

A construction permit is required to initiate the work to be completed and all applicable inspections must be conducted to ensure the anchoring system is compliant with the code. A Certificate of Occupancy must be issued before the park model trailer can be occupied.

When applying for the construction permit, the applicant is required to submit designs and specifications for the foundation and stabilization systems, based upon the applicable requirements of Section 1609, Wind Loads; Section 1804.1, "Loadbearing Value of Soils, Soils Report;" and Section 1806.1, "Depth of Footings, Frost Protection" of the Building Officials and Code Administrators National Building Code/1996. The designs and specifications must be signed and sealed by a professional engineer or an architect licensed in New Jersey, and must also clearly indicate the type, make, model, etc. of the anchoring equipment so that the construction code official can verify conformance in the field.

I hope this will clear up any confusion. If you have any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva
Bureau of Code Services

Manufactured Homes: Permanent Foundations

Uniform Construction Code Bulletin No. 88-2, "Manufactured Housing," identifies four specific conditions for a manufactured home (formerly called "mobile homes") to be located on a private property. One condition is the requirement for a permanent foundation for the manufactured home. The Department of Community Affairs has received several inquiries regarding the definition and guidelines for these permanent foundations. The following information should be useful in the enforcement of this provision:

- The use of straps and anchors (whether concrete or soil anchors) does not constitute a permanent foundation.
- Permanent foundations are required to be constructed of durable materials, i.e., concrete, mortared masonry, or treated wood, and must be site-built. Permanent foundations are required to have attachment points to anchor and stabilize the manufactured home in order to transfer all loads to underlying soil or rock.

Please note, *N.J.A.C.* 5:23-2.15(e)1.vi, "Construction Permits – Application," provides that the foundation and stabilizing system must be designed by a New Jersey licensed professional engineer or registered architect. The structural design of the foundation system is required to be developed in accordance with the manufacturer's instructions for permanent foundation and must take into consideration the following:

- Vertical Stability:
  1. Rated anchorage capacity must prevent uplift and overturning due to wind forces. Screw-in anchors are <u>not</u> acceptable.
  2. Footing size must prevent overloading the soil-bearing capacity and must avoid soil settlement. Footing shall consist of reinforced concrete and shall be considered permanent.
  3. Base of footing is required to be below maximum frost-penetration depth.
  4. The crawl space, when provided, shall be enclosed with a continuous wall. The wall may be bearing or non-bearing.
- Lateral Stability:
  Rated anchorage capacity must prevent sliding due to wind forces.
- Design:
  The design of a permanent foundation must be based on the applicable requirements of Section 1609, "Wind Loads," in the 1996 edition of the Building Officials and Code Administrators National Building Code.

(continued on page 12)

(continued from page 11)

For more detailed information relating to this subject, please refer to the US Department of Housing and Urban Development publication entitled, "Permanent Foundations Guide for Manufactured Housing."

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

Source: Paul Sachdeva
Bureau of Code Services

Summary of Changes to the Rehabilitation Subcode – 2002

The proposed amendments to *N.J.A.C.* 5:23-6, the Rehabilitation Subcode, incorporate changes from the adoptions of the International Code Council editions of model codes by incorporating the updated model code section numbers into the Uniform Construction Code (UCC). These include references to the International Building Code 2000, International Residential Code 2000, International Mechanical Code 2000, International Fuel Gas Code 2000, National Electrical Code 2002, and International Code Council/American National Standards Institute (ICC/ANSI) standard for accessible design A117.1-1998. All of the existing model code references would be deleted and the new, updated references would be inserted in their place.

In addition to these revisions, the following amendments are being proposed in an effort to update the UCC by deleting terms and references that are obsolete. A section-by-section summary of the proposal follows:

1. At *N.J.A.C.* 5:23-6.1, Introduction, using this subcode, references to several cites have been amended to provide the code user with more precise references.

At *N.J.A.C.* 5:23-6.1(f)5iii, the reference to *N.J.A.C.* 5:23-6.12, Basic Requirements – Use Group A-1, would be deleted and replaced with *N.J.A.C.* 5:23-6.11, Basic Requirements in All Use Groups.

At *N.J.A.C.* 5:23-6.1(g)4ii, the reference to *N.J.A.C.* 5:23-6.31, Change of Use, would be changed to *N.J.A.C.* 5:23-6.31(c), which specifically pertains to means of egress.

At *N.J.A.C.* 5:23-6.1(g)4vii, the reference to *N.J.A.C.* 5:23-6.31(h), (i), and (j) would be changed to cite only *N.J.A.C.* 5:23-6.31(h) and (i), which provide for the installation of fire alarm systems and automatic fire detection systems in a building that has undergone a change of use. The reference to *N.J.A.C.* 5:23-6.31(j), Single- and Multiple-Station Smoke Detectors, is a typographical error.

2. At *N.J.A.C.* 5:23-6.4(d)5iv, *N.J.A.C.* 5:23-6.5(d)6iv, *N.J.A.C.* 5:23-6.6(d)6iv, and *N.J.A.C.* 5:23-6.7(d)5iv, restrictions would be added to limit dry scraping or sanding of painted surfaces of pre-1978 structures to two square feet per room for interior surfaces and ten square feet per building for exterior surfaces.

3. At *N.J.A.C.* 5:23-6.25(b)5 and *N.J.A.C.* 5:23-6.26(a)7, which prescribe basic requirements for Use Groups R-1, R-2, and R-4, the word "not" would be deleted to correct a typographical error. Also, the term "opening protection" would be deleted and replaced with "opening protectives" for use of a more accurate term.

4. *N.J.A.C.* 5:23-6.31(a)8, Change of Use, would provide for the installation of single- or multiple-station smoke detectors and a fire separation assembly between dwelling units when an existing single-family dwelling is converted to a two-family dwelling.

Source: John N. Terry
Code Assistance Unit

Code Change Proposals for the Rehabilitation Subcode (*N.J.A.C.* 5:23-6)

Once again, it is time to submit code change proposals for the Rehabilitation Subcode. Code changes may be aimed at improving the Rehabilitation Subcode by recommending a requirement that is not currently there, or they can address a requirement that seems unclear. Since its adoption in 1998, the Department of Community Affairs has encouraged code users to submit Rehabilitation Subcode code changes. This process, through which code changes based on the experience of the code users are presented and discussed, has been very successful.

To be considered this year, code changes must be submitted to the Department by March 10, 2003. The code change must be specific — the citation and the exact language change must be given. An explanation must be provided and any companion changes (other sections of the Rehabilitation Subcode that would also need to be changed) must be identified.

The code changes will be collated and presented to the Uniform Construction Code Advisory Board. A public hearing will be held at 9:30 a.m. on April 11, 2003 in Conference Room 129 of the Department of Community Affairs at 101 South Broad Street in Trenton. The public hearing will give code change proponents a chance to present — and explain — their proposals to the members of the Code Advisory Board.

A code change proposal form is included on the next page for your convenience. If you have any questions about this process, please contact the Code Development Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
CODE CHANGE PROPOSAL 2003
REHABILITATION SUBCODE (*N.J.A.C.* 5:23-6)

Due: **March 10, 2003**
Proposals must be presented with language proposed for deletion in brackets [ ].
Proposals must be presented with language proposed for addition underlined ____.

Mail code change proposals to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
Post Office Box 802
Trenton, New Jersey 08625

Fax code change proposals to:
Code Development Unit
(609) 984-7717 or
(609) 633-6729

Direct questions to the Code Development or Code Assistance Units at (609) 984-7609.

Section (citation) proposed for change: _____

Sections (companion changes) that might also need to be changed: _____

_____

NAME: _____

ORGANIZATION (if any): _____

ADDRESS: _____

_____

TELEPHONE: _____ FAX: _____ E-mail: _____

Proposed Code Change:

_____

_____

Supporting Statement (reason for code change):

_____

_____

_____

_____

Swimming Pool Etiquette 

Ok, here it is . . . the official scoop on all you've ever wanted to know about the Uniform Construction Code (UCC) requirements applicable to a private swimming pool. Specifically, this article explains provisions for swimming pool sizes, materials, barriers, and electrical requirements.

Building Components:

Identifying the point at which a swimming pool is regulated by the 1996 edition of the Building Officials and Code Administrators National Building Code (BOCA/1996), the Building Subcode, has been confusing for several enforcing agencies. This article should clarify these uncertainties.

Section 421.1 of BOCA/1996 states that all swimming and bathing facilities are regulated by BOCA/1996, except for those that are less than 24 inches in depth or those that are less than 250 square feet in surface area (18 feet in diameter). These two conditions are written as exceptions to the initial requirement and they are independent. This means that if the swimming/bathing facility is either less than 24 inches in depth or less than 250 square feet in surface area, then the facility is exempt from the BOCA/1996 requirements. For example, a pool that is 23 inches in depth and 500 square feet in surface area is exempt from the requirements. A pool that is 54 inches in depth and 240 square feet in surface area is also exempt.

Additional exceptions to BOCA/1996 further complicate the issue. BOCA/1996 also states pools that are less than the required dimension or depth mentioned above are not exempt when they are constructed of structural materials, or are permanently equipped with water recirculation equipment. The standard interpretation of a pool that does not involve structural materials is a pool that relies on water or air to remain upright. This type of pool is usually made of nonmetallic, molded polymeric or inflatable walls.

Another point that has been confusing for many enforcing agencies is whether installed water recirculation equipment is considered permanent. There are two primary conditions of the water recirculation equipment that should be observed to determine its permanence. If the equipment is permanently connected to the electrical service, or if the equipment is cord-and-plug type but is required to be bolted to a foundation, then the equipment should be considered permanent. In such instances, the equipment should be regulated by the Building Subcode.

Moving beyond the pool itself, swimming pool barriers have also been a topic of discussion. Simply stated, if a swimming pool is not exempted by the above requirements, it is regulated by the Building Subcode, in which case a swimming pool barrier is required. The definition of a swimming pool barrier can be found in Section 421.2 of BOCA/1996, where it is defined as a fence, a wall, a building wall, the wall of an above-ground swimming pool, or a combination thereof which completely surrounds the swimming pool and obstructs access. The requirements for construction of a swimming pool barrier can be found in Section 421.10 of BOCA/1996 (note: 421.10.1, #9, is deleted). Please keep in mind that the primary purpose of a barrier is to protect the safety of small children, particularly those five years old or younger, by limiting or delaying access to a pool.

A swimming pool barrier may be placed anywhere up to the property line, provided a local ordinance does not say otherwise, and as long as the pool is completely surrounded. The barrier must be independent of any neighboring barrier. Neighboring barriers are not to be shared for purposes of meeting pool barrier requirements. If sharing pool barriers were allowed, a neighboring property owner could decide to remove his barrier. This would leave a pool without a barrier on all sides, which would be in violation of the Building Subcode.

Two conforming pool barriers may be placed back to back, provided the barriers are not climbable from either side. However, if a neighboring property contains a climbable fence or barrier, the barrier for the new pool should be placed a sufficient distance away in order to limit access to the pool. This distance should be based upon the topography of the properties. Separation distances between the fence and the barrier may range from two feet to four feet. Smaller or greater ranges may be appropriate, based upon specific circumstances.

When determining whether a building permit is necessary for installation, the following statement applies: If the swimming pool is not exempted by Section 421.1 of BOCA/1996, a building permit is required.

The Department of Community Affairs is proposing an amendment to the International Building Code and the International Residential Code to keep swimming pool requirements the same as those in BOCA/1996, as described above.

Electrical Components:

The Code Assistance Unit has also heard some confusion about whether an electrical permit is

required for the installation of a swimming pool. Typically, there are two scenarios that would trigger the need for an electrical permit: 1) if a swimming pool is capable of holding water to a depth of greater than 42 inches, or a pool has nonmetallic, molded polymeric walls or inflatable fabric walls, regardless of dimension; or 2) if a swimming pool is equipped with permanent recirculation equipment, regardless of dimension. Please note, the requirements for electrical permits are completely independent of building permit requirements.

The chart below further clarifies when an electrical or building permit would be required for the installation of swimming pools.

If you have questions on this matter, feel free to contact the Code Assistance Unit at (609) 984-7609.

Sources: John N. Terry and Rob Austin
Code Assistance Unit

Permit Application for Swimming Pools -- When to File

	Permit Application Required	
	Building Subcode	**Electrical Subcode**
A - Maximum Water Capacity -- A Pool That Is:		
24 inches or greater depth and 250 square feet or greater area	Y	N[1]
Less than 24 inches deep and 250 square feet or greater area	N	N[1]
24 inches or greater depth and less than 250 square feet area	N	N[1]
[ð]Less than 24 inches deep and less than 250 square feet area	N	N[1]
B - Pool above or on ground with nonmetallic, molded polymeric or inflatable walls	N[2]	N[1]
C - Pool involving structural materials, regardless of dimension	Y	N[1]
D - Pool equipped with permanent water recirculation system, regardless of dimension	Y	Y[3]

Notes:
1. Required where mandated by the conditions in Item D.
2. Required where mandated by the conditions in Item A.
3. Not mandated if all of the following conditions are met:
--Motor/filtration pump unit is portable (no foundation/not bolted down) and can be readily disassembled from the water circulation system;
--Motor/filtration pump unit is listed (UL, etc.) as double insulated and has a cord with a minimum of 25 feet in length;
--[ð]Pool is capable of holding water to a maximum depth of 42 inches; and
--Pool has no underwater lighting.

REMINDER: Swimming pools receive a Certificate of Approval (not a Certificate of Occupancy).

Technical Assistant/Permit Technician

If you are working in a municipality as a Technical Assistant (TA), if you have completed the certification course offered through the Department of Community Affairs' continuing education program, or if you have just completed the Department's TA college course, then the International Code Council is offering a test that would give you national recognition and help to enhance your credibility in your profession.

New Jersey offers certification courses to support staff working in the Office of the Construction Official. Over 110 students have already taken advantage of the college courses that were offered during the fall semester, bringing the total of certified TAs to over 400 throughout the State. You may want to take the next step!

The first TA to successfully complete the Permit Technician Examination (P2) and receive this national recognition is Ede DeLuca. With 20 years of experience, Ms. DeLuca is currently working in Vernon Township, Sussex County and is teaching the TA course at Sussex County College. She is also active in the Bergen-Passaic TA Association, where she holds the position of Secretary.

Please be advised that the P2 is not mandatory. If you would like more information on the P2 or the practice course, please contact Building Officials and Code Administrators International at (708) 799-2300. If you are interested in the availability of college courses, please call the Education Unit of the Department at (609) 984-7820.

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

UCC Standard Forms – Inspection of LPG Installations

In May 2001, amendments to *N.J.A.C.* 5:23-3.4 were adopted assigning responsibility for inspection of liquefied petroleum gas (LPG) installations up to 2,000 gallons aggregate water capacity to the plumbing subcode official. However, the Uniform Construction Code standard form for the Fire Protection Subcode Technical Section has not yet been amended to reflect this change. Please disregard the LPG item on this form. Inspection of these systems is the responsibility of the plumbing subcode official only.

Source: Kristy Paolillo
Code Development Unit

NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS

Division of Codes and Standards
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