Construction Code Communicator

State of New Jersey
James E. McGreevey, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

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The I-Codes Are Here!

The Department of Community Affairs adopted the 2000 editions of the International Building Code (IBC/2000) and the International Residential Code (IRC/2000) on May 5, 2003. The purpose of this article is to summarize the changes made by the State of New Jersey to these model codes. This article is not intended to provide an all-inclusive list of amendments, but merely a list of the "big-ticket" changes that are proposed by the Department.

IBC/2000

1. Occupancy Classification Clarifications (Chapter 3): The Department is amending the published occupancy descriptions for Group I and Group R. These amendments reflect the New Jersey laws for rooming and boarding homes, hotels and multiple dwellings, and the Department of Health and Senior Services regulations for assisted-living facilities. Additionally, the amendments provide clarification on Group R-3 occupancies because the definition, as published in the IBC/2000, is not clear. The amended language provides clarity on the limited scope of this occupancy classification.

2. Height and Area Limitations: The Department is amending the allowable number of stories per the IBC/2000. The number of stories allowed will be consistent with the number of stories allowed by the 1996 edition of the Building Officials and Code Administrators (BOCA) National Building Code.

3. Unlimited Area Buildings (Section 507): The IBC/2000 contains a provision for unsprinklered, unlimited-area buildings. This provision has been deleted upon adoption. The IBC/2000 also contains provisions for two-story, unlimited-area buildings. These provisions are limited to buildings of Type 1 or Type 2 construction.

4. Fire Wall Horizontal Continuity (Section 705.5): The IBC/2000 provides that fire walls must be continuous for a distance of four feet on either side where the firewall intersects with an exterior wall. This provision has been deleted and the BOCA/1996 requirement for a smoke-tight junction has been retained.

5. Elevator Lobbies (Section 707.14.1): The IBC/2000 contains requirements for elevator lobbies in occupancies that are required to have fire-resistance-rated corridors. In New Jersey, these requirements are limited to high-rise buildings that are required to have fire-resistance-rated corridors.

6. Fire Protection Systems:

A. Group I (Section 903.2.5) -- The fire sprinkler exception for day-care facilities with 100 or fewer children that have direct access to the exterior at grade is retained from BOCA/1996. However, this exception is NOT

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applicable to buildings of construction types IIIB and VB.

B. Group R (Section 903.2.8) -- The current exception from BOCA/1996 for two-story, Group R-2 buildings is retained.

C. Windowless Stories (Section 903.2.12.1) -- The current BOCA/1996 requirements for the suppression of windowless stories are retained.

D. Area Sprinkler Requirements (Section 903.2.16) -- A sprinkler threshold has been established for Groups B, F-2, and S-2. An automatic sprinkler system per Section 903.3.1.1, "NFPA 13 Sprinkler Systems," of the Building Subcode is required when the maximum area is exceeded for construction types IIB, IIIB, and VB.

E. Standpipe Installation (Section 905.2) -- The current requirements for standpipe system design from BOCA/1996 are retained.

F. Fire Department Connections (Section 906) -- The current requirements for Fire Department Connections (FDCs) from BOCA/1996 are retained because the IBC/2000 does not contain requirements for FDCs.

7. Horizontal Exits: The current requirements for horizontal exits are retained.

8. Structural Tests and Special Inspections: The Department has made a few changes to the IBC/2000 requirements for structural tests and special inspections. These are new concepts for construction code enforcement in New Jersey, and the provisions expand the quantity and types of special inspections required. The adopted amendments limit the application of these requirements to Class 1 buildings only.

9. Swimming Pool Barriers: The IBC/2000 inadequately addresses swimming pool protection. Therefore, the current requirements from BOCA/1996, as amended, are retained.

10. Referenced Standards: The 1999 editions of the National Fire Protection Association (NFPA) 13, 13R, 13D, and 20 are adopted in lieu of the 1996 editions of the NFPA standards, which are referenced in the IBC/2000. The 1996 editions of the NFPA standards are no longer in print.

IRC/2000

1. Stair Issues: The Department has amended the provisions for stairs in the IRC/2000 to retain the current building code requirements. Examples of these amendments include provisions for stairway illumination, tread and riser dimensions for all residential stair types, handrail grip size, and ladder effect of guardrails.

2. Private Garage Separations: The Department has retained the BOCA/1996 requirements for fire-resistance ratings for private garages that are located under or adjacent to a living space.

3. Emergency Escape and Rescue: The Department has deleted the requirement contained in the IRC/2000 for emergency escape and rescue openings for all basements that contain habitable spaces. These openings will be required for sleeping rooms only.

4. Sprinkler Trade-Off for Dwelling Unit Separation: The Department has amended the section that allows a reduction in the fire-resistance rating for the installation of an automatic fire sprinkler system installed in accordance with NFPA 13. The adoption allows use of the reduced fire-resistance ratings when an NFPA 13, 13R, or 13D system is installed.

5. Presumptive Load Bearing Values of Soil: The Department has retained the load-bearing values for soil from the 1995 edition of the Council of American Building Officials One- and Two-Family Dwelling Code.

6. Waterproofing and Dampproofing for Foundations: The Department has retained the BOCA/1996 text for the requirements applicable to the waterproofing and dampproofing of foundation walls.

7. Chimney Clearance to Combustibles: The Department has retained the current BOCA/1996 requirements for clearance to combustible sheathing and trim.

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

Source: John N. Terry
Code Assistance Unit

Adoption of the NEC 2002

The proposal for the adoption of the 2002 edition of the National Electrical Code (NEC/2002) as the Electrical Subcode was published in the December 16, 2002 *New Jersey Register*. The adoption was published on May 5, 2003. The highlights of the New Jersey amendments to the NEC/2002 are as follows:

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Article 80, "Administration and Enforcement," is deleted because the Uniform Construction Code contains the administrative provisions for the enforcement of technical subcodes in New Jersey.

The requirement for the installation of Arc Fault Circuit Interrupters at Section 210.12(B), entitled "Arc-Fault Circuit-Interrupter Protection," is also deleted. These installations will remain optional in New Jersey.

In addition, Section 334.12(A)(1), "Uses Not Permitted," which prohibits the installation of romex (Types NM, NMC, and NMS) cable throughout multi-story buildings of construction types III, IV, and V, is deleted.

Another significant feature of this adoption is the introduction of metric units (also known as SI units) as the preferred measurement system for enforcement of the Electrical Subcode. The conversion from the inch-pound units to SI units is allowed to be used as an approximate conversion (also known as a hard conversion), except in limited cases as covered in Section 90.9(C), "Units of Measurement, Permitted Uses of Soft Conversion." Accordingly, at Section 300.4(a)(1), "Protection Against Physical Damage, Cables and Raceways Through Wood Members," the allowed distance from the edge of a hole on a nail plate to the nearest edge of a wood member has been changed from "1¼ inches (31.8 mm)" to "32 mm (1¼ inches)" to make it consistent with the standardized text of the NEC/2002. Numbers shown in either SI units or inch-pound units are considered compliant.

Code officials are advised to note the corrections contained in the errata to the NEC/2002, which are posted at the National Fire Protection Association web site at www.nfpa.org, and to remember the provision for the six-month grace period for subcode revisions, as set forth at *N.J.A.C.* 5:23-1.6(a).

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

Source: Ashok Mehta
Code Assistance Unit

ALERT! Aluminum Structures

"Patio rooms," "sunrooms," "three-seasons rooms," "four-seasons rooms," or "Florida rooms" — call them what you want, but we have found that these aluminum structures are collapsing at an alarming rate in New Jersey. Why? Because many of the manufacturers have not taken into consideration the snow drifting requirements contained in Section 1608.7.1 of the 1996 Building Officials and Code Administrators (BOCA) National Building Code.

These structures are usually bolted to the rear wall of single-family dwellings. The roof of the aluminum structure is usually considerably lower than the roof of the main structure. That allows snow to build up and the structure eventually collapses.

There is a second problem. The Council of American Building Officials One- and Two-Family Dwelling Code and the 2000 International Residential Code (IRC), which have recently been adopted, do not contain provisions for drifting snow. To address this situation, the Department of Community Affairs will publish a Formal Technical Opinion (FTO). This FTO will contain the provisions from the 2003 IRC, which will have specific design criteria for aluminum structures. Until the FTO is published, all code officials should review these structures utilizing the provisions contained in the recently adopted 2000 International Building Code, Section 1608.7, "Drifts on Lower Roofs."

If you have any questions, please contact the Code Assistance Unit at (609) 984-7609 or the Office of Regulatory Affairs at (609) 984-7672.

Source: Lou Mraw
Office of Regulatory Affairs

Licensing of Autobody Repair Facilities

This article is to serve as a heads up for code officials in case you receive calls about the new licensing requirements for autobody repair facilities.

Recent statutory changes at *N.J.S.A.* 39:13, Motor Vehicles – Repairs, Licensing, and Permits, have established new licensing requirements for autobody repair facilities. For more information, anyone with questions may contact the New Jersey Department of Transportation, Division of Motor Vehicles (NJDOT DMV) at (609) 984-9632 or (609) 984-9631.

Please be advised, Uniform Construction Code officials do not have jurisdiction in this matter. This information is provided so that code officials may appropriately direct inquiries on autobody repair facility licensing requirements to NJDOT DMV.

Source: Yvonne Dawkins
NJDOT DMV

Highlights of the Differences Between IBC/2000 and BOCA/1996

The Department of Community Affairs adopted the 2000 edition of the International Building Code (IBC) on May 5, 2003 and many requirements of the 1996 Building Officials and Code Administrators National Building Code (BOCA) will change. The following chart highlights some of the new code requirements, illustrating primary differences between the IBC/2000 and BOCA/1996.

Chapter 3 "Use and Occupancy Classification" (Refer to other articles in this issue of the *Construction Code Communicator* for additional information.)	Use Groups, which are now Groups per the IBC/2000, have been revised and new ones have been added. For example, upon adoption, restaurants and nightclubs are both considered Group A-2, churches have been added to Group A-3, and indoor arenas are classified as Group A-4.
Chapter 4 "Special Detailed Requirements Based on Use and Occupancy"	There are requirements for security grilles and doors in malls. A standby power and an emergency voice/alarm communication system are required in malls with an area greater than 50,000 square feet. Atrium walls and ceilings must meet a Class B interior finish. A carport must be open on two sides, or it is considered a garage.
Chapter 5 "General Building Heights and Areas"	The Height and Area Table is different than that provided in BOCA/1996. Larger buildings can be constructed under the IBC/2000. IBC/2000 tabular areas have been increased when compared to those found in BOCA/1996. Also, the IBC/2000 allows a larger area increase for sprinklers than BOCA/1996.
Chapter 6 "Types of Construction"	The Types of Construction have been revised. Type 1A per BOCA 1996 is deleted and Type 1B is now Type 1A in IBC/2000. Also, Type 2A is now Type 1B, Type 2B is Type 2A, and Type 2C is Type 2B. The remaining Types of Construction are the same.
Chapter 7 "Fire-Resistance-Rated Construction"	Minor technical changes have been made and the chapter has been reorganized. There are new requirements for an elevator lobby in certain instances.
Chapter 8 "Interior Finishes"	Textile ceiling finishes must conform to Class A of ASTM E84. Suspended acoustical ceilings must be installed per ASTM C635 and ASTM C636. Pyroxylin plastic is not permitted in Group A occupancies.
Chapter 9 "Fire Protection Systems"	An automatic sprinkler system is required in woodworking operations greater than 2,500 square feet or where finely divided combustible material is created. An automatic sprinkler system is required in a cellulose nitrate or pyroxylin plastic fabrication area. There are new requirements for the installation of sprinklers in repair garages. A secondary water supply is required for high-rise buildings in seismic areas. There is a standpipe requirement in non-sprinklered Group A buildings with more than 1,000 occupants. These buildings also require an emergency voice/alarm communication system. There are new requirements for Group F and Group M involving manual alarms.
Chapter 10 "Means of Egress"	A new requirement states that protruding objects cannot reduce the clear width of an accessible route. A new section contains requirements on special doors and grilles. A new section has been added that requires stairway doors to be operable from both sides without knowledge or effort; there are exceptions. There are new requirements for turnstiles. There are new requirements for corridor continuity. There is a new requirement for the separation of ventilation equipment that serves exit enclosures from other ventilation equipment.
Chapter 12 "Interior Environment"	There are only minor changes to this chapter.
Chapter 14 "Exterior Walls"	There are requirements for a vapor retarder on exterior walls. There are new requirements for fastening of wall coverings.

Chapter 15 "Roof Assemblies and Rooftop Structure"	There is a new requirement for at least schedule 40 plastic pipes for gutters and leaders except in Group R-3, private garages and Type V construction. There are requirements for metal-panel roof systems and ballasted, single-ply roof systems. Roof covering material must be labeled with the manufacturer's and approved testing agency's identifying information.
Chapter 16 "Structural Design"	Wind speed is measured differently in the IBC/2000. The wind speed contour line for 110 mph (BOCA/1996 wind speed – 90 mph) has moved inland slightly so that there is a wind speed increase for coastal communities. The seismic section has been revised and new terms have been implemented. The same letter designation has been used to define Seismic Design Categories and Site Coefficient. These are two distinct parameters for seismic design.
Chapter 17 "Structural Test and Special Inspections"	There are new layers of responsibility for structural tests and special inspections. For example, inspection of smoke control requires an acceptance test after installation; windows and doors must be tested in accordance with AAMA/NWWDA or ASTM E330. Contractors are required to submit a statement of responsibility that acknowledges they are aware of the special quality assurance requirements, that specifies quality control procedures, and that identifies the persons responsible for quality control, etc.
Chapter 18 "Soil and Foundations"	There are new requirements for seismic overturning movement of foundations. There are soil liquefaction requirements. There are requirements for pools located close to sloping soils. There are minimum requirements for the width of footings. There are new design requirements for pier foundations.

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

Source: Marcel Iglesias
Code Assistance Unit

Carbon Monoxide Detectors in One- and Two-Family Dwellings

The requirement for the installation of Carbon Monoxide (CO) alarms in one- and two-family dwellings was adopted in the April 7, 2003 *New Jersey Register*. Please be advised, the six-month grace period does not apply to these regulations.

The six-month grace period does not apply because the requirement for installation of a CO alarm in accordance with the adopted regulations has no impact on the design of a home and may be addressed as an inspection item.

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

Source: Kristy Paolillo
Code Development

Did You Know the Division of Codes and Standards is on the World Wide Web?

The next time you are on the Web, be sure to surf to the Department of Community Affairs, Division of Codes and Standards web site. The Division's web site offers local construction offices and the general public a wide array of useful information and materials. From this web site you can:

- Find employment opportunities within the Division of Codes and Standards.
- Locate model codes adopted in New Jersey from 1975 to present.
- Comment on rule proposals via e-mail.
- Locate rule proposals and adoptions.
- Find information about the Carnival and Amusement Ride Safety Program.
- Locate a complete listing of working code officials (updated quarterly).

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- Locate a detailed listing of registered home builders in New Jersey.
- Print copies of the Uniform Construction Code (UCC) Construction Permit Application F100 and related UCC Standard Forms.
- Find information and print related applications for subcode and construction official license exams.
- Find seminar brochures and course dates, and e-mail your registration for continuing education seminars.
- Find information on how to order Division publications.

The Division's web site is updated on a regular basis, so be sure to add http://www.state.nj.gov/dca/codes/ to your "favorites" menu.

If you have any questions, you may e-mail me at dyedwab@dca.state.nj.us.

Source: Dana M. Yedwab
Division of Codes and Standards

Commercial Kitchen Hood Fire Suppression System 

With the adoption of the 2000 edition of the International Mechanical Code (IMC), a question has been raised on the requirements for the automatic shutdown of the fuel or electrical power supply to the cooking equipment when the hood fire extinguishing system is actuated. Previously, in the 1993 edition of the Building Officials and Code Administrators (BOCA) Mechanical Code, this code requirement was clearly stated in Section M-508.3.

In the IMC/2000, Section 509, "Fire Suppression Systems," reference is made to an approved automatic fire suppression system complying with the 2000 editions of the International Building Code (IBC) and the International Fire Code.

The IBC/2000, Section 904.11.2, "System Interconnection," clearly states the above requirement for automatic shutdown of the fuel or electrical power supply to the cooking equipment when the fire extinguishing system is actuated.

Please note, for projects approved prior to the adoption of the IBC/2000, the above requirements are referenced through the Uniform Construction Code to the 1996 editions of the BOCA National Building Code and the BOCA National Fire Prevention Code. BOCA/1996, Section 910, "Dry-Chemical Extinguishing Systems," and Section 914.0, "Wet-Chemical Range Hood Extinguishing Systems," make reference to National Fire Protection Association (NFPA) 17 and 17A standards. Both referenced NFPA standards have requirements for automatic shutdown of the fuel or electrical power supply to the cooking equipment when the fire extinguishing system is actuated.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

ISO is Reevaluating New Jersey's Code Enforcement Offices

The Department of Community Affairs and the Insurance Services Office (ISO) met recently to discuss ISO's Building Code Effectiveness Grading Schedule (BCEGS) program. A primary topic of this meeting was the State-adopted building code.

One of the premises of the BCEGS program is to encourage the adoption of the latest edition of a model building code. This is accomplished in two ways. First, less than full score is assigned when the code being used is over five years old. Second, when the final score is being calculated, a factor is applied to the balance of the points available that further reduces the maximum possible score.

Recently, several jurisdictions throughout New Jersey have had reductions in their BCEGS classifications. These reductions occurred primarily because the building code in use in New Jersey is more than five years old. The reductions are not a reflection on local code enforcement efforts.

The International Building Code (IBC/2000) and International Residential Code (IRC/2000) have been adopted as the Building Subcode for the State of New Jersey in the spring of this year. Municipalities whose scores were reduced are now eligible for additional points in the BCEGS program.

Following the adoption of the IBC/2000 and IRC/2000, ISO will contact each municipality that received a reduced score. To determine whether there have been any significant changes in your code enforcement activity other than the change in the adopted building code, ISO will include a brief questionnaire. The questionnaire will ask whether there has been a change in local support for code enforcement. ***Your municipality will be reclassified only***

if you answer the questions and return the questionnaire to ISO.

If you report that there have been some changes in code enforcement activity, or that there have been changes in the local support for code enforcement, ISO will contact the construction official and obtain additional information before recalculating your score and reclassifying your municipality. If you report that the code enforcement activity — and the support for code enforcement — remain substantially the same, ISO will recalculate your score and reclassify your municipality based on the information you previously provided, with credit given for the newly adopted Building Subcode. ISO will notify you of those results.

ISO wants to remind all municipalities that the BCEGS program is an advisory insurance underwriting information and rating tool. It is not intended to analyze all aspects of a comprehensive building code enforcement program. It is not for the purposes of determining compliance with any State or local law, nor is it for making loss prevention or loss safety recommendations.

If you would like to know more about this program, there is a web site that provides information about the BCEGS program. The web site also has information on a companion ISO program that evaluates community fire suppression capabilities. You may access this web site at www.isomitigation.com.

If you have any questions, please contact Lou Mraw at (609) 984-7672 or me at (609) 984-7609.

Source: Emily Templeton
Code Development

Guidelines for Building Enclosures in Flood-Prone Areas

Throughout New Jersey, there are many flood-prone areas. Some of these are "V" zones, which are areas where the floodwaters move at a rate of moderate to fast velocity and occur at the oceanfront. Others are "A" zones, where the floodwaters rise and fall with some horizontal movements, and are located near lakes, rivers, and the bayfront. When constructing buildings in these areas, certain factors need to be considered for the building's enclosures.

In a V zone, buildings that have enclosures below the Base Flood Elevation (BFE) are required to be constructed so that the enclosure would break away during a flood and allow the moving water to pass through the enclosure.

Buildings that have enclosures below the BFE in an A zone need to be constructed with vents to allow the water to enter and leave, thus eliminating differential hydrostatic pressures on the building's walls. Examples of enclosures allowed in A zones include vehicle parking areas and garages, storage rooms, and building access enclosures. Enclosures that are not allowed are living areas such as bedrooms, dining rooms, living rooms, family rooms, and service uses. Also, installation of mechanical equipment below the BFE is prohibited.

It has been indicated that there are cases where enclosures constructed below the BFE in A zones have not been provided with the required water equalization vents as required by the Building Subcode. In order to receive coverage under the Federal Flood Insurance Program at the standard rate, homeowners would need to identify the enclosures, and bring them into compliance with the hydrostatic venting requirements of the Building Subcode and the Federal standard 44CFR60.3(c)(5). Please be advised these requirements provide that a design must be certified by a registered professional engineer or registered architect. Otherwise, the enclosure may be designed using the following minimum criteria:

> A minimum of not less than two openings with a combined net area of not less than one square inch for every square foot of area subject to flooding are required; and vents may be equipped with screens, louvers, valves, or other coverings or devices, provided that they allow for the automatic entry and exit of floodwaters.

Please note, in entry foyers not separated from the living area by doors, the use of vents is neither advisable nor practical. Such areas are difficult to heat or cool and they are subject to insect infestation because insect screening will block the flow of water with debris. It is advised that, in newly constructed houses, the entryway or foyer floors be elevated to the level required by the Local Flood Damage Prevention Ordinance.

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

Source: Jeffrey Applegate
Code Assistance Unit

What Residential (Use) Group R Means in New Jersey

The 1996 edition of the Building Officials and Code Administrators (BOCA) National Building Code had Residential Use Groups R-1, R-2, R-3, and R-4. The adoption of the International Building Code (IBC) and International Residential Code (IRC), both 2000 editions, has five groups, which include the new designation, Group R-5.

Group R-5 is exclusively an IRC building. All other Group R buildings are constructed according to the provisions of the IBC.

BOCA/1996	IBC/2000
R-1 — Residential; hotels, motels, boarding homes, etc. (BOCA)	R-1 — Residential; hotels, motels, boarding homes, etc. (IBC)
R-2 — Residential; multiple family, dormitories, etc. (BOCA)	R-2 — Residential; multiple family, dormitories, etc. (IBC)
R-3 — Residential; 1 and 2 family, and multiple single family, 5 residents or less each (BOCA)	R-3 — Residential; 1 and 2 family, and adult/child care, 5 residents or less each (IBC)
R-4 — Residential; detached 1- and 2-family dwellings, 2 story max (CABO)	R-4 — Residential; therapeutic residences for 6-16 occupants (IBC)
	R-5 — Residential; detached 1- and 2-family dwellings, 3 story max (IRC)

New Jersey's amended IBC Section 310, Residential Group R, now reads like this:

R-1 Residential occupancies where the occupants are primarily transient (less than 30 days) including: *Hotels (including motels) having transient occupancy, rooming houses with more than five residents having transient occupancy.*

R-2 Residential occupancies containing more than two dwelling units where the occupants are primarily permanent, including: *Apartment houses, convents, dormitories, fraternity and sorority houses, monasteries, rooming houses with more than five residents not having transient occupancy, therapeutic residences with more than 16 residents.*

R-3 Detached one- and two-family dwellings greater than three stories in height, multiple single-family townhouses greater than three stories in height, and attached two-family dwellings separated from adjacent units by firewalls including: *Single residential occupancies accessory to a dwelling unit having no more than five roomers or lodgers (single occupancies, accessory to a dwelling unit, having more than five roomers or lodgers shall be classified as Group R-2 or I-1, as appropriate), adult and child day-care facilities accessory to a dwelling unit serving five or fewer persons of any age for less than 24 hours, rooming houses with five or fewer residents, therapeutic residences with five or fewer residents.*

R-4 Therapeutic residences including more than five but not more than 16 occupants, excluding staff, capable of prompt evacuation as defined by Section 22-1.3 of NFPA 101-97, referenced in Chapter 35. *Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided in the code.*

R-5 Detached one- and two-family dwellings not more than three stories in height, and multiple single-family townhouses not more than three stories in height, designed and constructed in accordance with the IRC.

With the retention of *N.J.A.C.* 5:23-3.21(b) during this interim period, the existing code requirements applicable to the height and area of such buildings shall continue to apply. Specifically, the basic tabular area and the increases allowed for open perimeter, sprinklers, or construction type shall apply. In addition, a third story of living space shall be allowed, provided it meets the habitable attic requirements.

Source: Rob Austin
Code Assistance Unit

What . . . More (Use) Groups?

The 2000 edition of the International Building Code (IBC/2000) has more (Use) Group classifications than the 1996 edition of the Building Officials and Code Administrators National Building Code (BOCA/1996). Most of these differences appear in the IBC/2000 Hazardous Group H and Institutional Group I. (There are separate articles in this issue of the *Construction Code Communicator* on Assembly Group A and Residential Group R.)

Group H in the IBC/2000 is very similar to Use Group H in BOCA/1996. However, BOCA/1996 classifies Hazardous Production Materials (HPM) Facilities in Chapter 4, "Special Use and Occupancy," Section 416, "HPM Facilities." IBC/2000 classifies HPM Facilities as an additional Group, according to Chapter 4, "Special Detailed

Requirements Based on Use and Occupancy," Section 415.9, "Group H-5."

Group I in the IBC/2000 also includes a new group, Group I-4, which pertains to day-care facilities. Per the IBC/2000, day-care facilities provide supervision, personal care services, and accommodations on less than a 24-hour basis for six or more persons of any age. If you recall, BOCA/1996 dealt with day-care facilities as Use Group I-2 and Use Group E for children, but never assigned a use group to facilities for adult care.

The following chart provides a simple comparison of the two codes.

BOCA/1996	**IBC/2000**
H-1 — High Hazard; detonation hazard	**H-1** — High Hazard; detonation hazard
H-2 — High Hazard; deflagration hazard	**H-2** — High Hazard; deflagration hazard
H-3 — High Hazard; combustion or physical hazard	**H-3** — High Hazard; combustion or physical hazard
H-4 — High Hazard; health hazard	**H-4** — High Hazard; health hazard
	H-5 — High Hazard; hazardous production materials (HPM)
I-1 — Institutional; supervised residential homes for 6 or more occupants	**I-1** — Institutional; supervised residential homes for 6 or more occupants
I-2 — Institutional; medical, nursing care, etc. for 6 or more occupants	**I-2** — Institutional; medical, nursing care, etc. for 6 or more occupants
I-3 — Institutional; jails, reformatories, asylums, etc. for 6 or more occupants	**I-3** – Institutional; jails, reformatories, asylums, etc. for 6 or more occupants
	I-4 — Institutional; day care for 6 or more occupants

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

Source: Rob Austin
Code Assistance Unit

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ISO and Training

It has come to our attention that some municipalities are receiving less than they may be eligible for regarding the questions on training that are included on the questionnaire for the Building Code Effectiveness Grading Schedule (BCEGS) used by the Insurance Services Office (ISO) in its evaluation of local code enforcement efforts.

The questionnaire allows for full credit to be given for up to 96 hours of training per year. This seems like a lot — 12 days of training each year. Although not everyone is expected to meet that criterion, you should know that ISO regards training in a broader scope than simply the required courses for license renewal. In addition to the training courses for license renewal, organized discussions about code issues also count as training.

ISO divides training into four distinct areas with specific contact hour criteria for each.

a) Administration – (12 hours) Training in administration means receiving education in the internal workings of a building department including permit processing and tracking, budgeting and staffing, supervising and managing, and public service issues.

b) Legal – (12 hours) Legal training includes education in the aspects of code enforcement that are affected by, or that pertain to, the legal rights, obligations, liabilities, or immunities of code enforcement staff, building owners, and contractors.

c) Mentoring – (12 hours) Mentoring means providing one-on-one education in code enforcement. A common means of mentoring is where a senior field inspector rides along with a junior field inspector to provide construction site instruction on specific issues and conditions to be addressed when performing inspections.

d) Technical – (60 hours) Technical training is education in those aspects of code enforcement that relate to interpreting and enforcing specific technical requirements in adopted codes and standards.

A classroom setting is not the only way to achieve ISO's credit for training. The BCEGS program can credit weekly staff meetings that devote time to education, a technical session that is part of a professional association meeting, courses taken via computer, or education through videotapes.

When deciding whether meetings count as training, it is helpful to have a record of the meeting, people who attended, date, time, and issues discussed (the agenda). Although some credit may be given for meetings that are not recorded, full credit can be given when records are available. The records may be in a log format and do not have to be lengthy.

The ISO has information available on its web site, www.isomitigation.com. If you have further questions on the ISO process, please contact Lou Mraw at (609) 984-7672 or me at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Locking Means of Egress Doors Under Special Conditions in Hospitals, Nursing Homes, and Assisted-Living Facilities

In New Jersey, the construction of hospitals and other medical facilities is regulated by two standards: the 2000 edition of the International Building Code (IBC/2000) as mandated by the New Jersey Uniform Construction Code and the 2000 edition of the National Fire Protection Association Life Safety Code 101 (NFPA 101/2000) as mandated by the Health Care Finance Administration, a branch of the United States Department of Health and Human Services.

For years, the Building Officials and Code Administrator's National Building Code (BOCA) and the other national model codes have sparsely addressed the special needs and safety requirements particular to health-care occupancies. For this reason, the Health Care Finance Administration, which administers the Medicare/Medicaid reimbursement program for the federal government, has mandated the implementation of life safety requirements from NFPA 101 for all medical facilities.

In general, the requirements for means of egress set forth in both IBC/2000 and NFPA 101/2000 are very similar. However, recognizing the unique requirements of health-care facilities and the danger to certain patients posed by free access to, from, and through a health-care facility, NFPA 101/2000 allows for egress doors to be locked where the clinical needs of patients require specialized security measures for their safety, whereas IBC/2000 does not. Locking of egress doors is allowed per NFPA 101/2000 with the recognition that health-care facilities are fully sprinklered, staffed at all times, and compartmentalized to allow for the protection of patients within a facility without evacuation.

The following sections of NFPA 101/2000 provide requirements for the locking of egress doors:

7-5.2.1, Staff Availability, Exception #1 – Allows exit access in health-care occupancies to pass through

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Permits for Lead Hazard Abatement Work

INFORMATION REQUIRED FOR A LEAD PERMIT

Since January 1, 1996, the Lead Hazard Evaluation and Abatement Code (*N.J.A.C.* 5:17) has required that a permit be obtained under the Uniform Construction Code (UCC) for any work intended to abate lead hazards. (Please note: lead abatement projects involving superstructures and commercial buildings are exempt from this requirement.) Unfortunately, permits are still being issued without all of the information that is required by the UCC.

There are two subsections in Subchapter 2 of the UCC – specifically *N.J.A.C.* 5:23-2.15(a)7i-v and *N.J.A.C.* 5:23-2.15(b)4i-iii – that list exactly what is required when a lead contractor or owner-occupant of a single-family dwelling applies for a lead hazard abatement permit. Construction officials must ensure that applicants submit all of the information that is required by these subsections.

CLOSING OUT A LEAD PERMIT

As a reminder, in order to close out a lead hazard abatement permit, a Certificate of Clearance is issued (not a Certificate of Occupancy or a Certificate of Approval). The requirements for issuance of a Certificate of Clearance can be found at *N.J.A.C.* 5:23-2.23(o)1-5.

A Certificate of Clearance is required on all lead hazard abatement-permitted projects, except when the work is being performed by an owner-occupant of a single-family dwelling, provided the lead abatement is not an order from the local health department. If an owner-occupant of a single-family dwelling is performing his own lead abatement, and if it was not mandated by the local health department, the owner may apply for a Certificate of Clearance. However, a Certificate of Clearance is not required under the UCC for projects by owner-occupants of single-family homes.

Finally, a lead abatement Certificate of Clearance shall not be issued on a project that has been ordered by a local health department until approval of the health department has been given.

There are a few different scenarios, so if you come across a scenario in which you are not sure what is required, please call us at (609) 633-6224.

Source: Jim Amici
Bureau of Code Services

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rooms or spaces subject to locking, as provided in Chapters 12 and 13 of NFPA 101/2000.

18-1.1.1.5, General Requirements – Allows the authority having jurisdiction to determine the appropriate modifications to those sections of the code that require means of egress to be kept unlocked if patient safety and security warrants locking.

18-2.2.2.2, Means of Egress Requirements, Doors, Exception #2 – Allows locking of patient room doors where the clinical needs of the patients require security. Staff must carry keys at all times.

18-2.2.2.4, Exception #1 – Allows locking of means of egress doors in security areas (operating room suites, labor and delivery suites, nurseries, psychiatric units, Alzheimer's units, dementia units, etc.). Staff must carry keys at all times.

18-2.2.2.5 – Requires remote release and duplicate keying of locks in all units where means of egress doors are locked.

The above-noted sections have been used by the Health Care Plan Review Unit at both the Department of Community Affairs (DCA) and the Department of Health and Senior Services (DHSS) for the past 28 years to review health-care projects that include patient units with restricted egress. When this is allowed, staff in the unit must carry keys to the locked doors at all times. In addition, the requirements of Section 1003.3.1.8.2 of IBC/2000, Special Locking Arrangements, are also applied, except for the delayed-release provision. Therefore, locking devices on egress doors must be releasable from a central, remote location and the doors must unlock upon activation of the fire alarm system or the sprinkler system, or upon loss of power to the egress control device.

Permission to lock specific egress doors must be approved through a variation by the DCA's Bureau of Construction Project Review, Health Care Plan Review Unit.

Again, these locking arrangements are used in hospitals, psychiatric facilities, nursing homes, and assisted-living facilities throughout the State and throughout the country to provide the proper level of security for Alzheimer's units, dementia units, psychiatric units, operating suites, critical-care units, and labor/delivery/nursery areas, without which these units could not properly function.

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

Manufactured Housing – Permanent Foundation Guide

In the Winter 2002 *Construction Code Communicator,* the article entitled, "Manufactured Homes: Permanent Foundations," made reference to a publication issued by the United States Department of Housing and Urban Development entitled, "Permanent Foundations Guide for Manufactured Housing." Since then, the Department of Community Affairs has received several inquiries on how this guide may be obtained.

If you would like to view the publication, go to www.hudclips.org and click on "Library." Then, highlight "Guidebooks" and click on "Search." You will be prompted to enter either a word or phrase, or a document number. Enter the document number "4930.3G," and you will be able to view and download the guide.

Source: Paul Sachdeva
Bureau of Code Services

New Jersey Register Adoptions

Date: December 2, 2002
Adoption: 34 *N.J.R.* 4195(a)
Summary: These adopted amendments make an administrative correction in the Barrier-Free Subcode at *N.J.A.C.* 5:23-7.5, entitled "Residential Buildings Other Than Use Group R-1," to reconcile the rule text as adopted effective November 4, 2002 with the rule text as adopted effective August 5, 2002. In addition, these adopted amendments correct a typographical error at *N.J.A.C.* 5:23-7.5(b).

Date: December 16, 2002
Adoption: 34 *N.J.R.* 4428(a)
Summary: This adopted amendment deletes the requirement for only pressure-assisted (not gravity-flow) water closets in commercial buildings.

Date: January 6, 2003
Adoption: 35 *N.J.R.* 219(c)
Summary: This adopted amendment to *N.J.A.C.* 5:23-12.12, entitled "Special Safety Equipment," corrects a typographical error in a cross-reference (changing "204.4c" to "204.4e").

Date: February 18, 2003
Adoption: 35 *N.J.R.* 1054(b)
Summary: This adopted amendment to *N.J.A.C.* 5:23-9.6, entitled "Construction Requirements for New and Existing Casinos," extends the height allowance for casino slot machines up to 75 inches where certain conditions are met.

Date: February 18, 2003
Adoption: 35 *N.J.R.* 1055(a)
Summary: This adopted amendment to *N.J.A.C.* 5:23-12.12, entitled "Special Safety Equipment," requires a sign at the top and bottom landings of each escalator to state that standing escalators are not to be used as a building stair.

Date: April 7, 2003
Adoption: 35 *N.J.R.* 1558(c)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.20, 6.4, 6.5, 6.6, 6.7, 6.21A, 6.25A, 6.26A, 6.27, 6.31 and *N.J.A.C.* 5:70-1.5, 2.1, 2.3, 2.9, 4.19 require the installation of carbon monoxide alarms in new and existing one- and two-family dwellings. Buildings without fuel-burning appliances or attached garages are not subject to this requirement.

Source: Megan K. Sullivan
Code Development

Farewell to Ashok

After 13 years of answering electrical questions in the Code Assistance Unit, Ashok Mehta has left the Department of Community Affairs to move forward in his career at the Department of Health and Senior Services. We congratulate him on his achievements, though the Code Assistance Unit will not cease to remember with great affection and gratitude his unfailing polite manner, reliability, and depth of knowledge in the electrical field. We thank Ashok for his exceptional contributions to the Unit and wish him the best in his future. He will surely be missed!

Source: Code Assistance Staff

Operation Alert

It has been brought to the attention of the Department of Community Affairs that some inspectors are requiring verification of the operation of equipment before issuing either a Certificate of Approval or Certificate of Occupancy. Please be advised that the Uniform Construction Code (UCC) deals mainly with the *installation* requirements for equipment and not requirements for the *operation* of equipment. Therefore, code officials are required to ensure that equipment is installed in a manner that is compliant with the UCC. Unless specifically required otherwise by the applicable subcode or adopted standard, code officials are not responsible for equipment operation.

For example, Section 918.10 of the 1996 edition of the Building Officials and Code Administrators National Building Code, the Building Subcode, requires that fire alarm

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Nightclubs vs. Restaurants

Those who have been in construction code enforcement for more than a year or two have been asked the question of whether a specific space should be considered a nightclub or a restaurant. With the adoption of the 2000 edition of the International Building Code (IBC), this question is no longer an issue. The appropriate classification of both a nightclub and a restaurant is now Group A-2.

Along with this change, there are several other changes to the Group A occupancy classification. As stated above, Group A-2 includes nightclubs and restaurants; however, it will now also include banquet halls, taverns, and bars.

Group A-3 remains the "general assembly" group and applies to assembly uses intended for worship, recreation, or amusement. It will also now include churches and indoor swimming pools without spectator seating.

Group A-4 has been added, and applies to assembly uses intended for viewing indoor events and activities with spectator seating. This would include arenas, skating rinks, swimming pools, and tennis courts. Again, this applies only when these functions include spectator seating. Without spectator seating available, these occupancies would be classified as Group A-3.

Please note that Groups A-1 and A-5 remain the same, applying to theaters and outdoor assembly.

Hopefully, this summary will save some time when enforcing the IBC 2000. Should you have any questions regarding this article or any other IBC-related issue, please call the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Phone Number Change – Lead/Asbestos Unit

Please be advised, the telephone number for the Lead/Asbestos Unit at the Department of Community Affairs has recently been changed to (609) 633-6224. The phone number provided in the Winter 2002 edition of the *Construction Code Communicator* in the article entitled "Prohibited Paint Removal Methods" is no longer valid.

Source: Kristy Paolillo
Code Development

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systems be subjected to a 100 percent acceptance test in accordance with the 1993 edition of the National Fire Protection Association 72 standard. Similarly, Section 700-4(a) of the 1999 edition of the National Electrical Code (NEC/1999), Electrical Subcode, entitled "Tests and Maintenance," requires that the test for a complete emergency electrical system be conducted or witnessed upon installation. In such cases, it would be a violation of the UCC if the equipment installed does not operate in accordance with the applicable code or standard. However, it is not the intent of the UCC to regulate the operation of appliances.

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

Source: Ashok K. Mehta
Code Assistance Unit

Rob is a New Addition to Our Unit

The Department of Community Affairs, Division of Codes and Standards introduces Robert Austin, the newest member of the Code Assistance Unit. Rob joined the Department in 2001 as a recent graduate of The College of New Jersey with a Bachelor's degree in Mechanical Engineering. Since then, he has proved to be a valuable asset to the Department, demonstrating reliability through his work with the members of the Unit, and his responsiveness to the inquiries of local officials and those in the construction industry. Rob has been closely involved in the adoption of the 2000 editions of the International Building Code and International Residential Code, and updates to the new energy code regulations. He has successfully completed the Fundamentals of Engineering examination and will soon be working toward his Professional Engineer license.

Source: Code Assistance Staff

Underwriters Laboratory Standard UL 94

Recently, William Connolly, Director of the Division of Codes and Standards, sent the following letter to all New Jersey construction officials in response to the fire at the "Station" nightclub in Rhode Island. This letter is reprinted here for all readers of the *Construction Code Communicator*.

March 7, 2003

Dear Construction Official:

The tragic event at the "Station" nightclub in Rhode Island has again placed the construction code enforcement industry on the front page. As you may know, the unusually rapid spread of this fire was due to the use of unrated foam packaging material as an interior finish. The purpose of this letter is to inform you of the findings of the Department of Community Affairs regarding the documentation of the flame spread of interior finishes.

There are some foam products on the market that advertise that they comply with the Underwriters Laboratory Standard UL 94. The title of this standard is "Tests for Flammability of Plastic Material for Parts in Devices and Appliances". This standard clearly states "these requirements do not cover foamed plastics for use as materials for building construction or finishing." UL 94 is not scoped for the testing of building materials and products tested using UL 94 should not be accepted as complying with the interior finish requirements of the code.

Only material that has been tested in accordance with ASTM E84, the Test Method for Surface Burning Characteristics of Building Materials, and that complies with the interior finish requirements of the Building Subcode or the Rehabilitation Subcode may be installed in buildings in New Jersey. Code officials ensure compliance with this standard by requiring design professionals or building owners to submit documentation on the specific product to be used.

Should you have any questions regarding the ASTM E84 standard or any product's compliance with this standard, please contact the Code Assistance Unit at (609) 984-7609.

Sincerely,

William M. Connolly
Director
Division of Codes and Standards

Employment Opportunities on the Web

Find the latest employment opportunities within the Division of Codes and Standards by visiting the Division's web site, or point your browser to: http://www.nj.gov/dca/codes/employment/employmentopportunities.htm.

This site provides a list of available positions within the Bureau of Construction Project Review, the Office of Local Code Enforcement, and the Office of Regulatory Affairs. Applicants are encouraged to file applications electronically. The Employment Opportunities Web page is updated on a regular basis, so be sure to add the URL to your browser's "favorites" menu.

Source: Dana Yedwab
Division of Codes and Standards

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