Construction Code Communicator

State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

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In response to a request, the following article is reprinted from a 1984 issue of Codes *magazine.*

What Is the Meaning Behind the Issuance of a Certificate of Occupancy?

The Uniform Construction Code Act itself states that "the Certificate of Occupancy shall certify that the building or structure has been constructed in accordance with the provisions of the construction permit, the code, and other applicable laws and ordinances." There are three important concepts related to Certificates of Occupancy (C.O.'s) which need to be understood:

1. The law states that the "certificate of occupancy shall certify." This does not mean that the construction official or subcode officials are certifying that the structure complies. Rather, those officials issue or approve the issuance of the C.O. based on the applicant's certification that the work complies and their own inspections which are intended to check on, rather than substitute for, the owner's certification. The certification is called for at *N.J.A.C.* 5:23-2.23(h)4. It should be a part of the application for a C.O.
2. The C.O. is to be issued only if the requirements of all other applicable laws and ordinances are met. An example would be conditions imposed by a municipal planning board as a part of site plan approval. It is important to understand that the authority to decide whether or not the requirements of other laws and ordinances have been met rests with the construction official and no one else. If the other law or ordinance is enforced by some other municipal, county, or state official, then the Construction Official will ordinarily rely on the advice of that other official as to whether or not the other law or ordinance has been complied with. Final decision-making authority, however, rests with the Construction Official. Similarly, the authority to issue a Temporary Certificate of Occupancy (T.C.O.) when work required under some other law or ordinance is not fully complete rests with the Construction Official. The Construction Official should use the guidelines for T.C.O.'s established in the regulations at N.J.A.C. 5:23-2.23(g).
3. The Certificate of Occupancy constitutes permission to occupy a building for a specific use — and no more. The requirement for a C.O. was established because some control on when the use of a new building or the changed use of an existing one may legally commence. This permission is granted

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by the Construction Official and it can be withdrawn by the Construction Official because a C.O. is conditional. There are conditions which have to be met in order for a building to qualify for a certificate of occupancy. They are listed in the regulations at *N.J.A.C.* 5:23-2.24. There are also conditions which have to be met in order for a building to keep its certificate of occupancy. They are set forth at *N.J.A.C.* 5:23-2.23(i). The regulations provide that a C.O. may be revoked if the conditions for obtaining it or the conditions for keeping it are no longer met. For example, if it is found that a serious violation of the code is present which was not picked up during construction or if it is found that a required system such as a fire alarm is no longer operable, then the C.O. can be revoked. The revocation of a C.O. is a serious matter since the owner loses use of the building. It is a remedy which should not be invoked lightly, but it is important to understand that it is there.

There is one final principal related to Certificate of Occupancy which is important. It is quite common for Temporary Certificates of Occupancy (T.C.O.) to be issued. These T.C.O.'s should only be issued for a fixed period of time. It is expected that any remaining work will be completed before the T.C.O. expires. A T.C.O. can, of course, be extended for good cause. If a T.C.O. expires without all remaining work being done, then the building is being occupied without a C.O. in violation of the code. The construction official is obliged to assess penalties and take any other step as may be necessary to terminate the illegal occupancy. This holds true whether the remaining work is required by the code or required by one of the other laws or ordinances referred to by law.

The certificate of occupancy is not a certification, but a powerful enforcement tool which is there for the Construction Official to use to compel compliance with the law.

Source: William M. Connolly, AIA
Director, Division of Codes and Standards

Construction Permits in the Pinelands Area

The Pinelands Protection Act (*N.J.S.A.* 13:18A-1 et seq.) authorizes the Pinelands Commission to undertake a review of construction permits within 15 days of the date they are issued. Development cannot occur until the Pinelands Commission has issued notice that they do not need to review the construction permit. This has caused applicants confusion. It has also added to the responsibilities of construction code officials by requiring them to monitor a site and to ensure that no development occurred until the applicant received the proper notice from the Commission.

The Commission and the Department have agreed on a new process to eliminate the delay between the date on which the construction permit is issued and the date on which it may take effect. This process involves a review of the construction permit by the Commission at the same time it is being reviewed by the construction code official. From now on, the following procedure should be followed with all applications for construction permits involving activities that are also subject to the application requirements of the Pinelands Comprehensive Management Plan:

1. Complete the form provided by the Commission immediately upon receiving an application for a construction permit involving development in the Pinelands Area;
2. Fax the form to the Pinelands Commission at 609/726-0974;
3. Issue the construction permit *only if* the Pinelands has faxed you a notice indicating the development conforms with the Pinelands Comprehensive Management Plan.

Once the Pinelands Commission receives the fax in step (2), the Commission staff will perform an immediate review of the development as it is presented to the construction code official. Upon completion of the review (normally within 2 business days), the Commission will fax a notice to the construction code official indicating whether or not the construction permit would raise an issue. (If you need a quicker response from the Pinelands Commission, please call Nancy Fischer of the Pinelands Commission at 609/894-9342 and arrangements will be made.) If no issues are identified, the construction permit can be issued and immediately acted upon by the applicant.

If the Pinelands Commission advises you that the construction permit would raise an issue that cannot be resolved, it should be considered that the applicant has not obtained all prior approvals as required in *N.J.A.C.* 5:23-2.15(a)5 and *no construction permit should be issued.* If this situation arises, the Commission will send a letter to the applicant indicating that a public hearing has been scheduled to address the issues and advising the applicant that *no development can occur.*

This procedure has already been instituted by several municipalities in the Pinelands. Thousands of construction permits have been handled in this manner since the process was first developed. Applicants and construction code officials have both found it to be beneficial.

The Commission will be contacting each municipality currently not involved in this program to provide them with the appropriate fax form and to answer any questions about this process. If you have any questions in the meantime, please contact Nancy Fischer of the Pinelands Commission staff at 609/894-9342.

Source: Susan Uibel
Pinelands Commission

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Site Lighting

The Department has entered into an agreement with Public Service Electric and Gas Company (PSE&G), Atlantic Electric Company, and Jersey Central Power and Light (GPU Energy). It resolves pending litigation between the Department and the electric utilities regarding permits, codes, and inspections in connection with site lighting, sometimes called "dusk to dawn" lighting. The agreement establishes a protocol for the regulation of the installation and inspection of site lighting facilities by the utilities. The agreement includes the following provisions:

1. Site lighting facilities utilizing only metal poles having underground electrical feed located on private property are covered by the agreement. No permits or inspections are required for other types of site lighting installed, owned, and maintained by electric utilities. Other types of site lighting have been and remain subject to the Uniform Construction Code (UCC) and the National Electric Code (NEC).
2. National Electrical Safety Code (NESC) Standards (ANSI C2) shall apply to site lighting installations covered by the agreement. Training on the NESC will be made available through the continuing education program.
3. Installation of site lighting facilities by a utility shall constitute minor work in accordance with the minor work section of the UCC, *N.J.A.C.* 5:23-2.17A. Within five (5) business days following a verbal notice of a proposed installation, the utility shall mail a permit application setting forth, at a minimum, the identity of the utility, the street address and location of the site lighting facilities, the number of site lighting facilities to be installed, and a general description of the installation.
4. The permit application shall include the Electrical Technical Section (Form F120) only.
5. The utility shall pay a fee which shall be calculated at 25 percent (25%) of the customary permit fee for such installations as established pursuant to the Departmental fee schedule set forth in the UCC at *N.J.A.C.* 5:23-4.20(c)2i(2) and *N.J.A.C.* 5:23-4.20(c)2iii(1).
6. As with other kinds of minor work, upon receiving a notice, the municipality may conduct inspections of such facilities during their installation as long as the utility is not required to delay or otherwise schedule their installations to accommodate these inspections.
7. Should the inspection result in the identification of a violation of the UCC, the inspector shall notify the Department of Community Affairs, Code Assistance Unit, Post Office Box 816, Trenton, NJ 08625-0816. The inspector shall not issue a Notice of Violation or a Stop Work Order to the utility unless authorized to do so by the Department.

All questions on this issue should be directed to the Code Assistance Unit at 609/530-8793.

Source: Ashok Mehta
Code Assistance Unit

Who May Perform Lead Abatement

A State law enacted in 1993 directed the Department of Community Affairs to license lead evaluation and abatement contractors. Effective July 17, 1995, the Department enforces the "Lead Hazard Evaluation and Abatement Code," at *N.J.A.C.* 5:17.

This code requires that all testing and abatement of lead-based paint be performed by contractors who are licensed by the Department. Licensed contractors are required to employ trained licensed personnel, have a legal address and phone number, and have business insurance. Licensed abatement contractors are required to notify the Department prior to commencing abatement jobs, and their jobs are inspected by the Department to ensure that their procedures, practices, materials, and methods conform to State regulations and to protect the safety and health of any building occupants and the general public. Lead abatement work requires a permit from the local construction official and clearance testing at the end of abatement. It is finished when clearance testing shows that lead has been safely and effectively abated and a clearance certificate is issued by the local construction official.

There are only two real exceptions to the requirement for a licensed lead abatement contractor as per *N.J.A.C.* 5:17. A single family homeowner, occupying the home in question, may perform abatement; however, clearance testing may be performed only by a licensed lead evaluation contractor at the end of abatement. The purpose of this exception is to allow owners, if they so choose, to work on their own living quarters. It is not intended to allow owners to work on tenant spaces. The Department has seen this exception abused by owners who have falsely claimed to be residing in properties when they, in fact, had another legal residence, or when they evicted tenants solely to avoid hiring a licensed contractor. The Department has also seen owners falsely represent that a contractor was performing work, when, in fact, the owner performed the work. This course of action subjects the owner, and possibly the contractor, to violations and penalties.

A property owner may use the owner's own employees as long as they are trained and licensed by the New Jersey Department of Health as workers and supervisors, as is required on a lead hazard abatement project. Only employees, not independent unlicensed contractors, may be used. The purpose of this exception is to allow multi-family or institutional landlords to train or expand their existing maintenance staff to perform work under *N.J.A.C.* 5:17. Clearly, an owner who uses staff instead of a contractor, assumes more responsibility for the work.

At *N.J.A.C.* 5:17, the code covers only permanent abatement, achieved through removal, enclosure, or encapsulation, with a 20 year warranty. Cleaning, repainting, or other temporary methods are considered "interim controls," and are not lead abatement under *N.J.A.C.* 5:17. Also, while *N.J.A.C.* 5:17 covers soil cleanup where an abatement is done, soil cleanup by itself does not require a permit under *N.J.A.C.* 5:17.

Source: Chrys Wyluda, Supervisor
Asbestos/Lead Hazard Abatement Unit

Some time ago, we alerted you to industry concerns over High Temperature Plastic Vent pipe systems. In a recent development, the Consumer Product Safety Commission, along with various manufacturers, have established a recall of those products. The following article is a reprint of a press release issued by the Consumer Product Safety Commission.

Recall Program to Replace Vent Pipes on Home Heating Systems

In a landmark action, virtually the entire furnace and boiler industry together with the manufacturers of high-temperature plastic vent (HTPV) pipes have joined with the U.S. Consumer Product Safety Commission (CPSC) to announce a recall program. This program will replace, free of charge, an estimated 250,000 HTPV pipe systems attached to gas or propane furnaces or boilers in consumers' homes. The HTPV pipes could crack or separate at the joints and leak carbon monoxide (CO), presenting a deadly threat to consumers.

CO is a colorless, odorless gas produced by incomplete burning of carbon-based fuel, including natural gas and propane. The initial symptoms of CO poisoning are similar to the flu, and may include dizziness, fatigue, headache, nausea, and irregular breathing. High-level exposure to CO can cause death.

To determine whether they have HTPV pipe systems that are subject to this program, consumers should first check the vent pipes attached to their natural gas or propane furnaces or boilers. Vent pipes subject to this recall program can be identified as follows: the vent pipes are colored gray or black; and the vent pipes have the names "Plexvent," "Plexvent II" or "Ultravent" stamped on the vent pipe or printed on stickers placed on pieces used to connect the vent pipes together. Consumers should now check the location of these vent pipes. For furnaces, only HTPV systems that have vent pipes that go through the sidewalls of structures (horizontal systems) are subject to this program. For boilers, all HTPV systems are subject to this program. Other plastic vent pipes, such as white PVC or CPVC, are not involved in this program.

After checking the vent pipes, consumers should call the special toll-free number 800/758-3688, available between 7 AM and 11 PM EST seven days a week, to verify that their HTPV pipe systems are subject to this recall program. Consumers with eligible systems will receive new, professionally installed venting systems free of charge. Additionally, consumers who already have replaced their HTPV pipe systems may be eligible for reimbursement for some or all of the replacement costs.

The program came about as a result of mediation among 27 participants — manufacturers of HTPV pipes and manufacturers of natural gas or propane-fired boilers and mid-efficiency furnaces. This is the first time that CPSC has used a mediator to bring together all segments of an industry to implement a program for the benefit of consumers.

All consumers should have their fuel-burning appliances inspected each year to check for cracks or separations in the vents that could allow CO to leak into the home. In addition, CPSC recommends that every home should have at least one CO detector that meets the requirements of the most recent Underwriters Laboratories 2034 standard or International Approval Services 6-96 standard.

The following is a list of the manufacturers participating in this program.

Armstrong Air Conditioning Inc.
Bard Manufacturing Co.
Burnham Corp.
Consolidated Industries
Crown Boiler Co.
The Ducane Co., Inc.
Dunkirk Radiator Corp.
Evcon Industries Inc.
Hart & Cooley Inc.
Heat Controller Inc.
International Comfort Products Corp. (USA)
Lennox Industries Inc.
Nordyne Inc.
Peerless Heater Co.
Pennco Inc.
Plexco Inc.
Raypak Inc.
Rheem Manufacturing Co.
Slant/Fin Corp.
Thermo Products Inc.
The Trane Co.
Trianco-Heatmaker Inc.
Utica Boilers Inc.
Vaillant Corp.
Weil-McLain
Westcast Inc.
York International Corp.

Source: Michael Baier
Code Assistance Unit

Smoke Detectors and the Rehab Subcode

With the adoption of the Rehab Subcode, there have been numerous questions regarding the smoke detector requirements. As you are all aware, the rehab subcode requires smoke detectors to be installed when any work is performed on a single family dwelling. The questions have centered around the permit requirements for these devices.

Remember your training on the rehab subcode! The permit requirements have not changed with the adoption of the subcode. We did not require permits for the installation of battery operated smoke detectors prior to the adoption of the rehab subcode, and we should not be requiring permits for the installation of smoke detectors after the adoption. To further reinforce this, the Department is in the process of amending the ordinary repair provisions in *N.J.A.C.* 5:23-9.6 to include the installation of battery operated smoke detectors as an ordinary repair.

Some officials have voiced concern over this. Some feel that because there is a code requirement for these devices, a permit should be required to verify their installation. This is not the case. There are other situations in our code where requirements exist, but permits are not required. One example of this is the low flow toilets. When a homeowner replaces a toilet, a permit is not required. The toilet must comply with the code, however, and may not use more than 1.6 gallons of water per flush. If the code official discovers that a toilet has been installed recently that needs more than 1.6 gallons of water per flush, a violation notice may be issued and the owner may be required to replace the water closet with one

that complies with the code. Another analogy (this one is not a code issue, but deals with compliance and enforcement in a broader framework) is the speed limit. The law requires that we obey the speed limit. I'm sure we all do, even when we're late for an inspection. But, experience tells all drivers that police cannot enforce the speed limit everywhere every day. So, speeding is common. However, if you are caught exceeding the speed limit, you must pay the price.

It is not necessary to enforce the smoke detector requirements by requiring permits, but if you find that smoke detectors have not been installed when UCC work has been done, it is a UCC violation.

We recommend that you prepare a counter notice to inform homeowners of this provision of the code. The Department has a sample Notice being distributed at the Rehab Subcode training. This sample Notice is available; just call Code Assistance at 609/530-8793 and ask Janice White or Laura Maressa to send it to you.

Source: John N. Terry
Code Assistance Unit

Housing Demolitions: How and What to Report

Each month, the Division of Codes and Standards publishes figures from the permit and certificate reports it receives from local construction offices. The New Jersey *Construction Reporter* has statistics on a range of activities, including the number of houses authorized by permits, the number of dwellings certified, the square feet of office and retail space, and the estimated cost of construction authorized by permits. The report serves as a useful tool for policy makers, planners, business people, and others interested in economic activity and development trends. It is one of the few resources in the state with indicators available on a monthly basis for each municipality. The report is widely distributed. Every month, in addition to individual subcribers, we send approximately 70 copies to the state's network of libraries. A subscription is available for $50 per year and an annual report is included as part of the yearly subscription.

Periodically, we will provide articles to the *Construction Code Communicator* to highlight building trends or to discuss problems we encounter when we analyze the monthly reports you send us. In this article, we highlight one such problem, which concerns demolition permits. Although most construction offices do this correctly, a small number incorrectly report the loss of a housing unit (a rental or sale unit lost), when, in fact, a dwelling was not demolished. This may occur for several reasons.

There appears to be confusion about recording the removal of a building and recording the elimination of a house or apartment. The "housing-unit-lost" field on your computer screen (or column, for paper reports) refers *only to dwellings;* it does not refer to *ALL* buildings. For example, when a demolition permit is issued for an office or a store, the only time the loss of a housing unit should be reported is in these rare instances in which a house or apartment was part of the larger structure.

A related problem occurs when a demolition permit is issued for the removal of garages and oil or other storage tanks. Some reports indicate the loss of a house when only a garage or an oil tank has been removed. Other reports indicate the loss of a house when part of the house has been demolished, but the entire house has not been removed.

There is a similar tendency to classify the demolitions of garages or the removal of oil or other storage tanks as permits for residential uses, Use Groups R-2, R-3, or R-4, when, in fact, these should be identified as "U" structures (accessory structures and miscellaneous structures). When a demolition permit is issued for a Use Group U, there should be no loss of a housing unit. There are exceptions to this general rule: for example, the demolition of a garage with an apartment on top.

Another reporting problem is with demolitions of Use Group R-1, hotels, motels, and guest houses. This problem may stem from an unfortunate "glitch" in the software. We have been told that some of the the software prompts you for information on the number of housing units lost whenever you issue demolition permits for hotels and motels. In response, many of you type in the number of hotel or motel rooms demolished. This is understandable, but incorrect. Hotel rooms are not dwelling units. If you issue a permit to demolish a hotel or other structure of Use Group R-1 and the computer will not let you leave the screen until you report at least one dwelling unit lost, please give us a phone call, and we will try to help you remedy this problem. I can be reached at 609/292-7898. My E-mail address is jlago@ix.netcom.com.

Source: John Lago
Division of Codes and Standards

Rated Assemblies

Recently, people have questioned which inspector is responsible for making sure that penetrations of rated assemblies are adequately protected.

Though both the plumbing and electrical codes mention that various electrical and plumbing lines that pass through rated assemblies need to be protected, responsibility ultimately rests with the building subcode official. During the plumbing and electrical rough inspection, penetrations are often not protected because sheet rock or other fire resistance rated materials have not been installed yet. During the final inspection these penetrations are often concealed or finished to a point where the plumbing or electrical inspector is unable to tell whether the protection used is appropriate.

The building official is best able to verify that the penetration has been protected during the course of his/her inspection and is generally the most knowledgeable about matching the penetration protection to the fire resistance rated assembly.

Source: Mike Baier
Code Assistance Unit

Address/Telephone Directory

Mailing Addresses

Division Office

Division of Codes and Standards
Post Office Box 802 — Name of Unit/Office
Trenton, New Jersey 08625-0802

William M. Connolly, Director
Cynthia A. Wilk, Assistant Director

Princeton Pike Office

Division of Codes and Standards — Name of Bureau or Unit
Post Office Box 816
Trenton, New Jersey 08625-0816

Other Mailing Addresses for the Princeton Pike Location:

Division of Codes and Standards
Bureau of Construction Project Review
Post Office Box 817
Trenton, New Jersey 08625-0817

Division of Codes and Standards
Health Facilities or Education Plan Review
Post Office Box 815
Trenton, New Jersey 08625-0815

Division of Codes and Standards
Bureau of Homeowner Protection
Post Office Box 805
Trenton, New Jersey 08625-0805

Regional Offices

Northern Regional Office
#171 Route 173, Suite 107
Asbury, New Jersey 08802

Central Regional Office
Post Office Box 817
Trenton, New Jersey 08625

Southern Regional Office
301 East Blackhorse Pike, Unit 5
Williamstown, New Jersey 08094

Telephone and FAX Numbers

Division Office

Telephone

609/292-7899
609/292-7898
609/984-0040 } **Main numbers**

609/984-0040 Fiscal Office
609/292-7899 *Construction Reporter* (content)
609/530-8788 *Construction Reporter* (subscriptions)
609/292-7899 Housing Research
609/984-0040 Publications
609/292-7899 Site Standards
609/292-7898 Team UCCARS
609/292-7898 Training Fees

FAX

609/633-6729 Main Division Office FAX number

Princeton Pike

Telephone

609/530-8820 **Main number**

609/530-8857 **Bureau of Code Services (BCS)**
609/530-8812 Asbestos and Lead Hazard Abatement Unit
609/530-8798 Education Unit
609/530-8830 Elevator Safety Unit
609/530-8830 Industrialized Buildings Unit
609/530-8803 Licensing Unit

609/530-8838 **Bureau of Regulatory Affairs (BRA)**
609/530-8838 Construction Board of Appeals
609/530-8838 Investigations
609/530-8838 Municipal Monitoring
609/530-8838 Third Party Agency Monitoring

609/530-3624 **Bureau of Construction Project Review (BCPR)**
609/530-8866 Receptionist
609/633-0800 Education Plan Review
609/633-8151 Health Facilities Plan Review
609/530-8876 State Buildings

609/530-6183 **Bureau of Homeowner Protection (BHP)**
609/530-6357 Receptionist
609/530-8800 Builder Registration
609/292-4174 Landlord-Tenant (Automated Information System)

609/530-3626 **Bureau of Local Code Enforcement (BLCE)**

Code Assistance Unit (CAU)
609/530-8793 Questions on the technical subcodes of the UCC
609/530-8788 *Construction Code Communicator* (content)
609/984-0040 *Construction Code Communicator* (subscription)

FAX

609/530-8357	BCS	609/530-6101	BCPR
609/530-8357	BRA	609/530-6101	BLCE
609/530-8357	CAU	609/530-8858	BHP

Regional Offices

Telephone

908/713-0722 Northern Regional Office
609/ 530-5901 Central Regional Office
609/567-3653 Southern Regional Office

FAX

908/713-0995 Northern Regional Office FAX
609/530-6101 Central Regional Office FAX
609/704-1510 Southern Regional Office FAX

DEP Changes Its Procedures for Abandoning Underground Storage Tanks

The Department of Environmental Protection (DEP) has made a change to the way it deals with people who are abandoning the underground storage tanks regulated by DEP. Previously, an applicant would have to submit a Closure Approval Plan to the DEP. Once approved, the DEP would issue a Closure Approval. The applicant would present this closure approval to the building department when applying for a demolition permit.

DEP no longer requires a Closure Approval Plan and no longer issues a Closure Approval. Now, the DEP simply requires an applicant to submit a notice that a tank is being abandoned. This notice must be submitted 30 days prior to the date the applicant plans to do the work. The applicant is required to present a copy of this notice, which will have been stamped by the DEP, when applying for a UCC demolition permit.

Source: Mike Baier
Code Assistance Unit

The Biology of Boat Pumpouts

In biology, there is a group of organisms called protists. The interesting thing about protists is that they cannot be classified as plants or animals — they have characteristics of both. It is good to know that even a question as simple as "is it a plant or animal?" does not always have a straight answer.

Like scientists, we in code enforcement are caught up in an endless battle of trying to classify the things we encounter. We ask, "What type of project is it?", "What use group is it?", or "Does it fall under the scope of the UCC?" One of the more recent "organisms" I have heard of are boat pumpouts.

Apparently, the Federal Environmental Protection Agency has been awarding grants to marinas for boat pumpout facilities. The idea is to give boat owners a place to dispose of the waste that a long day of fishing miles away from shore can generate. This is supposed to encourage boat owners not to dump their holding tanks into the ocean. After all, no one wants to go swimming with that biohazard.

There are two main types of pumpout facilities. One connects directly to the boat's holding tank; the other has a receptor for emptying "portable potties." The question is how do we classify these systems. Are they process equipment? Are they equipment as the UCC defines the term? Are they something else?

Well, they are not related to building services, so they fail the test for equipment as defined in the UCC. They also fail the test for process equipment because there is no product being produced. So, are they UCC regulated or not? Considering that, first, there are no standards that cover this type of equipment in the UCC, and, second, another state agency (in this case, the DEP) oversees the installation of the equipment, it is not reasonable to require a construction permit for this type of equipment.

Therefore, this equipment should be treated as if it were process equipment — only the connections to the equipment from building services would be regulated by the UCC. For example, if there are water or electric connections to the equipment from the building or if the discharge from the pumpout connects to the building's drainage system, there would be UCC oversight. The electric line from the building to the pumpout and the connection of the discharge line to the building drain or building sewer would require an inspection.

Source: Michael Baier
Code Assistance Unit

Regulation of Locksmiths and Burglar, Fire Alarm, and Electronic Security Businesses

On January 8, 1998, the Governor signed a bill that requires a license to engage in the business of locksmithing or alarm services. This includes fire alarms, burglar alarms, and electronic security systems. All persons or agencies, except licensed electrical contractors, telephone utilities, and cable companies regulated by the Board of Regulatory Commissioners, that are engaged in alarm business are now required to obtain a license.

The law provides a six-month period to promulgate rules. Therefore, the provisions of this new law will not take effect for at least six months. In the meantime, code officials are advised that proof of licensure is not required to undertake fire alarm work. More information will be provided when it is available.

Source: Ashok Mehta
Code Assistance Unit

Code Citations Decoded

I can't tell you how many times I get calls from architects and contractors asking if a code official is required to provide a code citation for a plan review rejection comment. The answer simply is **YES**.

N.J.A.C. 5:23-2.16(a), Construction permits — procedure, states, "If the application is denied in whole or in part, the enforcing agency shall set forth the reasons therefor in writing." An applicant has a due process right to question a rejected item. The applicant's due process right entitles him/her to know what specifically has been violated. Therefore, written comments MUST be accompanied by the appropriate code citation. This provides the applicant the ability to appeal a rejection. Also, remember the code citation must be accurate and complete.

If you can't find an applicable code section, you can't cite the item as a violation.

Source: Gerald Grayce
Bureau of Regulatory Affairs

Special Purpose Personnel Elevators (ASME A17.1, Part XV) — Inspection Frequencies and Replacement of Safeties

The Elevator Subcode Committee recommended that an article be written to clarify how replacements of the safeties on Special Purpose Personnel Elevators affect the cyclical inspections and tests.

Special Purpose Personnel Elevators are subject to routine, periodic, and acceptance inspection/test requirements including those for a load test every fifth year (ASME A17.1, 1010.6). It was brought to our attention that some of the manufacturers of Special Purpose Personnel Elevators require replacement of safeties every three years. As per regulations, such work requires a permit and a load test (the "five-year" test) witnessed by the elevator subcode official prior to the device's approval.

According to *N.J.A.C.* 5:23-12.9(f)1ii, the date of the approval of an existing elevator under a permit shall not change the existing cycle of inspections and tests, except the elevator shall not be subject to the "five-year" test before it is due, as long as the acceptance test performed under the permit was a "five-year" test. Therefore, when replacement of the safeties and the full "five-year" test are done under a permit at intervals less than every 5th year, the elevator remains subject to the applicable cyclical inspection/tests, except for a cyclical "five-year" test.

Source: Paulina Caploon
Elevator Safety Unit

Elevator Records Management 106

When the Department of Community Affairs conducts reviews of elevator records, one of the elements checked is the elevator fees in the municipal ordinances. In a significant number of towns, such fees are absent. In other cases, the fees are obsolete. There is a revised fee schedule being used, but the ordinance has not been updated. The ordinance must be updated for the revised fee schedule to be effective. The fees for elevator plan review must be included in the ordinance.

Municipalities should make a best estimate as to the costs attendant with Elevator Subcode management and calculate fees accordingly. No matter what the fees are, all categories outlined at *N.J.A.C.* 5:23-12.6(a) and (b) must be present in the fee ordinance pursuant to *N.J.A.C.* 5:23-4.18(g)3, even if all types of devices listed in the rule are not represented in existing buildings.

A significant number of towns charge the Department's fees. When this is the case, fees in the municipal ordinances may be a duplication of the fees in *N.J.A.C.* 5:23-12.6. A simple approach would be to cite the fees by reference.

You are reminded that when a municipality changes the enforcement of the Elevator Subcode from third party to local, the administrative fee may no longer be charged. Therefore, the fee ordinance must be amended accordingly.

Please address any and all pertinent questions to me at 609/530-8833.

Source: Phil van Leeuwen
Elevator Safety Unit
Bureau of Code Services

For the benefit of the code officials and builders, the following article is reprinted from The Code Authority, *Volume Six, Number One, 1997 .*

The World of Difference Between UL 'Listed' and UL 'Recognized'

Listing vs. Recognition, What's the difference?

A product is UL Listed if the UL Listing Mark is on the product, accompanied by the manufacturer's name, trade name, trademark or other authorized identification.

A UL Listing Mark on a product is always composed of four elements: the "UL in a circle" Mark, the word "LISTED" in capital letters, an alpha-numeric control number, and the product name, (e.g., "toaster" and "portable lamp"). Sometimes the UL file number is used as company identification. The UL Listing Mark on a product is the manufacturer's representation that samples of that complete product have been tested by UL to nationally recognized Safety Standards and found to be free from reasonably foreseeable risk of fire, electric shock and related hazards and that the product was manufactured under UL's Follow-Up Services program.

Let's assume, for example, you are looking at the installation of a spa in a health club. If you can locate a nameplate marking on the spa with the complete UL Listing Mark and the other information noted above, the spa, the "end-product," meets the requirements outlined in UL 1563, Electric Spas, Equipment Assemblies and Associated Equipment.

If you do not find a UL Listing Mark on the product, you may find, on closer examination, that some of the individual components in the spa — such as the pump, control, heater or filter — have the UL Recognized Component Mark. And some manufacturers may claim that because the components are UL Recognized, the product in which they're assembled meets all the necessary requirements. But that's not necessarily the case, because the UL Recognized Component Mark means that the component alone meets the requirements for a limited, specified use. Remember, the complete UL Listing Mark and related information on the product indicate the spa (or other end-product) is UL Listed.

UL's Component Recognition Service covers the testing and evaluation of component products that are incomplete or restricted in performance capabilities. These components will later be used in complete end-products or systems Listed by UL. UL's Component Recognition Service covers millions of components, such as plastics, wire and printed wiring boards, that may be used in either very specific, or a broad spectrum of end-products, or

even components such as motors or power supplies. These components are not intended for separate installation in the field—they are intended for use as components of complete equipment submitted for investigation to UL.

Component/end-product compatibility is the critical link between certification of a component and certification of the end-product in which the component is used. Use of UL Recognized Components in a spa (or any other product) does not mean the spa itself is UL Listed.

If you're unsure of the exact meaning of a given UL certification (Listing or Recognition), look in the appropriate UL Product Directory for information about a specific product certification and marking information. For example, the Swimming Pool and Spa Equipment category (WABX) begins on page 505 of the 1997 Electrical Construction Equipment Directory. The Directory will also explain any limitations and the extent of UL's evaluation in the information section preceding each product category.

If you've exhausted your information sources, here are some ways we can help. If you have the product name and catalog number, part number or system designation, call UL's Data Services in Melville, N.Y., at 516/271-6200, ext. 22897. ULDS will help find the UL category for the product in question. If you need to verify a Listing or find a file number for a product bearing a UL Mark, call 847/272-4909, or the Client Relations staff at the UL office nearest you — in Northbrook, Ill., 847/272-8800, ext. 42396; in Santa Clara, Calif., 408/985-2400, ext. 32279; in Melville, N.Y., 516/271-6200, ext. 22123; and in Camas, Wash. 360/817-5611. As always, Codes & Technical Services staff members at each UL office will help with other questions you may have concerning UL certifications, code compatibility or product installation.

Source: UL Certification Office

Guestroom Separations

During the public hearings for the pre-proposal of the 1996 model codes, one of the commenters voiced concern over the possibility of the misinterpretation of Table 602. In order to avoid confusion on this issue, the Department offered to write this article.

The point of concern centers around new text in line #5 under "Structural Element" in Table 602 of the 1996 BOCA National Building Code. The added text is the term "guestroom separations." It is the intent of this new text to require this separation in guestrooms of Use Group R-1. The commenter was concerned that this might be interpreted to require separation for a guest bedroom in an occupancy of Use Group R-2, R-3 or R-4.

I would hope that no one would make this mistake. However, to avoid confusion, apply the term "guestrooms" only to buildings of Use Group R-1.

Source: John N. Terry
Code Assistance Unit

Architects, Engineers, and Builders Rehabilitation Subcode Training

Briefing sessions are available for architects, engineers, and builders on the newly adopted Rehabilitation Subcode, *N.J.A.C.* 5:23-6. This briefing session is Course Number A187 and is offered by the Department of Community Affairs, Bureau of Code Services, Education Unit.

The cost of the briefing session is $75.00 for unlicensed persons. Participants will receive a copy of the Rehabilitation Subcode. The seminar is scheduled from 8:30 A.M. to 3:30 P.M. Lunch is not included. Please share this information; this form may be reproduced.

This is a MAIL-IN registration. Checks must be made payable to "Treasurer, State of New Jersey." Because these briefings are expected to be heavily subscribed, you must indicate both a first and second choice of dates. You will be sent a confirmation approximately ten (10) days before the briefing. Space is limited, so please register early. If you have any questions regarding this announcement, please call us at 609/530-8798.

Several training sessions have been held. The sessions remaining on the calendar are:

5/12 Toms River, Holiday Inn

6/17 Mt. Laurel, Mt. Laurel Fire Dept.

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

Rehabilitation Subcode Briefing Registration Form
(Course #A187)

Name _____

Address _____

_____

Phone: Home _____ Bus. _____

FAX: _____

Date _____ Location _____ (1st Choice)

Date _____ Location _____ (2nd Choice)

I am an Architect Engineer Builder (Please circle)

Other (Specify) _____

Enclose a check for $75.00 made payable to **Treasurer, State of New Jersey**. Return this registration form to:

Department of Community Affairs
Bureau of Code Services — Education Unit
P.O. Box 816
Trenton, New Jersey 08625-0816

The following article is reprinted from Codes *magazine (Volume 22, Number 2), with permission.*

Construction Officials and Hazardous Conditions

The phone call that changed my plans for the next ten months seemed like a joke when I received it.

The man on the phone complained, "We can see light in the grill in the wall and we can smell what our neighbors are cooking." We took the man's phone number and address with the intention of checking the block and lot file and then doing the investigation/inspection. After viewing the block and lot file, I called the man back and told him that the building had been given a Certificate of Occupancy ten years ago. He told me that he had moved in about five months ago and he was not the original owner. The following week, I conducted an inspection and discovered that this condominium unit had a common wall with common cold air returns that allowed residents to take the grill off in each unit and shake hands.

Additionally, what was supposed to be a one hour rated separation wall was constructed like no approved rated assembly known to code enforcement. Other deficiencies in the fire resistant construction included: no separation in the attic space and penetrations of all sizes in the separation walls and the floor/ceiling assemblies. All these deficiencies could have contributed to a fire racing through the building from one condo unit to the next in less than the designed one hour. This, in turn, could have prevented the occupants from getting out and definitely would not have allowed the fire service enough time to respond and put out the fire in the unit of its origin.

So, I contacted the original builder and set up a meeting. We sent Violation Notices to the builder and prepared a list of the violations in the original construction. In the meeting, the builder said that the buildings had been CO'd ten years ago and that the inspectors had approved the construction; why bring this up now? My answer was, "The Certificate of Occupancy is conditional and may be revoked if the conditions for obtaining it or the conditions for keeping it are no longer met." That means when a violation exists in the original construction, the local enforcing agency is required to take action to resolve the problem. I limited the violations to life safety violations, remembering that all the units were occupied. Finally, 210 Notices of Violation and Penalty Orders were issued, compelling reasoning was given, so the builder, his architect, and my staff began to address a plan to repair the violations.

After months of revisions, the repair plans were approved and permits issued. I set a timetable of six months for the work to be completed. The Homeowners Association wanted our office to address 24 other non-life safety items while correcting the fire resistant deficiencies; we declined. The Homeowners Association sued and sought a restraining order. The Superior Court Judge took testimony from the Fire Marshall and myself and ordered that the work be completed in 30 days. That meant that 210 occupied units had to be entered, walls opened, corrective work done, and inspections completed. Well, the work was completed in 30 days.

The point of this story is: when a deficiency in a life safety building item, such as fire resistant construction, is brought to the attention of the construction official, it is his responsibility to take the appropriate action to restore the protection that the building was originally designed to have.

The Bureau of Regulatory Affairs will help a construction official who encounters such a problem; I know because they have helped me on many occasions. The Bureau of Regulatory Affairs also has a responsibility to ensure that construction officials take action when violations like these are brought to their attention. Construction officials who take no action after being made aware of these violations expose themselves to disciplinary action by DCA. DCA should be perceived as the resource of choice and not as an antagonist. Every construction official, along with the DCA, should be concerned with abating the hazardous condition.

Source: Ronald E. Estepp, CBO
Construction Official

New Jersey Register Adoptions

Date: January 5, 1998

Adoption: 30 *N.J.R.* 129(a), 193(a) and 194(a) Adopted amendments: *N.J.A.C.* 5:23-2.16 and 2.17; 4.20.
Adopted new rule: *N.J.A.C.* 5:23-6.

Summary: N.J.A.C. 5:23-2.16 and 2.17 The Bureau of Water Allocation in the Department of Environmental Protection asked the Department of Community Affairs to revise the procedures in the Uniform Construction Code concerning the reporting of abandoned wells. These amendments delete the requirements at *N.J.A.C.* 5:23-2.16(k) so that no notification of DEP is required when a water supply is changed from a private well to a public supply. A referral is required per *N.J.A.C.* 5:23-2.17(b)2 when a well is abandoned in connection with a demolition project.

N.J.A.C. 5:23-4.20 As a result of this amendment, A-5 structures are included in the Department fee schedule at *N.J.A.C.* 5:23-4.20(c)2i(1). The basis for fee calculation is the volume enclosed underneath such structures (not the open dome).

N.J.A.C. 5:23-6 Subchapter 6 of the Uniform Construction Code (UCC) is the Rehabilitation Subcode. There are companion amendments at *N.J.A.C.* 5:23-1.1, 1.4, 2.2, 2.3, 2.4, 2.5, 2.6, 2.14, 2.15, 2.17A, 2.19, 2.21, 2.23, 3.3, 3.4, and 3.6. These amendments consist of administrative changes to the UCC rules that are necessary to provide consistency with the Rehabilitation Subcode.

Source: Farid Ahmad, PE
Supervisor, Code Assistance Unit

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NOTICE: Control Persons Associations

It has been three years since the formation of the first control persons association in New Jersey, namely, the Control Persons Association of Bergen/Passaic County. We have grown from 24 members to nearly 80 and the changes do not stop there. Our name will be changed to the Technical Assistants Association of Bergen/Passaic County, but you still do not need to hold the title of Technical Assistant to be a member of our, or any, technical assistant association.

If you work in a construction code office and perform the duties of a technical assistant/control person, you are eligible for membership. If you are not a member of an association, we encourage you to join. These associations have proved to be an important vehicle of sharing experiences, information, procedures, and promoting the sense of professionalism required for this position. There are now five associations and others are being organized at this time.

We need you to become involved to strengthen the pursuit of recognition for the importance of the work that we perform and to support our determination to achieve certification through education. Please call one of the following associations today:

Technical Assistants Association of Bergen/Passaic County
Linda Aiello, President 201/666-0462

Monmouth/Ocean Technical Assistants Association
Lynn Mizer, President 732/446-4429

Northwest Jersey Control Persons Association
Dawn Neil, President 908/879-5361 x3003

South Jersey Association of Technical Assistants
Kathy Franzoi, President 609/794-4113

Union County Control Persons Association
Debbie Timko, President 908/665-1098

If there is no association for your county, you may join the nearest association or, if you are interested in starting one, just call me for a packet of information on how to begin. I will be more than happy to help get you started.

I would also like to announce the formation of the New Jersey State Association of Technical Assistants. The Association can be contacted through Linda Aiello, Liaison for the Association, at the number above or mail addressed to NJATA, c/o Linda Aiello, 350 Hudson Avenue, Township of Washington, NJ 07675. We will be hosting a meeting at the Building Safety Conference in May and would love to see you there!

Call your nearest association for details.

Source: Linda Aiello
President, TAABPC

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New Brunswick, NJ 08903-5079

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Construction Code Communicator

State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

Volume 10 Number 2 *Summer 1998*

Building Safety Conference of New Jersey 1998

The 17th Annual Building Safety Conference was held on May 13, 14, and 15 at Bally's Park Place, Atlantic City. It was a very successful event. Over 600 inspectors and technical assistants participated in 22 educational seminars on Thursday and Friday. The third annual golf outing was well received on Wednesday. It included a continental breakfast and a picnic lunch. It was a little chilly, and windy, too, but the golfers had a good time.

Wednesday evening, the Crackerbarrel round table discussions were held on 37 different topics. At Thursday's luncheon recognition was given to:

Building Inspector of the Year — Philip Wolski
Electrical Inspector of the Year — Andre Cartal
Fire Inspector of the Year — Arthur Londensky
Plumbing Inspector of the Year — Charles Douches
Elevator Inspector of the Year — Peter Tropiano
Technical Assistant of the Year — Linda Aiello

The luncheon was attended by the inspectors and their invited guests, instructors, and Department of Community Affairs staff. Awards were presented by William M. Connolly, Director of the Division of Codes and Standards, and the association presidents.

A reception was held on Thursday evening honoring the award recipients. The event was sponsored by all of the associations.

At the conclusion of the conference, a name was selected from all the name badges returned. Congratulations go to Walter J. Lacey of Middletown. He will receive a free registration to the 1999 conference, which will be held again at Bally's Park Place on April 28, 29, and 30, 1999.

Overall, the comments received were supportive of the event and new location. Many were pleased with the sit-down breakfast offered each morning — no standing in line! As always, your suggestions are appreciated. We hope your expectations of the conference were met and we look forward to seeing you next year.

Source: Susan McLaughlin
Supervisor, Education Unit

In This Issue

Grounding at a Detached Building or Structure

There appears to be confusion in the field about the grounding requirements where two or more buildings or structures are supplied from a common alternating current (a.c.) service. This article aims to eliminate confusion by providing guidelines about how to comply with the applicable provisions of the National Electrical Code (NEC) with regard to grounding requirements at a building or structure when the electrical power is supplied from another building or structure that is under the same management.

The main rule, at Section 250-24(a) of the NEC-96, requires that each building or structure, whose power source is supplied from a common a.c. service by a feeder or more than one branch circuit, shall have a grounding electrode (as described in Part H of the Article 250), connected to the metal enclosure of the building or structure's disconnecting means. This rule further establishes specific conditions in which the grounded circuit conductor is required to be connected to the grounding electrode in a detached building on the same premises, as stated below:

1. Exception #1 to Section 250-24(a) covers the situation where the detached building or structure contains only one branch circuit that supplies **equipment not requiring grounding.** A grounding electrode is not required in the detached building under these conditions. This situation, though rare, can be encountered where a single-branch circuit supplies a lighting fixture located in a detached garage equipped with a snap switch which serves as a disconnecting means in accordance with the exception to Section 225-8(c).
2. The first part of exception #2 to Section 250-24(a) covers the situation where the detached building or structure contains **only one branch circuit** serving equipment that may require grounding. When the detached building is supplied by a **four-wire feeder** (a metal raceway may act as the fourth wire), the first part of exception #2 to the Section 250-24(a) requires that: (1) the neutral bus must be isolated and the equipment grounding conductor must be bonded to the metal enclosure of the disconnecting device and (2) must also be bonded to the existing electrode, if any, by a grounding conductor. The grounding conductor must be sized in accordance with Table 250-95 based on the rating of the overcurrent device protecting the ungrounded conductors of the feeder. When there is no electrode, a new grounding electrode system is **not** required in the detached building. When a detached building or structure is supplied by a **three-wire single branch circuit** from the other building, the first part of exception #2 to Section 250-24(a), requires the equipment grounding conductor to be bonded to the metal enclosure and to the existing electrode, if any, in the detached building. If none exists, **no** new electrode is required to be installed. Either wiring method allowed by the first part of the exception #2 is acceptable. Each separate building or structure is required to have a disconnecting means as outlined in Section 225-8.
3. The second part of exception #2 to the Section 250-24(a) covers the situation where the detached building or structure is supplied by a **four-wire feeder** serving **two or more branch circuits.** In this situation, the neutral bus is required to be **isolated** and a grounding electrode is **required.** An existing electrode, if any, must be bonded to the equipment grounding conductor by a grounding conductor sized in accordance to Table 250-95 based on the rating of the overcurrent device protecting the ungrounded conductors of the feeder. Where no electrodes exist, a new grounding electrode **shall be provided** in the detached building or structure.
4. The third part of exception #2 to the Section 250-24(a) requires an equipment grounding conductor in underground feeders to be **insulated or covered copper** when supplying buildings house **livestock**. This requirement is added to minimize the stray voltages in the earth to which livestock are very sensitive.
5. Where the detached building is supplied by a **three-wire feeder**, requirements of the Section 250-24(a) are met by providing a grounding electrode system in the detached building and by bonding the neutral bus to the subpanel equipment grounding bus and metal enclosure, as is done in the case of service equipment. Although the NEC does not prohibit the use of metal raceways for this wiring method, metallic raceways should not be used to enclose the feeder circuits to prevent the flow of objectionable currents over metal raceways, which are bonded at both ends to, and are electrically parallel with, the neutral conductor contained within. This will help ensure compliance with Section 250-21, which requires installation that will prevent the flow of objectionable currents. Where an equipment grounding conductor is not run to the detached building or structure with the feeder, the grounded circuit conductor of the feeder shall be connected to the grounding electrode installed in the detached building. The size of the grounded conductor to the detached building shall not be smaller than the size specified in Table 250-95 for equipment grounding conductors in order to have the capacity to conduct safely any fault current.

It is recommended that the feeder conductors arriving at the second building or structure be treated as service entrance conductors. The provisions of Section 225-8, which require installation of

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the disconnecting means listed as suitable for service equipment at each separate building under single management, support this recommendation. Electrical subcode officials are reminded that it is the option of the designer to choose either a three-wire feeder or a four-wire feeder for such installations. Electrical inspectors must first ensure that the grounding of electrical wiring systems, circuits, metallic raceways, noncurrent-carrying materials and equipment is installed and arranged to prevent the flow of any objectionable current over the grounding conductors. Second, electrical inspectors must ensure that the installation meets the applicable rules of the NEC, specifically those pertaining to the conditions in which the grounded circuit conductor is required to be connected to the grounding electrode in the second building.

Questions regarding this issue may be directed to me at 609/530-8793.

Source: Ashok K. Mehta
Principal Engineer
Code Assistance Unit

Homeowners Doing Their Own Electrical Work

Recently the Division of Codes and Standards received a copy of a letter addressed to all Construction Officials from the Board of Examiners of Electrical Contractors relating to homeowners applying for construction permits to perform electrical work in their own homes. This article is to correct any misconceptions that may exist as a result of that letter and is to clarify the Division's position.

When homeowners apply for construction permits to perform electrical work in their own homes, construction code officials should not question these individuals as to whether they are actually going to perform the electrical work and should not predetermine that the individuals are not qualified to do the work. Upon signing and dating the application form "Certification in Lieu of Oath" and marking section "C.3.", the homeowner is submitting a written statement that he or she will actually perform the electrical work. Construction code officials may advise the homeowner of *N.J.A.C.* 5:23-2.31(b)1.iv, which allows a penalty of not more than $500 for making a false or misleading written statement and may advise the homeowner that the certification indicates that the homeowner will actually perform, and not just supervise, the electrical work. Upon inspection of the completed work, the competency of the homeowner must be verified. But, as in all cases, whether the work was performed by a homeowner, contractor, or others, it remains the inspector's burden to inspect carefully to determine compliance with the code. That burden is greater when a homeowner does his or her own work, but it is a burden that inspectors must shoulder.

Suspected violations or questions relating to electrical contractor licensure laws and regulations should be directed to the Board of Examiners of Electrical Contractors for action and response. Violations of the UCC remain under the appropriate construction code official's jurisdiction; and questions on UCC procedures should be directed to the appropriate Division staff for response.

When in doubt, call the Code Assistance Unit at 609/530-8793.

Source: Mitchell Malec
Division of Codes and Standards

Seismic Concerns for Electrical Components and Systems in New Jersey

There appears to be some misunderstanding about the applicability of the seismic requirements covered in the building subcode to electrical components and systems. All buildings assigned to Seismic Performance Category C in Seismic Hazard Exposure Group II and Group III, and those buildings in Group I that have a Performance Criteria Factor greater than 0.5, require evaluation for the seismic design of electrical components and systems (Section 1610.6 of the BOCA National Building Code 1996). Based on the contour map indicating Effective Peak Velocity-Related Acceleration Coefficient (Av) values in the various parts of New Jersey, all buildings in Group III assigned to Seismic Performance Category C require evaluation for the seismic design of electrical components and systems **no matter where they are located in the State.**

Questions should be directed to me at 609/530-8793.

Source: Ashok K. Mehta
Principal Engineer
Code Assistance Unit

Homeowner Plan Submittals

There have been several questions regarding the relationship between the "Building Design Services Act" and the "Uniform Construction Code." The one question that continues to be asked is: "A homeowner submits construction documents for his or her own residence and there is not sufficient information on the documents to verify compliance with the code for a portion of the dwelling. The homeowner does not have sufficient technical expertise to submit calculations for this portion of the project and chooses to contract with a licensed design professional to submit just the calculations needed to verify compliance for this item. Is it necessary for a design professional to assume responsibility for the complete set of construction documents?"

The answer is no. In this case, the design professional is responsible for the documents which he or she has prepared. Because homeowners are permitted to prepare all of the construction documents, design professionals should only be required to sign and seal the documents they prepared.

Source: John N. Terry
Code Assistance

Construction Data: March Highlights 1998

Introduction

Do you wonder what happens to the data you send to the Division of Codes and Standards? It is published monthly in the *Construction Reporter*, a compilation of construction statistics in New Jersey. The *Construction Reporter* contains information on housing units, retail and office space, and residential and nonresidential construction authorized by building permits. It is one of the few resources with information on each municipality that is available on a monthly basis. The following is an excerpt from the March 1998 highlights. The Division distributes the *Construction Reporter* on a subscription basis.

Information

In March 1998, the estimated cost of construction authorized by building permits totaled $649.8 million; 490 municipalities reported. Residential activity totaled $311.8 million (48 percent). Office, retail, and other nonresidential work amounted to $338 million (52 percent). March activity was $129 million more (24.8 percent) than last month's reported activity.

The City of Elizabeth in Union County led all municipalities with $108.9 million of construction. This was nearly 17 percent of the estimated cost of all work in March. A single permit accounted for nearly all of the activity, authorizing construction on the footings and foundations of a new shopping mall. The estimated cost of construction thus far is $106 million. The size of the new mall, according to the initial permit, is 807,000 square feet, but the construction official anticipates that by the time the final updates are issued, the redevelopment project will generate about 1.2 million square feet of new retail space and more than 220 stores. The estimated cost of construction authorized by this building permit was the largest, single amount reported in the three-year history of the *Construction Reporter.*

Other municipalities with a high level of activity in March were: Lakewood Township and Dover Township in Ocean County ($11 million and $10.8 million, respectively), Bridgewater Township in Somerset County ($10.4 million), the City of Rahway in Union County ($9.8 million), Piscataway Township in Middlesex

Dollar Amount of Residential and Nonresidential Construction Authorized by Building Permits

New Jersey Top Municipalities: March 1998

Rank	Municipality	County	Totals	Residential	Nonresidential
1	ELIZABETH CITY	UNION	$107,945,380	$1,945,380	$106,000,000
2	LAKEWOOD TWP	OCEAN	11,036,978	9,499,929	1,537,049
3	DOVER TWP	OCEAN	10,800,659	3,499,040	7,301,619
4	BRIDGEWATER TWP	SOMERSET	10,397,205	6,578,428	3,818,777
5	RAHWAY CITY	UNION	9,828,969	19,000	9,809,969
6	PISCATAWAY TWP	MIDDLESEX	9,458,403	2,098,151	7,360,252
7	PARAMUS BORO	BERGEN	8,849,779	1,530,326	7,319,453
8	BERNARDS TWP	SOMERSET	8,495,796	8,022,586	473,210
9	BAYONNE CITY	HUDSON	8,240,920	294,020	7,946,900
10	CRANBURY TWP	MIDDLESEX	7,320,565	1,244,065	6,076,500
11	STAFFORD TWP	OCEAN	7,069,763	3,499,179	3,570,584
12	MARLBORO TWP	MONMOUTH	7,028,824	6,351,643	677,181
13	SOUTH BRUNSWICK TWP	MIDDLESEX	6,704,668	5,064,448	1,640,220
14	MOORESTOWN TWP	BURLINGTON	6,255,834	4,616,182	1,639,652
15	MOUNT LAUREL TWP	BURLINGTON	6,170,763	3,084,160	3,086,603
16	FREEHOLD TWP	MONMOUTH	5,823,133	4,517,105	1,306,028
17	HANOVER TWP	MORRIS	5,738,152	186,062	5,552,090
18	MONTGOMERY TWP	SOMERSET	5,559,074	5,414,008	145,066
19	SPARTA TWP	SUSSEX	5,533,660	2,310,907	3,222,753
20	JACKSON TWP	OCEAN	5,435,736	4,065,981	1,369,755
	TOP MUNICIPALITIES		253,694,261	73,840,600	179,853,661
	NEW JERSEY		**$649,758,741**	**$311,806,737**	**$337,952,004**
	TOP AS % OF STATE		39.0%	23.7%	53.2%

County ($9.5 million), and Paramus Borough in Bergen County ($8.5 million). In Lakewood, over 82 percent of the estimated cost of work authorized by building permits was for new residential construction. The Township had 133 authorized housing units, more than any other municipality in March. Dover also reported $3.5 million in residential construction and 26 authorized units, as well as several permits for new schools with an estimated construction cost of $5.8 million. In Bridgewater, new housing accounted for much of the work reported ($5.5 million and 56 authorized units, second to Lakewood). In addition, the Township issued nearly two dozen permits for office construction. Over 75 percent of the work in Rahway was for new offices; the City reported two new construction permits for offices with estimated costs of $1.2 million and $6.4 million. Piscataway's construction office authorized retail work with an estimated cost of $5.1 million. In Paramus, retail activity accounted for more than three-fourths of the construction authorized.

Questions about the data should be directed to me at 609/292-7899. Information about a subscription to the *Construction Reporter* can be obtained from Laura Maressa at 609/530-8820.

Source: John Lago
Division of Codes and Standards

CABO in Flood Zone?

With the adoption of the 1995 edition, the Council of American Building Officials (CABO) One and Two Family Dwelling Code may be used for construction in flood prone areas. Previously, amendments to the CABO One and Two Family Dwelling Code in the Uniform Construction Code prohibited its use in flood prone areas. The adoption of the 1995 CABO includes amendments that allow the use of CABO in flood prone areas but require compliance with the Building Officials and Code Administrators (BOCA) National Building Code flood hazard provisions for CABO homes constructed in flood prone areas. The amendments are necessary because CABO does not address flood resistant construction. Among other things, the BOCA National Building Code 1996, Section 3107 requires that a CABO home adhere to the following requirements:

1. The flood hazard zones ("A" or "V") and the corresponding base flood elevation is determined on the basis of the most recent Flood Insurance Rate Map published by the Federal Emergency Management Agency and is included in a municipal ordinance. Code officials do not determine the applicability of the Flood Insurance Rate Map for specific properties, but do enforce flood plain construction provisions for those properties cited in the municipal ordinance as being in the flood plain.
2. "A" zones, known as flood-hazard zones, are those areas which are subject to flooding but do not encounter high-velocity waters or wave action. With some exceptions, buildings in the flood hazard zones are required to be elevated so that the lowest floor is located at or above the specified base flood elevation. The structural systems of buildings must be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to flood loads.
3. "V" zones, known as high-hazard zones, are subject to tidal influence (wave heights of more than 3 feet) or high-velocity wave run-up. The buildings in a high-hazard zone are required to be elevated so that the lowest portion of structural members supporting the lowest floor is located at or above base flood elevation specified. Of course, some exceptions apply to mat or raft foundation, piling, pilecaps, columns, grade beams, and bracing.
4. Enclosures below the base flood elevation in both "A" zones and "V" zones require special types of construction and may be used for some specific purpose.
5. Mechanical and electrical systems shall either be installed above the base flood elevation or protected from flood water.

The scope of this article is to provide a brief guideline for CABO users undertaking construction in areas prone to flooding. It is not an exhaustive list of all requirements. Complete details are contained in the BOCA National Building Code 1996. The services of a design professional may be required for flood-resistant construction, especially for the building foundation system.

Please call the Code Assistance Unit at 609/530-8793 with any questions.

Source: Farid Ahmad, P.E.
Supervisor, Code Assistance Unit

"Ponding"

WHAT IS PONDING? Ponding is the accumulation of water or the buildup of ice on a roof.

The BOCA National Building Code 1993, Section 1609.5, requires that the design professional account for loading that could be caused by the ponding of water on a roof. "All roofs shall be designed for a maximum depth of water that would pond thereon as determined by the relative levels of roof deck and overflow weir, scuppers, edges or serviceable drains in combination with the deflected structural elements. In determining the possible depth of water, all primary roof drainage means shall be assumed to be blocked."

It is common to find roofs that are not pitched adequately, roof drains/drain lines that are clogged, or roof drains which are located higher than the lowest point on the roof. All these situations could lead to a roof failure if the roof has not been properly designed.

The design professional has two options in accounting for the additional loading due to ponding. One, secondary roof drainage can be provided to relieve the accumulation of water. Examples of secondary roof drainage are scuppers, overflow weirs or secondary drains. Two, the roof structure can be designed to support the water load.

Source: Marcel Iglesias
Code Assistance Unit

17th Annual Building Safety Conference

Elevator Inspector of the Year

Peter Tropiano *(center)*, Elevator Inspector of the Year, with Cynthia Wilk *(left)*, Department of Community Affairs, and John Delgrosso *(right)*, Treasurer of the Municipal Elevator Inspectors Association.

Fire Protection Inspector of the Year

Arthur Londensky *(center)*, Fire Protection Inspector of the Year, with Cynthia Wilk *(left)*, Department of Community Affairs, and John Lightbody *(right)*, President of the New Jersey Fire Prevention and Protection Association.

Plumbing Inspector of the Year

Charles Douches *(center)*, Plumbing Inspector of the Year, with Cynthia Wilk *(left)*, Department of Community Affairs, and Alexander Tucciarone *(right)*, President of the New Jersey State Plumbing Inspectors Association.

1998 Awards — The "Best of the Best"

Building Inspector of the Year

Philip Wolski *(center)*, Building Inspector of the Year, with Cynthia Wilk *(left)*, Department of Community Affairs, and Thomas Millar *(right)*, Vice President of the Building Officials Association of New Jersey.

Electrical Inspector of the Year

Andre Cartel *(center)*, Electrical Inspector of the Year, with Cynthia Wilk *(left)*, Department of Community Affairs, and Victor V. Timpanaro *(right)*, Municipal Electrical Inspectors' Association.

Technical Assistant of the Year

Linda Aiello *(center)*, Technical Assistant of the Year, with Cynthia Wilk *(left)* and Susan McLaughlin *(right)*, Department of Community Affairs.

Barrier Free Subcode Is Changing Again: Two Books Instead of Three

Remember the Background

In 1996 when the Department of Community Affairs last amended the Barrier Free Subcode (BFSC), the number of books that needed to be consulted for barrier free compliance changed from one book to three. The BFSC had been a "home grown" code, written and published "in house." With the belief that the Building Officials and Code Administrators (BOCA) National Building Code's accessibility provisions would meet the Federal Fair Housing Amendments Act (FFHAA) and the Americans With Disabilities Act (ADA) during the next BOCA code change cycle, the Department supported the movement toward a single national accessibility standard and adopted Chapter 11 of the BOCA National Building Code 1993 for scoping provisions and CABO/ANSI A117.1 for technical design standards. The sections of BOCA Chapter 11 that had not been brought up to Federal law were amended in the New Jersey Administrative Code. Well, the accessibility provisions of the 1996 BOCA National Building Code would have needed to be amended once again because some did not meet and some exceeded Federal law. So, we had to decide what to do next.

Factors Considered

We turned to concerns about scoping. We reviewed 1996 BOCA Chapter 11 in terms of what amendments would be necessary to achieve compliance with Federal law. Those amendments were substantial. Next, we identified those amendments that were needed to ensure compliance with the New Jersey Barrier Free enabling legislation. By the time we were finished, we realized that the BFSC would be clearer if we wrote the scoping provisions ourselves.

Next, we reviewed the technical standards. CABO/ANSI A117.1 is clear and familiar. Therefore, we looked to see whether there was a reason to drop CABO/ANSI A117.1. There wasn't.

Finally, we recognized that there have been "three book" complaints in every class in the Barrier Free Subcode since the adoption of the BFSC-BOCA-CABO/ANSI combination. That was a strong indication of the preference of code officials.

What Now

By the time you receive this *Construction Code Communicator* — or shortly thereafter — the amended BFSC should be published in the *New Jersey Register* as a proposal. In the proposal, BOCA Chapter 11 is deleted and replaced with scoping requirements written "in house." The scoping provisions will be at *N.J.A.C.* 5:23-7 and will meet the requirements of the FFHAA, the ADA, and the New Jersey Barrier Free enabling legislation. The technical standards will continue to be CABO/ANSI A117.1-92.

What's New

The BFSC would not have been amended solely to reduce the number of books used. There are changes in the requirements. The most substantial change is to the multifamily residential provisions. The decision of whether to provide an elevator in multifamily residential buildings with four or more dwelling units in a single structure (Use Groups R-2, R-3, R-4) will be market-driven. The BFSC will no longer **require** that elevators be installed. Instead, the BFSC will require that when an elevator is provided, all dwelling units be accessible; when there is no elevator provided, the ground floor dwelling units must be accessible. An accessible dwelling unit will continue to be one that has an accessible entrance, accessible clear floor space, and adaptable features in the kitchen and bathroom. It is expected that this change will result in the construction of more accessible dwelling units.

What's Old

Large buildings are still large buildings (i.e., more than two stories or 10,000 square feet or greater) and must be fully accessible. Small buildings are still small buildings (i.e., less than three stories and less than 10,000 square feet) and must be accessible on the entry level with accessible features on the second story. CABO/ANSI A117.1 still provides the standard for technical design and construction.

What About Questions?

Questions on the Barrier Free Subcode may be directed to John Terry or me. Questions involving CABO/ANSI A117.1 should be directed to John Terry. We each may be reached by calling 609/530-8793.

Source: Emily Templeton
Code Development

Access to Playing Fields and Accessible Recreation Equipment

Playing fields

There shall be an accessible route of travel to at least one of each type of playing field in each distinct area on a site.

Overlay field: an accessible route of travel to the primary field is required.

Complex of playing fields in a single area: an accessible route of travel to the area is required.

All permanent spectator viewing areas seating 50 or more persons shall be on an accessible route of travel.

Picnic Equipment & Facilities

Five percent of all picnic tables, benches, fireplaces and grills provided, but not less than one, shall be on an accessible route of travel. Such equipment shall be distributed throughout the picnic area to the degree feasible as determined by the topography of the area.

Remember, the enforcement of the Barrier Free Subcode's recreation requirements is the responsibility of the facility manager unless the work being performed requires a permit under the Uniform Construction Code.

If you have any questions, I can be reached at 609/ 530-8788.

Source: Gail R. Weikel
Code Assistance Unit

Americans with Disabilities Act Accessibility Guidelines: Play Areas

The Architectural and Transportation Barriers Compliance Board proposes to amend the Americans with Disabilities Act Accessibility Guidelines by adding a special application section for play areas. The notice of proposed rulemaking was published in the *Federal Register* April 30, 1998.

The Department of Community Affairs is in the process of reviewing the proposed regulations and evaluating any impact on the New Jersey Barrier Free Subcode. Copies of this proposal are available by calling the Access Board's automated publications order line 202/272-5434. It is also available on the Board's Internet site (http://www.access-board.gov/rules/playfac.htm).

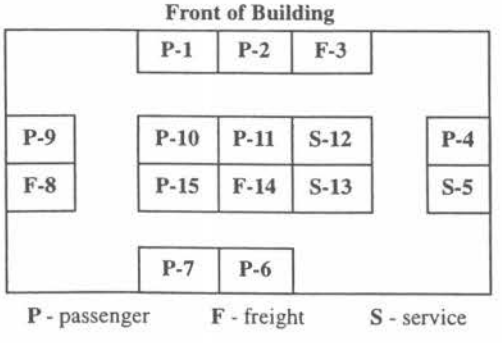
If you have any questions, I can be reached at 609/ 530-8788.

Source: Gail R. Weikel
Code Assistance Unit

Elevator Records Management 107

There was a recent incident in New Jersey where a person was trapped in an elevator. The emergency rescue squad (ERS) asked, "Which elevator?" Building management responded with an identifying number. However, because this was a large building, it contained freight and service devices in addition to passenger elevators. While trying to respond to the situation, the ERS discovered that there were several devices with the same number. Valuable time was wasted trying to discover which elevator was stopped with the passenger waiting for rescue. To prevent a repeat of this situation, a new numbering system is recommended for specific device identification.

Inside the building, face the building's main entrance. Starting with the elevator in the left corner and continuing clockwise around the building, number the devices beginning with number 1 and proceeding consecutively, without duplicating numbers, without regard for whether the elevator is a passenger, freight, or a service device (refer to schematic below). Devices in a central core could be numbered from left to right in the first echelon and right to left in the second echelon.



We recognize that elevator companies generally number devices when installed and, because of this, we recommend that this article be duplicated and made available to elevator companies. In this way, we hope that the next time an emergency occurs, rescue is aided by clear device identification numbers.

Please direct questions relating to this matter to me at 609/ 530-8833.

Source: Phil van Leeuwen
Elevator Safety Unit

Correction: Telephone Numbers Division of Codes and Standards

In the Spring, 1998 *Construction Code Communicator*, there were two errors in the list of telephone numbers for the Division of Codes and Standards. They are corrected here. The telephone number for the Atlantic City office for Casino Plan Review is also included.

Princeton Pike Bureau of Code Services Elevator Unit	609/530-8833
Regional Offices Bureau of Local Code Enforcement Central Regional Office	609/530-5928
Bureau of Construction Project Review Casino Plan Review Atlantic City Office	609/441-3679

Please make these corrections on your copy of the Spring 1998 *Communicator*.

Source: Division Staff

Meet the Newest Code Assistant

Marcelino (Marcel) Iglesias graduated from Stevens Institute of Technology in 1977 with a Bachelor of Engineering in Civil Engineering. He has been with the State since 1987, is a licensed code official with Building Subcode and Construction Official licenses, and is a certified Instructor for the Uniform Construction Code. Until recently, he was in the Bureau of Construction Project Review with the Casinos and Special Project Unit performing structural plan review. He has now joined the Code Assistance Unit as a Code Specialist. He has previous experience with large architect/ engineering consulting companies in the field of nuclear and fossil power distribution, petro-chemical and naval ships. He is an active member of BOCA International.

Marcel will answer questions on the building subcode, the rehabilitation subcode, and the Uniform Construction Code. He can be reached at the telephone number for the Code Assistance Unit, 609/530-8793.

Source: Division Staff

Medical Gas Piping

Chapter 14 of the Plumbing Subcode has always been the most mysterious chapter in the code to me. Yes, even more mysterious than Chapter 12 on venting. One question that continually comes up with respect to Chapter 14 is how to treat medical gas piping.

Chapter 14, Section 14.11 requires medical gas facilities to conform to NFPA 99. A quick overview of NFPA 99 shows that it deals with proper piping materials, proper pipe joints, protection against freezing, protection against corrosion, protection against physical damage, proper hanger spacing, and locations where pipe is permitted to be, and prohibited from being, installed. In addition, the code goes to great lengths to describe how the pipe must be cleaned and purged prior to being placed in service.

While inspectors may be able to verify that the proper materials have been installed, it is unlikely that they will be able to verify that the system is properly sized, cleaned, and purged. For these issues, it is appropriate for the inspector to rely on *N.J.A.C.* 5:23-2.20, Tests and Special Inspections. This section requires the applicant to have a qualified third party verify that the system has been cleaned and purged in accordance with NFPA 99 and is sized to meet the demand.

Source: Mike Baier
Code Assistance Unit

Swimming Pool Enclosures

As the summer arrives, it is time to consider swimming pool enclosures. It has recently been brought to the attention of the Department that several municipalities have ordinances in effect which exceed the requirements of the Uniform Construction Code. Examples of such ordinances are those which require a minimum height of five feet for the swimming pool enclosure and do not permit a wall of a dwelling to serve as part of the enclosure. Such ordinances are contrary to Sections 421.9.1 and 421.10.1 of the BOCA National Building Code, which establish a minimum height of four feet and permit the wall of a dwelling unit to serve as part of the enclosure. The 1993 BOCA National Building Code required that the door to the pool have an alarm or an approved pool covering, but that provision is being deleted in New Jersey's adoption of the 1996 BOCA National Building Code. (See companion article by John Terry)

Code officials are reminded that where a construction item, such as a swimming pool, is specified in the Uniform Construction Code, said code requirements supersede any municipal code requirements (N.J.A.C. 5:23-1.5). Municipal ordinances which conflict with the aforementioned code sections should be brought to the attention of the Department in order that these ordinances may be amended by the municipalities.

Cooperation in this area will lead to a cooler summer for all concerned.

Source: Bob Hilzer, Esq.
Bureau of Regulatory Affairs

Pool Barriers and the Code Adoption

With the adoption of the 1996 BOCA National Building Code, there will no longer be a need to put an alarm in the door from a dwelling where the dwelling unit wall serves as a part of the pool barrier. There has been some confusion as to whether the dwelling can serve as part of the barrier. It can.

Section 421.10.1 #9 is the text being deleted. This subsection of the building subcode deals only with the requirements for the door. It remains appropriate to allow the dwelling unit wall to serve as a portion of the barrier. This is reinforced by the definition of the term "Barrier" in section 421.2 which states: "A fence, a wall, a building wall, the wall of an above-ground swimming pool or a combination thereof...."

So, remember, the barrier requirements are similar to what we are all used to, however, the door from the house is no longer required to have an alarm.

Source: John N. Terry
Code Assistance Unit

An Innovation in College Courses

Something new is happening. We are going to try our hand at distance learning. Sussex, Warren, and Morris County Colleges are offering the first Department of Community Affairs' interactive televideo course. The Building HHS course will be offered in the fall semester. With interactive video/television, the instructor and one class of students are in one location while two other classes of students are in different locations. All students and the instructor are able to converse and see each other through television monitors.

There is no extra charge in tuition for this program. To register or find out more about this course or other courses being offered in the fall semester, please call:

Sussex Co. College	Dr. Dan McElwreath 973/300-2141
Morris Co. College	Alane Sheaves 973/328-5184
Warren Co. College	Bob Casciano 908/689-7613

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

Welcome to Our New Code Advisory Board Members

The Uniform Construction Code Advisory Board has two new members, **Vera Bacwyn-Holowinsky** and **Linda Aiello**. We would like to take this opportunity to introduce these two new members.

Vera Bacwyn-Holowinsky is a registered architect who practices in New Jersey. She has a general practice and, therefore, has experience with multiple building types. Ms. Bacwyn-Holowinsky is interested in the model codes and has a solid knowledge of their requirements. Those of us who have taught classes in the Uniform Construction Code know that her style is inquisitive, and we are confident that the Board will benefit from her active participation.

Linda Aiello is the technical assistant (formerly known as control person) for Washington Township in Bergen County. Since the members of the Code Advisory Board discuss amendments to the administrative portions of the Uniform Construction Code, Ms. Aiello's experience will provide a welcome — and needed — perspective.

Ms. Bacwyn-Holowinsky and Ms. Aiello, each of whom fills a public member seat, will join the 13 other Code Advisory Board members:

Robert Lemon, who represents municipal building officials, has been a Board member since 1984, and serves the Board as Chair;

Albert Turek, a mechanical engineer who represents licensed professional engineers, has been a Board member since 1988, and serves the Board as Vice-Chair and as Chair of the Mechanical and Energy Subcodes Committee;

Dr. Jung Cho, who represents public health officials, has been a Board member since 1980;

John Del Colle, who represents people with disabilities, has been a Board member since 1991, and serves the Board as Chair of the Barrier Free Subcode Committee;

Jon Evans, who represents the public, has been a Board member since 1997, and serves the Board as Chair of the Elevator Safety Subcode Committee;

Stephen Frame, who represents the public, has been a Board member since 1995, and serves the Board as Chair of the Building Subcode Committee;

William Lynn, who represents fire protection subcode officials, has been a Board member since 1992, and serves the Board as Chair of the Fire Protection Subcode Committee;

Robert McCullough, who represents licensed electrical inspectors, has been a Board member since 1990, and serves the Board as Chair of the Electrical Subcode Committee;

Michael Mills, who represents architects, has been a Board member since 1988;

Beth Pochtar, a structural engineer who represents licensed professional engineers (structural), has been a Board member since 1995;

Leonard Sendelsky, who represents the building industry, is a charter member of the Board;

Jim Sinclair, who represents consumers, has been a member of the Board since 1993;

Alexander Tucciarone, who represents licensed plumbing inspectors, has been a member of the Board since 1995, and serves the Board as Chair of the Plumbing Subcode Committee.

The Code Advisory Board meets on the second Friday every other month in the first floor conference room, 3131 Princeton Pike, Building 3, Lawrenceville. The meetings begin at 9:30 a.m. sharp and generally conclude by noon.

The meeting schedule for the remainder of 1998 is: August 14; October 16; and December 11.

If you need directions, call the Code Assistance Unit at 609/530-8793 or the Code Development Unit at 609/530-8788.

Source: Emily Templeton
Code Development

New Jersey Register Adoptions

Date: March 16, 1998

Adoption: 30 *N.J.R.*, 1038(a) Adopted amendments: *N.J.A.C.* 5:23-3.15.

Summary: *N.JA.C.* 5:23-3.15 The amendment at *N.J.A.C.* 5:23-3.15(b)9xii references and reproduces those sections of ANSI/NSPI-2 1992 that deal with avoiding entrapment; this is to ensure that bathers will not be entrapped by drains in spas and hot tubs. Because this amendment is part of the plumbing subcode, plumbing inspectors will ensure that all new spas and hot tubs have the required safety features.

Date: May 18, 1998

Adoption: 30 *N.J.R.*, 1777(b) Adopted amendments: *N.J.A.C.* 5:23-5.21.

Summary: *N.J.A.C.* 5:23-5.21 The amendment at *N.J.A.C.* 5:23-5.21(d)5 specifies that each licensed building subcode official or building inspector take the mandatory barrier-free subcode seminar for license renewal. Previously, only the building subcode official in each municipality was required to take this course. To require the training as a condition of licensure, rather than as a condition of employment, will make the code enforcement process more effective and efficient. The language that required seminar attendance based upon employment by a specific municipality has been deleted.

Source: Farid Ahmad, P.E.
Supervisor
Code Assistance Unit

Construction Code Communicator

NEW JERSEY UNIFORM CONSTRUCTION CODE

State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

Volume 10 Number 3

Fall 1998

PEOPLE, PLACES and THINGS Moving Forward/Looking Back

1998 is a special year for me because it marks 10 years of work in the Code Assistance Unit. We all get hooked on milestones. Often we mark the milestones by reminiscing and taking inventory of where we are and where we've been. Here's a look at some of the things I've observed over the past 10 years.

1988 — building, mechanical, electrical, plumbing, and energy code enforcement, asbestos abatement.

1998 — all of the aforementioned, plus radon mitigation, lead abatement, residential site improvement standards, amusement rides, high pressure boilers, elevators, and commercial propane systems. I've always sort of half-joked that the reward in state government for a job well done is more work. I guess we've been doing O.K.

1988 — doughnuts at the seminars.

1998 — no doughnuts at the seminars — though this happened quite a while ago, people are still complaining about it. The training unit reports that there are no statistics on how this policy has affected code officials' learning.

1988 — code adoption process.

1998 — code adoption quagmire. Between 1988 and 1995, I was involved in the adoption of six different editions and supplements of the model codes, with the average time to make the changes ranging from 3 to 6 months. With the advent of the state requirement that we justify each code change, I've been involved in one code adoption that took well over a year. Can someone say "streamline?"

1988 — regional code.

1998 — national code. Ten years ago, the code had a regional following and was called a national code. Now the code aspires to a national following and is called an international code. Next will come an international code that will be called a universal code (suitable for adoption by jurisdictions from Mercury to Pluto and beyond, but only Earth code officials will be allowed to vote).

1988 — 25% - 50% rule.

1998 — rehabilitation subcode. For designers, the 25%-50% rule was the equivalent of trying to guess how many jelly beans are in a jar; the rehab code lets designers open the jar and count the jelly beans.

1988 — Code Assistance Staff — Jeff Applegate, Maria Roth and me.

1998 — Code Assistance Staff — Farid Ahmad, John Terry, Ashok Mehta, Marcel Iglesias and me. I refuse to make any comparisons on the staff of the unit; I'll leave that up to you. (I had considered doing it on looks, but have you seen the picture of John Terry that appeared with his profile in the BOCA magazine? 'nuff said.)

1988 — Blue book, 6 x 9.

1998 — Blue book, 8½ x 11. If you can answer the fol-

(Continued on page 2)

In This Issue

lowing three questions, you have achieved total consciousness: 1. If a tree falls in the woods and no one hears it, does it make a sound? 2. Can God create something so heavy even he can't lift it? 3. Do the dividers in the UCC go before the last page of a subchapter or after the first page of a subchapter?

1988 — No newsletter.

1998 — The *Construction Code Communicator* has easily surpassed bulletins, FTO's and interpretations as the best way to provide information to code officials. For frustrated writers like me, it is the literary equivalent of cable access TV.

1988 — when discussing code issues with colleagues, the phrase "Chuck says...." was repeated over and over again.

1998 — the phrase "Chuck said..." is invoked. The more things change, the more they stay the same.

Source: Michael Baier
Division of Codes and Standards

When Shall I Consider Snow Drifts?

The BOCA National Building Code/1996, Section 1608.7 requires that "In areas where the ground snow load is greater than 10 pounds per square foot [see Figures 1608.3(1), 1608.3(2) and 1608.3(3)], multilevel roofs, lower roofs and decks of structures and roofs adjacent to projections shall be designed in accordance with Sections 1608.7.1 through 1608.7.4."

In the State of New Jersey, the ground snow load is always greater than 10 pounds per square foot as per Figure 1608.3(1), Ground Snow Loads for the Eastern United States of the BOCA National Building Code/1996. The map in Bulletin 94-8 in the Uniform Construction Code provides an easier reading of the isolines on the ground snow loads.

The snow drift surcharge is applicable to any adjacent lower roofs or structures sited within 20 feet of a higher structure. In BOCA/1996, consult Figure 1608.7.1 — Drifting snow on low roofs and decks. The snow drift surcharge is also applicable to mechanical equipment, penthouses, parapets and other projections above the roof. In BOCA/1996, consult Figure 1608.7.3 — Snow drifting at roof projections.

An example may help: If a new building is being constructed and there are any existing buildings with roofs lower than the roof of the new building within 20 feet of the new building, the owner of the new building (or his representative) must provide structural calculations that ensure that the roof and the main structural components of the adjoining existing building can safely support this additional loading. Note that as the distance between the buildings increases, the snow drift load decreases. When the building separation exceeds 20 feet, this requirement is no longer applicable. Section 1608.7.2 and Figure 1608.7.2 in the 1996 BOCA National Building Code provide the formulas and figures, respectively, for accounting for the drifting of snow onto adjacent low structures.

All roofs must be designed to support the greatest of the following live loads: minimum roof live loads as per Section 1607.3, rain loads as per Section 1607.5, special purpose loads as per Section 1607.6, and snow loads as per Section 1608.0. These loads are not combined to determine the roof live load, but are compared to one another and the largest one is used as the roof live load.

Source: Marcel Iglesias
Code Specialist
Code Assistance Unit

New Jersey Register Adoptions

Date: July 6, 1998

Adoption: 30 *N.J.R.* 2421(b) Adopted amendments: *N.J.A.C.* 5:23-3.11A, 3.11B, 3.14 through 3.18, 3.21 and 4A.5 Adopted new rule: *N.J.A.C.* 5:23-3.4

Summary: *N.J.A.C.* 5:23-3.4, 3.11A, 3.11B, 3.14, 3.15, 3.16, 3.17, 3.18, 3.21 and 4A.5 1996 editions of the BOCA National Building Code (*N.J.A.C.* 5:23-3.14), the National Standard Plumbing Code (*N.J.A.C.* 5:23-3.15), and the National Electric Code (*N.J.A.C.* 5:23-3.16), and the 1995 edition of the CABO One-and Two-Family Dwelling Code (*N.J.A.C.* 5:23-3.21) are adopted with amendments. The section on the assignment of responsibilities for enforcement of subcodes (*N.J.A.C.* 5:23-3.4) is restructured to make the assignment of responsibilities clearer and easier to follow. Other companion amendments are adopted for clarity and consistency.

Date: July 20, 1998

Adoption: 30 *N.J.R.* 2644(b) Adopted amendments: *N.J.A.C.* 5:23-3.16 Adopted new rule: *N.J.A.C.* 5:23-2.18B

Summary: *N.J.A.C.* 5:23-2.18B and 3.16 The new rule adopted at *N.J.A.C.* 5:23-2.18B details the code official's jurisdiction, and the permit fee for the installation of site lighting on private property by utilities. This installation is treated as "minor work" in accordance with *N.J.A.C.* 5:23-2.17A. The companion amendment at *N.J.A.C.* 5:23-3.16 permits the use of the National Electrical Safety Code (ANSI C2-1997) for such installation. This adoption is the result of a settlement agreement between the Department of Community Affairs and the utility companies.

Source: Farid Ahmad, P.E.
Supervisor
Code Assistance Unit

The *Construction Code Communicator* is published quarterly by the New Jersey Department of Community Affairs and the Center for Government Services at Rutgers, The State University. Editor: Emily Templeton. Address changes and subscription requests may be directed to the **DCA Publications Unit, P.O. Box 802, Trenton, NJ 08625-0802**. Comments and suggestions should be sent to the **Code Development Unit, P.O. Box 802, Trenton, NJ 08625-0802.**

New Numbers

As most of you know, several offices of the Construction Code Element have moved to the Department of Community Affairs's main building at 101 South Broad Street, Trenton. To make it easier for you to communicate with us, here is a quick list of telephone, FAX and Post Office Box numbers. All units will be in the main building by the end of October.

Division of Codes and Standards
Telephone: (609) 292-7899; (609) 292-7898; (609) 984-0040
FAX: (609) 633-6729

William M. Connolly, Director
Cynthia A. Wilk, Assistant Director

Fiscal Office: (609) 984-0040
Construction Reporter (content): (609) 292-7899
Construction Reporter (subscriptions): (609)984-7607
Housing Research: (609) 292-7899
Publications: (609) 984-0040
Site Standards: (609) 292-7899
Team UCCARS: (609) 292-7898
Training Fees: (609) 292-7898

Code Assistance and Code Development:
Questions on the technical subcodes of the UCC: (609) 984-7609
Construction Code Communicator (content): (609) 984-7609
Communicator (subscription): (609) 984-0040
Construction Reporter (content): (609) 292-7899
Construction Reporter (subscription): (609) 984-7607
FAX: (609) 984-7717

Bureau of Code Services: (609) 984-7974
Asbestos and Lead Hazard Abatement Unit: (609) 984-7815
Carnival and Amusement Rides and Ski Lifts Safety Unit: (609) 292-2237
Education Unit: (609) 984-7820
Elevator Safety Unit: (609) 984-7833
Industrialized Buildings Unit: (609) 984-7833
Licensing Unit: (609) 984-7834
LP Gas Facilities: (609) 292-2237
FAX: (609) 984-7952

Bureau of Construction Project Review: (609) 984-7850
Receptionist: (609) 984-7860
Education Plan Review: (609) 633-0800
Health Facilities Plan Review: (609) 633-8151
State Buildings: (609) 984-7865
FAX: (609) 984-7956

Bureau of Homeowner Protection: (609) 984-7905
Receptionist: (609) 984-7908
Builder Registration: (609) 984-7910
Landlord-Tenant (Automated Information System): (609) 292-4174
FAX Number: (609) 984-7954

Bureau of Regulatory Affairs: (609) 984-7672; (609) 984-7768
Construction Board of Appeals: (609) 984-7672
Investigations: (609) 984-7672
Municipal Monitoring: (609) 984-7672
Third Party Agency Monitoring: (609) 984-7672
FAX: (609) 984-7718

Bureau Of Local Code Enforcement: (609) 984-7603
FAX: (609) 984-7986

Northern Regional Office
#171 Route 173, Suite 107
Asbury, New Jersey 08802
Telephone: (908) 713-0722
FAX: (908) 713-0995

Central Regional Office
Post Office Box 817
Trenton, New Jersey 08625
Telephone: (609) 633-2423
FAX: (609) 984-7956

Southern Regional Office
301 East Blackhorse Pike, Unit 5
Williamstown, New Jersey 08094
Telephone: (609) 567-3653
FAX: (609) 704-1510

Atlantic City Office (BCPR)
1300 Atlantic Ave., Suite 204
Atlantic City, NJ 08401
Telephone: (609) ~~441-7351~~ (609) 441-3679
FAX: (609) 441-7355

Mailing Addresses:
Division of Codes and Standards - Post Office Box 802
Code Assistance Unit - Post Office Box 802
Bureau of Homeowner Protection - Post Office Box 805
Education Facilities Plan Review - Post Office Box 815
Health Facilities Plan Review - Post Office Box 815
Bureau of Code Services - Post Office Box 816
Bureau of Construction Project Review - Post Office Box 817
Bureau of Regulatory Affairs - Post Office Box 818
Bureau of Local Code Enforcement - Post Office Box 817
Carnival and Amusement Ride Safety Inspection Unit - Post Office Box 808

We hope this list will be helpful to you.

Source: Emily W. Templeton
Code Development

The Wide Side

This Department has been asked several times whether gravity flow water closets are required to have the flush handle installed on the wide side. The answer is no. The old Barrier Free Subcode required the handle to be installed on the wide side for all water closets. However, since 1995, when CABO/ANSI A117.1 was adopted as the technical design standard for the Barrier Free Subcode, that requirement has applied only to flushometer water closets and has not applied to gravity flow water closets. The applicable citation is in CABO/ANSI A117.1, Section 4.17.5.

Source: Emily W. Templeton
Code Development

Rehabilitation Subcode (NJAC 5:23-6) Code Change Proposal 1999

Sections must be presented with language proposed for **deletion in brackets [ ]** and language proposed for **addition <u>underlined</u>**. Please print or type all information.

Code changes may be **mailed** to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
Post Office Box 802
Trenton, New Jersey 08625

Code changes may be **faxed** to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
FAX: (609) 633-6729 or (609) 984-7717

Information may be obtained from the Code Development Unit at (609) 984-7609.

For consideration, code changes must be submitted by January 15, 1999.

Section Proposed For Change (Citation): _____.

Code Change Submitted By:

NAME: _____ Organization: _____

ADDRESS: _____

_____

_____

TELEPHONE: _____ FAX: _____

E-MAIL ADDRESS: _____

_____

Proposed Code Change: _____

_____

_____

_____

_____

Supporting Statement (Reason for change): _____

_____

_____

_____

_____

_____

_____

Department of Community Affairs, Division of Codes and Standards
Rehabilitation Subcode
Code Change Proposal 1999

Summary of Technical Changes to the 1996 BOCA National Building Code for New Jersey

The purpose of this article is to provide a list of technical changes that have taken place with the adoption of the 1996 edition of the BOCA National Building Code. This is not an exhaustive list of all changes that have taken place. It is necessary to refer to *N.J.A.C. 5:23-3.14* in the Uniform Construction Code for a list of all changes, including administrative changes.

1. Section 307.8 Exception #3: Amend this exception by deleting the word "less" in the second line and replacing it with "more".

2. Section 312.1 and Table 313.1.2: Delete the text of the 1996 edition of the code and insert the text of section 312.1 of the 1993 edition of BOCA. Delete Use Group U from Table 313.1.2.

3. Section 421.10.1: Delete the text of item #9 in its entirety.

4. Table 503: Delete Use Group U from the Table.

5. Table 705.2: Delete Use Group U from the table.

6. Table 707.1: Delete Use Group U from the table.

7. Section 721.6.5: Delete the text of the 1996 edition of the code and insert the text of section 720.6.5 of the 1993 edition of BOCA.

8. Section 723.6: Delete the text of this section in its entirety.

9. Table 803.4: Delete Use Group U from the table.

10. Section 921.0: Delete the text of this section in its entirety.

11. Section 1005.5: Delete the text of the 1996 edition of the code and insert the text of section 1005.5 of the 1993 edition of BOCA.

12. Section 1005.6: Delete the text of the 1996 edition of the code and insert the text of section 1005.6 of the 1993 edition of BOCA .

13. Section 1014.6 Exception #8: Delete the text of the first sentence of this exception and insert the text of exception # 8 of the 1993 edition. Retain the text of the second sentence of the 1996 edition regarding the nosing of the stair.

14. Section 1014.6.3: Delete the text of the 1996 edition of the code and insert the text of section 1014.6.3 of the 1993 edition of BOCA .

15. Section 1014.9.1: Delete the text of the 1996 edition of the code and insert the text of section 1014.9.1 of the 1993 edition of BOCA.

16. Section 1017.1.1: Add the word "nominal" at the end of the sentence in exception #2 referring to door threshold heights.

17. Section 1021.2 Exception #1: Delete the text of exception #1 from the 1996 edition and insert the text from section 1021.2 exception #1 of the 1993 edition.

18. Section 1022.2: Delete the text of the 1996 edition and insert the text of section 1022.2 of the 1993 edition.

19. Section 1022.2.2 Exception #1: Delete the text of exception #1 in the 1996 edition and insert the text of section 1022.2.2 exception #1 of the 1993 edition.

20. Section 1022.2.4: Delete the text of the 1996 edition and insert the text of section 828.2.4 of the 1987 edition.

21. Section 1024.1: Modify this section by deleting the second sentence.

22. Section 1207.2 and 1207.2.1: Delete these two sections in their entirety without substitution.

23. Section 1210.1: Delete this section of the 1996 edition and substitute the text of sections 1210.1 and 1210.1.1 of the 1993 edition of BOCA

24. Section 1405.3.11: Delete this section from the 1996 edition in its entirety.

25. Table 1609.7(6): Delete the text of Note e in the 1996 edition and insert the text of Table 1611.7(6) Note e of the 1993 edition.

26. Section 2603.5.1: Delete this section for the 1996 edition in its entirety.

As stated previously, this is not meant to be an all-inclusive list of changes, but is provided to highlight the technical amendments of the building subcode adoption.

Source: John N. Terry
Code Assistance Unit

May I Do A Plan Review Without All The Prior Approvals?

Members of the Code Assistance Unit have been asked whether a construction office may review a set of plans prior to the issuance of all the prior approvals. The answer to this question is yes. In fact, the Department encourages code officials to review plans and specifications in these cases.

Some projects are "fast tracked," so that construction documents are completed at the same time as the prior approval process. If the permit applicant wants to take the risk associated with this process, code officials should provide the service of reviewing the plans. The original purpose of the non-refundable fee for plan review was to allow the applicant to go through the plan review process and the prior approval process at the same time. The code enforcement agency does not lose anything by doing this. The permit applicant must pay the plan review fee, therefore, even if the building is not built, the code enforcement agency is paid for its review.

One advantage of reviewing plans during the prior approval process is that there is more time for the review of complex projects. Because the time limit for the code enforcement agency to take action on the application begins when the application is complete, the plan review "clock" starts on these projects when all prior approvals have been granted. In some cases, this is reason enough to provide this service.

This does not affect the issuance of the permits. Permits may not be issued until all the prior approvals have been granted.

Source: John N. Terry
Code Assistance Unit

Access To Playing Fields and Accessible Recreation Equipment

Playing Fields

There shall be an accessible route of travel to at least one of each type of playing field in each distinct area on a site. Overlay field: an accessible route of travel to the primary field is required. Complex of playing fields in a single area: an accessible route of travel to the area is required. All permanent spectator viewing areas seating 50 or more person shall be on an accessible route of travel.

Picnic Equipment & Facilities

Five percent of all picnic tables, benches, fireplaces and grills provided, but not less than one, shall be on an accessible route of travel. Such equipment shall be distributed throughout the picnic area to the degree feasible as determined by the topography of the area.

Source: Gail R. Weikel
Code Development and Assistance

UCCARS and Y2K (Year 2000)

Many of you have asked about the impact of the year 2000 on UCCARS. I thought, Good Question! So, I decided to look at the matter closely myself. Because I'm not a computer hardware or software technician, but am a computer user, to be sure I wasn't missing anything important, I asked our original software developer for his thoughts on the matter. In the process, I reviewed a good deal of writings on the subject of computing and the year 2000, and discovered there was a lot to consider. So that you will be as informed as I now am, I'd like to share what I've learned. To make it as easy as possible for those of you who are, like me, only a user to follow along , I've divided the information into four categories: 1) your hardware; 2) our UCCARS software; 3) interface with other agency or office applications; and 4) other software you may be using in your construction code enforcement office. This is what I learned.

First, Some Background

Year 2000, also known as Y2K, issues are date-related. The traditional method of recording and storing dates, which uses two digits to represent the year, i.e. 98 for 1998, will cause calculation problems when we roll over to the year 2000. It seems the traditional use of two-digit years was caused by the cost of physical memory and disk storage in the early days of computing. At that time, developers of operating systems and application software developers opted for the two-digit date methodology to save on then-expensive memory and disk space. This method works great until the year no longer begins with the digits 19. As the century turns, systems and applications will recognize the two-digit year 00 as 1900, not 2000. This will cause some applications to shut down or generate erroneous information. Applications that perform arithmetic calculations, sort, and date field comparisons may not function at all.

Next, Your Hardware

Ensuring Y2K compliance in terms of your hardware is something you can do while the New Jersey Department of Community Affairs is working on the UCCARS software. Because UCCARS was designed to run on even the smallest and most basic of PC's, but also functions well on the bigger, faster PC's that have come along, the make, model and configuration of PC's used to run UCCARS is diverse. One thing that is the same, however, is every user's need to ensure that the computer will function in the 21st century.

> Note: If you are running your UCCARS software on a network, with regard to hardware, please let your network administrator concern him/herself with the century rollover; you may skip down to the section, entitled *Our UCCARS Software*.

If you are running UCCARS on a stand-alone PC, regardless of how new you believe your machine to be, you may still have to assist your PC with the century rollover. Most PC's will not gracefully enter the new millennium; the operative word, however, is gracefully; with a little help from you, it will probably rollover.

Why. *If you want to know why, read this paragraph. If you simply want to know how, skip to the next paragraph.* On a PC, the RTC (Real Time Clock) chip, the thing that holds the system date, will not roll the date over to the year 2000 without help. This is because of the way the date is stored in the clock chip, which keeps track of the time and date when the PC is not on. On the clock chip, the year is stored as a 2-digit value. The BIOS (that stands for *basic input-output system*) tracks the century separately through a byte in the CMOS RAM (that stands for *Complementary Metal Oxide Semiconductor Random-Access Memory*). Even though this is also located in the clock chip, it's stored separately, so the change in the RTC date won't automatically change the century, thus in effect, the century is not "maintained." Now, your PC's operating system, i.e. DOS (and Windows) also maintains the date. But both are represented differently. The CMOS RTC date is stored as yy/mm/dd, and then century separately, while the DOS date is kept as days since 1980/01/01 (don't ask me why), which is then converted to a yyyy/mm/dd date when any program asks for it. When the PC starts up, DOS gets its date from the BIOS which gets it from the CMOS RTC, and then converts it to days since 1980/01/01. DOS maintains its date as long as the PC remains on (remember, the CMOS RTC hardware maintains its date whether the PC is on or off, but it does not "maintain" the century). In the CMOS RTC, year 99 overflows to 00 and the century remains unchanged so the effective year becomes 1900; in DOS, the year 1999 overflows to 2000. So, until the PC is turned off and turned back on again, there may appear to be no problem with the rollover from 1999 to 2000; trouble lurks, however, in the CMOS RTC date, which has really become the year 1900. When the PC is powered off and on again, DOS reads an out-of-range date from the CMOS RTC (as 1900 is an out-of-range date). The date conversion algorithm calculates the incorrect date of 1980/01/04.

How. At the end of your last business day of 1999 (for most of us, that will be Friday, December 31), turn your PC off. When you come to work on the first working day after the start

of the new year, turn your PC on . . .so far it's pretty simple, right? At the DOS prompt (C:>), type DATE and press <enter>. Respond to the prompt by typing the current date (for most of us, that will be **01-03-2000** which is Monday). Your PC's clock should be okay now, of course only until 01-01-2100, but we're going to let somebody else worry about that!

TEST EVERY PC!

Because there are some PC's that will not roll over to the year 2000, even with our help as described above, it's *very important* that *everyone using a PC to run UCCARS* test that PC *well in advance.* Then, if you find that yours is one of the PC's that *won't* roll over, testing in advance will have afforded you ample time to upgrade your UCCARS PC. So, of course, the next logical question is, "How do I test my PC?" Please, read on.

How To Test

If your PC is part of a network, please contact your network administrator to ascertain your PC's Y2K compliance. If your PC is a stand alone machine, there are a number of test programs available; some are free, some are not. We used the 2000.exe program developed by NSTL (National Software Testing Laboratories), a division of McGraw-Hill. It was downloaded from New Jersey's Office of Telecommunications and Information Systems' web-site. If you do not have Internet access, but would like to use this program to test your UCCARS PC, please call and we'll put you in touch with a copy. Once you have the test program downloaded to diskette, follow these instructions.

> To test from the DOS prompt, type A:\2000 then press <enter>. If your PC runs Windows, you must exit from Windows before performing this test.
>
> Please adhere to the terms and conditions of use as expressed upon execution of the program.

Our UCCARS Software

The Problem. UCCARS was conceived in 1986 and developed in 1987; as is the case with many other products of its time, it was not developed with the year 2000 foremost in anyone's mind. As such, operational failures will occur in UCCARS due to the year 2000 century rollover.

In fact, we've already experienced the first, that of inspector license expirations. Fortunately, we all have adopted the method of temporarily entering 12/31/19 as the license expiration date to get around this failure until a fix is in place. The next failure will occur around January 1999 in System II only, as it relates to the expiration of contractor local licenses. Though very much a nuisance, this failure, like the one we've already experienced, isn't critical to operation. Happily, the first critical failure won't manifest itself until on or after July, 1999.

The Guarantee. If you simply want assurance that something is being done, read this paragraph and skip the next. The Department has taken steps to ensure that UCCARS is Y2K compliant. We have met with Municipal Information Systems, Inc., the product's original developer, and have identified areas that require attention. Between now and July, 1999, the product's critical fail date, the Department will have distributed a new Y2K compliant version of both UCCARS System I and System II.

The Details. Municipal Information Systems has conducted a thorough, systematic review of the program functions of UCCARS and has provided the DCA with its findings. If you're curious about when and how the current UCCARS software might fail, look to the detail tables at the back. Otherwise, simply continue on to the next section.

Interface With Other Systems/Applications

The area of greatest vulnerability is data interface, i.e. the sharing of data between agencies and organizations. Both agencies must convert the date field from six to eight digits before sharing occurs, otherwise the receiving computer could reject the transmission entirely, or worse, accept it, thereby incorporating into its data files data in which the fields don't match up.

The primary, and most significant, interface with UCCARS, from DCA's perspective, is with its own CARS database, which is the central repository for construction activity data in New Jersey, and its subsequent interface, on municipalities' behalf, with the US Census Bureau. The Department has already ensured Y2K compliance and coordination in this regard. Of secondary concern, however, but of equal significance, is any interface that may have been developed at the local level. As UCCARS dates, though traditionally entered as 6-digit dates, have always been stored as 8-digit dates, this should not pose a problem. If, however, your UCCARS database is accessed or used by any other data system in your town, you should alert those responsible for other systems that a fully Y2K-compliant UCCARS product will have been distributed and will be in use sometime around June, 1999.

Other Software You May Be Using

In researching this topic, to my surprise, I learned that some of the software we buy for our PCs, such as spreadsheet or word processing packages, often referred to as *shrink-wrapped software*, also have Y2K compliance issues not yet resolved. If you are using other *shrink-wrapped software* on your PC, you may get in touch with the company, either at its web-site or via its technical assistance line, to discuss possible problems, and product updates.

Also, if you have any other custom-written applications that you rely upon to keep things in your office running smoothly, please be certain to consider their Y2K compliance as well.

Conclusion

The Y2K issues with UCCARS are being addressed. Fully compliant System I and System II are planned to be released by July, 1999.

The rest is up to you. Remember: 1) Test your hardware; 2) Ensure the compliance of *shrink-wrapped* software you are using by contacting its manufacturer; and 3) Consider the compliance of any additional custom-written applications.
And, most importantly, **start now**.

Source: Berit Seiple Osworth
Division of Codes and Standards

Table 1: Y2K Failures in System I
(Derived from MIS, Inc. Analysis)

Program Function	Pre-Jan. 1, 2000 Failure	Remarks
Enter Data		
Adjustment	Yes; may vary.	If an error is made in date entry.
Miscellaneous Adjustment	Yes; may vary.	If an error is made in date entry.
Inspection Request Screen (all subcodes)	Yes; December 22, 1999	When the date inspection requested is beyond end of century.
Update Inspection Requests include Prior/Next screens	Yes; December 22, 1999	When the date inspection requested is beyond end of century.
Inspection Results	Yes; December 22, 1999	May have results stored apart from requests leaving requests remaining open.
Structure - Plan Review include Initial/Resubmittal screens	Yes; December 1, 1999	When "Due" is beyond 12/31/99
Violation/Penalty	Yes; November 1, 1999	a) Compliance Due date b) Date Notice Issued
Unsafe/Imminent Hazard	Yes; November 1, 1999	a) Demolish/Vacate/Repair by: b) Date Notice Issued c) Notify by: ___
Stop Construction Order	Yes; November 1, 1999	a) Date Notice Issued b) Compliance Due Date c) Stop Construction as of: ___
Change Program Setup		
Update Inspection Data	Yes; January 1997	License Expiration
Archive	Yes; December 31, 1999	Archive all closed permits issued on or before:
Requested Inspections	Yes; December 7, 1999	If *all* open requests are printed, they may extend 2-3 weeks into the future, crossing the century.
Overdue Inspections	Yes; December 7, 1999	If a 2-3 week future date is entered.
List of Ongoing Inspections	Yes; may vary	Fail date is dependent upon data entered in *Inspections* and *Ongoing Inspection Intervals*.
Project Plan Review Report	Yes; December 1, 1999	Because screens are printed on future dates.
Subcode Plan Review Report	Yes; December 1, 1999	Same as above.
Due/Overdue Plan Reviews	Yes; December 1, 1999	Due on or Before date may extend 1 month into future.

Table 2: Y2K Failures in System II
(Derived from MIS, Inc. Analysis)

Program Function	Pre-Jan. 1, 2000 Failure	Remarks
All listed for System I	Yes; varies.	See System I Table.
Enter Data		
Permit Screen	Yes; but only in earlier releases.	Upgrade to ver. 5.16 will preclude premature failure in this regard.
Technical Screens	Yes; January 1, 1999	Relates to the expiration of contractor local licenses.
Certificates: CC TCO TCC	Yes; July 1, 1999	Relates to expiration dates established.
Update Contractors File	Yes; January 1, 1999	Relates to the expiration of contractor local licenses.
Print Reports		
List of Open TCOs	Yes; July 1, 1999	May vary, however, based on user's request.
Data on Specific Contractor	Yes; January 1, 1999	Only in that the license expiration date appears on the report. The report itself, however, can be produced as it is not data range dependent.

Rehabilitation Subcode Amendments: Code Change Process

In order to maintain orderly and reasonable amendments to the rehabilitation subcode (NJAC 5:23-6), the Department has determined, with the advice of the Code Advisory Board, that the rehabilitation subcode will have its own code change process.

This process will begin as an annual review and will provide for both public participation and technical review by the Code Advisory Board and its subcode committees. There will be one Code Advisory Board meeting each year dedicated to hearing code change proposals and members of the subcode committees will be invited to attend that meeting. Through their committee chairs, the members of the subcode committees will provide technical advice to the Code Advisory Board, which will provide advice to the Department regarding the merit of each proposed code change. As with all Code Advisory Board meetings, the code change meeting will be open to the public.

Once all of the proposed code changes have been reviewed and evaluated, the regulatory process will apply. The proposed changes to the rehabilitation subcode will be published as a proposal in the *New Jersey Register*. A public hearing will be held during the public comment period. Once all comments have been considered, the adoption will be published in the *New Jersey Register*.

At the annual reorganizational meeting, which will be held December 12, the Code Advisory Board will set a date for the rehabilitation subcode code change meeting. The deadline for the submittal of code changes for consideration in this first annual review is January 15, 1999.

The code change submittal form is printed here as a convenience for anyone who would like to submit a code change proposal. Forms will be available from the Code Development Unit after September 1, 1998.

If you have any questions about this process, please contact the Code Development Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Programs Moved to DCA

The New Jersey budget for 1998-1999 included a provision to consolidate code enforcement programs that had resided in the Department of Labor and the Treasury Department in the Department of Community Affairs.

The inspection function of the Division of Building and Construction in the Treasury Department has been moved to the Bureau of Construction Project Review, Division of Codes and Standards. The Bureau Chief is Arthur Lange. Until the end of October, the unit may be reached at

Post Office Box 817
Trenton, New Jersey 08625
Telephone: (609) 530-3624
FAX: (609) 530-6101

The functions of asbestos and lead contractor licensing that were in the Department of Labor have been moved to the Bureau of Code Services, the Asbestos/Lead Unit. (See companion article in this newsletter.) The Bureau Chief is Richard Osworth and the unit supervisor is Chrystene Wyluda. After the first week of September, the lead and asbestos contractor licensing unit may be reached at

Post Office Box 816
Trenton, New Jersey 08625
Telephone: (609) 984-7815

The inspection of ski lifts and carnival and amusement rides have been moved from the Department of Labor to the Bureau of Code Services. The plan review and inspection of LP gas facilities is also included in this unit. Richard Osworth is the Bureau Chief; Joseph Palazzone is the unit chief. The unit may be reached at

Post Office Box 808
Trenton, New Jersey 08625
Telephone: (609) 292-2237

The boiler inspection program from the Department of Labor has been moved to the Housing Inspections Element; they may be reached at

Post Office Box 814
Trenton, New Jersey 08625
Telephone: (609) 632-2345

The consolidation of these enforcement programs within the Division of Codes and Standards is logical and staff is working hard to ensure that the merge is efficient and effective.

Source: Emily W. Templeton
Code Development

Unisex Toilets

Over the years, many questions have been asked about the use of unisex toilet rooms. The most recent series of questions has been attributed to the language in the rehabilitation subcode which specifically allows a unisex toilet room when it is "technically infeasible" to provide a compliant accessible toilet stall in an existing toilet facility or when it is "technically infeasible" to enlarge an existing single fixture toilet room to meet the accessibility requirements.

The question at this time is whether it is permissible to create one accessible unisex toilet room and to designate the existing single fixture toilet room as a unisex toilet room. The answer is yes, as long as the fixture count required by the plumbing subcode is met.

Technically infeasible means that it is not possible to alter the existing toilet room to meet accessible dimensions. It may be possible, however, to create one accessible toilet room. In that case, providing two toilet rooms, one of which is accessible, is a reasonable solution.

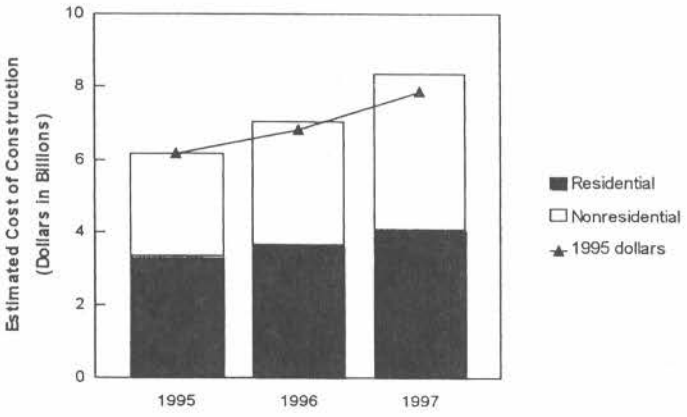
If you have any questions, please contact John Terry or me at (609) 984-7607.

Source: Emily W. Templeton
Code Development

Construction Reporter 1997 HIGHLIGHTS

The estimated cost of construction authorized by building permits totaled $8,346.5 million in 1997. This was $1,318.1 million more than last year, an increase of 18.8 percent. In real terms,assuming a three percent inflation rate for the year, construction activity grew by 15.3 percent compared to 1996. Residential work totaled $4,083 million (48.9 percent) and nonresidential activity amounted to $4,263.5 million (51.1 percent).

Estimated Cost of Construction Authorized by Building Permits, 1995, 1996, 1997



Municipalities in central New Jersey accounted for 37.4 percent of the estimated cost of construction authorized by building permits. Northern New Jersey made up another 36 percent and southern New Jersey comprised 22.1 percent. The remainder (less than five percent) consists of work on State buildings located throughout New Jersey.

Top Municipalities

Atlantic City in Atlantic County led all municipalities with $248.9 million of work authorized. Although the hotel and casino industry accounted for much of this activity, other large projects broke ground during the year, including a new public safety building, a thermal energy plant, and a minor-league baseball stadium. South Brunswick Township in Middlesex County had $29.9 million in residential construction and $74.6 million in commercial activity, which included a building permit for a new financial office with an estimated cost of construction of $40 million. Bridgewater Township in Somerset County reported $104.5 million of activity, which was evenly split between commercial and residential uses. Bridgewater authorized 570 housing units in 1997, ranking fourth among municipalities.

New housing also accounted for much of the activity in Jersey City in Hudson County, East Brunswick Township in Middlesex County, and the City of Newark in Essex County. Jersey City issued building permits authorizing construction with an estimated cost of $101.7 million. Jersey City had 536 authorized housing units (fifth among all municipalities). The estimated cost of construction in East Brunswick was $101.6 million. East Brunswick had 374 authorized housing units (17th overall). Two of the larger commercial permits issued during the year were for a new assisted-living facility and an industrial site for a natural gas utility company. Newark reported $99.7 million of construction and had 712 authorized housing units, more than any other municipality.

Most of the activity in the Town of Secaucus in Hudson County was from a single permit for a new office/mass-transit complex. The estimated cost of the structure was $73 million. New office and parking structures also accounted for much of the activity in Middletown Township, Monmouth County. Middletown authorized more than one million square feet of new office space for a telecommunications company. No other municipality authorized more new office space in 1997.

Estimated Dollar Amount of Construction Authorized by Building Permits — Top Ten Municipalities: 1997

Rank/Municipality	County	Total	Residential	Nonresidential
1 Atlantic City	Atlantic	$248,911,097	$9,992,886	$238,918,211
2 South Brunswick	Middlesex	104,490,466	29,911,253	74,579,213
3 Bridgewater	Somerset	102,025,892	50,976,025	51,049,867
4 Jersey City	Hudson	101,660,462	49,452,765	52,207,697
5 East Brunswick	Middlesex	101,637,588	61,339,689	40,297,899
6 Newark	Essex	99,709,882	44,080,855	55,629,027
7 Secaucus	Hudson	96,376,807	2,109,810	94,266,997
8 Middletown	Monmouth	87,426,978	27,417,854	60,009,124
9 Jackson	Ocean	85,098,410	67,350,944	17,747,466
10 Wayne	Passaic	83,081,516	40,897,394	42,184,122
Top Municipalities		1,110,419,098	383,529,475	726,889,623
NEW JERSEY		**$8,346,533,114**	**$4,083,041,927**	**$4,263,491,187**

Source: N.J. Department of Community Affairs

Estimated Dollar Amount of Construction Authorized by Building Permits by Region: 1997

Region	Total (in millions)	%	Residential (in millions)	%	Non-residential (in millions)	%
North	$3,004	36.0	$1,470	36.0	$1,534	36.0
Central	3,119.9	37.40	1,795.8	44.0	1,324.1	31.1
South	1,842.3	22.1	807.3	22.1	1,035.0	24.3
State Buildings	380.4	4.6	9.8	0.2	370.6	8.7
Total	**$8,347**	**100.0**	**$4,083**	**100.0**	**$4,263**	**100.0**

Source: N.J. Department of Community Affairs

New Housing

New Jersey had 30,017 authorized housing units in 1997. This was 8.8 percent more than the 27,577 authorized units last year and 17.2 percent more than the 25,603 reported for 1995. Although Newark and Jersey City ranked among the top five municipalities in terms of new housing, much of the residential activity occurred in central New Jersey. Northern and southern New Jersey accounted for 26.7 percent and 25.1 percent, respectively, of all authorized housing units, while central New Jersey accounted for 48.1 percent.

Housing Units Authorized by Building Permits Top Five Municipalities: 1997

Rank	Municipality	County	Total	Residential	Multifamily	Mixed Use
1	Newark	Essex	712	462	248	2
2	Wall	Monmouth	593	593	0	0
3	Monroe	Middlesex	576	564	0	12
4	Bridgewater	Somerset	570	442	0	128
5	Jersey City	Hudson	536	90	446	0
	Top Municipalities		2,987	2,151	694	142
	NEW JERSEY		**30,017**	**24,814**	**4,593**	**610**

Source: N.J. Department of Community Affairs

Housing Units Authorized by Building Permits by Region: 1997

Region	Total	Percent
North	8,026	26.7
Central	14,438	48.1
South	7,529	25.1
State Buildings	24	0.1
Total	**30,017**	**100.0**

Source: N.J. Department of Community Affairs

New House Prices

Based on data from the new home warranty central registry maintained by the New Jersey Department of Community Affairs, New Jersey had 21,640 new houses that received a new home warranty in 1997. The median sales price of these houses was $190,000. The average sales price was $226,856. Bergen County had the highest median sales price ($290,000) and Cumberland County had the lowest ($113,229).

Median and Average Sales Prices of New Houses Issued a Homeowner's Warranty

Year Issued	Number of Houses	Median Sales Price	Average Sales Price
1996	20,930	$183,300	$217,564
1997	21,640	$190,000	$226,856

Source: N.J. Department of Community Affairs

Source: John Lago
Division of Codes and Standards

Testing Of Gas Piping Utilizing Gauges

The Bureau of Regulatory Affairs and the Code Assistance Unit have been receiving complaints and inquiries regarding the use of gauges for pressure testing gas piping systems. It appears that installers of gas piping need to have various test gauges to meet the demands of various inspectors throughout the state (a condition causing "non-uniform" code enforcement).

Section M-815.1 of the 1993 BOCA National Mechanical Code indicates gas piping shall be tested and inspected in accordance with NFPA 54. The 1992 edition of NFPA section 4.1.4(b) indicates that the test pressure shall be one-and-one-half times the maximum working pressure, but no less than three psig. Section 4.1.4(a) indicates "test pressure shall be measured with a manometer or with a pressure measuring device designed and calibrated to read, record or indicate pressure loss due to leakage during the test period." Therefore, an installer can use either a manometer or a measuring device such as a gauge to measure pressure loss during testing. Nothing in the wordage indicates the gauge must be as precise as the manometer. To the contrary, no details on how the gauge needs to be calibrated are given. It is stated only that the gauge must be able to indicate pressure loss due to leakage. Furthermore, to utilize a standard water tube manometer is impractical since to test at minimum pressure, which is the aforementioned three psig minimum, would require a device approximately 90 inches in height. Therefore, most installers use gauges, which brings us to our problem.

Understandably, some inspectors have a problem with an installer who utilizes a gauge with a zero to 100 psig — or higher — range that is calibrated in one pound increments and who insist on only testing with the code-compliant minimum three psig. The installer's point of view is that the gauge is calibrated to show loss and the test pressure is sufficient to satisfy the code. The inspector's point of view is based upon the premise that testing with a test pressure, such as the minimum three psig, and a gauge with a higher range is difficult to observe and may not be sensitive enough, thus resulting in an inspection that cannot be adequately performed.

In an attempt to clarify the issue, the Bureau recommends that for any test pressure of up to and including five psig, a test gauge with a maximum range of no greater than 10 psig can be used. Testing pressures in excess of five psig can be measured with gauges that have maximum ranges up to, but not exceeding, two times the testing pressure. All gauges shall be permitted to be calibrated in one psig increments in the aforementioned ranges. For example, a 15 psig test would require a gauge with a maximum range of 30 psig and be calibrated in one psig increments. Based upon this criteria, an installer and a code official has a choice to meet the requirements of the code in a reasonable fashion.

Any questions on this matter can be directed to me at (609) 984-7712 or the Code Assistance Unit at (609) 984-7609.

Source: Thomas Uber, Construction Official
Bureau of Regulatory Affairs

More Asbestos and Lead

Pursuant to an Executive Order ("Reorganization Plan No. 002-1998") from the Governor, the asbestos and lead contractor licensing functions at the New Jersey Department of Labor were transferred to the Department of Community Affairs as of May 29, 1998.

The State employees who license asbestos contractors and workers, and who inspect the work of painting contractors who work on steel structures, will move into the DCA building at 101 S. Broad St., Trenton in early September 1998. Questions about asbestos workers, contractors and steel structures can be directed to the asbestos and lead hazard abatement unit at (609) 984-7815 after the first week in September.

The Department has recodified the former DOL regulations, (N.J.A.C. 12:120) in DCA's Title 5 at N.J.A.C. 5:16. It is planned that in the future, DCA will make a more detailed revision to ensure that all the DCA regulations regarding asbestos and lead are consistent and cross-referenced where necessary.

Once all personnel are located in the same building, and the contractor, monitoring and technician programs are operating together, it is the goal of the Department to provide more unified, efficient enforcement of the code.

Source: Chrystene Wyluda
Abestos/Lead Unit

Oh Where, Oh Where Have My U Values Gone?

Anyone who has looked at the 1993 BOCA National Energy Conservation Code has undoubtedly noticed that the tables and graphs for determining the appropriate U values for walls, floors over unheated spaces, and roofs are missing.

In the 1993 code, the requirements for envelope compliance sent you to referenced standards. For commercial buildings, the values are found in ASHRAE 90.1-1989. For residential buildings, the values are found in ASHRAE 90A-1980. So it should be simple — you call ASHRAE and order copies (have your credit card ready). There is one problem, ASHRAE 90A-1980 is out of print.

So, what do you do? You can have ASHRAE photocopy the standard for $.50 a page or you can pick up your old copy of the 1990 BOCA National Energy Conservation and use the tables and graphs in it for residential compliance. You can also refer to the **Summer 1995**, *Construction Code Communicator* (Volume 7, Number 2) to find the appropriate values which were listed in an article called "What Energy Code Are We Using?"

Source: Michael Baier
Code Assistance Unit

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Construction Code Communicator

State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

Volume 10 Number 4

Winter 1998

Omega Sprinkler Recall

On October 14, 1998, the United States Consumer Product Safety Commission (CPSC) and Central Sprinkler announced the recall of approximately 8.4 million Omega brand fire sprinklers that have been manufactured since 1982 by the Central Sprinkler Corporation. The CPSC alleges that Omega sprinklers are defective and, consequently, are likely to fail in a fire. Omega fire sprinklers have been installed in homes, schools, hospitals, dormitories, nursing homes, prisons, offices, hotels, and other buildings.

As part of the settlement, the Central Sprinkler Corporation has asked Underwriters Laboratories to withdraw its listing for all Omega brand fire sprinklers.

The recall of the Omega sprinklers includes the following models: C1 (or C-1); C1A (or C-1A); C-1A PRO (or C1-A PRO); C1-A PRO QR, EC-20; EC-20A; R-1; R-1A; R-1M; Flow Control (FC, Flow Control-FC); Protector-M or M Protector (Upright, Pendent, Sidewall, Sidewall EC); HEC-12; EC-12 RES; HEC-12 EC; HEC-12 EC PRO; HEC-12 ID; HEC-12 PRO; HEC-12 PRO QR; HEC-20; Prohibitor QR; and Prohibitor AC.

Central Sprinkler Corporation is offering consumers free replacement glass bulb fire sprinklers and reimbursement toward the cost of the Omega sprinkler removal and replacement. The Omega Sprinkler Recall Hotline is (800) 896-5685.

Source: John N. Terry
Code Assistance Unit

Here Comes The Periodic Inspection of Public Swimming Pools

On December 11, 1998, Governor Christine Todd Whitman signed into law P.L.1998, C.137 which requires the periodic inspection of swimming pools, spas, and hot tubs on any property other than one or two family residential property. This law also provides that no facility may be opened until a valid 'bonding and grounding' certificate and electrical certificate of compliance are issued. These provisions are intended to ensure the life safety of workers at and users of such facility. The effective date is February 9, 1999.

The required bonding and grounding certificate must verify the continuity and integrity of the bonding and grounding system of the pool. The electrical certificate of compliance must verify that all wiring located in or about the pool pump and associated electrical equipment complies with the electrical subcode.

The bonding and grounding certificate is required to be issued by a recognized electrical testing agency and is valid for five years from the date of issuance. The electrical certification of compliance is required to be issued annually by the enforcing agency upon completion of a satisfactory inspection of the facility and payment of a fee established by the enforcing agency's to cover administrative costs.

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

Source: Ashok K. Mehta
Code Assistance Unit

In This Issue

Summary of Technical Changes to the 1995 CABO One and Two Family Dwelling Code for New Jersey

As a follow-up to the article in the Fall 1998 issue of the *Construction Code Communicator* on the changes made to Building Officials and Code Administrators (BOCA) National Building Code/1996, this article provides a list of the technical changes that were made to the Council of American Building Officials (CABO) One and Two Family Dwelling Code/1995. This is not an exhaustive list of the changes that have taken place with the adoption of these model codes. You must refer to *N.J.A.C.* 5:23-3.21 in the Uniform Construction Code (UCC) for a list of all the changes, including administrative changes. Technical changes follow:

1. Scoping provisions are amended to allow the use of CABO in a flood plain, provided that a BOCA foundation is constructed. Additionally, the scoping has been amended to incorporate the "habitable attic" concept into the CABO code.

2. Sections 303.4 and 303.4.1 regarding stairway illumination have been deleted in their entirety.

3. Sections 314.1, 314.2, 314.2.1 & 314.3 regarding stairways have been deleted. The text from section R-213.1 of the 1992 CABO One and Two Family Dwelling Code has been added.

4. Section 314.7 regarding illumination has been deleted in its entirety.

5. Section 315.2 regarding handrail grip size has been deleted. The text from section R-214.1 of the 1992 CABO One and Two Family Dwelling Code has been added.

6. Section 324 regarding protection against radon is deleted in its entirety.

7. Section 404.2 regarding foundation design has been deleted. The text from section R-304.4 of the 1992 CABO One and Two Family Code has been added.

8. In Section 405.1 regarding foundation drainage, the exception has been amended. The text has been deleted. The text from section R-305.1 of the 1992 CABO One and Two Family Dwelling Code has been added.

9. Section 407 regarding foundation insulation is deleted in its entirety.

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

Source: John N. Terry
Code Assistance Unit

Folding Inclined Wheelchair Lifts

The Department is aware that folding inclined wheelchair lifts have been installed on egress stairs in existing buildings, particularly in school buildings. The Department is also aware of the need to provide accessibility and, at the same time, to ensure egress. At this time, there is no technical standard for folding inclined wheelchair lifts. Therefore, if a code official is considering allowing one to be installed, a variation is required and the following issues must be addressed:

1. There should be an egress study of the building.

2. The travel distance of the folding inclined wheelchair lift should not exceed one story.

3. The folding inclined wheelchair lift must meet the provisions of ANSI A17.1 for non- attendant-operated lifts, except for the guards on the sides of the platforms, the access/exit ramps, and the hand grips, all of which shall comply with ANSI A17.1 for attendant-operated lifts. The operation of the lift shall not require an attendant.

4. The folding inclined wheelchair lift must be provided with emergency back-up power.

5. The folding inclined wheelchair lift should automatically fold into a vertical position when the individual using the device exits from it. This automatic-fold feature should also operate when the building fire alarm system is activated and when the lift is powered by emergency back-up power.

6. The safety arm that is located in front of and behind a person on a folding inclined wheelchair lift should provide a level of protection similar to that required by ANSI A17.1 for platform lifts. In the event of an emergency, the safety arm must unlock and open automatically when the folding inclined wheelchair lift reaches the designated level.

The decision as to whether a folding inclined wheelchair lift may be used to provide accessibility rests with the building subcode official. If the building subcode official determines that such a device is permissible, compliance with the applicable provisions of ANSI A17.1 rests with the elevator subcode official.

Questions concerning this issue should be addressed to the Elevator Safety Unit at (609) 984-7833.

Source: Emily W. Templeton
Code Development

The *Construction Code Communicator* is published quarterly by the New Jersey Department of Community Affairs and the Center for Government Services at Rutgers, The State University. Editor: Emily Templeton. Address changes and subscription requests may be directed to the **DCA Publications Unit, P.O. Box 802, Trenton, NJ 08625-0802**. Comments and suggestions should be sent to the **Code Development Unit, P.O. Box 802, Trenton, NJ 08625-0802.**

New Jersey Register Adoptions

Date: September 8, 1998

Adoption: 30 *N.J.R.* 3242(a)
Adopted amendment: *N.J.A.C.* 5:23-6.18A

Summary: N.J.A.C. 5:23-6.18A The amendment pertains to the supplemental requirement for use group E. At *N.J.A.C.* 5:23-6.18A(b) 1 and 2 an "or" has been added to separate paragraphs (b)1, 2 and 3 to assure compliance with one rather than all the three paragraphs. A typographic error in subparagraph (b)4ii is also corrected.

Date: September 21, 1998

Adoption: 30 *N.J.R.* 3461(a) and 3466(a)
Adopted amendments: *N.J.A.C.* 5:23-1.1, 9.6
Adopted new rule: *N.J.A.C.* 5:23-12A

Summary: N.J.A.C. 5:23-1.1 and 12A The rule adoption at *N.J.A.C.* 5:23-12A allows qualified elevator maintenance and testing firms that are registered with the Department to perform routine and periodic inspections and witnessing of tests. The regulations provide a registration process. The new regulations make it clear that this service must be provided under a "contract of full service needs". The companion amendment at *N.J.A.C.* 5:23-1.1 references *N.J.A.C.* 5:23-12A.

Date: October 19, 1998

Adoption: 30 *NJR* 3785(b)
Adopted amendment: *N.J.A.C.* 5:23-6.18(a)

Summary: N.J.A.C. 5:23-6.18(a) The amendment pertains to the basic requirements for use group E. At *N.J.A.C.* 5:23-6.18(a), paragraph 1 for single exit requirement was inadvertently omitted. It is restored through this notice of administrative correction.

Source: Farid Ahmad, P.E.
Supervisor
Code Assistance Unit

Model Codes 1999: A Head's Up

Now that the 1996 editions of the model codes are in place (1995 edition of CABO One and Two Family Dwelling Code), the Department is being asked what will happen with the 1999 model code editions. After careful consideration, *with the exception of the 1999 National Electrical Code, the Department has decided not to adopt the 1999 model codes.*

The model code organizations are going through a cooperative process which will result in international codes published by the International Code Council (ICC). The Department believes this new international code series should be thoroughly reviewed and its impact evaluated before it is considered for use in New Jersey.

Therefore, the Department advises municipalities ***not*** to invest in the 1999 model codes.

Questions on the adoption of model codes may be directed to the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Above Ground Pool-Barrier Alternative

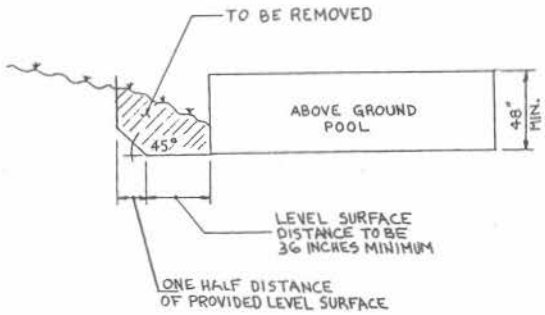
Many times, above ground pools are installed on a sloped site so that the top of the pool wall, which acts as a barrier, is below the 48 inch minimum required by section 421.10 of the 1996 BOCA National Building Code. Usually when this occurs, an additional barrier is mounted on the top of the pool, much to the annoyance of the pool owner.

After years of wrestling with this code section, DCA's Northern Regional Local Code Enforcement Office has come up with a safe option to the additional barrier. (Do not conclude that this is required!)

Where the above-ground pool is to be installed on a sloped site that will render a portion of the top of the pool structure to be less than 48 inches to grade, a minimum of a 3 foot level surface around the portion of the pool structure that is less than 48 inches to grade should be provided. The level surface should be measured away from the pool wall to the excavation edge and should be tapered away from the pool at a minimum 45 degree angle for a distance of one-half the provided level surface.

Because a picture is worth a thousand words, please refer to the sketch below for clarification.

Source: Chuck Herring, Northern Regional Office



Building Safety Conference 1999

Construction Officials, Inspectors, Technical Assistants, and Interested Parties, mark your calendars now! The annual Building Safety Conference of 1999 will be held in Atlantic City on April 28th through April 30th at Bally's Park Place. Save these dates and plan to join us at this annual event. All code officials are invited to participate. At this time, fees have not been determined, but there will be an early registration rate. The hotel will be setting aside two blocks of sleeping rooms at a special rate of $89.00 per room in the hotel or $114.00 per room in the tower.

For golfers, the fourth annual golf outing will take place on Wednesday, April 28th. Please consider being a sponsor or a player or get together a "foursome". Some exciting and motivational activities are being planned for those people who would like to participate in the spouse's program.

A brochure will be mailed in late February with more information on all these events. We look forward to seeing you in Atlantic City in the spring.

Source: Education Unit
Bureau of Code Services

Where's Transmittal 31?

On October 5, 1998, West Publishing Company issued Supplement 32. The previous Transmittal issued on September 21, 1998 was numbered 30. What happened to 31?

Well, the answer requires us to look back still further. On July 20, 1998, West Publishing issued transmittal number 29. Then, on September 8, 1998, West Publishing Company issued another transmittal, mistakenly numbering it transmittal 29.

When this was brought to West's attention, the problem was addressed by skipping number 31 entirely — the next transmittal was number 32.

Although confusing, this renumbering will at least ensure that subscribers know the total number of transmittals that were sent this year.

So, where is number 31? There is no transmittal 31. There are two transmittals numbered 29; there is one transmittal numbered 32.

Source: Marcel Iglesias
Code Assistance Unit

So Long, Mike B.

Some of you might have noticed that the lead article in the Fall, 1998, *Construction Code Communicator* was written by Michael Baier and was a retrospective of his ten years with the Construction Code Element. Mike is moving from his position in Code Assistance to take responsibility for the implementation of the Residential Site Improvement Standards, a project he has been involved with since it began several years ago.

We wish you the best, Mike. Because the Code Assistance, Code Development, and the Site Standards crews are all united on the 6th floor at 101 South Broad, we will continue to work near, if not with, you. That's a good thought.

Source: Code Development Unit

Welcome, Tom Pitch!

Welcome, Tom Pitcherello! Tom Pitcherello is a licensed Plumbing Subcode and Construction Official who has served in the Bureau of Construction Project Review as a plumbing plans reviewer. He has now moved to the Code Assistance Unit to respond to questions on the plumbing subcode and the mechanical and energy subcodes. Tom serves on the Test Development Committee for the plumbing tests published and administered by the Chauncey Group (formerly ETS). He is a certified instructor for the continuing education program for Licensed Master Plumbers and is an instructor for DCA's continuing education program in plumbing. Tom will serve as the liaison to the Plumbing and Mechanical and Energy Subcodes Committee of the Code Advisory Board.

All of us in Code Assistance and Code Development are looking forward to working with Tom Pitch. Questions on the Plumbing Subcode and on the Mechanical/Energy Subcodes may be directed to him at (609) 984-7609.

Source: Code Development Unit

Distance Learning/Interactive Television

The Fall of 1998 was a stepping stone into the future. The County College of Morris along with Sussex County Community College and Warren County Community College offered the first Department of Community Affairs (DCA) interactive televideo course for Construction Officials. The instructor for the course was Steve Freedman.

There were eight students at Morris, six students at Sussex, and four students at Warren. The students have learned to interact with each other and follow directions of the instructor through TV monitors. They can see and hear the students at the other locations and cameras focus in as students ask questions. Audio visuals are presented on a graphics camera, so the students have a clear picture of what is being discussed. Fax machines are used in each class to transmit data or current information, such as tests to be taken or problems to be discussed.

With class sizes becoming smaller, interactive TV allows us to continue to offer a broad range of construction code enforcement courses. Other areas of innovation for education are being explored. Some changes in the future may include courses offered through the Internet, on CD rom, or on video. These educational formats allow to students study when it is most convenient.

We look forward to further cooperation with our community colleges in offering a wider range of interactive TV courses as we move into the next millennium.

Source: Susan H. McLaughlin
Supervisor, Education Unit

Barrier Free Parking

At first, I thought it was a failure of my spatial abilities. But, then I checked with colleagues who have no spatial deficit and I found that mine was not so bad after all. Many of the access aisles at newly constructed accessible parking spaces have been reduced from the required five (5) foot minimum to a mere three (3) feet.

The dimensions for accessible parking spaces are given in CABO/ANSI A117.1-92 at section 4.6.2. A car accessible space is required to be eight (8) feet wide and to have a five (5) foot access aisle. One of every eight (8) accessible spaces — never less than one — must be van accessible. That means the space must be eight (8) feet wide with an eight (8) foot access aisle. People with disabilities who use wheelchairs need every inch of this space to exit and enter their vehicles. Three (3) feet is nowhere near enough space to accommodate that entry/exit; *that is why a three (3) foot access aisle is not permitted by the Barrier Free Subcode.*

Building subcode officials should be diligent in the enforcement of this most basic element of an accessible route.

If you have questions about accessibility requirements in New Jersey, please feel free to call John Terry or me at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Nationally Recognized Testing Laboratories (NRTL)

In 1973, the Federal Occupational Safety and Health Administration (OSHA) proposed its first lab accreditation program. That program, however, was never implemented. Instead, OSHA cited safety standards in terms of UL or FM (Factory Mutual). In 1983, after a court battle with the MET Electrical Testing Company, OSHA agreed to replace the UL and FM references with a lab accreditation program. In June, 1988, after another legal encounter with MET, OSHA adopted regulations that define and establish the NRTL program.

All NRTLs (Nationally Recognized Testing Laboratories) must be accredited by OSHA. A NRTL, as defined by OSHA, is an approved agency that tests, accepts, lists, or labels products and materials used in building and construction. A NRTL tests according to technical standards that are recognized in the United States (such as American National Standards Institute (ANSI), American Society of Testing and Materials (ASTM), and the National Electrical Materials Association (NEMA)). These standards are compatible and current with the national model building codes. There is no general NRTL recognition for technical standards. Each laboratory must specify the standards it will test and must provide information concerning the following in its application for accreditation:

The laboratory must prove that it has the capability to examine and test equipment and materials. This includes, but is not limited to, the proper testing of equipment, calibration facilities, trained staff, and quality control.

The laboratory must indicate its use of control procedures to identify listed and labeled equipment and materials.

The laboratory must provide evidence of its ability to perform and evaluate follow-up inspections of factories where the products are made.

The laboratory must show that it conducts field inspections to check on the proper use of its mark on products.

The laboratory must be independent of the buyers, manufacturers, and distributors of the tested products.

The laboratory must maintain a precise record of all complaints.

To gain OSHA recognition as a NRTL, each laboratory must prove its competence as outlined above. Test reports, listing, and labeling by a NRTL, are considered an authentic, reliable source of information.

Source: Farid Ahmad, P.E.
Supervisor
Code Assistance Unit

Asphalt Shingles Installation Requirements

There appears to be some confusion in the field about the requirements for the installation of asphalt shingles when the basic wind speed is 80 miles per hour or greater. According to the BOCA National Building Code/1996, Section 1507.4.3, asphalt shingles cannot be applied to roofs that have a slope of less than 2:12. For roofs with a slope of less than 4:12, a double-layer of underlayment must be used. Asphalt shingles must conform to ASTM D225 or to ASTM D3462. ASTM 225 covers asphalt roofing in shingle form composed of single or multiple thickness of organic felt saturated and coated on both sides with asphalt and surfaced on the weather side with mineral granules. ASTM D3462 includes four physical requirements for asphalt shingles. The requirements are as follows:

1. Shingles shall not stick together in the package; this would cause damage when the shingles are unpacked at ambient temperatures.

2. The shingles shall conform to the requirements prescribed in Table 1 (Physical Requirements of Asphalt Shingles Made from Glass Felt).

3. The shingles shall pass all of the Class A fire exposure test requirements of Test Method ASTM E 108.

4. The shingles shall pass the wind resistance test requirements of Test Method ASTM D3161, the Standard Test Method for Wind Resistance of Asphalt Shingles (Fan Induced Method). ASTM D3161 requires that asphalt shingles pass the wind resistance test, which includes a test of the asphalt shingles to a wind speed of 60 miles per hour for 2 hours or until such lesser time as a failure occurs. Any assembly that restrains full shingle tabs from lifting or keeps locking ears from tearing loose or disengaging shall be considered as having passed this test. This test method is used to ensure that asphalt shingles are resistant to wind blow-up or blow off when the shingles are applied on a low slope roof in accordance with the manufacturer's instructions.

The building subcode requires an increase in the number of fasteners for structures located in hurricane ocean-lines areas along the Atlantic and Gulf of Mexico coastal areas and 100 miles inland where basic wind speed is 80 miles per hour or greater. A minimum of six fasteners per shingle must secure the strip shingles for the increased wind loading associated with hurricane areas. Asphalt shingles that comply with the standards referenced in the BOCA National Building Code/96, ASTM D3462 and ASTM D3161, and that are fastened with six fasteners meet the code requirements for wind speed of 80 miles per hour or greater.

If you have any questions about this issue, I can be reached at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Major Structural Defect Claims

The New Home Warranty Program has recently completed an evaluation of Major Structural Defect Claims for which the program has made payments from the New Home Warranty fund. The following table lists the type of building defect found and the number of claims that were determined did not comply with the Uniform Construction Code (UCC).

Code Issue	Chimney	Deck	Foundation	Framing	Porch	Roof
Bearing Value of Soil	10	9	11	0	8	0
Column Ventilation	0	0	0	0	3	0
Height of Backfill vs Wall	0	0	15	0	0	0
Backfill Material	0	0	3	0	0	0
Connections	0	5	0	10	0	2
Lumber Grade	0	2	0	0	0	2
Pipe Columns	0	0	0	4	0	0
Plan Review Revisions	0	0	0	5	0	0
Retaining Wall	0	0	1	0	0	0
Truss or Joist Notching	0	0	0	12	0	0
Ventilation Crawl Space	0	0	0	11	0	0
Wood Foundation System	0	0	1	0	0	0
Wood in contact with Ground	0	5	0	4	0	0

Bearing Value of Soil:

1. Chimney footings were constructed on fill within the limits of the excavation for a basement.
2. Decks were constructed with an insufficient footing area for the load imposed.
3. Foundations were constructed on unsuitable material.
4. Porches that supported a roof or the floor above were installed on uncontrolled backfill.

Column Ventilation: Hollow wood load bearing columns failed due to interior moisture.

Backfill: The height of backfill compared to the foundation wall thickness continues to be the major cause of foundation wall cracking and failure. Eight inch block is often backfilled to six or seven feet high, well in excess of the maximum allowable.

Backfill Material: Boulders, organic material, and construction debris.

Inadequate connections:

1. Decks at the wall to deck intersection where the ledger has an insufficient through connection to the wall.
2. Joist hangers have been found still attached to a ledger that pulled away from the wall.
3. Columns have rotated and failed where the base plate was masonry nailed to the top of the footing and insufficiently attached at the beam and column intersections.
4. Built up beams have been found to have been inadequately nailed or bolted together and, therefore, have been unable to support the intended loads.
5. Lumber Grade was improper for the use, was in contact with the ground, or a lower strength grade was used in the roof instead of the grade that was specified.

Pipe Columns: Insufficient wall thickness, instead of the specified wall thickness, was provided.

Plan Review Revisions:

1. Undocumented changes during construction have resulted in structures where loads were not being transferred through the structure to bearing.
2. Room sizes were changed and bearing walls were lined up between joists, resting on the subfloor.
3. Field fabricated flitch plate beams were substituted for steel specified and built up wood columns (multiple studs) were substituted for pipe columns.
4. Wood columns were not continuous to bearing, but rested on the subfloor with blocking between the joists down to the masonry.
5. A room above a garage was designed to have a flat ceiling, but was built with a cathedral ceiling. No collar ties were installed and the resulting rafter thrust bowed the exterior walls, dropped the ridge, and deflected the rafters.
6. Diagonal windbracing on piles was reduced to allow for parking, the result was racking of the structure.

Retaining Wall: The masonry wall was constructed with insufficient footings, inadequate vertical and horizontal reinforcing and inadequately designed for a surcharge.

Truss or Joist Notching: Joists were drilled for plumbing under a water closet and shower. The drilling was perpendicular through the joists to parallel to the joist's run. There was top and bottom notching for HVAC. There was truss web removal for HVAC, with no gussets added, although the manufacturer had recommended them. Trusses were not set at the manufacturer's marked bearing points on the beam.

Ventilation of Crawl Space: There was no vapor barrier with vent area provided, although the design had included a for full vapor barrier. In some cases, a partial vapor barrier was provided. Vents were set below grade with no area well.

Wood Foundation System: Several pieces of plywood were an improper grade for below ground use.

Wood in Contact with Ground: Deck framing was set eight inches above grade. The dropped beam in the crawl space was set ten inches above crawl space floor.

Four code deficiencies accounted for 67 percent of Major Structural Defects. These were:

1. Bearing Value of Soil	31%
2. Connections	14%
3. Height of Backfill vs Wall Thickness	12%
4. Truss or Joist Notching	10%

Deficiencies in the foundations of the building, chimney, deck, and porch combined for 47% of the Major Structural Defects. Framing inadequacies accounted for 49% of all defects. 4% of the defects were classified as "other."

Construction Code enforcement agencies are the first line of defense in ensuring code compliance through plan review and field inspection. As the New Home Warranty program evaluates future claims, we will continue to report on what we are finding.

Source: Wil Hinds, Architect
Manager, Claims, Bureau of Homeowner Protection

The Department of Community Affairs announces with deep sorrow the death of Wil Hinds on January 3, 1999.

Telephone Numbers: Correction

In the Fall, 1998 *Construction Code Communicator*, the telephone number for the Atlantic City Plan Review Office was incorrect. The correct address and telephone number is:

Bureau of Construction Project Review
Atlantic City Office
1300 Atlantic Avenue, Suite 204
Atlantic City, New Jersey 08401

Telephone: (609) 441-3679
FAX: (609) 441-7355

Source: Emily W. Templeton
Code Development

A Summary of the National Electrical Subcode 1996

Effective July 6, 1998, the 1996 edition of the National Electrical Code (NEC) was adopted with amendments by the Department as the electrical subcode for New Jersey. This article contains a list of some of the new provisions of the NEC/1996 and highlights some of the amendments that were made to the electrical subcode.

Some of the new articles in the 1996 NEC are: lighting systems operating at 30 volts or less (Article 411); Class I Zone 0, 1 and 2 Locations, (Article 508); Carnivals, Circuses, Fairs, and Similar Events (Article 525); Park Trailers (Article 552); Electrical Vehicle Charging System Equipment (Article 625); Fire Pumps (Article 695); and Instrumentation Tray Cable Type ITC (Article 727). Although the NEC/1996 contains significant changes in certain sections, a majority of its changes are either editorial revisions or a reorganization of text.

Some of the amendments made by the Department to the 1996 NEC are:

1. Parts B, C, D, and E of the new Article 552, entitled "Park Trailers," have been deleted with the exception of Sections 552-43, 552-44 and 552-47.

2. New Section 680-12 concerning disconnecting means has been clarified by Formal Technical Opinion (FTO) 6. In other than single family dwellings, a disconnect or shut off switch is required to be installed within sight of a spa or a hot tub where access to the motor is remote from the unit.

3. Most of the fine print notes (FPN's) — with the exception of NFPA 86, NFPA 91 and NFPA 101 — have been adopted as part of the electrical subcode to the extent provided by the section containing the reference. For convenient reference, Bulletin 98-2 contains a list of standards and the related sections of the electrical subcode.

4. This code adoption includes the adoption of the National Electrical Safety Code (ANSI C2-1997) for the installation of site lighting facilities using metal poles on private property by electric utilities. This is in accordance with a settlement agreement reached by the Department with electric utilities.

5. Remember: The Department adopted the Rehabilitation Subcode (*NJAC* 5:23-6) in January, 1998. The Rehabilitation Subcode contains the requirements that apply to existing buildings. In many cases, these requirements differ from those that apply to new construction. Therefore, Electrical Subcode Officials must pay close attention to the electrical requirements in the Rehabilitation Subcode, which is Subchapter 6 of the Uniform Construction Code (UCC).

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

Source: Ashok K. Mehta
Code Assistance Unit

Summary of the 1998 National Standard Plumbing Code Change Hearings

This article contains a summary of some of the important code changes that were approved at the August 1998 National Standard Plumbing Code change hearings.

1. Editorial Changes: The New Jersey Plumbing Heating and Cooling Contractors Association Code Change Committee submitted numerous editorial changes that will improve and clarify the National Standard Plumbing Code text.

2. PEX tubing: There has been a marketing push to use this pipe in New Jersey. Currently the code is silent on this product, which means that if code officials believe that the product will perform as intended, they may approve its use under *NJAC* 5:23-3.7. In the past, the primary concern with the tubing was the lack of a technical standard for the fittings. This year, in addition to a technical standard for the tubing, a technical standard for the fittings has been published. The code change committee approved the use of PEX tubing that meets ASTM F876 with fittings that meet ASTM F877. This change will not appear until the 1999 (or perhaps 2000) edition of the NSPC. However, when reviewing applications regarding the use of this material, code officials may apply *NJAC* 5:23-3.7 knowing that the code change committee approved its inclusion in the next edition of the NSPC.

3. Grease Traps: A grease trap that has a capacity of 50 pounds or less may be installed inside of a building if approved by the administrative authority under the 1996 code. At the August 1998 hearings, this section of the NSPC was changed to permit the administrative authority to allow any size grease trap to be installed in a building.

4. Single Handled Mixing Valves: The current code requires the installation of fixtures so that the hot water is on the left of the fixture. An exception was passed that exempts single handled faucets from the hot on the left rule as long as the valve's operation is clearly marked.

5. Fixture Counts: In Table 7.21.1A, the Assembly C category currently applies to restaurants and nightclubs when determining the required number of fixtures. The NSPC code change committee approved a change that divides this category into two subcategories — one for restaurants and another for bars and nightclubs. The fixture count requirements for restaurants are reduced. The fixture count for nightclubs remains the same.

6. Tracer Wire: The code change committee approved adding a new section that requires a tracer wire to be installed adjacent to non-metallic water service piping.

If you have any questions on these changes, please contact Tom Pitcherello in the Code Assistance Unit at (609) 984-7609.

Source: Mike Baier
Code Assistance and Development

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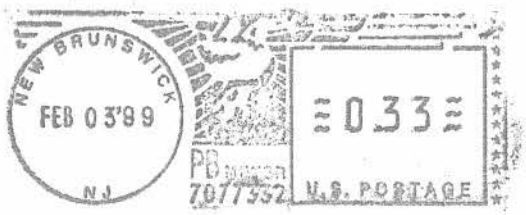

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