CODEWORD

The Official Newsletter of The Board of Building Regulations & Standards

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In this issue

DPS ASSISTS WITH TORNADO EFFORTS

During the early evening hours of Wednesday, June 1st, 2011, several tornadoes roared through Massachusetts. Violent winds caused damage in about two dozen communities. The aggressive storm sheared-off rooftops, uprooted trees, and, in some cases, totally destroyed residential and commercial structures alike. Almost immediately, Governor Patrick declared a state of emergency, calling into action nearly 1,000 National guardspersons, and other emergency personnel, including the Massachusetts Urban Search and Rescue Team (MATF 1).

As the storm first touched-down in Westfield, Department of Public Safety (DPS) Commissioner, Thomas Gatzunis was on-route to the Massachusetts Emergency Management Agency (MEMA) bunker in Framingham. Upon his arrival, Commissioner Gatzunis met with MEMA Director, Kurt Schwartz, along with other federal, state and local safety officials to assess the

damaging swath of the storm. As the storm progressed, showing no signs of relief, Commissioner Gatzunis directed DPS Building Chief of Inspections, Robert Anderson and DPS Building Inspector, Gene Novak to report to the bunker to lend support. Soon thereafter, all fifteen DPS building inspectors were put on alert.

At approximately 6:45 p.m. DPS Inspector, David Holmes dispatched to the Town of Monson. Inspector Holmes aided Monson Building Commissioner, Harold Leaming and other public safety officials throughout the night. Meanwhile, Commissioner Gatzunis and Chief Anderson continued to meet with MEMA and Federal Emergency Management Agency (FEMA) representatives throughout the night. At approximately 1:30 a.m. on June 2nd, eleven (11) DPS building inspectors were directed to report to affected areas at first light.

Commissioner Gatzunis met with the following DPS inspectors at the Springfield National Guard Armory at 6:00 a.m. on June 2nd.

- Gordon Bailey,
- Louise Vera,
- Joe McEvoy,
- John Bennett,
- Ron Wetmore,
- Billy Horrocks, and
- Marc LaPointe.

Simultaneously, Inspectors Jeff Putnam, Paul DiChiara, and David Holmes met at the Ware National Guard Armory. Soon thereafter, teams of DPS Inspectors along with MEMA and FEMA personnel were dispatched from the Springfield and Ware meeting points to locations in hard-hit areas of Westfield, Springfield, West Springfield, Wilbraham, Brimfield and Monson. Chief Anderson and Inspector Novak reported back to the Framingham Bunker. Inspectors Andy Majuri, John Wojciechowicz and Paul Piepiora joined efforts later in the day and DPS Building Inspector Manager, Ralph Cirelli (who was on vacation) monitored the situation and joined efforts upon his return, at which point all DPS building inspection staff were actively dedicated to the effort.

Once on-scene, DPS inspectors began to assess building damage, employing techniques acquired through training provided by the Applied Technology Council (ATC) of California. The ATC first developed building damage assessment techniques to assist in the aftermath of frequent seismic events occurring in and around the state of California. Originally, the technique known as ATC 20 or ***Rapid Building Damage Assessment***, established procedures to allow building code enforcement officials, engineers or other qualified individuals to quickly determine whether a building is safe to occupy in whole or in part, is safe to occupy only for brief periods as repairs are made or is simply unsafe and dangerous and therefore, may not be re-occupied. Later, methodologies were developed to assess damage due to high winds or severe storms. This method is known as ATC 45.

Using the ATC 45 system, DPS inspectors first performed rapid assessments of building damage to help establish the severity of the storm which assisted in determining whether the event would be classified as a federal emergency. Later in the process, DPS inspectors returned to mark damaged buildings by affixing color coded placards in accordance with the ATC system identified below. (*DPS inspectors have similarly assisted in Mississippi during post Hurricane Katrina\Rita efforts in 2005 as well as in the Town of Danvers following the 2006 Thanksgiving eve building explosion that rocked that area.)*

Green Placard **INSPECTED** (No Restriction, safe to occupy)

Yellow Placard **LIMITED ENTRY** (Off limits to unauthorized personnel)

Red Placard **UNSAFE** (Do not enter or occupy)

DPS inspection teams continued efforts throughout the weekend of June 3rd and 4th having received a request from Harold Leaming for assistance in the Towns of Monson and Brimfield. Additionally, municipal building inspectors Tim Neyhart from the Town of Hadley, Laurie Livoli from Concord, Jack Keough from Warren, and Peter Fein from Amherst volunteered to assist through an emergency assistance compact established years earlier. Other municipal inspectors contacted Commissioner Leaming and other building commissioners in affected areas and arrived directly to offer support. Those inspectors were:

- Nelson Burlingame from Uxbridge,
- John Couture from Sutton,
- Dan Hellyer from East Longmeadow,
- Curtis Meskus from Charlton,
- Brian Florence from Dennis,
- Ed Walsh from Canton,
- Fred Svenson from Kingston,
- Brian Gale from Orange,
- Michael White from Bridgewater,
- Louis Hasbrouk from Northampton,
- Robert Whalen from Middleborough,
- Richard Calisewski from Deerfield, and
- Jeff Taylor from Brookfield.

Ultimately, over 1400 buildings were assessed for damage during response to the June tornado. One-hundred and nineteen (119) structures were deemed to be unsafe to re-occupy and therefore affixed with a red placard; 159 received yellow, cautionary placards; and 160 were assigned green placards. A further break-down of inspections is provided in the table below.

DEPARTMENT OF PUBLIC SAFETY
Tornado Assistance Response
(As of June 10, 2011)

Type and Number of Reports	**Number of Reports\Forms**
Total Number of Rapid Assessment Reports Generated	**1476**
Total Number of Initial Rapid Assessments	**1038**
Percent Damage to Structure	**Number of Reports\Forms**
100 Percent Damaged	202
70 to 100 Percent Damaged	162
30 to 70 Percent Damaged	223

10 to 30 Percent Damaged	258
1 to 10 Percent Damaged	162
0 to 1 Percent Damaged	73
No Damage	18
Placards Posted	**Number of Placards Posted**
Green (Inspected - Okay to Occupy)	160
Yellow (Restricted Entry)	159
Red (Unsafe - Do Not Enter)	119
Total Number of Placards Posted	438

DPS Commissioner Gatzunis wishes to extend best wishes for a speedy recovery and return to normalcy to all who were affected by the event. Additionally, he wishes to thank all those who responded to the scene to assist in whatever manner possible as well as all those who volunteered, but were not activated. By all accounts, the effort was well orchestrated and successful in its mission.

Although not first responders, the DPS employs building inspectors who are ready and able to assist with any and all building related emergency. Additionally, the DPS enjoys a cooperative arrangement between MEMA and the Federation of Massachusetts Building Officials (Federation) to jointly respond to local emergencies. The cooperative arrangement extends to the Federal Emergency Management Agency (FEMA) in the event that response to emergencies beyond the borders of the Commonwealth is necessary. It is the true hope that such inspection teams are activated rarely, if ever. However, it is comforting to know that dedicated DPS employees and other state, municipal and federal authorities are available to assist in the aftermath of adverse natural or man-made events.

Eighth Edition MA Residential Code
Effective as of February 4, 2011

This is a reminder that the Eighth Edition of the Massachusetts Residential Code became effective on February 4, 2011. The Seventh Edition residential code remains in effect concurrently with the Eighth edition until early August, 2011. During the concurrency period a project may be designed using either edition without mixing provisions.

The deadline for filing a permit application for projects designed using the Seventh Edition of the code was August 3, 2011. Applications for projects filed after this date are expected to comply with provisions of the new, Eighth Edition code. Building officials shall reject permit applications with plans and\or specifications designed to the Seventh Edition code after the August 3rd date and instruct the applicant to revise documents to comply with new code provisions or file an appeal with the State Building Code Appeals Board for consideration of relief.

The Eighth Edition residential code is comprised of the International Residential Code 2009 (IRC), The International Energy Conservation Code (IECC) and a separate Massachusetts amendment package. The IRC and IECC is sold by the International Code Council and the Massachusetts amendments package is available at

the State House Bookstore (617-727-2834).

Changes to Construction Supervisor Examinations
Transition to the Eighth Edition of the Code

Effective October 3, 2011

Effective October 3, 2011, all Construction Supervisor License (CSL) exams will be based on provisions of the Massachusetts Building Code, Eighth Edition. Additionally, the ***Unrestricted Exam*** will be increased to seventy-five (75) questions. The revised reference list for exams administered on or after October 3rd is as follows.

Unrestricted Examination - 75 Questions

- **International Building Code, 2009, *with Massachusetts Amendments***
- **International Residential Code, 2009, International Code, *with Massachusetts Amendments***
- **International Energy Conservation Code, 2009, *with Massachusetts Amendments***
- **Code of Federal Regulations, Title 29, Part 26 (OSHA), Most Current July Revision Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA, 15250-7954**
- **Architectural Access Board Rules and Regulations (521 CMR). 2006 Massachusetts Secretary of the Commonwealth, State Bookstore, State House, Room 116 Boston, MA, 02133**

Restricted Examination - 60 Questions

- **International Residential Code, 2009, International Code, *with Massachusetts Amendments***
- **International Energy Conservation Code, 2009, *with Massachusetts Amendments***
- **Code of Federal Regulations, Title 29, Part 26 (OSHA), Most Current July Revision Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA, 15250-7954**

The Demolition, Insulation Contractor, Solid Fuel Burning, Masonry, Window and Siding, and Roof Covering Construction Supervisor License exams will transition on to the Eighth Edition of the code on this date as well.

Prometric, the exam administrator has strict rules as to the types of materials that may be brought into the examination room. With the exception of the Massachusetts amendment package, only copy righted materials are allowed. Although soft-cover code books are allowed, we encourage candidates to purchase loose-leaf versions of the ***International Codes*** so that amended pages can be inserted into the document in appropriate places. Proctors at the exam site will be checking to make sure only copy righted materials and identifiable Massachusetts amendments are brought into an exam site. Candidates who attempt to bring other materials may not be allowed to examine and may lose the exam registration fee. Be sure to check the latest Candidates Bulletin of Information for the latest exam requirements.

A revised ***Candidates Bulletin of Information*** will be posted on the Department of Public Safety website shortly with new information relating to all exams. Please refer to the website towards mid-Septemberto access the revised bulletin.

Also, please be aware that the exam application now asks a candidate to provide a contact e-mail address. Renewal forms will also ask for an e-mail address. In the not too distant future, the Department will begin communicating with licensees by e-mail on topical issues including renewal notice information and continuing education requirements. Consequently, the Department

requests for an ***accurate e-mail address*** for all new and renewal license applications.

All referenced international codes may be purchased from the International Code Council @

- International Code Council

4051 West Flossmoor Road, Country Club
Hills, IL 60478-5795
www.iccsafe.org

and, the Massachusetts amendments are available @

- The State Bookstore, State House

Room 116, Boston, MA 02133
www.sec.state.ma.us/spr/spridx.htm

Construction Supervisor License
Continuing Education Requirements

The Board of Building Regulations and Standards (BBRS) is pleased to announce that it has approved continuing education requirements for licensed construction supervisors. Over the last several months, BBRS staff has been reviewing applications submitted by those seeking approval to coordinate education programs.

July 1, 2011 is the line of demarcation for licensees to comply with education requirements as established below. Licensees who renew a license or are issued a first-time license ***on or after July 1, 2011*** shall be expected to fully comply with education requirements following a full two-year cycle or elongated first-time license cycle (a first-time license cycle may extend beyond two years depending on the licensees birth date). Licensees who renew or are issued a first-time license ***prior to July 1, 2011*** will be on a different schedule. Examples are provided below to help clarify when licensees are affected.

Example No. 1: John Smith renews his license on July 1, 2011. He next renews on July 1, 2013. Is he required to comply with continuing education requirements? **Yes**, because a full two-years has passed since his last renewal.

Example No. 2: John Smith renews his license on June 30, 2011. He next renews on June 30, 2013. Is he required to comply with continuing education requirements? **No**, a full two-year cycle has not been completed since the July 1, 2011 implementation date. He then renews on June 30, 2015, is he required to comply with continuing education requirements? **Yes.**

For those who may not be familiar, the legislature recently authorized the BBRS to approve continuing education requirements for construction supervisor licensees. The empowering legislation establishes a ***Continuing Education Council*** whose members are charged with developing continuing education requirements. Rather than reinvent the wheel, council members looked towards other states for guidance in developing requirements for the commonwealth. After reviewing procedures already in place in several other states, council members agreed to use Minnesota continuing education requirements as the model for Massachusetts.

Over several months, council members reviewed Minnesota requirements, word by word, line by

line modifying their regulations to suit Massachusetts' needs. According to the regulation, licensed construction supervisors must acquire a certain number of continuing education hours each 2 year renewal period based upon license category as identified below.

Unrestricted Construction Supervisors License 12 Hours
Restricted Construction Supervisors License 10 Hours
Specialty Construction Supervisors License 6 Hours
- Masonry
- Roofing
- Windows / Siding
- Demolition
- Burning Fuel
- Insulation

Courses and course coordinators are required to be approved by the BBRS in order to convene continuing education classes. Ultimately, a licensee will have a host of methods available to choose from to achieve compliance. A local technical college, for example, may apply for and receive approval to act as a course coordinator, and then provide varied courses presented by instructors approved by the program regulations as part of their ongoing continuing education program. Home builder associations may also apply for and receive approval as a coordinator and then hire approved instructors to present material as part of their regular monthly meetings as a service to their membership. These are just a few examples.

Approved coordinators and courses of instruction will be posted on the DPS website during the month of September. Please refer to the website towards the end of September for more information about approved courses and coordinators and see sample questions and answers below for clarity as to how continuing education requirements affect a licensee.

Question: Who must file for approval?
Answer: Only the Course Coordinator must submit an application for approval. The Course Coordinator is defined by the regulation as the person who is registered with the BBRS and who is responsible for supervising the program and ensuring compliance with all relevant laws and regulations.

Question: Does the Course Coordinator need to meet any particular qualifications?

Answer: The regulation does not define qualifications for Course Coordinators. Instead, it defines responsibilities (see Special Regulation Section 5.4.9). A Course Coordinator may be a person or an institution or organization. For instance, sole proprietor, John Smith may apply for approval, so too may Wentworth Institute, Springfield Technical Community College, or any of the varied building official or building contractor associations. In short, the process is available to any person or organization that can provide quality education to licensees as intended by the regulation. Course Coordinators will be issued an identification number that will be referenced in all materials and course offerings provided by that coordinator.

Question: What about the program instructor, does he\she need to file an application for

approval under the program?
Answer: No. The Course Coordinator is responsible for ensuring that only qualified individuals are used to deliver approved course materials. Special Regulation Section 5.4.10 specifies definitive qualifications for course instructors. Course Coordinators are expressly responsible for confirming qualifications prior to course offering.

Question: What about courses, do they need to be approved prior to offering?
Answer: Yes. The regulation expressly requires courses to be approved prior to offering. Courses will also be identified by a specific approval number. Course approval numbers must be clearly identified on all materials relating to the course.

Question: Are there specific, mandated topics that must be addressed as part of a course offering?
Answer: Yes, see Special Regulation Section 5.4.3

Questions: Are there courses that will not be considered for approval?
Answer: Yes, see Special Regulation Section 5.4.6.

Question: Each application (Course Coordinator and Course Approval Form) establishes a fee structure. Are these fees paid by the applicant or the licensee?
Answer: The application fees as identified on the referenced applications are payable to the commonwealth by the applicant for administrative services rendered to process the applications, issue approvals and maintain programmatic information. The fees ***do not*** relate in any way to how much a licensee will pay to attend a particular course. Course fees for attendees (licensees) will be established by Course Coordinators. Fees should be reasonably established to reflect and be commensurate with the level of education provided.

Question: What happens if a licensee fails to comply with continuing education requirements as defined by this schedule?
Answer: The license will be considered null and void and will be so noted in the agency's license data base and internet search engine. The licensee will be required to take and pass the requisite level exam in order to regain licensure in the system.

Chapter 304 of the Acts of 2004
Ticketing Process

Following the 2003 Station Night Club fire in Rhode Island, several legal and regulatory changes were approved relating to inspection practices in the commonwealth and elsewhere around the country. Specifically, Chapter 304 of the Acts of 2004 modified several sections of Massachusetts law. Among other things, these modifications allowed municipal building and fire service personnel to issue non-criminal citations to building owners for violations of the state building code and state fire prevention regulations. Initially, municipal building officials were authorized to issue tickets for only seven (7) different building code violations, including:

1. Blocked or impeded egress
2. Emergency lighting and\or signage
3. Occupant load exceeded
4. Interior finish
5. Occupant notification devices
6. Fire detection devices
7. Sprinkler system

In time, municipal building officials were authorized to issue tickets for six (6) additional infractions bringing the total to thirteen violations, including:

1. Occupying a building without an appropriately issued certificate of occupancy
2. Occupying a building beyond the expiration date of a temporary certificate of occupancy
3. Proceeding with construction work without proper inspections
4. Beginning work without applying for and receiving a building permit
5. Failing to submit amended plans to reflect a change in the scope of work
6. Failing to maintain a property in a manner safe for occupancy

Recently, authorization has been granted to further expand the list of violations to include nearly all of 780 CMR and its referenced materials (see expanded list of violations below).

Please remember that municipalities are not required to partake in ticketing practices; participation is voluntary. However, municipalities must have a duly trained hearings officer available to adjudicate appeals if they choose to participate in the program. Also, municipal building inspectors and others should understand the history and intent of the ticketing program. A PowerPoint Presentation is available for viewing at the Department of Public Safety website. The presentation reflects initial program requirements, not recent changes. BBRS and DPS staff will up-date the presentation and will provide training to municipal inspectors soon. Also, BBRS staff is working on a pocket guide to program requirements that will be forwarded to municipal inspectors toward the end of September. The guide will help further explain program requirements.

Additional programmatic informationis available at the DPS website relative to contact names and phones numbers for assistance.

Building Code Violations (780 CMR)
Administration - Chapter 1

1. 101.4.7 Architectural Access - Failure to comply with 521 CMR after due notice.
2. 101.4.4 Property Maintenance - Failure to maintain existing systems and equipment.
3. 101.5 Required - Failure to receive approval prior to proceeding with modifications to the permitted work.
4. 101.5.8 Notice of Start- Failure to provide building official 24 hour notice of start of work.
5. 110.7 Periodic Inspections -Failure to comply with 5 year requirement of testing/certifying exterior fire escapes, balconies, etc.
6. 111. 5.2 Required Egress Posting Failure to post egress placard.
7. 111. 5.3 Place of Assembly Posting Failure to post Occupancy in place of Assembly.
8. 111. 5.4 Replacement of Posted Signs Failure to replace posting.
9. 115. 3 Unlawful Continuance - Continuing work after Stop Work Order is issued

Interior Finishes - Chapter 8

10. 803 Wall and Ceiling Finishes
11. 804 Interior Floor Finish
12. 805 Combustible Materials
13. 806 Decorative Trim and Materials
14. 807 Insulation
15. 808 Acoustical Ceiling Systems

Fire Protection Systems and Notifications - Chapter 9

16. 901.3 Maintenance Failure to receive a permit from the local fire department for maintenance of Fire Protection systems.
17. 901.3 Maintenance Failure to maintain Fire Protection systems per NFPA 25
18. 903 Automatic Sprinkler
19. 904 Alternative Automatic Fire Extinguishing Systems
20. 905 Standpipe Systems
21. 906 Portable Fire Extinguishers
22. 908 Emergency Alarm Systems
23. 909 Smoke Control Systems
24. 910 Smoke and Heat Vents
25. 911 Fire Command Center
26. 912 Fire Department Connections
27. 913 Fire Pumps
28. 914 Emergency Responder Safety Features
29. 915 Emergency Responder Radio Coverage

Means of Egress - Chapter 10

30. 1005 Egress Width
31. 1007 Accessible Means of Egress

32. 1008 Doors, Gates and Turnstiles
33. 1009 Stairways
34. 1010 Ramps
35. 1012 Handrails
36. 1013 Guards
37. 1014 Exit Access
38. 1015 Exit and Exit Access Doorways
39. 1016 Exit Access Travel Distance
40. 1017 Aisles
41. 1018 Corridors
42. 1019 Egress Balconies
43. 1020 Exits
44. 1021 Number of Exits and Continuity
45. 1022 Exit Enclosures
46. 1023 Exit Passageways
47. 1024 Luminous Egress Path Markings
48. 1025 Horizontal Exits
49. 1026 Exterior Exit Ramps and Stairways
50. 1027 Exit Discharge
51. 1028 Assembly
52. 1029 Emergency Escape and Rescue

Interior Environment - Chapter 12

53. 1203 Ventilation
54. 1204Temperature Control
55. 1205 Lighting
56. 1206 Yards and Courts
57. 1207 Sound Transmission
58. 1208 Interior Space Dimensions
59. 1209 Access to Unoccupied Spaces
60. 1210 Surrounding Materials

Roof Assemblies and Rooftop Structures - Chapter 15

61. 1505 Fire Classifications
62. 1506 Materials
63. 1507 Requirements for Roof Coverings
64. 1508 Roof Insulation
65. 1509 Rooftop Structures
66. 1510 Reroofing

Soils and Foundations - Chapter 18

67. 1803 Geotechnical Investigations
68. 1804 Excavation, Grading and Fill

69. 1805 Dampproofing and Waterproofing
70. 1806 Presumptive Load-bearing Values of Soils
71. 1807 Foundation Walls, Retaining Walls and Embedded Posts and Poles
72. 1808 Foundations
73. 1809 Shallow Foundations
74. 1810 Deep Foundations

Special Construction - Chapter 31

75. 3102 Membrane Structures
76. 3103 Temporary Structures
77. 3104 Pedestrian Walkways
78. 3105 Awnings and Canopies
79. 3106 Marquees
80. 3107 Signs
81. 3108 Telecommunication and Broadcast Towers
82. 3109 Swimming Pool Enclosures and Safety Devices
83. 3110Automatic Vehicular Gates
84. 3202 Encroachments
85. 3302 Construction Safeguards
86. 3303 Demolition
87. 3304 Site Work
88. 3305 Sanitary
89. 3306 Protection of Pedestrians
90. 3307 Protection of Adjoining Property
91. 3308 Temporary Use of Streets, Alleys and Public Property
92. 3309 Fire Extinguishers
93. 3310 Means of Egress
94. 3311 Standpipes
95. 3312 Automatic Sprinkler System

Existing Buildings - Chapter 34

96. 102.2.1.3 Failure to evaluate change commodity and storage arrangement in existing buildings with existing sprinkler systems, when there is a change of occupancy classification, commodity classification, or storage arrangement.

Special Regulations - Chapter 110

97. 110.R3 Failure to comply with manufactured buildings program.
98. 110.R4 Non-compliant Native Lumber Producers Registration
99. 110.R1 Non-compliant Concrete Testing Laboratories Licensing
100. 110.R5.2.15.2 Responsibility to Supervise Work- Failure to directly supervise construction as prescribed by construction supervisor license requirements.
101. 110.R5.2.14 Requirement to Show License - Working without a current, valid construction supervisor license.

THE AMENDED INTERNATIONAL EXISTING BUILDING CODE (IEBC) 2009

Chapter 34 of the Eighth Edition Base Volume 780 CMR

(Note that the Eighth Edition One- and Two-Family Dwelling Code has a different **EXISTING BUILDING** Chapter which is referenced as Appendix J in that code.)

Chapter 34 of the Eighth Edition Base (*commercial*) Code now defaults to the International Existing Building Code-2009 (IEBC-09 with MA amendments). **The IEBC presents an entirely different approach in dealing with existing buildings than the approach required by the Seventh Edition and earlier Editions of 780 CMR.**

IEBC compliance approaches, and even definitional terms are likely new to Designers, Architects, Engineers, Contractors, Building Owners and Regulators familiar with requirements of earlier Code Editions. **Key Definitional terms** impact the Eighth Edition in ways different than in the Seventh Edition and earlier Editions of 780 CMR. Terms include, but are not limited to: "***EXISTING BUILDINGS", "ALTERATION", "CHANGE OF OCCUPANCY", "EQUIPMENT OR FIXTURE", "SUBSTANTIAL STRUCTURAL DAMAGE", "WORK AREA***"

THE DEFINITION OF *"EXISTING BUILDINGS"* AND IMPLICATIONS

As a starter, the definition of an *existing building* has changed. Earlier Editions of 780 CMR required that a building be legally occupied and/or used for a period of at least five (5) years in order to be considered an *existing building*.

The Eigth Edition defines an *existing building* as: *"A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued."* One measurable impact of this definition change is that many buildings that would have been treated as "new" buildings, subject to all applicable new construction requirements in earlier code editions, will now be defined as "existing" buildings subject to the requirements of 780 CMR 34 which defaults the MA-amended IEBC-09.

ADDITIONAL AMENDED IEBC DEFINITIONS NECESSARY TO UNDERSTAND

Although it is essential to understand the definition of any term utilized in the IEBC, several key terms and definitions are discussed here to help clarify differences between the Eighth and earlier versions of the code.

ALTERATION - "Any construction or renovation to an existing building other than a *repair* or *addition*. *ALTERATIONS* are classified* as Level 1, Level 2 and Level 3."

* COMMENTARY - *Alterations*, Level, 1, 2 or 3 are part of the WORK AREA COMPLIANCE Method of the IEBC (see below where discussion of the 3 Compliance Paths of the IEBC are discussed - note that a Level 2 alteration requires compliance with Level 2 and Level 1 requirements; likewise a level 3 alteration requires compliance with the requirements of Levels 3, 2 and 1).

CHANGE OF OCCUPANCY - "A change in the purpose or level of activity* within a building that involves a change in application of the requirements of this (IEBC) code."

*COMMENTARY - This definition expands the historical BUILDING CODE meaning of a Change of Use in that having a particular Use that simply undergoes an increase in the level of activity is now also classified as a *change of occupancy* (say a bowling alley that is converted to a dance hall - both are A-3 Uses and there is no change of use but the level of activity has measurably changed, thus there is a *change of occupancy*).

EQUIPMENT OR FIXTURE - In part, this definition* identifies plumbing, heating, electrical, ventilating, air conditioning, refrigerating, fire protection equipment, elevators, dumb waiters, escalators, boilers, pressure vessels and other mechanical facilities as *equipment or fixtures*.

* COMMENTARY - This definition is important as the installation or replacement of *equipment or fixtures,* which may involve all stories of an existing building, is not to be considered a Level 2 or Level 3 *alteration*. (Refer to the definition of *WORK AREA*, below).

SUBSTANTIAL STRUCTURAL DAMAGE - This is a critical definition* which, in part, identifies when either: the damage to the vertical elements of the lateral-force-resisting system is exceeded (lateral load-carrying capacity in any horizontal direction > 20% of the predamaged condition), or; the capacity of any vertical gravity load-carrying component or group of such components supporting > 30% of the structure's floor(s) and roof(s) is exceeded (reduced more than 20% of predamaged condition and remaining capacity of such components is < 75% of that required by the MA-amended IBC-09).

*COMMENTARY - Even with no building permittable work planned in an existing building, the purpose of this definition is to cause both evaluation of structural damage and correction/repair to certain defined design conditions if structural damage reaches the level of *substantial structural damage*.

WORK AREA - In part, this definition* reads: "That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents."
* COMMENTARY - The WORK AREA COMPLIANCE Method utilizes the philosophy of work areas and under this Compliance methodology, as part of the construction documents filing, the *work area* is required to be clearly defined. When the *work area* involves more than 50% of the floor area of a floor, certain IEBC requirements above requirements associated with the work area-proper are imposed on the entire floor. When the *work area* involves more than 50 % of the entire building area, the alteration is considered a Level 3 alteration.

Two (2) MA terms/definitions are carried forward from the 7th Edition Building Code / those terms are: ***COMPLIANCE ALTERNATIVES*** and ***HOUSE MUSEUMS*** and carry the same definitions as in the earlier Code Edition.

Compliance Methods - The IEBC allows the choice of one of three different compliance methods to demonstrate compliance (IEBC-09, CHPATER 3, PRESCRIPTIVE; IEBC-09, CHAPTERS 4-12 WORK AREA METHOD; IEBC-09, CHAPTER 13, PERFORMANCE METHOD).

Note that only one compliance method can be utilized under a particular building permit).

MA Amendments to the IEBC-09 - MA-amendments to the IEBC impact many Chapters of the IEBC but many MA amendments (particularly related to structural requirements, egress requirements and some fire sprinkler requirements) repeat from chapter to chapter. Among the many MA amendments, such amendments recognize that 521 CMR supersedes the access requirements of the IEBC; certain commercial buildings may be impacted by MGL c.148 § 26G; in areas prone to flooding it is necessary to design and construct per the requirements MA-amended Appendix 115.G; the "Investigation and Evaluation Analysis and Report" - a 7th Edition requirement - has been carried forward from the 7th Edition of 780 CMR and is required to accompany the building permit application for existing buildings involving construction control.

SWIMMING POOLS

Contributed by Mike Foley, Town of Framingham Building Inspector

Swimming pools can provide a place for enjoyment and exercise, but they can also pose a serious danger if precautions are not taken when they are left unattended or unsecured. Each year the news relates stories about swimming pool drownings and injuries. This article may help to lessen the number of those stories.

The state building code defines a **Swimming Pool** as:

"Any structure intended for swimming or recreational bathing that contains water over 24 inches in depth. This includes in-ground, above ground and on-ground swimming pools, hot tubs and spas".

All swimming pools require the issuance of a building permit prior to installation, construction and\or use.

Some building code safety requirements for swimming pools are identified below. Please reference Section 3109 of the base code and Appendix G of the Single and Two-Family Dwelling Code for further provisions. Also, please remember that Massachusetts General Law establishes additional requirements for public and semi-public swimming pools and that Massachusetts has amended certain provisions of the IBC and IRC relating to swimming pool safety.

In general:

- Swimming Pools shall be provided with a barrier at least 48 inches above grade either a permanent wall or fence is considered a barrier and there are restrictions on the climb ability of fence and wall barriers.
- The barrier shall be at grade or in the case of some above ground pools mounted on top of the pool structure. The wall of the above ground pool can serve as the barrier if it is a minimum of 48" from grade to top of pool wall.
- For above ground pools that are 48 inches in height and are accessed via a ladder and/or stairs, the stairs and/or ladder shall be removal and/or retractable. Where fixed stairs/ladders are used; the stairs/ladders shall be protected by a barrier.
- When an access gate is installed within a barrier; the access gate shall be self closing and self-latching; additionally, the gate shall open outward away from the swimming pool.

- Where a wall of a dwelling is used as a barrier and there is direct access from the dwelling to the swimming pool, at least one of the following options shall be used:
  - The pool shall be provided with a power safety cover;
  - All doors with direct access through that wall shall be provided with an audible warning alarm; or
  - Other means of protection, affording the same degree of pool barrier protection that is approved by the building official may be utilized.
- Convenient portable inflatable swimming pools that contain water over 24 inches are required to meet the same requirements as permanent swimming pools.

Reduce the risk of electrical shock

- Electrical work is required to conform to the MA Electrical Code (527 CMR 12.00).
- As a safety rule of thumb, do not run extension cords to provide power for filtration and lighting in or around the swimming pool.

It is a good practice to post swimming pool use safety rules in and around the pool area; be sure that your family and guests are aware of the rules and enforce the rigorously. Always be cautious when young children have access to a pool. Make certain that children understand the dangers and the rules that have been developed to help keep them safe. Never let young children use a pool without adult supervision and be sure to follow all code safety requirements when installing\constructing a swimming pool.

PROTECT CHILDREN FROM WINDOW FALLS

Contributed by Mike Foley, Town of Framingham Building Inspector

Never leave your child alone in a room where there are open windows.

Every year many children sustain severe, often permanent injuries due to a fall through an open window. It happens quickly. Even a fall from a first-floor window may cause catastrophic injury to a young child. Traditional window screens [1,2] are ***insect deterrents*** and ***will not*** prevent a child from falling through an open window.

Prevention

- Open only the top sash of double-hung windows for fresh air; keep the bottom sash closed. Install window stops to limit the opening dimension of the lower sash.
- Furniture that children climb on should not be located near windows.
- Install approved window fall prevention devices (guards) [1,2] that ***will*** prevent accidental falls. Window guards should be made of rigid metal and securely fastened.
  - Loose or improperly installed guards that moves when you push or pull on it, may not prevent a fall when a child leans or climbs on it. Make sure that guards are rigidly installed.
  - Window guards that are fastened to rotting window frame or window trim are likely to fail. Make sure that fasteners are solidly connected as prescribed by the manufacturer.
  - In July, 2000, the U.S. Consumer Product Safety Commission announced new standards for

window guards that set safety bar spacing of the window guards at no more than 4" apart.

- Never leave your children unattended to play on fire escapes, roofs, in halls with windows, near elevators or open shafts and near steps and stairs.

Children fall from windows in one and two-family homes every year. If you own your house, you may wish to consider having guards professionally installed or do it yourself.

If you are a property owner with multiple dwellings and rent to families with children under the age of 10 you should consider having guards professionally installed.

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[1, 2]There are special fall prevention screens that serve as insect screens but are really designed and constructed to withstand large forces and prevent falls from windows BUT there have been instances where fire departments have not been able to break through or otherwise remove such special fall prevention screens from windows in their efforts to effect rescue in a fire emergency. You may wish to consult municipal building and fire safety personnel before selecting a safety screen.

[1,2]Window guard systems, whether screens or bars, need to be properly installed but where such fall prevention screens or window guards are placed on the Building Code-required Emergency Egress Window of each bedroom, such fall protection screens or window guards need to be readily removable without special tools, knowledge or excessive force / where concern exists as to whether the screen or guard product will be appropriate for the singular emergency egress window in each bedroom, consider consulting with your municipal building department for assistance in this regard as well.