

Code Connection

The customer newsletter for the construction and development community.

CITY OF FOUNTAINS
HEART OF THE NATION



KANSAS CITY
MISSOURI

MAY 2003

Holiday Schedule:

The Department of Codes Administration (DCA) offices will be closed on the following dates:

Monday, May 26, 2003

Memorial Day

Friday, July 4, 2003

Independence Day

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NEW PROCEDURE FOR REMOTE READER WIRING INSTALLATION

The Water Services Department, in conjunction with the Home Builders Association (HBA) and DCA, has announced a new procedure for the installation of the wiring to serve the water meter remote reading device. This procedure will apply to all new residential construction under the scope of the *International Residential Code (IRC)*, including one- and two-family dwellings and attached single-family townhouses. This initiative will benefit home builders and homeowners in that it will ensure that the necessary wiring is installed when it can be readily accomplished, prior to any concealment work.

The builder will now be required to provide and install the remote reader wiring from the interior water meter location to the exterior remote reading device location. The Water Services Department will continue to provide and install the water meter and the remote reading device. Sufficient wiring shall be provided to extend a minimum of three feet beyond the anticipated meter set and remote reading device set locations. The wiring shall exit either at the front of the house or on either side of the house as close to the front as possible, and normally at the location of the gas service entrance. The wiring shall be a multi-conductor cable (type CL2) consisting of three, 22 gauge AWG conductors, solid jacket, with conductor insulation colors of red, green and black. The cable shall meet the standards of the Water Services Department.

The installation of the cable will be verified by DCA as an electrical rough-in inspection item. If the full extent of the wiring will remain exposed, this can be deferred to the final inspection. As this installation is not regulated by the building code, a permit is not required, and it is not required that the wire be installed by a licensed electrical contractor.

This new procedure will take effect beginning with building permits issued on May 1, 2003. As May 1 is the beginning of the City's fiscal year, building permits issued under this new procedure will begin with the numbers '2004' or greater.

If you have questions regarding DCA's procedure, please call our Code Question Line at 816-513-1511 or our Inspection Office at 816-513-1500. If you have questions regarding Water Services Department standards, please call 816-513-2174. □

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MAY 2003**



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**GREG FRANZEN DCA 2002
ASSOCIATE OF THE YEAR**

Greg Franzen, P.E., C.B.O., M.C.O., Division Manager of Inspections, was named DCA Associate of the Year for 2002. Greg was hired as a Construction Code Inspector I in 1987 and was promoted to his current position in 1996.

Greg was nominated by one of the DCA associates, and the Employees' Committee members selected him to receive this prestigious honor. The nomination cited his professionalism, his leadership skills, his knowledge of the adopted model codes, and his willingness to share that knowledge with the inspections and plans review staff. During his 16 years as an associate of DCA, he has also become a registered professional engineer, a certified building official, and a master code official. Way to go, Greg! □



Director Barry Archer (left) presents the 2002 Associate of the Year Award to Division Manager of Inspections Greg Franzen.

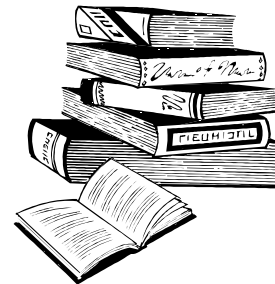
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CODE CHAT

by Gary Marker, R.A.
Division Manager of Plans Review

WHAT'S NEW WITH HIGH-RISE BUILDINGS?



The recently adopted *2000 International Building Code (IBC)* has many similarities with the *Uniform Building Code (UBC)* previously used for many years in KCMO. However, in the interest of creating a new standard acceptable to all member groups of the International Code Council, some changes have been incorporated. This article will attempt to highlight some of those differences as they apply to the subject of high-rise buildings. The comparison is made with the 1991 UBC, which was the immediate past code adopted by KCMO.

Applicability

The UBC “special provisions” of Section 1807 applied only to Group B-2 or R1 occupancies with floors used for human occupancy located more than 75 feet above the lowest level of fire department vehicle access. IBC Section 403 applies to all buildings, regardless of occupancy, with floors used for human occupancy located more than 75 feet above the lowest level of fire department vehicle access, with exceptions for special occupancies for which other height restrictions and requirements apply.

Automatic Sprinkler System

As required in the UBC, IBC Section 403.2 also requires high-rise buildings to be provided with an automatic sprinkler system throughout, with exceptions as deemed appropriate for open parking garages and telecommunications facilities. Like the UBC, the IBC requires a secondary on-site water supply for buildings in certain seismic design categories; however, under the IBC, these categories are determined by individual site conditions.

Modifications

While the UBC only permitted the reduction by one hour of certain nonbearing walls, bearing walls and roof framing that were not part of the structural frame, IBC Section 403.3.1 permits an actual reduction in construction type allowed by Table 601 from IA to IB and (in other than Groups F-1, M and S-1) a reduction from Type IB to IIA. As in the UBC, IBC also permits one-hour fire-resistive shaft enclosures other than elevator shafts or vertical exit enclosures where sprinklers are installed within the shafts. The above reductions are permitted only for fully sprinklered buildings with control valve and water-flow valve initiating devices at each floor.

While the UBC permitted the omission of a fire-resistive rating for all interior, nonbearing partitions except for corridors or partitions separating dwelling units or guest rooms, the IBC does not require such an exception, instead relying on Table 601 and Section 602 which do not require fire-resistive ratings on nonbearing partitions in most cases. Further, the IBC requirements for fire-resistive corridors are covered in Section 1004.3.2 and are no longer tied to high-rise requirements.

Emergency Escape and Rescue

While the UBC required emergency escape and rescue openings from all sleeping rooms without exception, IBC Section 403.4 permits the omission of these openings in buildings meeting the high-rise requirements.

(Continued on page 4)

Automatic Fire Detection, Emergency Voice/Alarm Communication System, Fire Department Communications System, Fire Command Center

These are required under the UBC, ditto for the IBC, Sections 403.5, 403.6, 403.7 and 403.8, respectively.

Smoke Control

The UBC required smoke control for high-rise buildings by either mechanical or natural ventilation; the IBC does not.

Elevators

The UBC required elevator openings on all floors in high-rise buildings to be protected by elevator lobbies, with exceptions for main entrance level lobbies and atria. The IBC elevator lobby requirement is not tied to high-rise buildings specifically, but is instead located in Section 707.14.1 regarding shaft enclosures. However, the requirement for elevator lobbies remains for elevators opening into fire-resistance-rated corridors in buildings other than Groups I-2 and I-3 occupancy and buildings more than four stories above the lowest level of fire department access, which would include high-rise buildings. The IBC also maintains the exception for elevators opening into sprinklered street floor lobbies for all buildings as was permitted in the UBC.

Standby Power, Light and Emergency Systems

Like the UBC, IBC Section 403.10.1 requires high-rise buildings to be provided with a standby power system with an on-premises fuel supply capable of providing two-hour full-demand operation of the system. Unlike the UBC, the IBC requires standby generators inside a building to be located in a separate room enclosed with two-hour fire-resistance-rated fire barrier assemblies and offers an exception to the on-premises fuel supply where the fuel is an approved piped natural gas system.

Like the UBC, the IBC requires all lighting and communication facilities, as well as fire command center functions and power, for at least one elevator to be transferable to the standby power system.

Stairway Door Operation

Like the UBC, IBC Section 403.11 permits stairway doors other than exit discharge doors to be locked from the stairway side, provided such doors are capable of being unlocked simultaneously by a signal from the fire command center. As with the UBC, IBC Section 403.11.1 requires a telephone or other two-way communications system connected to an approved constantly attended station at not less than every fifth floor in each required stairway where the stairway doors are locked.

Seismic Considerations

Like the UBC, IBC Section 403.12 requires building life-safety components to be designed for seismic resistance in accordance with their importance factor, as set forth in Section 1621.

While UBC and IBC methodologies for regulating high-rise buildings vary somewhat in specifics, the intent is the same, to achieve a high level of life safety while permitting flexibility in design. For questions regarding this subject or any other code requirements, feel free to call the DCA Code Question Hotlin at (816) 513-1511, where a helpful associate stands ready to provide assistance in applying code interpretations to individual situations. Or you may obtain e-mail answers to code questions from gary_marker@kcmo.org. □

FROM THE FILES...
REAL CODE MODIFICATION REQUEST CASE HISTORIES
MEANS OF EGRESS

**By Gary Marker, R.A.,
Division Manager of Plans Review**

The KCMO Code of Ordinances, Section 18-6, states that “The details and actions of granting modifications (to code requirements) shall be recorded and entered in the files of the Department of Codes Administration.” Doing so permits one to rationalize any apparent code discrepancies by investigating the files for the building in question. In order to facilitate this, DCA employs the Code Modification Request process wherein the applicant submits a form stating the location of the property, the applicant name and the proposed code alternate. Once this form is submitted along with the required application fee, the request is reviewed and either approved, conditionally approved or denied. The Code Modification Request process is outlined in DCA **Information Bulletin Number 101** (available on the web at www.kcmo.org). However, I am frequently asked, “What makes a “good” Code Modification Request?” This is another installment in a series of articles to attempt to answer that question by presenting actual case histories of CMR’s which have been **APPROVED** by DCA.

The subject of this request is an addition and remodel within an existing Group B building. A portion of this work consisted of the installation of a fence around the site with locked gates. IBC Section 1002.1 states that the means of egress system from this building shall be continuous and unobstructed to the public way. The applicant proposed to employ the provisions of 2000 IBC Section 1003.3.2.2 which permits fences with locked gates around school grounds for educational uses, provided there is a safe dispersal area within the fence not less than 50 feet from the building with an area of not less than 3 square feet per occupant. Staff believed this request met the intent of the code and it was approved.

This approval recognized that the intent of the code is to provide a continuous means of egress from the space in question and that a safe dispersal area may also be considered as an alternate, whether in a school or other occupancy. Be sure to watch future editions of the *Code Connection* for more informative and interesting tales from the CMR files. □

DCA STAFF CHANGES

Tina Weatherspoon was promoted from Accountant I to Customer Service Supervisor in the Business Services Division.

Vernon Livergood was promoted from Construction Code Inspector II to Construction Code Inspector III in the Inspections Division.

Glenn Longworth was promoted from Construction Code Inspector III to Construction Code Inspector Supervisor in the Investigation Division.

Kristie Reynolds joined DCA as a Customer Service Representative in the Permits Division.

Delores Owens, Customer Service Representative, transferred from the Permits Division to the Business Services Division.

Heather Dodge, **Ron DuBois** and **Larry Barnhart** joined DCA as Construction Code Inspector I’s in the Investigations Division.

Courtney May, **Scott Shepherd**, **Robbie Gastineau** and **Dennis Tedford** joined DCA as Construction Code Inspector I’s in the Inspection Division.

Hazel Booker, **Gloria Harper**, **Maxine Edwards**, **Ron Evans** and **David Carlisle** retired from the city.

DCA INTERPRETATIONS

#/CODE	QUESTION	ANSWER
CI2003-101 2000 Uniform Plumbing Code Sec. 713.4	May a building employ a private sewage disposal system where the public sewer abuts the lot on which the building is located?	Yes. UPC Section 713.4 states that the public sewer may be considered as not being available when the building is located more than 200 feet from the public sewer.
CI2003-102 2000 Uniform Plumbing Code Secs. 704.3, 801.2.3	UPC 704.3 requires that pot sinks, dishwashing sinks, etc., be connected directly to the drainage system. UPC 801.2.3 requires that sinks used for food preparation, etc, be indirectly connected to the drainage system by means of an air gap. If a sink in a commercial facility is to be used for both purposes, shall this sink be connected indirectly or directly to the waste line?	The requirement for the air gap for food preparation sinks is to ensure that there is not a direct path for bacteria from the drainage system to the food in the sink. This is the overriding concern, and therefore the indirect connection shall be used in this example. Note that UPC 804.1 requires that indirect waste receptors "...shall be of such shape and capacity as to prevent splashing or flooding...". The receptor and piping receiving the waste from dishwashing activities may need to sized larger to accommodate sudsing in the receptor.
CI2003-103 2000 International Building Code Sec. 1003.3.3.12	When a stairway to the roof is required by IBC Section 1003.3.3.12, must the portion of this stairway leading to the roof be located within a vertical exit enclosure?	Yes. While IBC Section 1003.3.3.12 does not specify that the stair to the roof must be in an exit enclosure, it does state that <i>one stairway shall extend to the roof surface</i> . It is the intent of this section that the stairway to the roof be contained within the exit enclosure in order to facilitate access to the roof for fire department personnel. If the building has a complying exterior exit stairway, then that stair is also permitted to serve as the stairway to the roof.
CI2003-104 2000 International Building Code Secs. 707.12, 708.4	May the top of a shaft enclosure (including stair enclosures), that does not terminate at the underside of a floor or roof structure above, be constructed of a listed wall assembly laid horizontal?	No. IBC 707.12 reads that the top of the shaft enclosure shall be constructed "...of the same fire-resistance rating as the topmost floor penetrated...but not less than the fire-resistance rating required by the shaft". The assembly used at the top of a shaft enclosure shall be installed in accordance with its listing, i.e., it must be listed for horizontal installation. As a wall is, by definition, a vertical element, wall listings are tested for vertical installation only unless specifically indicated otherwise. For corridor construction only, IBC 708.4, exception 3, allows the fire-resistance-rated corridor 'lid' to be constructed the same as the corridor walls (i.e. a wall laid horizontal). This is due to the minimal level of protection expected from a corridor, as also evidenced by the allowance of 20-minute door assemblies in the one-hour walls. Note that a corridor is not an exit, but rather is a part of the exit-access.

DCA INTERPRETATIONS

#/CODE	QUESTION	ANSWER
<p>CI2003-105 2000 International Building Code Table 704.8</p>	<p>1. If a portion of an exterior wall is recessed, can the distance from the property line to the face of the recessed portion of the wall be used to determine the exterior wall rating (assuming the recessed portion is beneath an additional floor or roof above)?</p> <p>2. What if the recessed portion is a court (i.e. is not covered by an additional floor or roof above)?</p>	<p>1. No. The extent of the floor area of a building is established by the definition of AREA, BUILDING (IBC 502.1). A portion of a building without an exterior wall, but beneath a projecting floor or roof above, is by definition a part of the building area. The exterior wall plane of the building is established by that definition. As the floor or roof above would have exposure based on its setback, the setback shall be measured to the exterior wall plane established by definition.</p> <p>2. By definition, a court is not a part of the building area. The setback shall be measured to the actual exterior walls within the court.</p>
<p>CI2003-106 2000 International Building Code Sec. 302.1.1.1</p>	<p>IBC Section 302.1.1.1 states that, where Table 302.1.1 permits an automatic fire-extinguishing system without a fire barrier, the incidental use area shall be separated by construction capable of resisting the passage of smoke. This section further states that the partitions shall extend from the floor to the underside of the fire-resistance-rated floor/ceiling or roof/ceiling assembly or to the underside of the floor or roof deck above. Must the referenced fire-resistance-rated floor/ceiling or roof/ceiling assembly be installed throughout the building?</p>	<p>No. The referenced fire-resistance-rated floor/ceiling or roof/ceiling assembly need extend only to the surrounding partitions of the incidental use area. (However, note that if a fire barrier is provided, it shall extend to the deck above in accordance with IBC 706.4).</p>
<p>CI2003-107 2000 International Building Code Secs. 508.2, 508.5, 508.8, 903.2.8</p>	<p>2000 IBC Section 903.2.8 states that an automatic sprinkler system shall be provided throughout all buildings with a Group R-2 fire area where more than two stories in height, including basements, or where having more than 16 dwelling units. Does this requirement also apply to an S-2 occupancy within the same building as permitted by IBC Sections 508.2, 508.5 and 508.8?</p>	<p>Yes. The special provisions of IBC Sections 508.2, 508.5 and 508.8 do not permit the omission of automatic sprinkler protection for these spaces when it is required by Section 903.2.8.</p>

DCA PLANS REVIEW AVERAGE TURNAROUND TIMES

Four-Week Averages as of April 27, 2003

New Commercial Bldgs. & Additions	3.3 weeks
One- and Two-Family Dwellings	1 day/plan
All Other Projects	0.7 weeks/plan

Code Connection

Department of Codes Administration
18th Floor, City Hall
414 East 12th Street
Kansas City, Missouri 64106

ADDRESS CORRECTION REQUESTED

Visit DCA on the Internet at www.kcmo.org/codes/

DCA Telephone Numbers: Area Code 816

Director's Office	513-1472
Deputy Director's Office	513-1478
City Hall Permit Center	513-1500 (option 3)
Plans Review Permit Center	513-1500 (option 5)
Commercial Plans Review	513-1500 (option 5)
One- & Two-Family Plans Review	513-1500 (option 5)
Inspections Division	513-1500 (option 2)
Special Inspections	513-1500 (option 2)
Investigations Division	513-1500 (option 2)
Business Services Division	513-1500 (option 3)
Contractor Licensing & Registration	513-1500 (option 6)

FAX Services/Numbers:

FAX Permit Process	513-1456
FAX Inspection Requests	513-1536
FAX Publication Purchases	513-1456
FAX One- and Two-Family Plans Branch	513-1505
FAX Plans Review Comments Call to request your comments	513-1500 (option 4)

Code Information:

Zoning, Floodplain, Airport Height Zone, Permit Application Information	513-1500 (option 3)
Code Questions, Plans submittal Information, Plans Review Status	513-1500 (option 5)

Publication Ordering Information:

The following publications are available at either DCA office.

You may also call 513-1500 (option 3) and request a credit card authorization form and then place your order via Fax.

1. **Chapter 18, Kansas City Building and Rehabilitation Code** and related ordinances. (Chapter 18 adopts the model codes by reference and identifies local amendments to the model codes.) Price: \$6.00
2. **Special Inspections Program Manual.** Price: \$5.00
3. **Fee Schedule.** Price: \$2.50

The following publications are available from the City Planning and Development Department (513-2846).

1. **Chapter 80, Kansas City Zoning Ordinance** Price: \$25.00
2. **Chapter 66, Subdivision Regulations** Price: \$6.00

The following publications are available from the International Code Council Regional Office (455-3330).

1. **2000 International Building Code**
2. **2000 Uniform Plumbing Code**
3. **2000 International Mechanical Code**
4. **1999 National Electrical Code**
5. **2000 International Residential Code**