

Code Connection

The customer newsletter for the construction and development community.

CITY OF FOUNTAINS
HEART OF THE NATION



KANSAS CITY
MISSOURI

MARCH 2004

Holiday Schedule:

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

Monday, May 31, 2004

Memorial Day

Monday, July 5, 2004

Independence Day

In this issue:

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- Revised Code Interpretation
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NEW MINIMUM STANDARD FOR SEWERS EFFECTIVE APRIL 1, 2004

In coordination with the Department of Public Works (DPW) and the Department of Water Services (DWS), the minimum standard for PVC sewer pipe has been revised effective April 1, 2004. Due to problems with the thinner wall material witnessed by the DWS, SDR-35 PVC sewer pipe (ASTM D3034) will no longer be accepted. PVC sewers shall be a minimum of SDR-26. This new minimum standard is applicable to sewers on private property (regulated by DCA's adopted plumbing codes) as well as within the public right-of-way (regulated by DPW's Construction Standards). Joints may be made with either solvent-cemented fittings or with elastomeric gasket ('slip') joints.

As an alternative, the building sewer (i.e. between the building and the connection to the public sewer) may be plumbed with PVC Schedule 40 DWV (Drain, Waste and Vent) piping (ASTM D2665). This is the same PVC piping that is suitable for use within the building.

The new standard shall be applied to projects with sewer plans submitted for review on or after April 1, 2004. For projects without submitted sewer plans (primarily one- and two- family dwellings), the effective date for application of the new standard shall be the sewer installation date. DCA has revised Code Interpretation CI2002-035 to document this change. This can be viewed on page 2 of this newsletter. A complete list of interpretations is available on our website (www.kcmo.org/codes).

As a reminder, it is the permit holder's responsibility to request inspection of all sewers prior to backfill. All sewer inspections in the public right-of-way, including the sewer tap, shall be requested from the Department of Water Services at (816) 513-8000. Sewer inspections on private property shall be requested from DCA. For one- and two-family dwellings only, the sewer on private property may be inspected by DWS if requested at the same time as the sewer tap inspection.

If you have questions, you may call DCA's Code Question line at (816) 513-1511. □

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Administration

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***CODE INTERPRETATION CI2002-035
ISSUED MARCH 1, 2002
REVISED MARCH 2, 2003***

CODE/EDITION: 2000 Uniform Plumbing Code (UPC)
2000 International Residential Code (IRC)

SECTION(S): UPC 715.1, IRC P3002.1

PURPOSE: To clarify the allowable materials for sanitary sewer piping.

QUESTION: The referenced sections do not specify the strength of material that is allowable for use as sanitary sewer piping. Rather they only reference the list of allowable standards. What materials may be used?

ANSWER: Beginning April 1, 2004, PVC sewer pipe (ASTM D3034) with wall thickness of SDR-35 is not permitted. (This exclusion is made to coordinate with Public Works standards for the portion of the sewer service line located within the public right-of-way.) The effective date shall be the project submittal for projects with sewer plans submitted for review. The effective date shall be the sewer installation date for projects without submitted sewer plans (primarily one and two family dwellings).

Otherwise, any material that is included in the UPC Chapter 14 list of referenced standards or IRC Table P3002.2 may be used for sanitary sewer piping if that use is in accordance with its listing. Any other alternate materials shall be proposed for use under the provisions of UPC 301.2 and KCBRC 18-5.

Storm sewer piping shall be of any material found in the list of allowable standards if that use is in accordance with its listing. (UPC 1102.4).

Note that by definition the building sewer begins two feet outside the building wall. Materials for drainage piping within the building shall be those identified in UPC 701.1 and IRC Table P3002.1. □



CODE CHAT

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



WHAT'S NEW WITH INSTITUTIONAL OCCUPANCIES PART II

The recently adopted 2000 *International Building Code* (IBC) has many similarities with the 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 differences become apparent. This article will attempt to highlight some of those differences as they apply to the special detailed requirements of institutional occupancies from Chapter 4 of the IBC.

Occupancy Group

While the UBC and IBC occupancy classifications remain closely aligned in concept, some differences occur due to the new classification system employed by the IBC. IBC occupancy Group I-3 currently includes buildings and structures that are inhabited by more than 5 persons who are under restraint or security. Occupants in this facility are incapable of self-preservation due to security measures beyond their control. This group includes, but is not limited to, prisons, jails, reformatories, detention centers, correctional centers and prerelease centers. Buildings as described above, but with 5 or less occupants are considered to be Group R occupancies. However, they are still required to meet the special requirements for egress presented in Chapter 10 for occupancies where liberties are restrained. The IBC further subdivides this occupancy into 5 categories based on the security system imposed and the relative freedom of movement permitted in an emergency egress situation. This IBC classification is equivalent to the I-3 occupancy group of the 1991 UBC, with the difference being that the UBC had no minimum number of occupants for the Group I-3 classification.

Mixed Occupancies. IBC Section 408.2 states that the requirements for Group I-3 means of egress systems shall be maintained where the means of egress passes through another occupancy, with an exception for means of egress passing through a horizontal exit. The UBC did not address this issue.

Means of Egress. Unlike the UBC, which specifically required egress doors to be not less than 32 inches in clear width, IBC Section 408.3.1 permits doors to resident sleeping rooms to be not less than 28 inches in clear width. While IBC Section 408.3.2 permits sliding doors to be used in means of egress, provided the required sliding force does not exceed 50 pounds, the UBC is not specific on the maximum force permitted for sliding doors.

While IBC Section 408.3.3 permits the use of spiral stairs conforming to the requirements of Section 1003.3.3.9 for access between staff locations, the UBC contains no such exception and spiral stairs are permitted only within Group R dwelling units. IBC Section 408.3.4 permits exits to discharge into a fenced or walled courtyard, provided there is a refuge area within the court of sufficient size to accommodate all occupants a minimum of 50 feet from the building in an area having not less than 15 square feet per occupant. The UBC does not specifically permit this option for Group I occupancies. IBC Section 408.3.5 permits a sallyport to be used as a means of egress, a condition that is not addressed in the UBC. Finally, IBC Section 408.3.6 permits glazing in walls and doors of exit enclosures under limited conditions. This is a new provision intended to address security concerns and is not addressed in the UBC.

(Continued on page 5)

NAESA INTERNATIONAL SPRING WORKSHOP

The Central Region of National Association of Elevator Safety Authorities International (NAESA) will hold its spring meeting and workshop in Kansas City, Missouri, April 15-17, 2004, at the Adams Mark Hotel, 9103 E. 39th Street (just off I-70 near the Sports Complex). The Department of Codes Administration, Periodic Inspections Branch will serve as host for the meeting and workshop. This workshop will provide an opportunity for elevator inspectors to obtain nationally recognized training, participate in the organizational meetings and network with other professionals in the field from throughout the Midwest.

NAESA International has a membership of over 1,000 members with headquarters located in Phoenix, AZ. Headquarters for the Central Region of NAESA International is located in Waterloo, IA. Attendees of this workshop will receive credit from NAESA International toward their annual maintenance agreement of qualification for the year 2004-05.

QEI examinations will be administered on Thursday, April 15, 2004. If you are interested in taking the exam, call the NAESA International office (602-266-9701 ext 12) to make arrangements.

Tentative agenda for the Spring Workshop is as follows:

Thursday, April 15	8:30 a.m. – 5:00 p.m. 7:00 p.m. – 8:00 p.m.	QEI Testing Early workshop registration in hotel lobby
Friday, April 16	7:00 a.m. 8:30 a.m. 8:45 a.m. 10:15 a.m. 10:30 a.m. 12:00 p.m. 1:00 p.m. - 4:00 p.m.	Breakfast Opening remarks and introductions Schindler Elevator Corp. presentation Break Thyssenkrupp Elevator presentation Lunch Access Elevator Inc demonstration of a machine roomless elevator
Saturday, April 17	8:00 a.m. 8:30 a.m. - 10:00 a.m. 10:00 a.m. 10:15 a.m. 11:45 a.m.	Registration Business meeting Break Roundtable or cracker barrel session Closing Remarks

If you are interested in attending this workshop, contact John Thompson by phone at 708-703-5533, mail at 17515 Winslow, Grayslake, Il. 60030. Contact the Adams Mark Hotel at 800-444-2326 for room reservations.

DCA STAFF CHANGES

Michael Coddington joined DCA as a Construction Code Inspector I in the Investigations Division.

(Continued from page 3)

Locks. IBC Section 408.4 details the allowances and requirements for the installation of locking devices on required egress doors. This section enumerates the conditions required for both remote and manual locking of egress doors based on the class of occupancy. In contrast, the UBC only states that “approved” locks or safety devices may be used where necessary to forcibly restrain the personal liberties of inmates or patients. This statement allows the building official great latitude, but the current requirements give more guidance.

Vertical Openings. IBC Section 408.5 permits unprotected vertical openings between floors where the maximum height between the lowest and highest floor does not exceed 23 feet and where the open area is unobstructed. This section also requires that each story so connected have at least one-half of its required means of egress capacity provided by exits leading directly from the story without traversing another interconnected area. The UBC permits such openings for all buildings with a maximum height of two stories. The 23 foot limitation in the IBC effectively limits the exception to two stories also.

Smoke Barriers. IBC Section 408.6 requires smoke barriers dividing stories of Group I-3 occupancies with 50 or more persons into areas of not more than 22,500 square feet, with smoke compartment size controlled by limiting the travel distance from any point in the compartment to a smoke barrier door to 150 feet. The IBC requires a refuge area on each side of a smoke barrier of not less than 6 square feet per occupant for the total number of occupants in the adjoining smoke compartment. The IBC (in Table 1004.2.1) requires two means of egress only from Group I-3 spaces having more than 10 occupants. Finally, the IBC states that smoke compartments must have at least one means of egress that is not dependent upon returning to a smoke compartment from which the means of egress originated. The UBC does not require smoke barriers in this occupancy.

Subdivision of Resident Housing Areas. Depending upon the occupancy conditions enumerated in Section 308.4, IBC Section 408.7 requires various degrees of separation via smoke-tight partitions between sleeping areas and common areas. The UBC does not require such separations.

Windowless Buildings. IBC Section 408.8 requires the installation of an engineered smoke control system complying with Section 909 for each windowless smoke compartment. This section further defines “windowless” to mean buildings or portions thereof which are without windows, have nonopenable windows, or windows that are not readily breakable. The UBC does not require smoke control for Group I occupancies.

While UBC and IBC methodologies for regulating institutional occupancies 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 Hotline 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. □

DCA PLANS REVIEW AVERAGE TURNAROUND TIMES

Four-Week Averages as of February 29, 2004

New Commercial Bldgs. & Additions	3.9 weeks
One- and Two-Family Dwellings	1 day/plan
All Other Projects	0.7 weeks/plan

FROM THE FILES...
REAL CODE MODIFICATION REQUEST CASE HISTORIES
STANDPIPE OUTLET LOCATION

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 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 a proposed, new, 9-story, multi-use structure. IBC Section 905.4 requires the Class I standpipes in this building to be provided with outlets located at each intermediate level landing, unless otherwise approved by the building official. The applicant requests that the hose connections be permitted to be located at each floor level landing. Based on a discussion with the Fire Marshall, this request was determined to meet the intent of the code and was approved.

This approval recognized that the intent of the code is to ensure that the standpipe system is accessible and usable by the Fire Department. In this case, the discussion with the Fire Marshall indicated his preference for the outlets to be located at each floor level landing for maximum usability. Be sure to watch future editions of the *Code Connection* for more informative and interesting tales from the CMR files. □

DCA INTERPRETATIONS

#/CODE

QUESTION

CI2004-017

What spaces are considered a plenum?

2000 IMC
Secs. 602.1, 918.5

ANSWER

1999 NEC
Sec. 300-22

For the purposes of the IMC, a plenum is any unoccupiable (typically concealed) space used to convey air, including above ceiling spaces, as well as building spaces designed exclusively as an air-handling room. Not included are furnace rooms, multipurpose building service rooms, or other occupiable spaces. (Simply because return air is conveyed through a room does not make it a plenum.) See IMC 602 for construction restrictions for spaces that are considered to be plenums. [This is supported by the 2000 IMC Commentary.]

For the purposes of the NEC, a plenum is strictly a space designed exclusively for air transfer. A concealed space such as an above-ceiling space is not a plenum, rather it is an ‘other space used for environmental air’. Similar to the IMC, an occupiable room, or any room the prime purpose of which is not air handling, is not considered a plenum nor is it considered as ‘other space used for environmental air’. See NEC 300-22 for construction restrictions for spaces that are considered to be plenums or ‘other space used for environmental air’. [This is supported by the 1999 NEC Handbook.]

DCA INTERPRETATIONS

#/CODE

QUESTION

- CI2004-018
2000 IBC
Secs. 713.2.1, 713.2.2
1. Where a fire-resistance rating is required for a column, may the ceiling membrane of a fire-resistance rated horizontal assembly be relied upon to provide the protection for the column?
 2. Where a fire-resistance rating is required for a column, may a column be considered as protected if located within the cavity of a fire-resistance rated wall assembly?

ANSWER

1. No. The column protection is required to extend the full length of the column. IBC 713.2.2 indicates that column protection must extend through the ceiling, and protect the full length of the column including connections to beams or girders.
2. No. Individual encasement is the only option for a column. IBC 713.2.1 only refers to membrane protection as specified in IBC 710. IBC 710 deals only with horizontal assemblies. Ceiling membrane protection for columns is prohibited by IBC 713.2.2.

[Note that an element of the wall construction (e.g. a gypsum board membrane) may also be utilized as an element of the required column encasement provided that all elements required by the listing for the column rating are provided.]

QUESTION

- CI2004-019
ICC/ANSI A117.1-1998
Sec. 604.3.2
- ICC/ANSI A117.1-1998
Sec. 604.3.2
- ICC/ANSI A117.1-1998, Section 604.3.2 states that the clearance around the water closet shall be permitted to overlap the fixture, associated grab bars, tissue dispensers, accessible routes, and clear floor or ground space. Is a lavatory, or any other fixture or object, permitted to encroach upon the clear floor space required for a water closet by ICC/ANSI A117.1, Figure 604.3.1?

ANSWER

No. Section 604.3.1 prohibits any other fixtures or obstructions in this space. However, Section 603.2.2 does allow that the clear floor space required for fixtures may overlap.

QUESTION

- CI2004-020
2000 IBC
Sec. 1003.2.10.1
- Are exit signs required within exit enclosures?

ANSWER

Exit signs shall be located within exit enclosures to indicate the path of egress where the path of egress travel is not readily apparent to occupants. Such situations shall include, but not be limited to, the following:

Where more than one below-grade level is required to egress upward to the exit discharge.

Where the exit discharge door is not readily apparent, i.e., where it cannot be identified as an exterior exit discharge door.

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*