

Code Connection

The customer newsletter for the construction and development community

CITY OF FOUNTAINS
HEART OF THE NATION



KANSAS CITY
MISSOURI

JULY 2001

KIVANET LIVE JULY 1, 2001

July 1, 2001, marks the successful culmination of the City's efforts to provide our citizens and customers with Internet access to **KivaNet**, the City of Kansas City, Missouri's land, permitting, inspections and request for services information system. The word "kiva" has origins in the Pueblo culture and means a coming together for a community benefit. KivaNet implementation in Kansas City is no exception! KivaNet is a coming together of private and public interests to share information and to better serve our community. KIVA is utilized by the Departments of Codes Administration, Public Works, City Planning and Development, Water Services, Neighborhood and Community Services, Parks and Recreation, Fire, Environmental Management and Finance to provide services to our citizens and customers on a daily basis.

For you, DCA's customer, this means you can access the status of your project—at **any time**—all the way from plans review submittal to issuance of the certificate of occupancy. Links to permit genealogy utilized by DCA enable you to locate related permits and applications quickly and to see their status in your project. Related applications such as Code Modification Requests, Encroachment Ordinance Applications, Special Inspections and others are linked by permit genealogy to their related plans review applications and building permits. Please see KivaNet for information on DCA permit types and descriptions.

KivaNet development continues to be dynamic and has included major input from both City staff and the City's development community customers. Future KivaNet on-line services will include application and permit processing, fee payment, real-time field inspections results entry and plans submittal and review.

Kansas City, Missouri, is the largest city in the country to have implemented such a comprehensive system on a citywide basis. The benefits to our citizens and customers are immeasurable, and the higher level of accountability provided by Internet access represents a major commitment on the part of DCA and the City.

Check out KivaNet on the City's web pages at <http://www.kcmo.org/codes/> for more information on its services and functions. □

HOLIDAY SCHEDULE:

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

Wednesday, July 4, 2001

Independence Day

Monday, September 3, 2001

Labor Day

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**CODE CONNECTION
JULY 2001**



Published by the City of Kansas City,
Missouri, Department of Codes
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***DCA MEETS ALL GUARANTEES
ON SERVICE DELIVERY FOR FY01***

DCA first gave guarantees on service delivery to our customers in February 1996. These guarantees are as follows:

- 90% of one- and two-family plans reviewed in 2 days or less.
- 90% of commercial detached building and addition plans reviewed in 4 weeks or less.
- 90% of commercial tenant-finish plans reviewed in 2 weeks or less.
- 95% of inspections performed on the day scheduled.

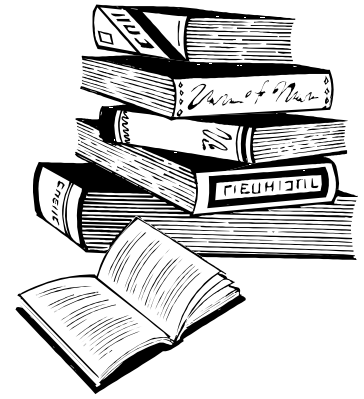
We are again pleased to announce that we have not only met these stated goals but have also exceeded them for the fiscal year ending April 30, 2001. That makes six years in a row! Total numbers for the past fiscal year are as follows:

Permits	FY01
No. of Construction Permits	19,728
Construction Value in 1,000's	\$593,413
Plans Review	
Average Time for One- and Two-Family (days)	1
Average Time for Bldg. & Additions (weeks)	3.5
Average Time for All Other (weeks)	0.8
Submittals for One- and Two-Family	2,481
Submittals for Bldg. & Additions	244
Submittals for all Other	2,681
On Time for One- and Two-Family (Goal 90%)	100%
On Time for Bldg. & Additions (Goal 90%)	99%
On Time for All Other (Goal 90%)	100%
Inspections	
No. of Construction Inspections	49,826
Third-Party Reports (One- and Two-Family)	3,646
Two-hour Inspections, Average Response Time	69.4 minutes
Two-hour Inspections, On-time Rate	97.6%
Number of Reinspection Fees	660
On-Time Rate (Goal 95%)	99.98%
Active Special Inspections Projects	Avg: 195
Investigations	
No. of Investigations	4,780
No. New Complaints	1,449
No. of Cases Closed	1,665
No. of Elevator Inspections	2,661
No. of Elevator Certificates	1,495
Building Demolition Permits Handled	559
Business Services	
Qualification Exams	186
Supervisor Certificates	1,257
Contractor Licenses	482
Contractor Registration	44
Customer Surveys/Average Score (Goal 7.0)	113/8.93



CODE CHAT

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



TOP 10 ONE- AND TWO-FAMILY PLAN DEFICIENCIES

Much has been written in this column regarding deficiencies noted during plans review of commercial projects. Lest anyone take this to mean that designers of one- and two-family dwellings are without sin, I hereby offer the following list of the top 10 one- and two-family plan deficiencies.

10. **LOCATION ON PROPERTY.** Typically noted more often in the review of detached accessory buildings and additions, but applicable to all structures, setback requirements are addressed both in the Building Code and in the Zoning Ordinance. Chapter 80, Zoning Ordinance, requires minimum front, rear and side yards based on the zoning district and (in the case of some front yards) based on the location of existing buildings in the same block. This ordinance also requires a minimum of ten feet separation between any principal building and an accessory building. In some cases these setbacks may be modified by the Board of Zoning Adjustment. 1992 CABO Section R-202.1 requires exterior walls located less than 3 feet from the property line to have not less than a one-hour fire-resistive rating while Section R-202.2 prohibits openings in exterior walls located less than 3 feet from the property line.
9. **CEILING HEIGHT.** CABO Section R-205 states that habitable rooms shall have a ceiling height of not less than 7 feet 6 inches for at least 50 percent of their required areas. Stairways are required by Figure R-213.1 to have a head clearance of not less than 6 feet 8 inches. Typical violations include rooms within dormers and basements (particularly those which were previously considered to be non-habitable and are being finished out) as well as stairways in which proper clearance is not provided at the header which creates the stairway opening.
8. **SAFETY GLAZING.** CABO Sections R-208.3 and R-208.4 require glazing in certain locations that may be subject to human impact to be safety glazing. These locations include, but are not limited to ingress and egress doors, sliding (patio) doors, storm doors, glazing in doors and enclosures for hot tubs, saunas, bathtubs and showers. The most noted plan review deficiencies include either fixed or operable panels adjacent to doors and in walls adjacent to walking surfaces.
7. **FOUNDATION DRAINS.** CABO Section R-305.1 requires the installation of foundation drains around all concrete or masonry foundations enclosing habitable or usable spaces located below grade. These drains are frequently omitted from submitted plans.
6. **GARAGE/DWELLING SEPARATION.** CABO Section R-209.2 requires garages to be completely separated from the residence and its attic area by means of ½ inch gypsum board or equivalent applied to the garage side. Further, Section R-209.1 prohibits openings from a private garage directly into a room used for sleeping purposes and states that other openings therein shall be equipped with either solid wood doors

not less than 1 3/8 inches in thickness or 20-minute fire-rated doors, or equivalent. Such separation shall be shown on the drawings.

5. **DWELLING UNIT SEPARATION.** CABO Section R-218.1 requires dwelling units in two-family dwellings to be separated from each other by wall and/or door assemblies of not less than one-hour fire-resistive rating when tested in accordance with ASTM E119. The required hourly rating and listing number of these assemblies, while frequently omitted, is required to be shown on the plans.
4. **SLEEPING ROOM EGRESS.** CABO Section R-210.2 requires that every sleeping room shall have at least one operable window or exterior door approved for emergency egress or rescue. While most sleeping rooms are provided with exterior openings, the most frequent deficiencies are incorrect size of openings (5 square feet for grade floor, and 5.7 square feet net clear opening for above grade rooms with minimum dimensions of 20 inches wide and 24 inches high) and incorrect sill height (no greater than 44 inches above finished floor allowed). The sill height is particularly problematic in basement sleeping rooms where compliance with the requirement frequently places the window far below grade level.
3. **STRUCTURAL SLAB REQUIREMENTS.** CABO Section R-603.2.1 states that the fill depth under concrete floor slabs shall not exceed 24 inches for clean gravel or sand or 8 inches for earth. Due to typical excavation techniques employed for garages, the area under the floor slab is commonly excavated to a depth of 36 inches (required frost depth) over the entire garage area to facilitate footing construction. Backfilling this area would result in greater fill depth than permitted by code. Therefore, where such a situation is anticipated, the applicant shall show on the plans a structural slab solution which is adequate for the conditions involved. As a service to our customers, DCA has assembled a series of standard garage slab details for this purpose. They can be found in DCA Information Bulletin Number 114, which is available at any DCA Office or on the DCA website at www.kcmo.org.
2. **LUMBER SPECIFICATIONS.** CABO Sections R-602.1 and R-702.1 require that all load-bearing dimension lumber for floor joists, beams, girders, ceiling joists and trusses shall conform to applicable standards or grading rules and shall be so identified by a grade mark or certificate of inspection issued by an approved agency. Sections R-602.2.1 and R-702.3 state that the clear spans for such members shall not exceed the values set forth in Appendix B. DCA requires the spans, species, grade and dimensions of all structural members to be described on the plans. This permits the evaluation of the structural adequacy of the proposed plan prior to construction, thereby eliminating costly changes in the field due to overspanned members.
1. **STRUCTURAL LOAD PATH.** One of the major reasons for requiring the submittal of plans for one- and two-family dwellings is to assure structural adequacy of the design. Due to the nature of wood frame construction, bearing walls are typically used to transfer structural loads from the roof to the foundation (with the exception of first floor loads which are often accommodated by a steel beam). However, the desire for flexibility in room design sometimes conflicts with the required location of structural walls. The plans shall show a continuous structural load path to the foundation, without offsets, unless an engineered design, supported by calculations, is submitted which substantiates the adequacy of the proposed alternate design.

The mission of the DCA One- and Two-Family Dwelling Plans Review Branch is to provide timely, accurate review of plans for code compliance. Careful attention to critical design issues such as those listed above will help DCA and our customers achieve those goals. For any questions regarding this subject or any other code requirements, feel free to call the DCA Plans Review office at (816) 513-1500 and select option number 5. □

DCA INTERPRETATIONS

<u>#/CODE</u>	<u>QUESTION</u>	<u>ANSWER</u>
CI2001-015 1991UBC Sec. 705, 905; 1997 UPC Sec. 413.2.1	May required toilet facilities for two-story buildings of Group B or H occupancy be located in another building conveniently adjacent thereto on the same property?	Yes. While 1997 UPC Section 413.2.1 permits a maximum vertical travel of one story, 1991 UBC permits these facilities to be located in another building conveniently adjacent thereto on the same property. However, the facilities in the adjacent building shall be located on the ground floor level and the total travel distance shall not exceed that which is specified in 1997 UPC 413.5.
CI2001-016 Code of Ordinances Sec. 18-15 (b) (1) d.	When determining the requirements for building permits for retaining walls for the purposes of KCMO Code of Ordinances Section 18-15 (b) (1) d., what is the definition of "adjacent to the public right-of-way"?	For the purpose of this code section, "adjacent to the public right-of-way" shall mean the setback of the retaining wall from the right-of-way is less than the height of the wall above grade. Therefore, a building permit is required to construct any retaining wall that is set back from the right-of-way a distance that is less than the height of the retaining wall.
CI2002-001 1991 UBC Sec. 503 (b)	May occupancy separation walls be terminated at the bottom membrane of a fire-resistive floor- or roof-ceiling assembly?	No. Section 503 (b) requires occupancy separation walls to form a complete separation, whereas, termination at the lower membrane of a fire-resistive floor- or roof-ceiling assembly does not afford a complete separation in the form of a listed assembly of the required rating. Therefore, such walls shall extend to the underside of the floor or roof deck above.

DCA PLANS REVIEW AVERAGE TURNAROUND TIMES

FOUR-WEEK AVERAGES AS OF JUNE 3, 2001

New Commercial Buildings and Additions	3.7 weeks/plan
One- and Two-Family Dwellings	1 day/plan
All other Projects	0.8 week/plan

*FROM THE FILES...
REAL CODE MODIFICATION REQUEST CASE HISTORIES*

SMOKE/HEAT VENTING AND CURTAIN BOARDS

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

The KCMO Code of Ordinances, Section 18-6, states, “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’s name, and the proposed code alternate. Once this form and the required application fee have been submitted, 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 attempting to answer that question by presenting actual CMR case histories that have been **APPROVED** by DCA.

The request currently under consideration regards a new, 57,000 square foot, Type 2-N, Group B-2, warehouse building which is provided with an early-suppression, fast-response sprinkler system throughout. UBC Section 3206 (a) requires this building to be provided with automatic smoke and heat venting and curtain boards. In lieu thereof, the applicant proposes the elimination of curtain boards and to provide a manually activated mechanical smoke and heat removal system. The applicant further notes that the Factory Mutual listing information for the sprinkler system states that automatic smoke and heat venting and curtain boards would be detrimental to the operation of the system. The concept of this request was determined to meet the intent of the code and was approved on the condition that the proposed mechanical system could be shown to exhaust a quantity equal to that which would be provided by the automatic vents and that the location and means of the mechanical system controls be approved by the Fire Department.

While the elimination of automatic smoke and heat venting and curtain boards was determined to be in accordance with the listing of the fire protection system, an equivalency was required to accomplish the task of smoke removal. Since this system is primarily for use by the Fire Department, their input was deemed critical to the design of the control system. Be sure to watch future editions of the *Code Connection* for more informative and interesting tales from the CMR files. □



QEI'S GET ELEVATOR RESCUE PRACTICES TRAINING

The Departments of Codes Administration's staff of Nationally "Certified/Qualified" Elevator Inspectors (QEI) attended the State of Missouri, Fire and Rescue Training Institute's Elevator Rescue Practices Course held June 2nd and 3rd in Jefferson City, Missouri. The training was part of the 2001 Summer Fire Training School, administered by the University of Missouri-Columbia for the Division of Public Safety. DCA's goals for participating in the continuing education program for the elevator industry were to maintain the QEI national certification of our inspectors, enhance training and retention, and promote quality assurance, competence and confidence. The "Elevator Rescue Practices" classes provided training vital to the safety and professional development of those attending, including elevator industry inspection professionals, firefighters, and engineering professionals. There was a good mix of participants from each discipline gathered; and they shared their knowledge, training, and past safety-related experiences. The experience instilled in our inspection team the importance of providing inspection services that provide the highest level of safety possible for the public and fire-fighting professionals as required by ASME A17.1/A17.3. Fire-fighting professionals need properly working elevator equipment to provide rescue services and fight fires safely in a fire emergency. The training included a series of "hands on" field exercises using a working elevator at a State building. Using their roped support harnesses, DCA inspectors worked closely with the firefighters and gained a special appreciation for firefighters who are subjected to risks on a daily basis. The group started the class as individuals and ended as a team, working together and sharing concerns and ideas. □

Code Connection

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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 513-1500 (option 4)
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:

FAX Permit Process..... FAX 513-1456
FAX Inspection Requests FAX 513-1536
FAX Publications Purchases..... FAX 513-1456
FAX One- and Two-Family Plans Branch..... FAX 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 from DCA.

1. **Chapter 18, Kansas City Building Code** and related ordinances.
This is the building code adopting ordinance and contains local amendments to the adopted model codes. Price: \$6.00
2. **Special Inspections Program Manual.** Price: \$5.00
3. **Fee Schedule.** Price: \$2.50

To order, send a check payable to "City Treasurer" to:

Publications Order	You may FAX
DCA City Hall Permit Center	your order and pay
18th Floor, City Hall	by credit card. Call
414 East 12th Street	513-1500 for forms.
Kansas City, Missouri 64106	We'll FAX to you.

The following publications are available from the City Planning & Development Department 513-2846 FAX 513-2838).

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

The following publications may be available from the International Conference of Building Officials Local Office (455-3330 FAX 454-8887).

1. **1991 Uniform Building Code**
2. **1993 National Electrical Code**
5. **1992 CABO One & Two Family Dwelling Code**
6. **1993 Amendments to the CABO One & Two Family Dwelling Code**
7. **1997 Uniform Plumbing Code**
8. **1997 Uniform Mechanical Code**