CHAPTER IV. BUILDINGS AND CONSTRUCTION

ARTICLE 8. ENERGY CONSERVATION CODE

SECTIONS

ARTICLE 8. ENERGY CONSERVATION CODE

4-801. **INTERNATIONAL ENERGY CONSERVATION CODE ADOPTED.** There is hereby incorporated by reference that certain code known as the International Energy Conservation Code, 2012 edition, prepared and published in book form by the International Code Council, Inc., including appendices save and except such articles, sections, parts or portions as are hereafter omitted, deleted, modified or changed, or added thereto, such incorporation being authorized by K.S.A.§ 12-3009 through 12-3012, as amended. No fewer than three copies of said Code shall be marked or stamped "Official copy as incorporated by Ordinance No. 2598C" with all sections or portions thereof intended to be omitted or changed clearly marked to show any such omission or change and to which shall be attached a copy of this ordinance, and filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

(Ord. 2296C; 02-04-08)
(Ord. 1935C; 01-22-02)

4-802. **INTERNATIONAL ENERGY CONSERVATION CODE AMENDED; SECTION 101.1. TITLE.** Section 101.1 is hereby amended to read as follows: **Title.** This code shall be known as the *International Energy Conservation Code* of the City of Leawood, Kansas, and shall be cited as such. It is referred to herein as this code or this *Energy Code* of the City of Leawood, Kansas.

(Ord. 2598C; 12-03-12)
(Ord. 2296C; 02-04-08)
(Ord. 1935C; 01-22-02)

4-803. **INTERNATIONAL ENERGY CONSERVATION CODE DELETIONS.** The following provisions of the 2012 International Energy Conservation Code, as adopted, shall be deleted and not applicable under this Code:

(a) Section C107 Fees
(b) Section C108 Stop Work Order
(c) Section C109 Board of Appeals
(d) Section R107 Fees
(e) Section R108 Stop Work Order
(f) Section R109 Board of Appeals

(Ord. 2598C; 12-03-12)
(Ord. 2296C; 02-04-08)
(Ord. 1935C; 01-22-02)

4-804. **INTERNATIONAL ENERGY CONSERVATION CODE; SECTION R401.2 COMPLIANCE.** Section R401.2 is hereby amended to read as follows:

R401.2 Compliance. Projects shall comply with Sections identified as "mandatory" and with either sections identified as "prescriptive" or the performance approach in Section R405.

EXCEPTION: Structures certified to meet or exceed the energy efficiency standards of the 2009 International Energy Conservation Code (IECC) through a simulated energy performance analysis conducted by a nationally certified energy auditor (for example, a HERS rating of 85 or lower) shall be exempted from the requirements of Chapter 11. The energy auditor shall present their national certification credentials for review and approval by the Building Official prior to issuance of the permit, and no Certificate of Occupancy shall be issued for the structure until documentation from the auditor certifying 2009 IECC performance compliance is submitted to and approved by the Building Official.

(Ord. 2598C; 12-03-12)
(Ord. 2296C; 02-04-08)
(Ord. 1935C; 01-22-02)

4-805. INTERNATIONAL ENERGY CONSERVATION CODE; TABLE R402.1.1. Table R402.1.1 is hereby amended to read as follows:

Table R402.1.1
Insulation and Fenestration Requirements by Component [a]

Climate Zone	Fenestration U-factor[b]	Skylight U-factor[b]	Glazed Fenestration SHGC[b]	Ceiling R-Value[f]	Wood Frame Wall R-Value	Mass Wall R-Value[e]	Floor R-Value	Basement Wall R-Value[c]	Slab R-Value & Depth[d]	Crawl Space Wall R-Value[c]
4	0.35	0.55	0.4	49	13[g]	8/13	19	10/13	10, 2 ft	10/13

a. R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
c. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement walls.
d. R-5 shall be added to the required slab edge R-values for heated slabs.
e. The second R-value applies when more than half the insulation is on the interior of the mass wall.
f. Loose-fill insulation shall be installed at the rate recommended by the manufacturer's statement "so many bags per 1000 sq ft." Where the pitch of the roof restricts the "minimum thickness" at the exterior wall line, the insulation shall be blown into the cavity so as to achieve a greater compacted density to a point where the "minimum thickness" can be achieved. An alternative is to install high-density batts around the perimeter edge per R402.2.
g. Where 2 x 6 framing is used, a minimum R-19 insulation is required.

(Ord. 2598C; 12-03-12)

4-806. INTERNATIONAL ENERGY CONSERVATION CODE; SECTION R402.4.1.2 TESTING. Section 402.4.1.2 is hereby amended to read as follows:

R402.4.1.2 Testing. Where required by the Building Official, the building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding 5 air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). Testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the Code Official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weather-stripping or other infiltration control measures;
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully open.

(Ord. 2598C; 12-03-12)

4-807. INTERNATIONAL ENERGY CONSERVATION CODE; SECTION R403.2.2 SEALING (MANDATORY). Section R403.2.2 is hereby amended to read as follows:

R403.2.2 Sealing (mandatory). Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with the International Mechanical Code or International Residential Code, as applicable.

EXCEPTIONS:

1. Air-impermeable spray foam products shall be permitted to be applied without additional joint seals.
2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.

3. Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures less than two inches (2") of water column (500 Pa) pressure classification shall not require additional closure systems.

Where required by the Building Official, duct tightness shall be verified by either of the following:

1. Postconstruction test: Total leakage shall be less than or equal to 4 cfm per 100 square feet of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.
2. Rough-in test: Total leakage shall be less than or equal to 4 cfm per 100 square feet of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to 3 cfm per 100 square feet of conditioned floor area.

EXCEPTIONS:

1. The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope.
2. On the postconstruction test, it is permissible to test for "leakage to the outdoors" versus a "total leakage." Leakage to the outdoors shall be less than or equal to 8 cfm per 100 square feet of conditioned floor area.

(Ord. 2598C; 12-03-12)

4-808. INTERNATIONAL ENERGY CONSERVATION CODE; SECTION R403.2.3, BUILDING CAVITIES (MANDATORY), DELETED. Section R403.2.3 is hereby deleted.

(Ord. 2598C; 12-03-12)

4-809. INTERNATIONAL ENERGY CONSERVATION CODE; SECTION R403.4.2 HOT WATER PIPE INSULATION (PRESCRIPTIVE). Section R403.4.2 is hereby amended to read as follows:

R403.4.2 Hot water pipe insulation (Prescriptive). Insulation for hot water pipe with a minimum thermal resistance (R-value) of R-3 shall be applied to the following:

1. Piping located under a floor slab.
2. Buried piping.
3. Supply and return piping in recirculation systems other than demand recirculation systems.

(Ord. 2598C; 12-03-12)

4-810. INTERNATIONAL ENERGY CONSERVATION CODE; SECTION 404.1 LIGHTING EQUIPMENT (MANDATORY). Section R404.1 is hereby amended to read as follows:

R404.1 Lighting equipment (Mandatory). Fuel gas lighting systems shall not have continuously burning pilot lights.

(Ord. 2598C; 12-03-12)

4-811. INTERNATIONAL ENERGY CONSERVATION CODE, PENALTIES. Any person violating any provision of this Article or this code is guilty of a public offense, punishable by a fine of not more than five hundred dollars ($500) or by imprisonment not exceeding thirty (30) days or both such fine and imprisonment. Each day that the violation continues shall be deemed a separate offense.

(Ord. 2598C; 12-03-12)