MINUTES OF MEETING OF
BOARD OF ELECTRICAL APPEALS

September 16, 2014 - 3:00 p.m.

METROPOLITAN AREA BUILDING & CONSTRUCTION DEPARTMENT
SEDGWICK COUNTY PUBLIC WORKS BUILDING
1144 SOUTH SENECA
BASEMENT CONFERENCE ROOM

Members: Cole Hawkins, Mike Kilian, Richard "Butch" Kretchmar, John Murrell, Tony Naylor, Ernie Nelson, Brad Ragland

Present: Hawkins, Naylor, Nelson, Ragland, Kretchmar, Kilian, Murrell

Staff Present: Tom Kerschen, (MABCD); Brad Crisp (City of Wichita Fire Dept.); Jeff Vanzandt (City of Wichita Law Dept.)

The meeting was called to order by Board Chairman Ragland at 3:02 p.m.

Board Member Hawkins made a motion to approve the August 12, 2014 minutes. Board Member Kretchmar seconded the motion. The motion carried.

There was no one present to speak on the Public Agenda.

The recent examination results from Prometric and ICC for electrical examinations administered by their office for Metropolitan Area Building and Construction Department approved applicants were presented to the Board. The results were as follows:

APPLICANT NAME	APPLICANT NUMBER	EXAMINATION CLASSIFICATION	EXAMINATION RESULT
Jonathan Gray	8862	Master Elec	Failed
Brady Martin	8072	Master Elec	Failed
Joshua Baldridge	2303	Journeyman Elec	Failed
Richard Claycamp	5439	Journeyman Elec	Failed
Andrew Crawshaw	7715	Journeyman Elec	Failed
Andrew Hutcherson	6475	Journeyman Elec	Failed
Jesse Kerr	9401	Journeyman Elec	Failed
Jay Wassall	0495	Journeyman Elec	Failed
James Floyd	2373	Res. Wireman	Failed
Joshua McNeill	1366	Res. Wireman	Failed
Justin Schneider	6922	Res. Wireman	Failed

Two (2 Master Electrician, three (3) Journeyman Electrician, and one (1) Electrical Elevator Mechanic applications were reviewed for approval to be administered the appropriate examination for certification. The results were as follows:

NAME	NUMBER	CLASSIFICATION	ACTION
Randy Gehring	5943	Master Elec	Approved
William Wright	7820	Master Elec	Approved

Richard Claycamp	5439	Journeyman Elec	Approved
Andrew Crawshaw	7715	Journeyman Elec	Approved
Andrew Hutcherson	6475	Journeyman Elec	Approved
Brian Ross	8628	Elevator Mech	Approved

There was two (2) new Electrical Contractor Licenses issued since August 12, 2014:

COMPANY NAME	QUALIFIED PERSON
K & H Electric	Kevin White
Heineken Electric Co Inc	Kyle Heineken

Unfinished Business
The Board reviewed the proposed changes, for content, to the Wichita/Sedgwick County Unified Building and Trade Code (UBTC). The proposed changes will recommend the adoption of the 2014 National Electrical Code as well as a few changes to the UBTC as follows:

Sec. 4.A.080. - Electrical inspectors—Appointments—Duties.
All electrical inspectors shall have had a minimum of five (5) years of practical experience in this field as a Journeyman or Master and hold a current electrical certificate and shall be duly appointed pursuant to the requirements set forth by the Director of the MABCD. Persons in the employ of the MABCD who are duly certified as residential combination inspectors or residential electrical inspectors by the International Conference of Building Officials or by the International Code Council shall also be qualified as electrical inspectors for one and two-family residential structures and their accessory structures. Each inspector shall be duly appointed pursuant to the requirements set forth by the Director of the MABCD.

Sec. 4.1.020. - Electricians' certificates—Application—Examination.
Applications for examination for a master electrician's certificate or a journeyman electrician's certificate or a residential wireman electrician's certificate shall be made to the office of the MABCD. The fee for an examination for a master electrician, journeyman electrician or residential wireman electrician shall be established by the Director of the MABCD, to cover the administrative costs.
Applicants for master electrician examination shall provide written documented proof of having a valid journeyman electrician certificate for a minimum of two (2) years.
Applicants for journeyman electrician and residential wireman electrician shall provide written documented proof of at least two (2) years field experience in the electrical construction industry. "Field experience" means working under the direct supervision of a person having a valid journeyman certificate or master certificate or attending an accredited electrical trade school. No more than one (1) year of the requirement may be satisfied by trade related schooling. Schooling shall consist of a minimum of 930 hours classroom training. Documentation shall be the following:
Written letter on company letterhead from employer(s) stating job description and dates of employment and signed by a person qualified in the electrical trade; and
Copy of a transcript or attendance record from an accredited electrical trade school.
The electrical examination will be administered in accordance with K.S.A. 12-1525 and amendments thereto, with a minimum passing score of seventy-five percent (75%).

Sec. 4.1.110. - Electrical permit required—Fees listed. See Article 1.2 of this Code
It is unlawful for any person to do or cause to be done any electrical wiring for light, heat or power in or on any building or structure or on any premises in the MABCD jurisdiction without first obtaining a permit from the office of MABCD. Applications for permits shall be made on forms furnished by

MABCD, duly executed and signed by a person properly authorized to obtain permits for the applicant. The application may be presented in person, by electronic media or by mail and accompanied by the fee as listed in Article 1.2 of the Code.

Sec. 4.2.010. - Installation standards.

All electrical installations made shall be in strict conformity with the provisions of this Code. If sections contained within this Code, in a given situation, do not prescribe a specific type or class of material or specific standards of construction, then the standards as set forth and contained in the National Electrical Code, 2014 Edition including Informative Annex C (Conduit and Tubing Fill Tables), as published by the National Fire Protection Association as N.F.P.A. No. 70-2014, as presently constituted and as may be hereinafter amended, shall apply with the exception of Section 110.16; Section 110.24; Section 200.6(d); Section 210.4(b); Section 210.5(c)(1); Section 210.12; Section 210.52(c)(1) Exception; Section 230.24(A) Exception No. 5; Section 230.40; Section 250.68(a) Exception No. 2; Section 300.4(H); Section 300.11(a)(2); Section 314.28; Section 334.10; Section 334.12(a)(1); Section 334.40(b); Section 334.80; 410.64; Section 430.22(G)(1); Section 430.22(G)(2); Section 514.11(A); Section 590.4(D); Section 590.6(B)(2); and Section 680.8; of such publication. Said N.F.P.A. No. 70-2014, was adopted by the National Fire Protection Association at its 2013 June Technical Session and approved as an American National Standard on August 21, 2013. By this publication, all provisions of such publication, with noted exceptions, are adopted by reference and made a part of this Code, and this Section as though fully set forth herein.

Sec. 4.2.055. – Feeder or Branch circuit disconnects, location.

Article 225.32 of the National Electrical Code shall be amended to read:

The disconnecting means shall be installed either inside or outside of the building or structure served or where the conductors pass through the building or structure. The disconnecting means, if installed on the exterior of the building or structure, shall be at a readily accessible location nearest the point of entrance of the conductors. The disconnecting means, if installed inside the building or structure, shall be at a readily accessible location and located so the total length of conductor shall not be extended more than fifteen (15) feet inside of the building or structure. For the purposes of this section, the requirements of 230.6 shall be utilized. NEC exceptions permitted.

Sec. 4.2.070. - Conductor requirements.

A. *Commercial and Industrial.*

(1) *Type.* All commercial and industrial wiring conductors rated two hundred (200) amperes or less, including all service conductors required to be installed by the licensed electrical contractor, shall be copper. For parallel conductors, each individual conductor of a parallel set shall meet the requirements of this section. Parallel conductors are not to be considered a single conductor.

Exception. Feeder circuit and branch circuit conductors rated one hundred (100) amperes or more, may be aluminum or copper-clad aluminum, provided panelboards or disconnect switches served by such circuits are marked by the manufacturer as being suitable for aluminum or copper-clad aluminum termination.

(2) *Minimum Size.* The minimum size conductors shall be No. 12 AWG copper, except smaller sizes will be acceptable for control wiring.

B. *Residential.*

All residential and accessory building wiring conductors less than ninety (90) amperes shall be copper.

Note: Grounding conductors installed in the same raceway or cable with the above listed aluminum conductors may be allowed to be aluminum when sized per Article 250 of the currently adopted National Electrical Code.

Sec. 4.2.125. - Type NM, NMC and NMS cable ampacity.
The ampacity of Types NM, NMC, and NMS cable shall be determined in accordance with Table 310.15(B)(16) of the National Electrical Code. The ampacity shall be in accordance with the 60°C (140°F) conductor temperature rating.

Sec. 4.2.170. - Conduit bodies.
Section 314.28 of the National Electrical Code shall be amended to read as follows: Boxes and conduit bodies trade size over two (2) inches used as pull or junction boxes shall comply with 314.28(A) through (E).

Sec. 4.2.175. - Arc-Fault Circuit-Interrupter Protection.
A listed arc-fault circuit interrupter shall be installed to provide protection as required in (A), (B) and (C).
(A) Dwelling Unit Bedrooms. All 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in dwelling unit bedrooms shall be protected by a listed arc-fault circuit interrupter, combination type installed to provide protection of the branch circuit.

Exception: The location of the arc-fault circuit interrupter shall be permitted to be at other than the origination of the branch circuit in compliance with (a) and (b):

(a) The arc-fault circuit interrupter installed within six (6) feet of the branch circuit overcurrent device as measured along the branch circuit conductors.

(b) The circuit conductors between the branch circuit overcurrent device and the arc-fault circuit interrupter shall be installed in a metal raceway or a cable with a metallic sheath.

(B) Branch Circuit Extensions or Modifications — Dwelling Units. In any of the areas specified in 4.2.175(A) of this Code, where branch-circuit wiring is modified, replaced, or extended, the branch circuit shall be protected by one of the following:

(1) A listed combination-type AFCI located at the origin of the branch circuit

(2) A listed outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit

Exception: AFCI protection shall not be required where the extension of the existing conductors is not more than six (6) feet and does not include any additional outlets or devices.

(C) Dormitory Units. All 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in dormitory unit bedrooms shall be protected by a listed arc-fault circuit interrupter meeting the requirements of 4.2.175(A) of this Code, including exceptions.

Sec. 4.2.185. - Receptacles in countertops not to be installed face-up. (Repealed)

Sec. 4.2.190. - Receptacles in wet locations. (Repealed)

Section 4.2.205 – Permitted use of Underground Residential Distribution (URD) cable
Underground Residential Distribution (URD) cable may be installed as an approved wiring method for outdoor use only, with the following restrictions.

(a) Permitted for outdoor use only, installed direct buried or in a raceway.
(b) Minimum size shall be #2 Aluminum.
(c) The phase conductors and the neutral conductor shall be the same size.
(d) The phase conductors and the neutral conductor insulation shall be identified as USE.
(e) The Neutral conductor shall be properly identified per the National Electrical Code.
(f) Grounding conductor, if needed, shall be a minimum of #2 aluminum or #6 copper and shall be insulated.

(g) The ampacity of the conductors must comply with the values for the respective size and conductor material as listed in the seventy-five degree (75%) column of the Ampacity Tables of the latest adopted edition of the National Electrical Code.

Sec. 4.2.220 - Conduits exposed to sunlight on rooftops.
Where conductors or cables are installed in conduits with a horizontal length exceeding six (6) feet and exposed to direct sunlight on or above rooftops, the adjustments shown in Table 310.15(B)(3)(c) of the National Electrical Code shall be added to the outdoor temperature to determine the applicable ambient temperature for application of the correction factors in Table 310.15(B)(16) and Table 310.15(B)(18) of the National Electrical Code.

Sec. 4.2.240 – Listing of Signs. 2014 NEC Article 600.3
Effective January 1, 2016. All fixed, mobile, or portable electric signs, section signs, outline lighting, and retrofit kits, regardless of voltage, shall be listed, provided with installation instructions, and installed in conformance with that listing, unless otherwise approved by special permission of the Code Official.
(A) Field-Installed Skeleton Tubing. Field-installed skeleton tubing shall not be required to be listed where installed in conformance with this Code.
(B) Outline Lighting. Outline lighting shall not be required to be listed as a system when it consists of listed luminaires wired in accordance with this Code and Chapter 3 of the 2014 National Electrical Code.

Board Member Naylor made a motion to accept the above proposed amendments for presentation and recommendation to the County Commission and City Council for adoption and adding into the UBTC. Board Member Kretchmar seconded the motion. The motion was approved. (7-0)

New Business
Fire Marshal Crisp handed the Board a checklist he designed with the input from City and County departments, State Fire Marshal, parties interested in installing CNG stations in Wichita and Sedgwick County and would like to get the building and trade Boards input. The purpose of the check list is to help in directing parties that wish to install CNG facilities a basic list of steps to follow as well as giving the departments involved with information that will help in making informed decisions to promote consistency on the installations. The Board looked over the checklist and asked Fire Marshal Crisp questions, addressed concerns with the installations and make suggestions to the checklist.
Fire Marshal Crisp asked to the Board to contact Mr. Kerschen should they have any other ideas or suggestions and thanked the Board for their time.

With no other business to conduct, Board Member Kilian made a motion to adjourn. Board Member Naylor seconded the motion. The motion was approved.

The meeting adjourned at 4:00 p.m.