CITY OF BELLEVUE, WASHINGTON

ORDINANCE NO. 5303

AN ORDINANCE relating to adoption of the 1999 Edition of the National Electrical Code, addition of permit and inspection requirements for data and telecommunications systems, and standardization of electrical regulations between Bellevue and surrounding jurisdictions; amending Sections 23.30.010, 23.30.020, 23.30.025, 23.30.030, 23.30.100; 23.30.110 and 23.30.130; and adding new sections 23.30.040 on Receptacles, 23.30.140 on Emergency Systems and 23.30.150 on Communication Class 2 and Class 3 Cables of the Electrical Code chapter of the Bellevue City Code.

THE CITY COUNCIL OF THE CITY OF BELLEVUE, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section 1. Section 23.30.010 of the Bellevue City Code is hereby amended as follows:

23.30.010 Short title.

This chapter shall be known as the electrical code of the city of Bellevue, which is hereinafter referred to as the "city of Bellevue electrical code," “electrical code" or as "this code."

Section 2. Section 23.30.020 of the Bellevue City Code is hereby amended as follows:

23.30.020 National Electrical Code - Adopted as amended, added to and excepted.

The National Electrical Code (NFPA 70), 1999 Edition including Appendices A, B and C, the most current edition of Centrifugal Fire Pumps (NFPA 20), Health Care Facilities (NFPA 99), Emergency and Standby Power Systems (NFPA 110), and Safety Standards—Installing Electric Wires and Equipment—Administrative Rules Chapter 296-46A WAC, issued pursuant to Chapter 19.28 RCW are adopted and shall be applicable within the city, as amended, added to or excepted in this chapter. Where there is any conflict between the National Electrical Code (NFPA 70), the city of Bellevue electrical code, Centrifugal Fire Pumps (NFPA 20), Health Care Facilities (NFPA 99), or Emergency Standby Power Systems (NFPA 110), the National Electrical Code (NFPA 70) shall take precedence.

Section 3. Section 23.30.025 of the Bellevue City Code is hereby amended as follows:

23.30.025 Permit requirements and exemptions.

A. In accordance with chapter 19.28 RCW, an electrical permit is required for the following installations:

1. The installation, alteration, repair, or maintenance of all electrical systems, wire and electrical equipment regardless of voltage.

2. All installations of telecommunications systems on the customer side of the network demarcation point for projects greater than ten telecommunications outlets.

3. All backbone installations regardless of size and all telecommunications cable or equipment installations involving penetrations of fire barriers or passing through hazardous locations require permits and inspections.

4. The installation of greater than ten outlets and the associated cables along any horizontal pathway from a telecommunications closet to work areas during any continuous ninety-day period requires a permit and inspection.

5. In Group R, Division 1 occupancies as defined in the building code, permits and inspections are required for all backbone installations, all penetrations of fire resistive walls, ceilings and floors; and installations of greater than ten outlets in common areas.

6. Definitions of telecommunications technical terms will come from chapter 19.28 RCW or the currently adopted rules, EIA/TIA standards, and National Electrical Code.

B. An electrical permit shall not be required for the following:

1. Portable motors or other portable appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved receptacle when that cord or cable is permitted by the National Electrical Code;

2. Repair or replacement of fixed motors, transformers or fixed approved appliances or devices rated 50 amps or less which are like-in-kind in the same location;

3. Temporary decorative lighting;

4. Repair or replacement of current-carrying parts of any switch, conductor or control device which are like-in-kind;

5. Reinstallation of attachment plug receptacles, but not the outlets therefor;

6. Repair or replacement of any over current device which is like-in-kind in the same location;

7. Repair or replacement of electrodes or transformers of the same size and capacity for signs or gas tube systems;

8. Taping joints;

9. Removal of electrical wiring;

10. Telecommunications outlet installations within the individual dwelling units of group Group R, Division 1 and Group R, Division 3 occupancies.

11. All telecommunications installations within Group R, Division 3 occupancies as defined in the building code;

12. The installation or replacement of cord and plug connected telecommunications equipment or for patch cord and jumper cross-connected equipment;

13. Listed wireless residential security systems where power is supplied by a listed Class 2 plug in transformer.

14. A permit shall not be required for the installation, alteration or repair of electrical wiring, apparatus or equipment or the generation, transmission, distribution or metering of electrical energy or in the operation of signals or the transmission of intelligence by a public or private utility in the exercise of its function as a serving utility.

C. Exemption from the permit requirements of this code shall not be deemed to grant authorization for work to be done in violation of the provisions of the National Electrical Code or other laws or ordinances of the city.

Section 4. Section 23.30.030 of the Bellevue City Code is hereby amended as follows:

23.30.030 Removal of unused conductors.

Electrical conductors, regardless of voltage, and communication cables not in use shall be removed unless otherwise authorized by the building official.

Section 5. A new Section 23.30.040 of the Bellevue City Code is hereby added as follows:

23.30.040 Receptacles.

A. All 125 volt, single phase, 15 and 20 ampere receptacles installed within 6 feet of any sink, fixed water source or a normally wet or damp location shall be provided with ground fault circuit-interrupter protection for personnel.

Exception: The laundry receptacle when installed within the dedicated wall space occupied by the clothes washer.

B. All 125 volt, single phase, 15 and 20 ampere receptacles installed outside shall be provided with ground fault circuit-interrupter protection for personnel.

Exception: Subject to approval of the building official a dedicated single receptacle which is not readily accessible or is located in dedicated space, which is intended for utilization equipment, electric snow melting or deicing equipment;

C. At least one 125 volt, single phase, 15 or 20 ampere receptacle shall be installed in each room or office in other than residential occupancies, except restrooms and rooms used exclusively for storage.

Exception: Subject to the approval of the building official, other areas where receptacles are unlikely to be needed.

Section 6. Section 23.30.100 of the Bellevue City Code is hereby amended as follows:

23.30.100 Service entrance conductors and outside feeders.

Service entrance conductors shall be installed in the following manner:

A. Where current limiters are permitted, they shall be installed in an approved enclosure, and labeled "current limiters,"

B. Service entrance conductors shall be installed in an approved electrical raceway system except that single-family dwellings and two-family (duplex) dwellings may be served with approved direct burial cable; provided such cable shall be sleeved under paving. All service entrance conductors where installed underground must be buried to a minimum depth of 24 inches below finished grade and installed to conform to Sections 230(d) and 300-5 of the National Electrical Code.

C. Conduit used as a means of support for overhead service conductors or feeders shall be a minimum of 2 inch rigid steel galvanized conduit.

Exception: Existing conduit where the conductors for the service or feeder remains the same size and the conduit is capable of safely supporting the strain of overhead service-drop conductors or feeders.

D. Where a service disconnecting means is located outside of a building or structure served in accordance with National Electrical Code 230-70 it must be installed on the building or structure served at a readily accessible location.

E. Where a feeder disconnecting means required by National Electrical Code 225-32 is located outside of a building or structure it must be installed on the building or structure served at a readily accessible location.

Exception: Feeders from an on-site generator located not more than 15 feet from the building or structure served, provided all of the following conditions are met:

1. The feeders are protected from overcurrent at the generator by a listed circuit breaker or set of listed fuses sized for the feeders in accordance with National Electrical Code 310-15.

2. A grounding electrode system is installed at the generator location which is connected to the grounded conductor where available and the generator feeder disconnect enclosure.

3. A permanent plaque or directory with ½ inch high letters listing the locations of all building or structure disconnecting means shall be placed at the generator disconnect and at the feeder disconnect in the building.

F. Where a feeder disconnecting means required by National Electrical Code 225-32 is located inside of a building or structure the disconnect may be located at any readily accessible location which complies with WAC 296-46A-23062(1).

Section 7. Section 23.30.110 of the Bellevue City Code is hereby amended as follows:

23.30.110 Grounding procedures.

Electrical systems shall be grounded in conformance with Article 250 of the National Electrical Code.

A. All required grounding shall be fully installed and visible for inspection at the time of the rough-in inspection.

B. At each new building or structure served a grounding electrode which complies with one of the electrodes described in National Electrical Code 250-50 (a) through (d) shall be required as part of the grounding electrode system. All electrodes shall be inspected prior to covering, concealing or the placing of concrete.

Exception: Job site construction trailers, mobile homes and manufactured homes, when not installed on a permanent foundation.

C. Where rod or pipe electrodes are installed, a minimum of two shall be required. The two electrodes shall be installed no less than 16 feet apart. Rod or pipe electrodes placed horizontally in a trench, and plate electrodes shall not be approved without prior written approval from the building official.

D. Only one rod or pipe electrode is required for temporary power services which are 100 amperes or less.

E. Flexible metal conduit and liquidtight flexible metal conduit shall contain an equipment grounding conductor sized per National Electrical Code Section 250-122.

Section 8. Section 23.30.130 of the Bellevue City Code is hereby amended as follows:

23.30.130 Wiring Methods.

All buildings and structures shall be wired with approved electrical raceway systems or metal clad (M.C.) cable except as further provided in this section.

A. Single-family, duplex, or multifamily dwellings, not exceeding three stories above grade and, outbuildings not exceeding three stories above grade on single-family and two-family (duplex) residential property which serve a direct accessory function to the residence, may be wired in accordance with the National Electrical Code. For purposes of this section, grade is defined in the currently adopted Uniform Building Code.

B. Installations under Articles 720, 725, 770, 800, 810, 820 and 830 may be installed as open cable systems where in conformance with the applicable provisions of the National Electrical Code, chapter 296-46A WAC and this code.

C. Metal clad (M.C.) cable shall not be smaller than #14 AWG copper, with a grounding conductor contained within the outer jacket, approved per National Electrical Code for use only with approved fittings.

Section 9. A new Section 23.30.140 of the Bellevue City Code is hereby added as follows:

23.30.140 Emergency Systems.

A. Fire detection and smoke control systems required by Chapter 4 of the 1997 Uniform Building Code, and installed in accordance with Section 905 of the Uniform Building Code are considered essential for the safety of human life and shall be wired in accordance with Article 700 of the 1999 National Electrical Code and shall meet all of the following requirements:

1. All wiring for smoke control systems, regardless of voltage, initiating devices, all portions of the fire alarm system that are connected to a Signaling Line Circuit, Map-Net, Conventional Loop, Multi-plex or data transfer that will initiate, posture, or report the status of the smoke control system shall be fully enclosed within a dedicated continuous electrical raceway system installed in conformance with the National Electrical Code.

2. Where an EMS (Energy Management System) or BMS (Building Management System) is utilized for smoke control, all conductors dedicated to, or sharing control features with the smoke control system, shall be enclosed within a dedicated continuous electrical raceway system installed in conformance with the National Electrical Code.

3. Power distribution to the smoke control system shall meet the requirements of Section 905.8.1 of the 1997 Uniform Building Code

4. For smoke control systems, all junction boxes shall be substantially red in color and all covers shall be substantially red in color with a yellow diagonal hash mark.

5. All boxes, enclosures, transfer switches, power panels and circuits shall be identified with a permanent label, decal or similar approved means suitable for the environment.

B. Survivability of fire alarm notification and evacuation appliance circuits, fire command center central control unit and/or a remote fire command control unit and associated interconnecting wiring shall be in accordance with NFPA 72, (1999 edition), Section 3-8.4.1.1 and Section 3-8.4.1.3.3

Section 10. A new Section 23.30.150 of the Bellevue City Code is hereby added as follows:

23.30.150 Communication, Class 2 and Class 3 Cables.

A. Cables and raceways for telecommunications, National Electrical Code Class 2 and Class 3 conductors, must be installed in compliance with Chapter 3 of the National Electrical Code unless other methods are specifically allowed elsewhere in the National Electrical Code, Chapter 296-46A, or this code.

B. Telecommunications cable, coaxial cable, optical fiber cables, Class 2 and Class 3 cables when run through spaces above a suspended ceiling must be securely fastened to the building structure. When dedicated support wires are used in accordance with National Electrical Code 300-11(a), cables may be supported from a dedicated #12 gauge or larger wire which is independent of the ceiling support system. The maximum number of cables allowed on one support wire shall not exceed 1½ inches in diameter when bundled together. The support wires must be capable of safely securing and supporting the cables without reducing the structural integrity of the ceiling.

Section 11. This ordinance shall take effect and be in force thirty (30) days after its final passage by the City Council.

Passed by the City Council this 16th day of July, 2001, and signed in authentication of its passage this 16th day of July, 2001.

(SEAL)

Chuck Mosher, Mayor

Approved as to form:
Richard L. Andrews, City Attorney
Lori M. Riordan, Assistant City Attorney

Attest:
Myrna L. Basich, City Clerk

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