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17.01 OBJECT

The purpose of this chapter is to safeguard persons and property and to give assurance of all manner of electrical work being done in a workman like manner, by establishing minimum standards for the installation and maintenance of electrical systems, by regulating and providing for the inspection of the installation and maintenance of electrical wiring, equipment and devices, and providing for the licensing and verification of certification of persons, firms and corporations undertaking electrical work who are certified as per the State of Wisconsin COMM 5 and 17, and fixing a penalty for the violation thereof. Compliance with these standards is intended to result in installations reasonably free from electrical hazards. The standards merely prescribe and establish a reasonable minimum and do not constitute a specification for electrical installations and electrical equipment generally. Specifications for electrical installations are not complete when they only require compliance with this chapter, because of adequacy, suitability, operating efficiency, convenience, finish, appearance, and value of electrical installations may be greatly varied or affected in many respects without departure from the regulations of this chapter.

17.02 SCOPE

- (1) The regulations of this chapter shall apply to the supply of electricity, the licensing and verification of certification status of electricians, and to all sales, rentals, leases, uses, installations, alterations, repairs, removals, renewals, replacements, disturbances, connections, disconnections, and maintenance of all electrical materials, wiring, conductors, fittings, devices, appliances, fixtures, signs, and apparatus, or parts thereof, or attachments therefor, hereafter referred to as electrical equipment, which are intended to be, or are, within, on, under, over, or near, all buildings, structures, equipment, and premises. This electrical code shall apply to all existing installations as well as all new ones.

- ~~(2) The Wisconsin Administrative Code, the Wisconsin Statutes and Annotations, the National Electrical Code (NFPA 70), (NFPA 73) and the State of Wisconsin Electrical Code Chapter COMM 16 Volume One and Volume Two as amended from time to time shall become a part of this Code.~~
- (2) The Wisconsin Administrative Code, the Wisconsin Statutes and Annotations, the National Electrical Code (NFPA 70), (NFPA 73) and the State of Wisconsin Electrical Code Chapter SPS 316 as amended from time to time shall become a part of this Code. (MC#1147)

17.03 INSPECTOR

- ~~(1) The inspector shall be of good moral character and shall be a qualified person well versed in approved methods of electrical construction for safety of life and property, and Statutes of the State of Wisconsin relating to electrical work, the rules and regulations issued to the Department of Commerce, Safety and Buildings Electrical Division under authority of the Statutes, the National Electrical Code of the National Fire Protection Association as referenced by the State of Wisconsin. The inspector shall have met or be able to meet the requirements as set forth by Chapters COMM 5 and 17.~~
- (1) The inspector shall be of good moral character and shall be a qualified person well versed in approved methods of electrical construction for safety of life and property, and Statutes of the State of Wisconsin relating to electrical work, the rules and regulations issued to the Department of Commerce, Safety and Buildings Electrical Division under authority of the Statutes, the National Electrical Code of the National Fire Protection Association as referenced by the State of Wisconsin. The inspector shall have met or be able to meet the requirements as set forth by Chapters SPS 305 and 316. (MC#1147)
- (2) The inspector shall be located in the city hall and shall not be interested, either directly or indirectly, in the installation of wiring, preparation of plant and specifications, sale or manufacture of any material, process or device entering into or used in, or in connection with, electrical installations, except as authorized by the Common Council of the City of Wisconsin Rapids. The Electrical inspection may be utilized for inspection services by other municipalities as agreed to by the Common Council.
- (3) The inspection shall be performed by the electrical inspector, termed inspector, or the assistant. The assistant inspector shall be hired by the Inspector and approved by the common council.
- (4) The city shall reimburse the inspector and assistant for transportation costs accumulated while enforcing this ordinance on the same basis as the other city employees.

~~17.04 BOND AND OATH OF OFFICE~~

- ~~(1) The inspector shall execute a bond to the City of Wisconsin Rapids in the sum of \$5,000, with such sureties as the common council shall approve, conditioned for the faithful performance of his/her duties, the cost of such bond to be assumed by the City of Wisconsin Rapids.~~
- ~~(2) The inspector shall also take and subscribe an oath of office which, together with the certificate of his/her appointment, shall be filed with the city clerk.~~

17.04 OATH OF OFFICE (MC#1147)

The inspector shall take and subscribe an oath of office which, together with the certificate of his/her appointment, shall be filed with the city clerk.

17.05 DUTIES

- (1) The inspector or the assistant shall have the authority to enter all buildings and premises and all parts thereof, except occupied dwellings and then only with the occupant or owner's permission, in order to make an inspection, or test the electrical equipment or wiring contained therein or thereon to enforce the regulations of this chapter.
- (2) It shall be unlawful for any person to refuse lawful entry to the Inspector or the assistant, or to interfere with, harass, abuse, obstruct, or cause delay in the performance of their duties. The inspector or the assistant shall have the authority, and they are hereby empowered to order the removal of any and all obstructions including lath, plaster, lumber, boards, and partitions.
- (3) The inspector, having reasonable cause to believe a violation exists, shall make examinations of electrical wiring and appliances installed within the City of Wisconsin Rapids and when such wires or appliances are found to be in a dangerous or unsafe condition, or not in compliance with this Chapter, he/she shall notify the person, firm, or corporation owning, using, operating, or installing the same to place them in a safe condition. Any person, firm or corporation failing or refusing to make the necessary repairs or changes, and have such completed within 15 days after receipt of such notice, shall be in violation of this Code and the Inspector is hereby empowered with authority to order discontinuance of electrical service to such defective wires or appliances until they have been repaired, removed, or changed as directed by the inspector.

- (4) The electrical inspection in conjunction with the Wisconsin Rapids Municipal Court shall issue citations for violations in matters of noncompliance with all applicable State Statutes, Wisconsin Administrative Code rules, City of Wisconsin Rapids Municipal Codes, or Water Works & Lighting Commission rules.

17.06 INSPECTIONS

- (1) Complete records of all permits issued and inspections made and other official work performed under the provisions of this ordinance shall be kept and so arranged as to afford prompt information concerning electrical installations.
- (2) The inspector may periodically inspect all public buildings and business establishments. He/she may at times deemed necessary by the fire chief, accompany the fire inspector, for inspections, and may make recommendations to correct violations and assist in the investigation of fires of electrical or undetermined origin.
- (3) All electrically operated amusement devices shall be inspected by the inspector and the operator shall comply with his/her recommendations to assure safe operation of this equipment. All carnivals and similar groups must obtain an electrical permit and inspection before operation is started.
- (4) Failure to notify the inspector for an inspection will result in the permit holder removing materials to expose concealed work or, at the discretion of the inspector, result in penalties as outlined in the adopted fee schedule for the first offense and second offense. Third and subsequent violations will result in a citation being issued. (MC#1147)

17.07 AUTHORITY TO DISCONTINUE ELECTRICAL OPERATIONS

The inspector shall have the authority to cause the turning off of all electrical currents to any equipment which is found to be in an unsafe condition, and he/she shall attach an official notice, and cut or discontinue electrical service in cases of emergency and where such electrical currents are dangerous to life or property or any interference with the work of the fire department. No person, firm, or corporation shall reconnect any equipment thus cut off until written permission is given by the inspector.

17.08 APPEAL

Where the inspector refuses to issue a certificate of occupancy on the electrical work of any building, or condemns the same, the owner may, within five business days after receiving written notice from the inspector, file notice of appeal in writing with the Zoning Board of Appeals.

~~17.09 OWNER'S PRIVILEGE~~

~~A property owner may personally install electrical wiring in their own single family residence which is owned and occupied by themselves or to be occupied by themselves as a permanent residence, provided that said owner shall:~~

- ~~(1) Apply for and secure a permit in accordance with succeeding sections.~~
- ~~(2) Pay required fees~~
- ~~(3) Sign an affidavit stating they are responsible for their work and that they will comply with COMM 20.10 regarding these inspections.~~
- ~~(4) Do the work themselves in accordance with this code~~
- ~~(5) Apply for inspections as required~~
- ~~(6) Receive the approval of the inspector~~

17.09 OWNER'S PRIVILEGE (MC#1147)

A property owner may not install a new electric service and main electrical panel on their residence or accessory building unless the owner is a state licensed electrician. A property owner may personally install electrical wiring inside their own single family residence or accessory building, including new sub panels and branch circuits, which is owned and occupied by them or to be occupied by them as a permanent residence, provided that said owner shall:

- (1) Apply for and secure a permit in accordance with succeeding sections.
- (2) Pay required fees
- (3) Sign an affidavit stating they are responsible for their work and that they will comply with SPS 320.10 regarding these inspections.
- (4) Do the work themselves in accordance with this code
- (5) Apply for inspections as required
- (6) Prove their electrical knowledge and receive the approval of the inspector

17.10 CITY AND INSPECTOR NOT LIABLE

This chapter shall not be construed to relieve from or lessen the responsibility or liability of any person supplying electricity to, or selling, renting, owning, using, operating, controlling, installing, altering, repairing, removing, replacing, disturbing, connecting, or maintaining, any electrical equipment, for damages to person or property caused by any

defect herein or therefrom; nor shall the city or its inspector be held as assuming any such responsibility or liability by reason of the issuance or revocation of any license, permit or certificate, or the inspection authorized by this chapter, or by reason of the approval or disapproval of any electrical equipment, sales, rentals, drawings, plans, specifications, materials, samples, test reports, literature, information or schedules, authorized in this chapter.

~~17.11 DEFINITIONS~~

- ~~(1) **Master Electrician:** any one who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters COMM 5 and 17.~~
- ~~(2) **Journeyman Electrician:** any one who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters COMM 5 and 17.~~
- ~~(3) **Electrical Contractor:** any person who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters COMM 5 and 17.~~
- ~~(4) **Electrical Apprentice:** any person, 16 years of age or over who shall enter into any contract of service, expressed or implied, whereby he/she is to receive from or through their employer in consideration of their services, in whole or in part, instruction of the electrical craft. All apprentice electricians shall be indentured and serve an apprenticeship under Chapter 106 of the State Statutes before being eligible to make application for a journeyman electrician license, and may work only under the direct supervision of a master or journeyman electrician, and work in accordance with the guidelines so stated in this chapter.~~
- ~~(5) **Plant Electrician:** shall be a master or journeyman electrician regularly employed as primary occupation, by a firm or corporation and whose electrical work for such employer is limited exclusively to the plant or shop of their employer. These firms assume all responsibility for the plant electrician's performance. These persons shall be state certified by the State of Wisconsin Administrative Code Chapters COMM 5 and 17.~~
- ~~(6) **Limited Licensee:** may be any person, but not a firm or corporation, approved by the city electrical inspector to install, reconnect, or remove specific major electrical appliances or signs as defined in 17.12(5) and under the conditions set forth in 17.12(5).~~
- ~~(7) **Beginning Electrician:** any person who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapter COMM 5 and 17. A beginning electrician may only work under the direct supervision of a master or journeyman electrician. All helpers or trainees shall be certified and shall register with the electrical inspector.~~
- ~~(8) **Residential Wireman:** any person who meets the qualifications of and is designated by the IBEW or another equivalent organization. These persons shall only do wiring in one and two family dwellings or multifamily occupancies under the supervision of a Municipal licensed electrical contractor. (MC#988)~~
- ~~(9) **Material Handler:** any person hired as a general laborer. This person may not directly perform any electrical work or make any electrical connections.~~
- ~~(10) **Electrical Construction or Electrical Work:** The installation of all equipment, wiring, material, fittings, devices, appliances, fixtures and apparatus used for the production, modification, regulations, control, distribution, utilization or safeguarding of electrical energy for mechanical, chemical, cosmetic, heating, lighting or similar purposes as covered by the scope of the Wisconsin State Electrical Code, Volume 2, COMM 16.~~

17.11 DEFINITIONS (MC#1147)

- (1) **Master Electrician:** anyone who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters SPS 305 and 316.
- (2) **Residential Master Electrician:** anyone who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters SPS 305 and 316.
- (3) **Journeyman Electrician:** anyone who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters SPS 305 and 316.
- (4) **Residential Journeyman Electrician:** anyone who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters SPS 305 and 316.
- (5) **Industrial Journeyman Electrician:** anyone who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters SPS 305 and 316.
- (6) **Electrical Contractor:** any person who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapters SPS 305 and 316.
- (7) **Electrical Apprentice:** any person, 16 years of age or over who shall enter into any contract of service, expressed or implied, whereby he/she is to receive from or through their employer in consideration of their services, in whole or in part, instruction of the electrical craft. All apprentice electricians shall be indentured and serve an apprenticeship under Chapter 106 of the State Statutes before being eligible to make application for a journeyman electrician license, and may work only under the direct supervision of a master or journeyman electrician, and work in accordance with the guidelines so stated in this chapter.
- (8) **Plant Electrician:** shall be a master or journeyman electrician regularly employed as primary occupation, by a firm or corporation and whose electrical work for such employer is limited exclusively to the plant or shop of

their employer. These firms assume all responsibility for the plant electrician's performance. These persons shall be state certified by the State of Wisconsin Administrative Code Chapters SPS 305 and 316.

- (9) Limited Licensee: may be any person, but not a firm or corporation, approved by the city electrical inspector to install, reconnect, or remove specific major electrical appliances or signs as defined in 17.12(5) and under the conditions set forth in 17.12(5).
- (10) Beginning Electrician: any person who meets the requirements and definition of and is certified by the State of Wisconsin Administrative Code Chapter SPS 305 and 316. A beginning electrician may only work under the direct supervision of a master or journeyman electrician. All helpers or trainees shall be certified and shall register with the electrical inspector.
- (11) Residential Wireman: any person who meets the qualifications of and is designated by the IBEW or another equivalent organization. These persons shall only do wiring in one and two family dwellings or multifamily occupancies under the supervision of a Municipal licensed electrical contractor. (MC#988)
- (12) Material Handler: any person hired as a general laborer. This person may not directly perform any electrical work or make any electrical connections.
- (13) Electrical Construction or Electrical Work: The installation of all equipment, wiring, material, fittings, devices, appliances, fixtures and apparatus used for the production, modification, regulations, control, distribution, utilization or safeguarding of electrical energy for mechanical, chemical, cosmetic, heating, lighting or similar purposes as covered by the scope of the Wisconsin State Electrical Code SPS 316.

17.12. LICENSE REQUIRED

- ~~(1) No person, firm or corporation shall engage in the business of planning, installing, altering or repairing any electric wiring or apparatus for the utilization of electric current for light, heat or power in the City of Wisconsin Rapids, Wisconsin, without first having procured a license therefor as provided in this chapter. Any person, firm or corporation that does electrical construction without a license, except as allowed elsewhere in this chapter, shall be subject to a citation and penalties as provided in this code. In no case shall any person or electrician do electrical work in the City of Wisconsin Rapids, Wisconsin unless under the supervision of a licensed master electrician or licensed electrical contractor, who shall be responsible in accordance with this chapter. All new applicants for Master electrician, electrical contractor, and Journeyman electrician who do not hold a current valid City of Wisconsin Rapids license shall be certified under the Wisconsin Administrative Code Chapters COMM 5 and 17. All journeymen, apprentices, beginning electricians and material handlers shall register with the inspector's office showing proof of their status. There shall be at least one licensed Journeyman or licensed Master electrician at each job site for each apprentice, beginning electrician or material handler, so that a one-to-one ratio of licensed electricians to all others is maintained. State certified electricians shall not be required to purchase a Municipal journeyman license.~~
- (1) No person, firm or corporation shall engage in the business of planning, installing, altering or repairing any electric wiring or apparatus for the utilization of electric current for light, heat or power in the City of Wisconsin Rapids, Wisconsin, without first having procured a license therefor as provided in this chapter. Any person, firm or corporation that does electrical construction without a license, except as allowed elsewhere in this chapter, shall be subject to a citation and penalties as provided in this code. In no case shall any person or electrician do electrical work in the City of Wisconsin Rapids, Wisconsin unless under the supervision of a licensed master electrician or licensed electrical contractor, who shall be responsible in accordance with this chapter. All new applicants for Master electrician, electrical contractor, and Journeyman electrician who do not hold a current valid City of Wisconsin Rapids license shall be certified under the Wisconsin Administrative Code Chapters SPS 305 and 316. All journeymen, apprentices, beginning electricians and material handlers shall register with the inspector's office showing proof of their status. There shall be at least one licensed Journeyman or licensed Master electrician at each job site for each apprentice, beginning electrician or material handler, so that a one-to-one ratio of licensed electricians to all others is maintained. State certified electricians shall not be required to purchase a Municipal journeyman license. (MC#1147)
- (2) Master Electrician License. At least one member of a firm or corporation shall hold a master electrician license. No person, firm, or corporation shall contract or undertake to install or repair electrical wires or apparatus within the City of Wisconsin Rapids, Wisconsin, except as otherwise herein provided, without, first having obtained a master electrician license.
- (3) Journeyman Electrician License. Unless as otherwise provided in this chapter, no person shall alter, install, or repair electric wires or apparatus for the utilization of electric current, or supervise the same, without first having obtained a journeyman electrician license, except indentured apprentices or certified beginning electricians serving under the direct supervision of a master electrician or journeyman electrician.
- (4) Short Term License. A short term license may be granted to state certified electricians or other persons who have completed a State approved apprenticeship, who are not permanent residents of the city and who are hired by licensed master electricians to perform only electrical work on one project as shall be described in

their application. The term of this license shall last for the length of the project or one year whichever is shorter.

- (5) Limited License. A limited license may be granted to any individual, but not a firm or corporation, which will entitle such person to (1) install, remove, reconnect or provide maintenance of household electrical appliances, and install new premises wiring to these appliances in existing dwellings. These persons may only connect or disconnect and provide maintenance to commercial and industrial electrical appliances; or (2) install, remove reconnect or maintain outdoor advertising signs. Such license may be granted by the city electrical inspector upon application made by such person on a form furnished by the electrical inspection, if the electrical inspector is satisfied that the applicant has sufficient knowledge of the type of work involved that his/her work will be safe and in accordance with the requirement of this code. Such license shall be subject to revocation in the same way as other licenses issued under this code. All electrical work performed under this license shall be subject to permits as defined under 17.19 and 17.21. The issuance of such license may be subject to passing a written or oral examination.
- (6) Residential Wireman. A residential wireman license may be granted by the electrical inspector to any individual who has been designated as a residential wireman by the International Brotherhood of Electrical Workers Local 388 or another equivalent organization. Residential wiremen may perform wiring as allowed by this chapter without direct supervision by a journeyman or master electrician. (MC#988)

17.13 ISSUANCE OF LICENSE

- ~~(1) Application for a license shall be made to the electrical inspector on forms furnished by him, and before such license shall be issued the application therefor shall be approved by the city electrical inspector. A license may be issued to persons certified under the Wisconsin Administrative Code Chapters COMM 5 and 17 upon the signature of the electrical inspection.~~
- (1) Application for a license shall be made to the electrical inspector on forms furnished by him, and before such license shall be issued the application therefor shall be approved by the city electrical inspector. A license may be issued to persons certified under the Wisconsin Administrative Code Chapters SPS 305 and 316 upon the signature of the electrical inspection.
- (2) Master, journeyman electrician, residential wireman and limited licenses shall be issued, subject to the provisions of this section. Such licenses shall not be assignable or transferable.
- (3) When a current license holder allows their license to lapse by not filing a proper application before its renewal date, this person shall revert to the same status of a person not previously licensed.

17.14 LICENSE FEES AND PERIODS

- (1) License fees shall be as follows:

	<u>Class</u>	<u>License Fee</u>
(a)	Master	\$50.00
(b)	Journeyman	\$30.00
(c)	Residential Wireman	\$30.00
(d)	Limited	\$30.00
(e)	Short Term	\$10.00
(f)	Apprentice	none

- (2) License Periods. All licenses shall be issued for a maximum of three (3) years commencing the 1st day of January and expiring the 31st day of December, per the three-year National Electrical Code cycle year of adoption, unless sooner revoked. The fees for such licenses shall be paid to the city treasurer.

17.15 INSURANCE

All master electricians and limited licenses shall be issued and granted only upon condition that the person, firms, or corporations applying therefor shall first file with the city electrical inspector a minimum of a \$250,000 general liability insurance certificate.

17.16 REVOCATION OF LICENSES

Any license granted under the provisions of this ordinance may be revoked by the city electrical inspector if the licensee violated any ordinance or law relating to electrical work or is guilty of installing electrical construction which is a hazard to life or property. When a license is revoked a new license shall not be granted to the same licensee for a period of at least 30 days, nor until the licensee shall have corrected the faulty construction in accordance with the provisions of the ordinance, and shall have made application and paid the fees as required for the original license. The city electrical inspector shall have discretionary power to withhold the granting of a license, for cause. When a license has been

revoked, the former holder thereof shall have the same status of a person not previously licensed and shall have to meet any qualifications such as required by any new applicant.

17.17 PERSONS EXEMPT FROM LICENSE REQUIREMENTS

- (1) Employees of electrical, telephone, telegraph and railway utilities may perform the planning or superintending and installation, operation and maintenance of equipment and materials required for the operation of the business of such utilities without a license, but when such employees perform said work on property or premises of other persons, firms, or corporations, except when making service connections and installing and testing transformers, meters, and other equipment ordinarily furnished by and remaining the property of the utility, they shall be licensed in the same manner provided for in this ordinance and failure to be so licensed shall constitute a violation of this ordinance.
- (2) The operating engineers and their assistants, in charge of power generating plants, prime movers and all auxiliary equipment and appliances connected therewith, shall be exempt in the supervision maintenance, repairs and in the operation of the electrical equipment under their jurisdiction, and this ordinance shall not apply to them in any form.
- (3) Plant electricians regularly employed by a firm or corporation need not be licensed while doing electrical work that is limited exclusively to the plant or shop of their employer. All new building construction shall be done under the required permits and adherence to all electrical code requirements including inspections.

17.18 INDUSTRIAL WORK

All maintenance work in industrial establishments shall be performed under the direction of a journeyman maintenance electrician or master electrician. All new building construction installations shall be done under the required permits and adherence to all electrical code requirements including inspections.

17.19 PERMITS

- (1) The inspector shall issue permits for the execution of electrical installation for light, heat, or power upon the filing of proper application, which shall be made on forms furnished by the inspector and shall prescribe the nature of the work as well as such other information as may be required for inspection. A plan may be required to accompany the application at the discretion of the inspector. In no case shall any electrical work be done, unless a permit has first been obtained. All permits shall only be valid for a period of one (1) year from date of issue.
- (2) No permit shall be required for minor repair, alterations or replacement of individual receptacles, flush or snap switches, motors, fuses, lamp sockets or fixture ballasts due to damage or defect provided only minor changes are made for this work.
- (3) All persons shall, before doing any electrical work in a building, make application to the Inspector for a permit covering such work. The inspector shall approve the application and issue to the applicant a statement showing the fees to be paid for such permit. If work is commenced before a permit is approved a fee of \$100.00 or double the permit fee which ever is greater, shall be charged. A valid permit and usual fee will still need to be filed. The electrical inspection shall have the authority to order any work halted where no permit has been obtained, if required, except in cases of emergency, in which case the permit must be obtained as soon as possible thereafter.
- (4) **Work that in the estimation of the inspector will cost less than \$500 and is performed by a licensed electrician will not be required to get a permit. (MC#1147)**

17.20 EXCEPTIONS

- (1) No permits shall be required for the usual operations of a local public utility company in conformance with NEC 90-2(b).
- (2) No permit shall be required for the manufacturing, assembling, repairing, or testing of electrical equipment or any electrical maintenance in any buildings used for industrial purposes, by any person, firm or corporation having in their employ a qualified plant electrician. This exception does not apply to any new construction.

~~17.21 PERMIT AND INSPECTION FEES (MC#1002)~~

~~Permit and inspection fees shall be assessed according to the schedule set by the community development director with the concurrence of the Common Council.~~

17.21 PERMIT AND INSPECTION FEES (MC#1147)

Permit and inspection fees shall be assessed according to the schedule set by the Director of Planning and Economic Development with the concurrence of the Common Council.

17.22 SIZE OF SERVICE

- (1) Where there are four or less service boxes in one building having one owner and one of these has to be changed to a 100 amp or larger, then all service boxes shall be changed to the latest approved type of at least 100 amp capacity. The service conductors shall also be changed to have adequate capacity calculated in accordance with the State Code requirements and installed in an approved raceway.
- ~~(2) Unless otherwise restricted by the State of Wisconsin Administrative Code all buildings shall have a single main service disconnect ahead of all premises wiring at each service location and each individual metering device shall have a single disconnecting means after it.~~
- (2) Unless otherwise restricted by the State of Wisconsin Administrative Code, all commercial multi tenant buildings and apartment buildings shall have a single main service disconnect ahead of all premises wiring at each service location and each individual metering device shall have a single disconnecting means after it. (MC#1147)
- (3) For a single family dwelling unit the minimum size service entrance switch shall be 100 amp and shall be of the circuit breaker switch type.

17.23 SERVICE WIRING

- ~~(1) The service disconnecting means placement shall comply with NEC 230.2 and the State Electrical Code Volume II COMM 16 requirements.~~
- (1) The service disconnecting means placement shall comply with NEC 230 and the State Electrical Code SPS 316 requirements. (MC#1147)
- ~~(2) There shall be no disconnecting means, or fuses, in the service entrance ahead of the metering device, normally, except to meet the single main disconnect location requirement. A minimum of #4 copper ground wire for the service shall be connected ahead of the water meter and bonded to both sides of the water meter. The grounding electrode shall be at least 5/8 inch diameter copper or copper clad rod eight feet in length. Two electrodes shall be used and spaced at least eight feet apart. No service entrance cable or non-metallic (Romex) cable shall be used for service entrance wire. All service conductors shall be copper unless restricted by the Wisconsin Administrative Code.~~
- (2) There shall be no disconnecting means, or fuses, in the service entrance ahead of the metering device, normally, except to meet the single main disconnect location requirement. All commercial buildings and apartment buildings larger than a four unit shall have copper service conductors. Residential and four unit apartments or smaller shall have aluminum or copper service conductors. (MC#1147)
- (3) Service entrance conductors shall extend a minimum of three feet beyond service entrance head. The grounded conductor shall be readily identified by either the color white or natural gray and any equipment grounding wire shall be readily identified by the color green or be a bare copper wire.

17.24 CONDUCTORS

- (1) Service conductors shall be enclosed in an approved listed raceway and shall terminate in a fused or circuit breaker disconnect. Where service masts protrude through roof or where the service entrance cables attach to the mast, the mast shall be two inches or larger rigid metal conduit.
- ~~(2) Conductors in all buildings hereafter constructed or new conductors installed when remodeling, except where excluded under the provisions of the State of Wisconsin Administrative Code, shall be installed per guidelines of the National Electrical Code as amended by the Wisconsin Electrical Code Volume II.~~
- (2) Conductors in all buildings hereafter constructed or new conductors installed when remodeling, except where excluded under the provisions of the State of Wisconsin Administrative Code, shall be installed per guidelines of the National Electrical Code as amended by the Wisconsin Electrical Code SPS 316. (MC#1147)
- ~~(3) Panels in commercial buildings shall be of the circuit breaker switched type. No residential panels are to be used.~~
- (3) Panels in commercial buildings shall be of the circuit breaker switched type. (MC#1147)
- (4) No aluminum conductors #8 and smaller shall be used.

17.25 REWIRING EXISTING BUILDINGS

In the rewiring of existing buildings (residential) or when a residential service is changed for any reason, the following work must be done:

- ~~(1) Service must comply with ordinance.~~
- ~~(2) Receptacles must be installed to provide a minimum two (2) in each living room, one in each bedroom, one in dining room, two in each kitchen to serve the counter top spaces, one in laundry, one in bathroom, one on the exterior of home, one in each detached or attached garage.~~
- ~~(3) All new outlets to be installed on new branch circuits.~~
- ~~(4) Kitchen and laundry to comply with the NEC covering separate appliance circuits.~~
- ~~(5) Basement, utility, bathroom, garage, and outdoor wiring receptacles must comply with regulations set forth in this ordinance.~~

- ~~(6) Remove all drop cords.~~
- ~~(7) Rewire furnace if necessary to comply with present requirements for a separate circuit and grounding.~~
- ~~(8) Repair and/or replace all defective sockets, switches, and other devices.~~
- ~~(9) Provide proper lighting for all stairways, halls, and exits, and for all basement stairs.~~
- ~~(10) Remove all abandoned wiring in basements or dwellings where otherwise exposed.~~
- ~~(11) Add GFCI protection to all receptacles that are required to have this protection under the NEC and Wisconsin State Electrical Code Volume II COMM 16.~~
- ~~(12) Install listed smoke detectors to all levels when not present or fix any existing detectors. These detectors in existing dwellings may be of the battery operated type.~~
- ~~(13) All provisions as outlined in 9.12(1)(d) and (e) of the City of Wisconsin Rapids Housing Code Municipal Code Chapter 36 International Property Maintenance Code of Wisconsin Rapids, Sections 604 and 605, must be adhered to. (MC#1094)~~

17.25 REWIRING EXISTING BUILDINGS (MC#1147)

In the rewiring of existing buildings (residential) or when a residential service is changed for any reason other than storm damage, the following work must be done:

- (1) Service must comply with ordinance.
- (2) Remove all drop cords. A new outlet shall be installed where drop cords have been used as permanent wiring.
- (3) Repair and/or replace all defective sockets, switches, and other devices.
- (4) Add GFCI protection to all receptacles that are required to have this protection under the NEC and Wisconsin State Electrical Code SPS 316.
- (5) Install listed smoke detectors and carbon monoxide detectors to all levels when not present or fix any existing detectors. These detectors in existing dwellings may be of the battery operated type.

17.26 PERMIT AND SERVICE FOR TEMPORARY AND EMERGENCY WORK

- (1) On applying for permit for temporary electrical work, a specified period of time for which such wiring is to remain in service must be stated or the permit will only be valid for sixty (60) days. Service shall be cut off at the end of this period and shall not again be connected without written permission from the inspector.
- (2) A temporary service during construction or repair must be installed in accord with an approved sketch furnished by the inspector.
- (3) In emergency work, the person, firm, or corporation doing or causing work to be done shall report the same to the inspector immediately after beginning work, on forms furnished by the inspector, and such work shall be in accordance with the provisions of this ordinance.

17.27 PENALTIES AND VIOLATIONS (MC#1147)

Electrical work that is constructed in violation of the provisions of this chapter shall be corrected in the time frame given by the electrical inspector. Should the electrical inspector feel that remedy by local citation is the best remedy he/she and/or his/her designee shall cause such citation to be issued and file such citation and supporting documents that he/she feels are necessary with the municipal court clerk for action in such court. Each day that a violation exists may be considered a separate violation.