

ORDINANCE 2010-7

**AN ORDINANCE AMENDING THE
2008 EDITION OF THE NATIONAL ELECTRICAL CODE**

WHEREAS, the Village of PECATONICA ("Village") has adopted the 2008 edition of the National Electrical Code; and

WHEREAS, the Village desires to amend sections of said Electrical Code; and

WHEREAS, the Village finds that it is in the best interest of the Village and its citizens to amend sections of the Electrical Code so that the Electrical Code better meets the needs and requirements of the Village; and

WHEREAS, the Village is authorized and empowered by statute to amend and enforce the provisions of this Ordinance.

NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND THE VILLAGE BOARD OF TRUSTEES OF THE VILLAGE OF PECATONICA, WINNEBAGO, ILLINOIS, AS FOLLOWS:

Section 1. The foregoing recitals are incorporated herein as findings of the Pecatonica Board of Trustees.

Section 2. That the 2008 Edition of the National Electrical Code as previously adopted by the Village is amended as follows:

(1) *Definitions:*

- a. Metal Conduit shall mean one of the following: Electrical Metallic Tubing (Type EMT) or Rigid Metal Conduit (Type RMC) or Intermediate Metal Conduit (Type IMC). Flexible Metal Conduit (Type FMC) shall be used in exposed and concealed locations in lengths not in excess of six (6) feet for any use.

(2) *Electrical Service:*

- a. Residential new service shall be in metal conduit.
- b. Commercial or industrial new service shall be in metal conduit.
- c. Apartments, duplexes, townhouses, condos and multi-family new service and sub-panels shall be in metal conduit.
- d. Minimum service shall be comprised of 100 amperage and a 16 circuit breaker cabinet with 100 amperage main breaker.

- e. Service on pole or outside run to the main cabinet or sub-cabinet shall have a main breaker or disconnect inside at the cabinet.
- f. All service shall have, at a minimum, two separate eight (8) foot ground rods placed at least six (6) feet apart. Ground wires shall come out from the bottom of the meter base and connect to ground rod with ground clamps. Ground wires shall go to terminal at the meter socket and into terminal in the breaker panel. Bonding bushings shall be required around concentric or eccentric knockouts.
- g. Ground clamps shall be six (6) inches above grade.
- h. All service shall be grounded to a metallic cold water pipe and to a supplementary electrode. Water meters shall require a bonding jumper.
- i. Minimum 100 amperage service shall be #3 copper and 1 ¼" conduit for single and multi-family units.
- j. Minimum 200 amperage service shall be #3 copper and 2" conduit for single and multi-family units.
- k. Commercial and industrial new services may be either aluminum or copper conductors.
- l. The minimum breaker panel size for 200 amperage service shall be 30 spaces.
- m. The use of tandem and mini breakers in new and remodeled single and multi-family units shall have no more than two tandem or mini breakers installed in a breaker panel.
- n. New multi-family units, condos, townhouses, and apartments shall be in metal conduit.
- o. At no time shall aluminum wire ever be used in single and multi-family units.
- p. New homes under construction with an area greater than 1,600 square feet shall have a minimum service rating of 200 amperages. New homes under construction with an area greater than 3,800 square feet of finished area, not including garages, shall have a minimum service rating of 400 amperages.

- q. Homes being remodeled shall have the square footage reevaluated by authorized Village personnel to determine if the service size shall be changed to accommodate any change in finished area. If a change in service size is determined to be necessary, the size of service shall conform to the standards for new homes.

(3) *Type of wiring:*

- a. All wiring in new (or remodeled) single-family dwellings shall be in Romex with a bare conductor for equipment ground if they want.
- b. All wiring in basements and garages shall be in conduit.
- c. The use of metal staples is prohibited.
- d. In basement, and garages exposed wiring to be in conduit.
- e. No stacking of more than two #14/2,14/3,-12/2,12/3,-10/. The use of stackers is required for Romex.
- f. All wiring in metal buildings and metal sheds shall be done in conduit.
- g. All wiring in commercial, farm, agricultural and industrial buildings shall be in metal conduit.
- h. The use of electrical nonmetallic tubing (ENT) shall be prohibited in commercial, residential and industrial buildings. The use of metal clad cable shall be prohibited in all applications including but not limited to commercial, residential, and industrial buildings.
- i. Armor cable may be used subject to pre-approval by authorized Village officials or their designee.
- j. All switches, devices and fixtures shall be rated according to conductor size. All commercial and industrial outlets shall be 20-ampere rated.
- k. All garage receptacles shall be on a 20-ampere separate circuit with 20-ampere GFI rated receptacles.
- l. Refrigerator, freezer or central vacuum shall be on a single, non-GFI rated, receptacle.
- m. Laundry equipment and sump pumps shall be on a single, non-GFI rated, receptacle.

- n. Conductor Terminations. Termination at permanently installed wiring devices shall be at one of the binding head screw, screw tightened clamp type, set screw, or manually torque hardware. Premises wiring methods utilized for component interconnection, box dimensions, and enclosures shall not be allowed in dwelling occupancies. Surface wiring methods listed and otherwise approved by the National Electrical Code may be allowed. Splices and taps shall be installed by methods in compliance with provisions of Article 110 and other applicable articles of the National Electrical Code.

(4) *Circuits and required outlets:*

- a. Number of Openings. The following standards shall apply:
 - i. For 15 amperage circuits: #14 gauge wire, a maximum of 8 openings, and all lights and outlets shall be on 15 amperage breaker.
 - ii. For 20 amperage circuit: #12 gauge wire, a maximum of 10 openings, and all lights and outlets shall be on 20 amperage breaker.
- b. There shall be install a minimum of one (1) wall switch to control the light outlet in every room, hallways, stairways, garage and outdoor entrance.
- c. All circuits shall be identified in the cabinet.

(5) *Splices and connections:*

- a. All wires shall be twisted and mechanically secured with wire nuts.
- b. All Romex shall be stripped before put in boxes.
- c. No more than two (2) wires shall be allowed on each receptacle.
- d. Joints shall be created for rough-in inspection.

(6) *Laundry:*

- a. Receptacle to be a 20 amperage device on a 20 amperage circuit.

(7) *Kitchen:*

- a. Lighting shall be on one (1) circuit, the dishwasher shall be on one (1) circuit, receptacles shall be on two (2) 20 amperage circuits. Receptacles shall be rated 20 amperage.
- b. A receptacle shall be installed on each counter space that is nine (9) inches or wider.
- c. Microwaves shall be on a separate, 20 amperage circuit.

(8) *Garage:*

- a. All walls, finished or unfinished, in a garage shall have a minimum of two (2) 20 amperage, GFI rated, receptacles.

(9) *Closets:*

- a. All closets less than three (3) foot in depth shall have approved closet fixtures if a light is to be installed.

(10) *Ground-fault circuit:*

NOTE: Outside outlet shall be required to be adjacent to patio doors.

NOTE: All GFI outlets shall be identified as GFI outlets. GFI receptacles shall be required to be within five (5) feet of any sink or laundry tub area. This includes all single-family, multi-family, commercial and industrial applications.

(11) *Boxes:*

- a. Wiring device boxes shall have sufficient cubic inches to house the wires installed within the box.
- b. All ceiling boxes shall be ceiling fan approved.
- c. Boxes shall be required in the dining room, living room, kitchen, family room, offices, bedrooms, and all habitable rooms of all residential dwelling units.

NOTE: All metal boxes shall have green screw.

(12) *Bathroom emergency lights:*

- a. All bathrooms, accessible to the public, in commercial and industrial buildings shall have emergency lights installed.

NOTE: No outlets or switches shall be located in designated bathtub or shower zones. Designated bathtub and shower zones shall be the area measuring 3 foot horizontally and 8 foot vertically from the top of the bathtub rim or shower stall threshold.

(13) *Water pump, furnace and air conditioner:*

- a. All furnaces and air conditioners shall have a disconnect switch.
- b. All water pumps shall have disconnect switch, if the water pump is not in the same room as breaker panel or is over twelve (12) feet from the panel.

(14) *Miscellaneous:*

- a. All homes under construction shall have addressees and/or lot numbers visible to inspectors from the road at all times.
- b. Electrical contractors shall have available addresses and lot number identified on the service at the time of installation. The address, lot number, and the contractor's name and phone number shall be on the meter sockets and break panels.
- c. All recessed lights shall be IC or double housing type when covered by insulation.

(15) *Mobile homes:*

- a. The connection from the distribution panels in a mobile home to the power source shall be made with proper conduit, which has been approved by the Village or its authorized designee.
- b. All electrical in mobile homes shall be approved by authorized Village officials before occupancy.

(16) *Smoke alarms:*

- a. Smoke alarms shall be installed in hallways, basement areas, all levels of a dwelling and in all bedrooms and sleeping areas.
- b. Smoke alarms shall be hardwired 120 volt interconnected with battery backup.
- c. The provisions of this paragraph 18 shall apply to all new construction or remodeling of residential, multi-family, townhouses and apartment units.
- d. Commercial and industrial buildings shall have smoke alarm systems or hardwired 120 volt interconnected battery backup smoke detectors.
- e. Heat alarms: Heat alarms shall be installed in attached garages.
- f. Carbon Monoxide Detectors: A carbon monoxide detector, interconnecting with battery backup, shall be installed on every floor, in common hallways and basements. These detectors shall be installed in accordance with manufactures instructions.

(17) *Emergency Lights:*

- a. All new and existing multi-family dwellings, apartments, commercial buildings and industrial building shall have emergency light and exit light installed where deemed necessary by the authorized Village officials or their designees.

(18) *Inspections:*

- a. Requests for electrical inspections of new construction shall be made by the electrical contractor. The electrical contractor shall provide the electrical inspector with the address and/or lot number of the dwelling to be inspected. The following three (3) electrical inspections shall, at a minimum, be required:
 - i. Service Inspection. No requests for service inspection shall be made unless backfill is in area of meter. In the event there is no backfill in the area of

the meter, the electrical inspector shall not perform a service inspection and the lack of backfill shall be deemed an incomplete installation requiring an additional inspection pursuant to subsection (b) below.

- ii. Rough-In Inspection.
 - iii. Final Before Occupancy Inspection.
- b. Additional inspections. When additional inspections are required as a result of incomplete installation or as a result of continuing violations, an additional inspection fee shall be charged. Each additional inspection shall require a fee of \$75.00. All fees must be paid to the Village before re-inspections will be performed.
- c. Defective conditions: Where installation of any wiring or electrical devices or material is found to be in a dangerous or unsafe condition the electrical inspector shall at once notify, in writing, the person, firm, or corporation owning, using, or operating the same, specifying wherein the same is dangerous or unsafe and such person, firm, or corporation shall, within the time specific in such notice make such repairs or changes as may be necessary to place such wiring, devices, and material in a safe condition.

(19) *Existing residences:*

- a. Electric service: Existing electric services shall be a minimum of one hundred (100) amperage, two hundred forty (240) volt, three-wire with distribution panel and wiring properly installed and protected. Main disconnect and over-current protective devices shall be accessible to each resident. All over-current devices such as fuses or breakers shall be used to protect branch circuit conductors. All panels shall be dead front.
- b. Service grounding: When grounding is on the house side of the water meter, the jumper shall be installed around water meter.
- c. Electric wiring and facilities: No dwelling or dwelling units shall be deemed to comply with the requirements of this ordinance relating to electrical wiring and facilities unless:

- (i) *Exposed wire.* Every exposed wire has insulation which is in good condition.
- (ii) *Switch and outlet plate.* Every switch and outlet plate is properly fastened in position.
- (iii) *Short circuit.* No short circuit or breaks exists in any electrical lines.
- (iv) *Fixtures.* Every fixture and outlet functions properly and is fastened in place.
- (v) *Shock hazard.* No obvious shock hazard exists as determined by authorized Village officials.
- (vi) *Temporary wiring.* No temporary wiring is used, except cords which run directly from portable electric fixtures to convenience outlets, and which do not lie beneath floor covering materials, pierce walls or extend through doorways, transoms, or other similar apertures through structural elements.
- (vii) *Overload.* No electrical circuit is overloaded as a result of connecting appliances which operate at high wattage to outlets supplied with wire of adequate size.
- (viii) *Exposed non-current metal parts.* All exposed non-current metal parts for the electrical system that are within eight (8) feet vertically or five (5) horizontally of ground or grounded metal object subject to contact by persons are grounded.
- (ix) *Exposed tube wiring.* There shall be no exposed knob and tube wiring in basements, garages, and walk-in attic areas.
- (x) *Maintenance in good condition.* Every outlet and fixture shall be properly maintained in good and safe condition, and shall be connected to an electrical power source in safe condition.
- (xi) *Hall and stairway lighting.* All halls and stairways in multi-family dwellings containing five (5) or more dwelling units shall be adequately lighted at all times. Every hallway and stairway in structures devoted solely to dwelling occupancy and containing not more than four (4) dwelling units shall be supplied with conveniently located light switches, controlling an adequate lighting system which may be turned on when needed, instead of full-time lighting.
- (xii) *Wall switches.* All habitable rooms shall have a wall switch to control a light or a receptacle outlet. Stairways from one living level to another shall have three-way switches at each level. A wall switch for permanently mounted light shall be installed at all exterior doorway entrances. Wall switch(s) shall be

installed for attic stairway and basement stairway lights. Wall switches and permanently installed lights shall be installed in dining rooms, kitchens, and bathrooms.

(xiii) *Light fixtures.* Permanently installed light fixtures shall be installed in utility rooms, over laundry tubs, in the area of electric panel(s), and in any other areas requiring general illumination. Permanently installed light fixtures, to be controlled by wall switch(s) shall be installed in dining rooms, kitchens, hallways, stairways and bathrooms.

(xiv) *Convenience of receptacle outlets.* In all habitable rooms, a minimum of two (2) duplex wall receptacles shall be installed, each on opposite walls.

In living rooms, recreation rooms, and family rooms, a minimum of three (3) duplex wall receptacles shall be installed, each on separate walls.

In bathrooms, one wall mounted receptacle shall be installed adjacent to the sink on G.F.C.I. Receptacle outlets shall not be installed within or adjacent to a shower or bathtub space.

In kitchens, a minimum of three (3) wall receptacles shall be installed, two (2) receptacles to be accessible at all times.

One (1) receptacle shall be installed within six (6) feet of laundry tubs.

Receptacle outlets installed in basements, garages, open porches, breezeways, or other locations used by person standing on the ground or on grounding conductive materials shall be installed on a grounded system and shall be G.F.C.I. protected. No receptacle, unless in an approved box, shall be installed in the floor.

Section 2. To the extent this Ordinance contradicts any previous orders, resolutions, ordinances or parts of orders, resolutions and ordinances of the Village, this Ordinance shall control and all other orders, resolutions, ordinances or parts of orders, resolutions, and ordinances in conflict herewith are hereby repealed insofar as such conflicts exist.

Section 3. All other orders, resolutions ordinances or parts of orders, resolutions, and ordinances of the Village of PECATONICA, Illinois not in conflict with this Ordinance shall remain in full force and effect.

Section 4. This Ordinance shall be in full force and effect from and after its passage, approval and publication in pamphlet form as provided by law. This Ordinance shall be published in pamphlet form.

PASSED by the Village Board this ____ day of _____, 2010.

APPROVED by the President of the Village Board this ____ day of _____,
2010.

Shawn Connors
President of the Board of Trustees of
the Village of Pecatonica, IL

ATTEST:

Ginger Binger, Village Clerk

Ayes: ____ Nays: ____ Absent: ____

Tarbert:	_____	Howard:	_____	Eytalis:	_____
Moyer:	_____	Doty:	_____	Sager:	_____