

GENERAL GUIDELINES FOR ELECTRICAL WORK IN THE CITY LIMITS OF BELLEVILLE

Article 90.4 Enforcement – National Electrical Code
“The authority having jurisdiction for enforcement of the code has the
responsibility for making interpretations of the rules.

COMMERCIAL & INDUSTRIAL

- 1C. No blue flexible conduit, MC cable, or AC cable allowed.
- 2C. All commercial raceways shall be in approved conduit (thin wall or approved by electrical inspector).
- 3C. All motor driven appliances must be on a separate circuit.
- 4C. No junction boxes permitted in attics, or in concealed places.
- 5C. Only grounding type outlets shall be installed as required by the National Electrical Code, current edition. If on a 2-wire system, it must be 2-wire only.
- 6C. The enclosures of dishwasher, clothes dryer, ranges, freezers, sump pump, power tools, dehumidifiers, air conditioners, and the like, shall be grounded in an approved manner.
- 7C. Service equipment, panel board and switch boards shall not be located in bathrooms, shower rooms, clothes closets, nor above washer and plumbed in fixtures.
- 8C. All conduit run on the exterior of a building, must be rigid galvanized conduit .
- 9C. 60 amp service will no longer be acceptable. Minimum of 100 amp service will be required.
- 10C. Entrance conductor of adequate size per city code.
- 11C. Bonding bushing inside meter can.
- 12C. Adequate bonding wire and ground rod.
- 13C. Bonding bushing inside panel.

- 14C. All circuits terminate in approved boxes.
- 15C. No tandem breakers allowed in new installations.
- 16C. Minimum service required shall be determined by load calculations.
- 17C. #3 T.H.W. copper minimum entrance cable for 100 amp service.
- 18C. 3-0 T.H.W. copper minimum entrance cable for 200 amp service.
- 19C. Entrance cable and neutral shall be of equal size and rating.
- 20C. Neutral shall be identified and continuous from weather head, through meter socket into panel on overhead services.
- 21C. Ground wire (#6 for 100 amp, #4 for 200 amp) to ground rods shall be installed in conduit.
- 22C. Conduit: Rigid galvanized conduit is required on services from the meter base to the weather head, meter base to 1' below grade, and meter base to first disconnect.
- 23C. No water pipe grounds will be permitted in lieu of the use of a ground rod.
- 24C. Aluminum wire is not permitted.
- 25C. All service panels shall have all circuits properly indexed.

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RESIDENTIAL

- 1R. No blue flexible conduit, MC cable, or AC cable allowed.
- 2R. All wiring enclosed in walls and ceilings, may be in Romex (with ground) minimum size #12 wire.
- 3R. Not more than four (4) outlets per circuit permitted in kitchen and dining area. All others, up to eight (8) outlets per circuit.
- 4R. All receptacles in bathrooms, garages, basements, outside receptacles, all countertop receptacles must be on a ground fault breaker G.F.I. or receptacle.
- 5R. All motor driven appliances must be on a separate circuit.
- 6R. No junction boxes permitted in attics, or in concealed places.
- 7R. Wiring must be stapled to studs and ceiling rafters within eight (8) to ten (10) inches from receptacle or outlet box, and then every three (3) to four (4) feet.
- 8R. A maximum of three (3) non-metallic sheathed cables will be permitted in any drilled hole.
- 9R. Only grounding type outlets shall be installed as required by the National Electrical Code, current edition. If on a 2-wire system, it must be 2-wire only.
- 10R. The enclosures of dishwasher, clothes dryer, ranges, freezers, sump pump,

power tools, dehumidifiers, air conditioners, and the like, shall be grounded in an approved manner.

- 11R. Service equipment, panel board and switch boards shall not be located in bathrooms, shower rooms, clothes closets, nor above washer and plumbed in fixtures.
- 12R. All conduit run on the exterior of a building, must be rigid galvanized conduit.
- 13R. 60 amp service will no longer be acceptable. Minimum of 100 amp service will be required.
- 14R. Entrance conductor of adequate size per city code.
- 15R. Neutral shall be identified and continuous from weather head, through meter socket into panel box on overhead services.
- 16R. Bonding bushing inside meter can.
- 17R. Adequate bonding wire and ground rod.
- 18R. Panel box equipped with single main disconnect.
- 19R. Galvanized rigid conduit to service panel.
- 20R. Bonding bushing inside panel.
- 21R. Neutral buss is bonded in panel.
- 22R. All branch circuits terminate with connectors in place.
- 23R. All branch circuits sized to ampere rating of installed equipment. (#12 minimum sizes)
- 24R. Major appliances on dedicated circuits:
 - Refrigerator
 - Freezer
 - Washer
 - Furnace
 - Motors 1/4+ HP
 - Dishwasher
 - Garbage Disposal
 - Garage Door Opener
 - Sump Pump
 - Range Hood/ Microwave
- 25R. All furnaces need to have a disconnect switch.

- 26R. All circuits terminate in approved boxes.
- 27R. Splices are contained in approved junction box with cover.
- 28R. Ground fault protection:
 - Kitchen
 - Bathrooms, each bathroom area (only protected within)
 - Garage
 - Unfinished basement area
 - Outside
 GFI must be accessible for maintenance for the following:
 - Hot tubs
 - Whirlpool
 - Hydro tubs
 - Wet bar
- 29R. Front and back (outdoor) receptacles with approved covers.
- 30R. Bathroom at least one receptacle outlet per sink.
- 31R. Hallway at least one receptacle outlet.
- 32R. Access door for maintenance of hydro massage bathtubs.
- 33R. Support of ceiling fans with UL approved ceiling fan boxes.
- 34R. Smoke detectors (interconnected) requirements
 - Sleeping areas
 - Basement
 - Stairways
 - Hallways of sleeping areas
- 35R. No tandem breakers allowed in new installations.
- 36R. Minimum of three (3) spare spaces left in panel for future.
- 37R. Arc Faults are required in all new bedroom installation including additions.
- 38R. Minimum service required shall be determined by load calculations.
- 39R. #3 T.H.W. copper minimum entrance cable for 100 amp service.
- 40R. 3-0 T.H.W. copper minimum entrance cable for 200 amp service.
- 41R. Entrance cable and neutral shall be of equal size and rating.
- 42R. Ground wire (#6 for 100 amp, #4 for 200 amp) to ground rods shall be

installed in conduit.

- 43R. Ground rods: copper ground rods are required and shall be a minimum of eight (8) feet long. 5/8 x 8 feet long.
- 44R. Conduit: rigid galvanized conduit is required on services from the meter base to the weather head, meter base to 1' below grade, and meter base to first disconnect.
- 45R. No water pipe grounds will be permitted in lieu of the use of a ground rod.
- 46R. All circuits shall be a minimum of #12 copper and switches in these areas shall be ground: kitchens, bathrooms, basements, and garages. #14 gauge wire shall not be permitted.
- 47R. All drops in basement shall be installed in thin wall conduit.
- 48R. Aluminum wire is not permitted.
- 49R. All service panels shall have all circuits properly indexed.
- 50R. Wiring shall be protected in areas of 30 inches or more vertical height in attics.
- 51R. Any and all alterations of structural members must adhere to manufacturer's recommendations.