

Electrical Requirements



*This handout is for informational purposes only it should not be viewed as comprehensive.
The provisions of the City's adopted codes prevail.*

Document Submittal List

- Permit application.
- Copy of electrician's license.
- A copy of a signed contract for work including proposed materials. If homeowner will be performing the work a copy of the contract is not required, but the scope should be clearly defined.

Failure to provide any of the above documents may result in processing delays.

General Information and Fees

- A permit is required to install, add, or alter, any electrical system or equipment other than changing lamps, receptacles, switches, or similar apparatus.
- All work is to be done in accordance with the 2020 National Electrical Code and the amendments adopted by the City of Warrenville.
- All contracted electrical work shall be performed by a licensed electrician. The electrical license must be one which was acquired by passing a written electrical examination offered by an approved municipality or a national contractor/trades association with a journeyman or higher electrician certification
- If work commences prior to permit issuance, the permit fee shall be doubled.
- A list of required inspections is provided on the reverse side of the permit. Inspections must be scheduled at least one day prior to the desired inspection date by calling the Warrenville Community Development Department (630-393-9050) or online [here](#).
 - Call for a rough-in inspection when all the raceways and boxes are installed with wires pulled in raceways. Do not cover any work with insulation, receptacles, or wall switches until the inspector has approved it.
 - Prior to final inspection be sure that panel boxes are covered, and circuits are labeled in the correct spaces on the box, and
 - All equipment, fixtures, switches, and appliances must be installed, and energized for the final inspection.
- A permit may become invalid if work does not begin within 180 days of issuance, or if construction has been halted and not resumed for a period of 180 consecutive days.
- Homeowners Association (HOA) approval may be required before commencing work. The issuance of a permit does not exempt HOA rules and regulations.
- It is the homeowner/contractor's responsibility to have underground utilities located no less than 48 hours prior to digging by calling J.U.L.I.E (811).

- Fees vary based on the scope of work and are outlined in the fee schedule available on the City's website.
- Approved construction documents shall be available on site.
- Alterations to the approved plans must be resubmitted to the Building Department in writing for review and approval prior to construction.

Adopted Amendments to the 2020 NEC

- EMT is required in remodeling or new residential construction with access to wall or ceiling cavities, conductors shall be installed completely in EMT. Short lengths of flexible metal conduit may be permitted by the Code Official.
- Exterior disconnects for residential services are not required.
- All conductors for wiring must be copper.
- All commercial work requires conductors to be a minimum size #12 AWG.
- All exterior low voltage wiring for commercial HVAC equipment shall be installed in an approved *raceway*.
- 15-amp devices shall be supplied with number 14 AWG conductors and 20-amp devices with 12 AWG conductors.
- Conductors cannot be dependent device connections such as lamp-holders, receptacles, and so forth, where removal would interrupt the continuity. Conductor shall be looped or have a pigtail wiring connection to the device.
- Conductors terminated at receptacles or switches are allowed only under the screw of the device per the manufacturer's directions. Backstabbing is not permitted.
- PVC shall not be permitted to emerge from concrete, earth, or other solid surfaces. Any portion of the raceway emerging from concrete or earth shall be installed in ridged metal conduit to a point not less than 18 inches above and below the emergence.
- EMT is not permitted in concrete, direct contact with earth, or used for exterior installations.
- Metal-Clad Cable Type MC cable is only to be used with lay-in type fixtures and recessed lighting fixtures in lengths not to exceed 6 feet of the total raceway.
- All unused wiring, including low voltage, is required to be removed back to the source of power or last utilized electrical device on the circuit.
- Service entrance conductors are to be installed in rigid metal conduit or intermediate metal conduit. PVC is allowed for underground use only and must be protected from any physical damage.
- Raceways installed in or under a slab or underground, except for service entrance raceways, require a separate equipment grounding conductor.
- The service disconnecting means shall be installed in a readily accessible location at the utility meter or at a point not more than five feet from the utility meter.

The following materials and methods are not permitted:

- *Armored Cable Type AC.*
- *Flat Cable Assemblies Type FC.*
- *Flat Conductor Cable Type FCC.*
- *Integrated Gas Spacer Cable Type IGS.*
- *Medium Voltage Cable Type MV.*
- *Nonmetallic Sheathed Cable.*
- *Service Entrance Cable Types SE and USE.*
- *Liquid Tight Flexible Nonmetallic Conduit.*
- *Concealed Knob and Tubing Wiring.*
- *Messenger Supported Wiring.*
- *Open Wiring on Insulators.*
- *Surface Nonmetallic Raceways.*
- *Nonmetallic Extensions.*
- *Electrical nonmetallic tubing.*
- *Flexible Metal Conduit outdoors*

**Manufactured wiring systems in any concealed or outdoor locations.*