



2023

Electric Vehicle Charging Station (EVCS) Permitting Checklist

****For Applicant****

Single-Family	Multi-Family and Commercial
<input type="checkbox"/> Contact name, address, phone number, and email for site owner and EVCS installer	<input type="checkbox"/> Contact name, address, phone number, and email for site owner and EVCS installer
<input type="checkbox"/> Occupancy type: (Single-family)	<input type="checkbox"/> Occupancy type: (Multi-family or commercial)
<input type="checkbox"/> Construction Type: New Construction, Retrofit/Renovation, Addition, Other	<input type="checkbox"/> Construction Type: New Construction, Retrofit/Renovation, Addition, Other
<input type="checkbox"/> Location of EVCS or outlets	<input type="checkbox"/> Location of EVCS or outlets
<input type="checkbox"/> Description of Work: Electric Vehicle Supply Equipment (EVSE) vendor, location(s), AC Voltage, Maximum continuous load (amperes), Quantities of charging circuits, estimated project value	<input type="checkbox"/> Description of Work: Electric Vehicle Supply Equipment (EVSE) vendor, location(s), AC Voltage, Maximum continuous load (amperes), Quantities of charging circuits, Estimated project value
<p>Suggested: Site owner register new EV with utility: https://secure.comed.com/SmartEnergy/SmartMeterSmartGrid/Pages/RegisterYourElectronicVehicle.aspx</p>	<p>Suggested: Site owner register new EV with utility: https://secure.comed.com/SmartEnergy/SmartMeterSmartGrid/Pages/RegisterYourElectronicVehicle.aspx</p>
<p>Required Permit:</p> <input type="checkbox"/> Single-Family Residential Electric Vehicle Charging Systems (SFREVCS)* <p>Additional Possible Permits:</p> <input type="checkbox"/> Building Permit** <input type="checkbox"/> Zoning Review*** <input type="checkbox"/> Other****	<p>Required Permits:</p> <input type="checkbox"/> Multi-Family Residential and Commercial Electric Vehicles Charging Systems (MFRCEVCS)* <p>Additional Possible Permits:</p> <input type="checkbox"/> Building Permit** <input type="checkbox"/> Zoning Review*** <input type="checkbox"/> Other****
<p>*The SFREVCS permit may be the only permit application required. If the EV Charger installation involves only the addition of a new or certification of an existing qualified Level 1 (120 VAC) or Level 2</p>	<p>* An EV Charging System (EVCS) Standard Electrical Permit is required for all other EVCS. This permit follows the same process as any other</p>

(240 VAC) outlet or the addition of a new branch run with a new circuit breaker, only a SFEVCS permit is required.

**** A building permit follows the same process as any other building permit, residential and non-residential. If the EV charging system includes concrete work, excavation, demolition, trending, boring, landscaping or other non-electrical work, these scope items will follow standard building permitting practices.**

*****If the installation of the EVCS has a significant impact on aesthetics, historical preservation, or impacts zoning restrictions, a zoning review may be required.**

******Other permits may be required based on scope of work (e.g. demolition, excavation, etc.)**

electrical permit, except for the additional information related to EV charging.

**** A building permit follows the same process as any other building permit, residential and non-residential. If the EV charging system includes concrete work, excavation, demolition, trending, boring, landscaping or other non-electrical work, these scope items will follow standard building permitting practices.**

*****If the installation of the EVCS has a significant impact on aesthetics, historical preservation, or impacts zoning restrictions, a zoning review may be required.**

******Other permits may be required based on scope of work (e.g. demolition, excavation, etc.)**

Additional Required Documents

- Site plan** (sketches, drawings, schematics) showing or describing locations of major EVCS components on the property, including all EVSE, including outlets, branch runs (conduit and wiring), outlets, and panels.
- Confirm EV charging branch run** is a dedicated circuit with no other loads sharing the circuit.
- If applicable, **confirm outlets are properly rated GFCI**.

Additional Required Documents

- Site plan locating and or defining major electrical components** (sketches, drawings, descriptions) on the property, including all EV Supply Equipment (EVSE), branch runs and risers (conduit and wiring), outlets, existing and new panels, new switches, power transformers, new distribution panels, energy management technologies, cellular and other wireless communications technologies.
- Site plan locating and/or defining and major non-electrical changes** (sketches, drawings, descriptions) to the property to install the EVCS, including concrete work, protective bollards, excavation, boring, trenching, landscaping or other changes impacting the facility, if applicable.
- Electrical load calculations** evaluation of all relevant connected loads to develop a facility power consumption profile (e.g., operating voltages; maximum and average amperages for all relevant facility loads)- with specific load profiles for each panel / switchgear box, as applicable. A load profile for future EV charging will be included, if applicable.
- One-line drawings for changes to any three- phase power**. These logical drawings map the three-phase power in the facility. This will include symbolic representations of all circuit breakers, transformers, switchgear, bus bars, conductors and other electrical equipment, shown by standardized schematic symbols.
- Utility service upgrade application** information between facility and utility, if applicable.
- Vendor cut sheets for EVSEs**, wireless equipment, panels, transformers and other new electrical equipment, if applicable.
- Review of electrical and mechanical drawings by a Professional Engineer**, including a certified stamp, if applicable.
- Site plan locating and/or defining any site changes related to zoning compliance** (sketches, drawings, descriptions) such as

mobility accessibility, aesthetics, historical preservation, signage, if applicable.

SFREVCS Permit Turnaround time is 3-5 business days; incomplete applications can extend the turnaround period

MFRCEVCS Permit Turnaround time is up to 10 business days; incomplete applications can extend the turnaround period

Inspection Process

EV Charging Station required inspections:

- Rough (Electrical)
- Pre-Power (Electrical)
- Final Electrical
- Final Building

Submitted plans

Electrical plans and permit application must include the information shown below for review. (Note: Additional information may be required once electrical drawings have been reviewed.)

EV chargers fed from existing electrical service

1. Electrical contractor name, address and license number signed by the license holder must be shown on all submitted electrical drawings, sketches and panel schedules. Engineered plans are required if the charging equipment is 277/480v.
2. Please show the general note of compliance with NEC 2017 for the electrical installation on the electrical drawing.
3. Please show the general note for voltage drop for 3-percent feeders and 3-percent branch circuits, 5-percent total (feeders and branch) on the submitted electrical drawing.
4. Provide a one-line diagram showing raceways, conductors and overcurrent protection supplying the new EV chargers.
5. Revised existing panel schedule with demand load to now include the new EV charger's circuitry. Provide a panel schedule showing the load, new and existing to be placed on the panel serving the new EV chargers.

6. Submit a site plan to include electrical drawings showing the existing electrical panel and locations of the new EV chargers.
7. Electrical specifications of EV chargers to include UL-2202 and UL-2594 listing and label information.
8. Provide approved fire stopping system for all penetrations of fire rated assemblies.

EV chargers fed from a new electrical service must also include:

1. A one-line diagram for the new electrical service showing raceways, conductors, and overcurrent protection size. Include voltage/phase/amperage/AIC rating.
2. Provide an arc fault current calculation, showing the available fault current at the service main breaker(s).
3. Please provide a grounding detail showing all applicable grounding electrodes and grounding electrode conductor size.

220.87 Determining Existing Loads:

The calculation of a feeder or service load for existing installations will be permitted to use actual maximum demand to determine the existing load under any of the following conditions:

1. The maximum demand data is available for a 1-year period.
2. The maximum demand at 125 percent plus the new load does not exceed the ampacity of the feeder or rating of the service.
3. The feeder has overcurrent protection in accordance with 240.4, and the service has overload protection in accordance with 230.90

Additionally for Commercial installations Only

1. Charging station(s) need to have emergency shut-off capabilities located within the vicinity of the charging station(s). The contractor shall install a Knox Box Remote Power Box for emergency shut-off of charging station(s).
2. Signage will be installed on the switchboard indicating the section the main breaker is in and that it functions as the emergency disconnect.

3. The breakers in the switchboard are equipped with a locking means that remain in place with or without a lock installed that meets the requirement of NEC 625.42.
4. Provide bollard protection for the new electrical transformer and equipment.
5. Provide one master manual shutdown shunt for all the dispensers and identify location of the master manual shutdown on the site plan.

**Village of Maywood
Department of Building & Code Enforcement
40 Madison Street
Maywood, IL 60153
Phone: (708) 450-4405
Fax: (708) 450-4893**

Email: codept@maywood-il.gov

Web link: https://www.maywood-il.gov/services/building_code_enforcement.php

**Hours and Days of Operation: 8:30AM-5:00PM
Monday-Friday**