



EV Make-Ready



WHAT IS EV MAKE-READY?

Electric vehicle (EV) make-ready means that all necessary electrical infrastructure to operate an electric vehicle charging station including all conduit, wire, and concrete work is configured so that the charging station can be mounted if required.

WHY IS IT IMPORTANT?

Car manufacturers across the nation are making commitments to transition their vehicle offerings to electric. General Motors, Ford, Volvo, Jaguar, Honda, Mercedes-Benz and others expect 100% of their sales to be electric by 2040, and some of them even earlier! The transition to electric vehicles will require charging stations in residences, workplaces, parking lots, and other commercial venues.

New residential and commercial buildings are designed to last for decades, so they should be ready to accommodate the potential need for charging infrastructure. Studies show that EV infrastructure is significantly less expensive to install during new construction compared to costly retrofits. For example, the estimated EV infrastructure costs for a parking lot with 10 total spaces and 2 charging stations would be about \$920 per charger for a new construction parking lot, while for a retrofit of a parking lot of the same size, the cost would be \$3,710 per charger because of the costs of trenching, demolition and additional permitting. Make-ready for EV charging can reduce the cost of installing charging stations by 75%!



EV Make-Ready Building Codes reduce the cost of installing charging stations.

Codes can establish requirements for new construction projects to include electrical capacity and wiring for the possible installation of EV charging stations in the future.

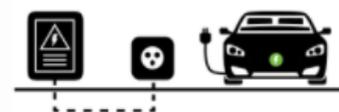
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DIFFERENT TYPES OF MAKE-READY

EV Ready: parking spaces that have raceways from dedicated circuits with electrical panel capacity so that spots can have EV chargers in the future



EV Capable: parking spaces that in addition to having EV ready requirements, also have conduit to a junction box or 240 volt-outlet that is ready for the installation of an EV charger



EV Installed: parking spaces that have an EV charging station installed

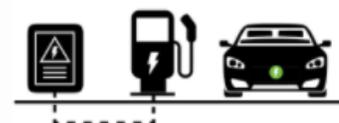


Image Credit: [SWEET](#)

APPLICATIONS:

EV Make-Ready building codes can be adapted to fit community needs. Code language can be introduced as part of the building code amendment process or can be introduced as an ordinance by a city or county.

- **Ann Arbor:** The city council adopted an update to their [Unified Development Code](#) to include provisions for EV-ready, EV-capable, and EV-installed charging equipment.
- **Auburn Hills:** Local ordinances strongly recommend the installation of the electrical capacity and conduits to support future EV charging equipment in residential and non-residential spaces.
- **Grand Rapids:** The City of Grand Rapids requires that all parking lots and structures provide space for 1 charging station for every 200 parking spots.
- **Ypsilanti:** The city provides an incentive that reduces the required number of off-street parking spaces for a business if some of those spaces are equipped with EV chargers.

Sources:

[Plug-In Electric Vehicle Infrastructure Cost-Effectiveness Report for San Francisco](#)
[Southwest Energy Efficiency Project](#)
[Charge Point](#)
[Southeast Michigan Council of Governments](#)
[Department of Energy and the Michigan Energy Office](#)
[Great Plains Institute](#)