

Appendix RD – Electric Vehicle Ready Provisions

User note:

RD101 SCOPE AND GENERAL REQUIREMENTS

Revise text as follows:

RD101.1 Intent. This code shall regulate the design, and construction of buildings for the effective use and conservation ~~reduction of greenhouse gas emissions and for the efficient production, use and storage~~ of energy over the useful life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

Intent has been modified to include consideration of greenhouse gas emissions as well as both production and storage of energy.

RD202 GENERAL DEFINITIONS

Add new definitions as follows:

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, a fuel cell, a photovoltaic array, or another source of electric current. Plug-in hybrid electric vehicles are electric vehicles having a second source of motive power. Off-road, self-propelled electric mobile equipment, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not considered electric vehicles.

Definition for EV is mirrored from NEC-2020 to be useful in defining requirements for electric vehicle infrastructure.

EV-READY SPACE. A parking space that is provided with dedicated branch circuit that meets the following requirements:

1. Wiring capable of supporting a 40-amp, 208/240-volt circuit,
2. Terminates at a junction box or receptacle located within 3 feet (914 mm) of the parking space, and
3. The electrical panel directory shall designate the branch circuit as “For electric vehicle charging” and the junction box or receptacle shall be labelled “For electric vehicle charging”.

The definition for EV Ready does not include requirements for minimum capacity for the branch circuit. Different levels of capacity are appropriate for different EV charging scenarios (charging at different building types, parking types, residential types, business types, times of day, etc.) as well as different levels of penetration of EV charging spaces in a parking lot. Therefore, capacity requirements are set in the code text itself to allow for consistent use of the definitions while the capacity requirements change to

match the specific EVCI requirements of the jurisdiction. The wiring requirement ensures that the space can be upgraded to a load-managed Level 2 EVSE in the future.

RD404 ELECTRICAL POWER AND LIGHTING SYSTEMS

Add new text as follows:

RD404.1 Electric vehicle charging infrastructure. Electric infrastructure for the current and future charging of electric vehicles shall be installed in accordance with this section. EV ready spaces are permitted to be counted toward meeting minimum parking requirements.

RD404.1.1 One- and two- family dwellings and townhouses. One- and two-family dwellings and townhouses with a dedicated attached or detached garage or on-site parking spaces and new detached garages shall be provided with one EV-ready space per dwelling unit. The branch circuit for the EV ready space shall have a minimum capacity of 9.6 kVA.

RD404.1.2 Group R occupancies. Parking facilities serving Group R-2, R-3 and R-4 occupancies shall comply with Section C405.15.

Tailored requirements for single-family and multifamily housing have been included. Single-family homes, where the occupants will choose the specific EVSE that meets their EV charging needs, are required to have one parking space with an EV Ready space that is sized to accommodate the most common EVSE on the market. The requirements for EV charging infrastructure for multifamily buildings are referenced to the commercial requirements as those are more appropriate for EV charging in parking lots. The required capacity for the branch circuit for the EV Ready space is the equivalent of a 240V, 40A circuit and is expressed in kVA as that is the standard metric for capacity or “apparent power” in electrical infrastructure.