

**SECTION 429
ELECTRIC VEHICLE CHARGING INFRASTRUCTURE**

429.1 Electric vehicle (EV) charging for new construction. The provisions of this section shall apply to the construction of new buildings and accessory structures, including parking lots and parking garages.

Electric vehicle supply equipment (EVSE) shall be installed in accordance with applicable requirements of RCW 19.28 and the National Electrical Code, Article 625.

EXCEPTION: Electric vehicle charging infrastructure is not required if any of the following conditions are met:

1. There is no public utility or commercial power supply.
2. Dwelling units without garages or other on-site parking.

429.2 New one- and two-family dwellings, and townhouses with attached private garages. A minimum of 40-ampere dedicated 208/240-volt branch circuit shall be installed for each dwelling unit. The branch circuit shall terminate in close proximity to the proposed location of EV charging equipment.

429.3 Buildings and accessory structures with on-site parking. Buildings and accessory structures provided with on-site parking shall comply with Table 429.3. Calculations shall be rounded up to the nearest whole number. Where a building contains more than one occupancy, the electric vehicle charging infrastructure percentages of Table 429.3 shall be applied to the number of spaces required for each occupancy

Exceptions:

1. On-site parking with less than 10 parking spaces.
2. Group A, Group E, and Group M occupancies shall comply with one of the following, whichever is greater:

2.1 The provisions of Section 429.3 shall apply only to designated employee parking spaces.

2.2 One of each 200 parking spaces or fraction thereof shall be EV Ready. One of each 200 parking spaces or fraction thereof shall be an EV Charging Station.

**TABLE 429.3
ELECTRIC VEHICLE CHARGING INFRASTRUCTURE**

<u>Occupancy</u>	<u>Number of EV Charging Stations</u>	<u>Number of EV-Ready Parking Spaces</u>
<u>Group A, B, E, F, H, I, M, and S occupancies</u>	<u>10% of total parking spaces</u>	<u>10% of total parking spaces</u>
<u>Group R occupancies</u>	<u>10% of total parking spaces</u>	<u>25% of total parking spaces</u>

**ALTERNATE TABLE 429.3 (For discussion purposes)
ELECTRIC VEHICLE CHARGING INFRASTRUCTURE**

<u>Occupancy</u>	<u>Number of EV Charging Stations</u>	<u>Number of EV-Ready Parking Spaces</u>	<u>Number of EV-Capable Parking Spaces</u>
<u>Group A, B, E, F, H, I, M, and S occupancies</u>	<u>10% of total parking spaces</u>	<u>10% of total parking spaces</u>	<u>10% of total parking spaces</u>
<u>Group R occupancies</u>	<u>10% of total parking spaces</u>	<u>25% of total parking spaces</u>	<u>10% of total parking spaces</u>

429.3.1 EV charging infrastructure. A minimum of 40-ampere dedicated 208/240-volt branch circuits shall be installed for all EV Ready parking spaces and EV Charging Stations. The branch circuits shall terminate at a receptacle outlet or EV charger in close proximity to the proposed location of the EV Ready parking space or the EV Charging Station.

429.4 Electrical room(s) and equipment. Electrical room(s) and/or dedicated electrical equipment serving buildings with on-site parking spaces shall be sized to accommodate the requirements of Section 429.

The electrical service/panel capacity and the electrical system, including any on-site distribution transformer(s), shall have sufficient capacity to simultaneously charge all EVs at all required EV Ready parking spaces and EV Charging Stations at a minimum of 40-amperes each.

EXCEPTION: Automatic Load Management System (ALMS) may be used to adjust the maximum electrical capacity required for the EV Ready parking spaces. The ALMS must be designed to allocate charging capacity among multiple future EV Charging Stations at a minimum of 16 amperes per EV charger.

429.5 Electric vehicle charging infrastructure for accessible parking spaces. Ten percent of the accessible parking spaces, rounded to the next whole number, shall be EV Charging Stations. Additional ten percent of the accessible parking spaces, rounded to the next whole number, shall be EV Ready.

The electric vehicle charging infrastructure may also serve adjacent parking spaces not designated as accessible parking. A maximum of ten percent of the accessible parking spaces, rounded to the next whole number, are allowed to be included in the total number of electric vehicle parking spaces required under Section 429.3.

CHAPTER 2

AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS). A system designed to manage electrical load across one or more EV Ready parking spaces.

ELECTRIC VEHICLE (EV) CHARGER. Off-board charging equipment used to charge electric vehicles.

ELECTRIC VEHICLE (EV) CHARGING STATION. EV Ready parking space with installed EV charger.

ELECTRIC VEHICLE (EV) READY PARKING SPACE. A parking space provided with an EV charger or a receptacle outlet allowing charging of electric vehicles.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors, attachment plugs, personnel protection system, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

429.1 Scope. The provisions of this section shall apply to the construction of new buildings.

EXCEPTIONS:

1. Occupancies classified as Group R-3 or Group U.

2. Group A, Group E, or Group M occupancies, except where employee parking spaces are designated. The provisions of Section 429 shall apply only to those designated employee parking spaces.

429.2 Required electric vehicle charging infrastructure. Where parking is provided, ten percent of parking spaces shall be provided with electric vehicle charging infrastructure in compliance with Sections 429.3, 429.4 and 429.5. When the calculation of percent served results in a fractional parking space, the applicant shall round up to the next whole number.

429.3 Electrical room(s). Electrical room(s) serving buildings with on-site parking spaces must be sized to accommodate the potential for electrical equipment and distribution required to serve a minimum of 20 percent of the total parking spaces with 208/240 V 40-amp, circuit or equivalent electric vehicle charging infrastructure.

429.4 Electric vehicle charging infrastructure. Electric vehicle charging infrastructure shall meet the following requirements:

1. A minimum number of 208/240 V 40-amp, circuit or equivalent electric vehicle charging stations required to serve the parking spaces specified in Section 429.2. The electric vehicle charging stations shall be located to serve spaces designated for parking and charging electric vehicles.

2. Additional service capacity, space for future meters, panel capacity or space for additional panels, and raceways for future installation of electric vehicle charging stations. The service capacity and raceway size shall be designed to accommodate the future installation of the number of 208/240 V 40-amp, circuit or equivalent electric vehicle charging stations specified in Section 429.2. The raceway shall terminate at spaces designated for parking and charging electric vehicles in the future.

Where designated electric vehicle charging locations serve exterior on-grade parking spaces that are located more than 4 feet from a building, raceways shall be extended below grade to a pull box in the vicinity of the designated future electric vehicle charging locations or stub above grade in the vicinity of the designated future electric vehicle charging locations, protected from vehicles by a curb or other device.

EXCEPTION: In lieu of surface-mounted raceway between the electrical panel and the designated electric vehicle charging locations, it is permitted to provide permanent markings indicating the pathway for future raceway, and one-inch diameter capped sleeves through each wall and floor assembly that are penetrated along that route. This pathway and the locations of capped sleeves shall also be indicated on the electrical plans. Raceway shall be installed for any portion of the pathway located below slabs, below grade, or within floor, wall or roof assemblies.

Load management infrastructure may be used to adjust the size and capacity of the required building electric service equipment and circuits on the customer facilities, as well as electric utility owned infrastructure, as allowed by applicable local and national electric codes.

429.5 Electric vehicle charging infrastructure for accessible parking spaces. When electric vehicle charging infrastructure is required, ten percent of accessible parking space, rounded to the next whole number, shall be provided with electric vehicle charging infrastructure. The electric vehicle charging infrastructure may also serve adjacent parking spaces not designated as accessible parking. A maximum of ten percent rounded to the next whole number, of the accessible parking spaces are allowed to be included in the total number of electric vehicle parking spaces required under Section 429.2.