

CPDC Bulletin

			24-018		
☑ Information	☐ Administrative	Procedural	 ✓ Technical ✓ CCR Title 24 ○ Design ○ Construction ○ Inspection 		
Bulletin: CALGreen EV Requirements for Parking Additions or Alterations					
Effective Date:	January 1, 2025				
From:	Energy, Sustainability & Transportation				
Item No.	Information				

The intent of this bulletin is to provide clarity and direction for campuses complying with Title 24, Part 11 (CALGreen) § 5.106.5.4, which relates to electric vehicle (EV) space requirements for non-residential parking facility additions and alterations.

As of July 1, 2024, § 5.106.5.4 requires either EV Capable Spaces and/or installed EV Charging Stations (EVCS). or power allocated for EV Capable Spaces and/or installed EVCS, for the following types of additions or alterations to existing buildings or parking facilities:

- 1. When the scope of construction work includes an increase in power supply to an electric service panel as part of parking facility addition or alteration.
- 2. When a new photovoltaic (PV) system is installed covering existing parking spaces.
- 3. When additions or alterations to existing buildings are triggered pursuant to code Section 301.3 and the scope of work includes an increase in power supply to an electric service panel.

Only after consultation with the CSU Building Official, and on a case-by-case basis, campuses may elect to apply a campus-wide or "portfolio" approach for calculating and locating EV Capable Spaces or EVCS required per CALGreen § 5.106.5.4. Using this approach, CSU may consider the total number of, or allocated power for, existing EV Capable Spaces and EVCS already installed throughout campus parking facilities as counting toward the amount required per CALGreen Tables 5.106.5.3.1 or 5.106.5.3.6. Please note that utilizing a portfolio approach may still require addition of EV Capable Spaces and EVCS.

Additionally, campuses shall consult with the CSU Building Official to determine whether any of the following potential exceptions listed in § 5.106.5.4 may apply to their project on a case-by-case basis:

- a. Where there is no local utility power supply.
- b. Where the local utility is unable to supply adequate power.
- c. Where there is evidence suitable to the local enforcement agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
- d. Where demonstrated as impracticable excluding local utility service or utility infrastructure issues.

On a case-by-case basis, the CSU Building Official may determine construction costs to be adversely impacted if the cost to install the required number of EVCS is disproportionate as compared to the adjusted construction cost. Projects which are requesting a determination of infeasibility based on cost

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impracticability must provide an estimate to substantiate this determination and request concurrence from the CSU Building Official.

Please note that campuses should always refer to accessibility requirements related to EV charging found in the California Building Code, Chapter 11B.ⁱ Campuses should also carefully weigh other accessibility considerations in relation to EV spaces and facilities. For example, shade provided by PV arrays over parking areas may be considered an amenity and, thus, accessible spaces would likely need to be included for those parking and EV spaces being covered.

Please reach out to Scope 3 Emissions Manager Hank Kaplan, <u>hkaplan@calstate.edu</u>; University Architect and Deputy Building Official Ebi Saberi, <u>esaberi@calstate.edu</u>; or Director of Architecture and CSU Building Official Tania Nunez, <u>thunez@calstate.edu</u>, with any questions.

Attachments:	CALGreen § 5.106.5.4 CALGreen Tables 5.106.5.3.1 and Table 5.106.5.3.6
Applicability:	All non-residential parking facilities owned and managed by the CSU including Auxiliary Services.

Plan Check Services, Mechanical Review Services.

End of Bulletin

ⁱ <u>https://up.codes/viewer/california/ca-building-code-2022-1/chapter/11B/accessibility-to-public-buildings-public-accommodations-commercial-buildings-and#11B-228.3</u>

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California Green Building Code 2022

5.106.5.4 Additions or Alterations to Existing Buildings or Parking Facilities [A]

[BSC-CG] Existing buildings or parking facilities being modified by one of the following shall comply with Section 5.106.5.4.1 or 5.106.5.4.2. When EVSE is installed, accessible EVCS shall be provided in accordance with the California Building Code, Chapter 11B, Section 11B-228.3.

- 1. When the scope of construction work includes an increase in power supply to an electric service panel as part of a parking facility addition or alteration.
- 2. When a new photovoltaic system is installed covering existing parking spaces.
- 3. When additions or alterations to existing buildings are triggered pursuant to code Section 301.3 and the scope of work includes an increase in power supply to an electric service panel.

Exceptions:

- 1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
 - a. Where there is no local utility power supply.
 - b. Where the local utility is unable to supply adequate power.
 - c. Where there is evidence suitable to the local enforcement agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
 - d. Where demonstrated as impracticable excluding local utility service or utility infrastructure issues.
- 2. Remote parking facilities that do not have access to the building service panel.
- 3. Parking area lighting upgrades where no trenching is part of the scope of work.
- 4. Emergency repairs, including but not limited to water line break in parking facilities, natural disaster repairs, etc.

5.106.5.4.1 Existing Buildings or Parking Areas Without Previously Installed EV Capable Infrastructure [A]

When EV capable infrastructure does not exist at an existing parking facility or building, and the parking facility or building undergoes an addition or alteration listed in Section 5.106.5.4, construction shall include electric vehicle charging in compliance with either Section 5.106.5.3 and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 and associated Table 5.106.5.3.6 for the total number of actual parking spaces being added or altered.

5.106.5.4.2 Existing Buildings or Parking Areas With Previously Installed EV Capable Infrastructure [A]

When EV capable infrastructure is available at an existing parking facility or building, and the parking facility or building is undergoing an addition or alteration listed in Section 5.106.5.4, construction shall include electric vehicle charging in compliance with either Section 5.106.5.3 and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 and associated Table 5.106.5.3.6 utilizing the existing EV capable allocated power and infrastructure for the total number of actual parking spaces being added or altered. If the area being added or altered exceeds the existing EV capable capacity, allocated power and infrastructure, provide additional EV charging as needed to comply with this section.

California Green Building Code 2022

5.106.5.3.1 EV Capable Spaces [N]

EV capable spaces shall be provided in accordance with Table 5.106.5.3.1 and the following requirements:

- 1. Raceways complying with the *California Electrical Code* and no less than 1-inch (25 mm) diameter shall be provided and shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the EV capable space and into a suitable listed cabinet, box, enclosure or equivalent. A common raceway may be used to serve multiple EV capable spaces.
- 2. A service panel or subpanel(s) shall be provided with panel space and electrical load capacity for a dedicated 208/240 volt, 40-ampere minimum branch circuit for each EV capable space, with delivery of 30-ampere minimum to an installed EVSE at each EVCS.
- 3. The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.
- 4. The service panel or subpanel circuit directory shall identify the reserved overcurrent protective device space(s) as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

Note: A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by an enforcement agency. See Vehicle Code Section 22511.2 for further details.

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE) ^{2, 3}
0—9	0	0
10—25	4	0
26—50	8	2
51—75	13	3
76—100	17	4
101—150	25	6
151—200	35	9
201 and over	20 percent of actual parking spaces ¹	25 percent of EV capable spaces ¹

TABLE 5.106.5.3.1

- 1. Calculation for spaces shall be rounded up to the nearest whole number.
- 2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count toward the total number of required EV capable spaces shown in column 2.
- 3. At least one Level 2 EVSE shall be provided.

California Green Building Code 2022

5.106.5.3.6 Electric Vehicle Charging Stations (EVCS)—Power Allocation Method

The power allocation method may be used as an alternative to the requirements in Section 5.106.5.3.1, Section 5.106.5.3.2 and associated Table 5.106.5.3.1. Use Table 5.106.5.3.6 to determine the total power in kVA required based on the total number of actual parking spaces.

Power allocation method shall include the following:

1. Use any kVA combination of EV capable spaces, low power Level 2, Level 2 or DCFC EVSEs.

2. At least one Level 2 EVSE shall be provided.

TABLE 5.106.5.3.6

TOTAL NUMBER OF ACTUAL PARKING SPACES	MINIMUM TOTAL kVA @ 6.6 kVA	TOTAL kVA REQUIRED IN ANY COMBINATION OF EV CAPABLE, ^{3,4} LOW POWER LEVEL 2, LEVEL 2, ^{1, 2} OR DCFC
0—9	0	0
10—25	26.4	26.4
26—50	52.8	52.8
51—75	85.8	85.8
76—100	112.2	112.2
101—150	165	165
151—200	231	231
201 and over	20 percent of actual parking spaces × 6.6	Total required kVA = P × .20 × 6.6 Where P = Parking spaces in facility

1. Level 2 EVSE @ 6.6 kVA minimum.

2. At least one Level 2 EVSE shall be provided.

3. Maximum allowed kVA to be utilized for EV capable spaces is 75 percent.

4. If EV capable spaces are utilized, they shall meet the requirements of Section 5.106.5.3.1 EV capable spaces.

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