

**EXHIBIT B**

**CHAPTER 16.43—GREEN BUILDING CODE**

- 16.43.010. Title.**
- 16.43.020. Adoption by Reference.**
- 16.43.030. Fireplaces and Wood-Burning Appliances.**
- 16.43.040. Definitions.**
- 16.43.050. Residential mandatory measures—Electric vehicle (EV) charging.**
- 16.43.060. Non-residential mandatory measures—Electric vehicle (EV) charging.**

**16.43.010. Title.**

This chapter shall be known and may be cited and referred to as the “Green Building Code for the City of Sunnyvale.”

**Section 16.43.020. Adoption by reference.**

The “2019 California Green Building Standards Code” adopted by the State Building Standards Commission in California Code of Regulations (CCR) Title 24, Part 11 is hereby adopted by reference, with changes and modifications as hereinafter set forth, as the green building code of the city of Sunnyvale.

**Section 16.42.030. Fireplaces and Wood-Burning Appliances.**

- (a) 2019 California Green Building Code Section 4.503 is amended to read as follows:

**Section 4.503.1. Fireplaces and Wood-Burning Appliances.** Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed wood stove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable and shall have a permanent label indicating they are certified to meet the emission limit.

This section shall not apply to the repair, reconstruction or replacement of any lawful, existing wood-burning appliance.

- (1) Coal;
- (2) Garbage;
- (3) Glossy or colored paper;
- (4) Paint;
- (5) Paint solvent;
- (6) Particle board;
- (7) Plastic or items made from plastic;
- (8) Rubber or items made from rubber;
- (9) Salt water driftwood;
- (10) Treated wood; and
- (11) Waste petroleum products.

- (b) 2019 California Green Building Code Section 5.503.1 is amended to read as follows:

**Section 5.503 Fireplaces and Wood-Burning Appliances.** Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed wood-stove or pellet stove. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

This section shall not apply to the repair, reconstruction or replacement of any lawful, existing wood-burning appliance.

It is unlawful to burn the following in any fireplace or wood-burning appliance:

- (1) Coal;
- (2) Garbage;
- (3) Glossy or colored paper;
- (4) Paint;
- (5) Paint solvent;
- (6) Particle board;
- (7) Plastic or items made from plastic;
- (8) Rubber or items made from rubber;
- (9) Salt water driftwood;
- (10) Treated wood; and
- (11) Waste petroleum products.

**Section 16.43.040. Definitions.**

2019 California Green Building Code Section 201 (Definitions) is hereby amended by adding the following definitions:

**EV Capable:** A parking space linked to a listed electrical panel with sufficient capacity to provide at least 110/120 volts and 20 amperes to the parking space. Raceways linking the electrical panel and parking space only need to be installed in spaces that will be inaccessible in the future, either trenched underground or where penetrations to walls, floors, or other partitions would otherwise be required for future installation of branch circuits. Raceways must be at least 1” in diameter and may be sized for multiple circuits as allowed by the California Electrical Code. The panel circuit directory shall identify the overcurrent protective device space(s) reserved for EV charging as “EV CAPABLE.” Construction documents shall indicate future completion of raceway from the panel to the parking space, via the installed inaccessible raceways.

**Level 1 EV Ready Space:** A parking space served by a complete electric circuit with a minimum of 110/120 volt, 20-ampere capacity including electrical panel capacity, overprotection device, a minimum 1” diameter raceway that may include multiple circuits as allowed by the California Electrical Code, wiring, and either a) a receptacle labelled “Electric Vehicle Outlet” with at least a ½” font adjacent to the parking space, or b) electric vehicle supply equipment (EVSE).

**Level 2 EV Ready Space:** A parking space served by a complete electric circuit with 208/240 volt, 40-ampere capacity including electrical panel capacity, overprotection device, a minimum 1” diameter raceway that may include multiple circuits as allowed by the California Electrical Code, wiring, and either a) a receptacle labelled “Electric Vehicle Outlet” with at least a ½” font adjacent to the parking space, or b) electric vehicle supply equipment (EVSE) with a minimum output of 30 amperes.

**Level 3 EV Ready Space:** A parking space served by a complete electric circuit with at least a 208/240 volt, 40-ampere capacity including electrical panel capacity, overprotection device, a minimum 1” diameter raceway that may include multiple circuits as allowed by the California Electrical Code, wiring, and either a) a receptacle labelled “Electric Vehicle Outlet” with at least a ½” font adjacent to the parking space, or b) electric vehicle supply equipment (EVSE) with a minimum output of 30 amperes.

**Electric Vehicle Charging Station (EVCS):** A parking space that includes installation of electric vehicle supply equipment (EVSE) with a minimum capacity of 30 amperes connected to a circuit serving a Level 2 EV Ready Space. EVCS installation may be used to satisfy a Level 2 EV Ready Space requirement.

**Level 3 Electric Vehicle Charging Station (EVCS):** A parking space that includes installation of electric vehicle supply equipment (EVSE) with a minimum capacity of 40 amperes connected to a circuit serving a Level 3 EV Ready Space. EVCS installation may be used to satisfy a Level 3 EV Ready Space requirement. As applied to this code, a Level 3 shall be SAE J1772 (IEC Type 1) or alternative approved by the chief building official.

**Automatic Load Management Systems (ALMS):** (ALMS) A control system which allows multiple EV chargers or EV-Ready electric vehicle outlets to share a circuit or panel and automatically reduce power at each charger, providing the opportunity to reduce electrical infrastructure costs and/or provide demand response capability. ALMS systems must be designed to deliver at least 1.4kW to each EV Capable, EV Ready or EVCS space served by the ALMS. The connected amperage on-site shall not be lower than the required connected amperage per Part 11, 2019 California Green Building Code for the relevant building types.

**Affordable Housing:** Residential buildings that entirely consist of units below market rate and whose rents or sales prices are governed by local agencies to be affordable based on area median income.

**Section 16.42.050. Residential mandatory measures—Electric vehicle (EV) charging.**

- (a) 2019 California Green Building Code Section 4.106.4 (Electric vehicle (EV) charging for new construction) is hereby amended to read as follows:

**4.106.4. Electric vehicle (EV) charging for new construction.** New construction shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers.

**Exceptions:**

1. Where there is no commercial power supply.
  2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities, unless the electrical panel is upgraded, or a new panel is installed in which case only the electrical capacity requirements apply.
  3. Spaces accessible only by automated mechanical car parking systems are exempted from providing EV charging infrastructure.
- (b) 2019 California Green Building Code Section 4.106.4.1 (New one- and two-family dwellings and townhouses with attached private garages) is hereby amended to read as follows:

**4.106.4.1. New one- and two-family dwellings and townhouses with attached private garages.** For each dwelling unit, install a Level 2 EV Ready Space and Level 1 EV Ready Space.

**Exception:** For each dwelling unit with only one parking space, install a Level 2 EV Ready Space.

- (c) 2019 California Green Building Code Section 4.106.4.1.1 (Identification.) is hereby amended to read as follows:

**4.106.4.1.1. Identification.** The raceway termination location shall be permanently and visibly marked as “Level 2 EV-Ready”.

- (d) 2019 California Green Building Code Section 4.106.4.2 (New multifamily dwellings) is hereby amended to read as follows:

**4.106.4.2. New multifamily dwellings.** The following requirements apply to all new multifamily dwellings:

1. For multifamily buildings with less than or equal to 20 dwelling units, one parking space per dwelling unit with parking shall be provided with a Level 2 EV Ready Space.
2. When more than 20 multifamily dwelling units are constructed on a building site:
  - a. 25% of the dwelling units with parking space(s) shall be provided with at least one Level 2 EV Ready Space. Calculations for the

required minimum number of Level 2 EV Ready spaces shall be rounded up to the nearest whole number.

- b. In addition, each remaining dwelling unit with parking space(s) shall be provided with at least a Level 1 EV Ready Space.

**Exception:** For all multifamily Affordable housing, 10% of dwelling units with parking space(s) shall be provided with at least one Level 2 EV Ready Space. Calculations for the required minimum number of Level 2 EV Ready spaces shall be rounded up to the nearest whole number. The remaining dwelling units with parking space(s) shall each be provided with at least a Level 1 EV Ready Space.

**Notes:**

- 1. ALMS may be installed to decrease electrical service and transformer costs associated with EV Charging Equipment subject to review of the authority having jurisdiction.
  - 2. Installation of Level 2 EV Ready Spaces above the minimum number required level may offset the minimum number Level 1 EV Ready Spaces required on a 1:1 basis.
  - 3. The requirements apply to multifamily buildings with parking spaces including: a) assigned or leased to individual dwelling units, and b) unassigned residential parking.
  - 4. If a building permit applicant provides documentation detailing that the increased cost of utility service or on-site transformer capacity would exceed an average of \$4,500 among parking spaces with Level 2 EV Ready Spaces and Level 1 EV Ready Spaces, the applicant shall provide EV infrastructure up to a level that would not exceed this cost for utility service or on-site transformer capacity.
  - 5. All accessible parking spaces for covered newly constructed multifamily dwellings shall provide Level 1 or Level 2 EV Ready Spaces.
- (e) 2019 California Green Building Code Section 4.106.4.2.2 (Electric vehicle charging space (EV space) dimensions) is hereby amended to read as follows:
- 4.106.4.2.2 Electric vehicle charging space (EV space) dimensions.** The dimensions of the EV spaces shall comply with Chapter 19.46 (Parking) of the Sunnyvale Municipal Code.
- (f) The following sections of the 2019 California Green Building Code Section are deleted in their entirety: 4.106.4.2.3 (Single EV Space Required), 4.106.4.2.4 (Multiple EV spaces required), and 4.106.4.2.5 (Identification).

**Section 16.42.060. Nonresidential mandatory measures—Electric vehicle (EV) charging.**

- (a) 2019 California Green Building Code Section 5.106.5.3 (Electric vehicle (EV) charging) is hereby amended to read as follows:

**5.106.5.3. Electric vehicle (EV) charging.** New construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation and use of EV chargers.

**Exceptions:**

1. Where there is no commercial power supply.
  2. Spaces accessible only by automated mechanical car parking systems are excepted from providing EV charging infrastructure.
- (b) 2019 California Green Building Code Section 5.106.5.3.1 (Single charging space requirements) is hereby amended to read as follows:

**5.106.5.3.1. Office buildings:** In nonresidential new construction buildings designated primarily for office use with parking:

1. When 10 or more parking spaces are constructed, 10% of the available parking spaces on site shall be equipped with Level 2 EVCS;
2. An additional 10% shall be provided with at least Level 1 EV Ready Spaces; and
3. An additional 30% shall be at least EV Capable.

Calculations for the required minimum number of spaces equipped with Level 2 EVCS, Level 1 EV Ready spaces and EV Capable spaces shall all be rounded up to the nearest whole number.

Construction plans and specifications shall demonstrate that all raceways shall be a minimum of 1” and sufficient for installation of EVCS at all required Level 1 EV Ready and EV Capable spaces; Electrical calculations shall substantiate the design of the electrical system to include the rating of equipment and any on-site distribution transformers, and have sufficient capacity to simultaneously charge EVs at all required EV spaces including Level 1 EV Ready and EV Capable spaces; and service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

**Notes:**

1. ALMS may be installed to increase the number of EV chargers or the amperage or voltage beyond the minimum requirements in this code. The

option does not allow for installing less electrical panel capacity than would be required without ALMS.

- (c) 2019 California Green Building Code Section 5.106.5.3.2 (Multiple charging space requirements) is hereby amended to read as follows:

**5.106.5.3.2. Other nonresidential buildings.** In nonresidential new construction buildings that are not designated primarily for office use, such as retail or institutional uses:

1. When 10 or more parking spaces are constructed, 6% of the available parking spaces on site shall be equipped with Level 2 EVCS;
2. An additional 5% shall be at least Level 1 EV Ready.
3. A Level 3 EVCS (Direct Current Fast Charger) shall be provided for every one hundred (100) spaces on site.

Calculations for the required minimum number of spaces equipped with Level 2 and Level 3 EVCS and Level 1 EV Ready spaces shall be rounded up to the nearest whole number.

**Exception:** Installation of each Direct Current Fast Charger with the capacity to provide at least 80 kW output may substitute for 6 Level 2 EVCS and 5 Level 1 EV Ready spaces after a minimum of 6 Level 2 EVCS and 5 Level 1 EV Ready spaces are installed.

- (d) 2019 California Green Building Code Section 5.106.5.3.3 (EV charging space calculation) is hereby amended to read as follows:

**5.106.5.3.3. Clean Air Vehicle Parking Designation.** EVCS qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

**Notes:**

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. [www.dot.ca.gov/hq/traffops/policy/13-01.pdf](http://www.dot.ca.gov/hq/traffops/policy/13-01.pdf).
2. See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.
3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides

helpful information for local governments, residents and businesses.  
[www.opr.ca.gov/docs/ZEV\\_Guidebook.pdf](http://www.opr.ca.gov/docs/ZEV_Guidebook.pdf).

4. Section 11B-812 of the California Building Code requires that a facility providing EVCS for public and common use also provide one or more accessible EVCS as specified in Table 11B-228.3.2.1.
5. It is encouraged that shared parking, EV Ready are designated as “EV preferred.”

(e) 2019 California Green Building Code Section 5.106.5.3.4 (Identification) is hereby amended to read as follows:

**5.106.5.3.4. Identification.** The raceway termination location shall be permanently and visibly marked as “EV CAPABLE Ready”.

(e) 2019 California Green Building Code Section 5.106.5.3.5 (Future charging stations) is hereby deleted in its entirety.