# 2013 INTERVENING CODE CYCLE
# SIGNIFICANT CHANGES - RESIDENTIAL MEASURES
# EFFECTIVE JULY 1, 2015

**Summary of significant changes made during the 2013 Intervening Code Cycle. See specific referenced sections in CALGreen for details.**

| | TYPE | SECTION | MEASURES | REQUIREMENTS |
|---|---|---|---|---|
| **Chapter 2 Definitions** | | | | |
| DEFINITIONS | | 202 | | **Revised definition.**<br>**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, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the California Electrical Code, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included. |
| | | 202 | | **New definition.**<br>**ELECTRIC VEHICLE CHARGING STATION (EVCS).** One or more spaces intended for charging electric vehicles. |
| | | 202 | | **No change in definition; provided for reference purposes.**<br>**ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).** The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, 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. |
| **Divisions 4.1 and A4.1 - PLANNING AND DESIGN (SITE DEVELOPMENT)** | | | | |
| SITE DEVELOPMENT | MAND. | 4.106.4 | **Electric Vehicle (EV) Charging** | **NEW. Electric vehicle (EV) charging for new construction.**<br>• Comply with Section 4.106.4.1 and 4.106.4.2 for future installation of EV chargers<br>• Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.<br>Exceptions (on a case-by-case basis as determined by Local Enforcing Agency):<br>1- Where there is no commercial power supply.<br>2- Verification that meeting requirements will alter the local utility infrastructure design requirements on the utility side of the meter increasing costs to the homeowner/developer by more than $400.00 per dwelling unit. |
| | MAND. | 4.106.4.1 & 4.106.4.1.1 | **Electric Vehicle (EV) Charging 1 & 2-family; townhouses with attached private garages** | **NEW. New one- and two-family dwellings and townhouses with attached private garages.**<br>• Install a listed raceway to accommodate a dedicated 208/240-volt branch circuit for each dwelling unit.<br>- Raceway shall not be less than trade size 1 (nominal 1-inch inside diameter).<br>- Raceway shall originate at the main service or subpanel and terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger.<br>- Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces.<br>• Service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. Service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as “EV CAPABLE”. The raceway termination location shall be permanently and visibly marked as “EV CAPABLE”. |
| | MAND. | 4.106.4.2 | **Electric Vehicle Charging Stations (EVCS) Multifamily** | **NEW. New multifamily dwellings.**<br>Applies when 17 or more multifamily dwelling units are constructed on a building site<br>• 3 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than 1, shall be EVCS capable of supporting future EVSE and shall be identified on construction documents. Calculations for the number of EVCS shall be rounded up to the nearest whole number.<br>• Construction documents are intended to demonstrate the project’s capability and capacity for facilitating future EV charging. There is no requirement for EVCS to be constructed or available until EV chargers are installed for use. |
| | MAND. | 4.106.4.2.1 | **Electric Vehicle Charging Station (EVCS) Multifamily** | **NEW. Electric vehicle charging station (EVCS) locations.**<br>Construction documents shall indicate the location of proposed EVCS. At least one EVCS shall be located in common use areas and available for use by all residents.<br><br>When EV chargers are installed, EVCS required by Section 4.106.4.2.1 and 4.106.4.2.2, Item 3, shall comply with at least one of the following options:<br>1- The EVCS shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.<br>2- The EVCS shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.<br>Note from HCD: Items 1 & 2 apply to the EVCS that is the “1 in 25” or “not less than 1.” |

**Note:** Mandatory CALGreen measures with more restrictive Tier 1 and Tier 2 requirements are noted in gray font color.

| | TYPE | SECTION | MEASURES | REQUIREMENTS |
|---|---|---|---|---|
| **Divisions 4.1 and A4.1 - PLANNING AND DESIGN (SITE DEVELOPMENT) continued** | | | | |
| **SITE DEVELOPMENT** | **MAND.** | **4.106.4.2.2** | **Electric Vehicle Charging Station (EVCS) Multifamily** | **NEW. Electric vehicle charging station (EVCS) dimensions and slope.**<br>The EVCS shall be designed to comply with the following:<br>1- The minimum length of each EVCS shall be 18 feet (5486 mm).<br>2- The minimum width of each EVCS shall be 9 feet (2743 mm).<br>3- One in every 25 EVCS, but not less than one EVCS, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EVCS is 12 feet (3658 mm).<br>a- Surface slope for this EVCS and 5-foot (1524 mm) wide aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction. |
| | **MAND.** | **4.106.4.2.3** | **Electric Vehicle Charging (Raceway) Multifamily** | **NEW. Single EVCS required.**<br>• Install listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.<br>- Raceway shall not be less than trade size 1 (nominal 1-inch inside diameter).<br>- Raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EVCS.<br>• Construction documents shall identify the raceway termination point.<br>• Service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. Service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as “EV CAPABLE”. |
| | **MAND.** | **4.106.4.2.4** | **Electric Vehicle Charging (Planning) Multifamily** | **NEW. Multiple EVCS required.**<br>• Construction documents shall indicate raceway termination point and proposed location of future EVCS and EV chargers; provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EV's at all required EVCS at full rated amperage of the EVSE.<br>• Plan design shall be based upon a 40-ampere minimum branch circuit.<br>• Raceways and related components planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original constuction.<br>• Service panel or subpanel circuit directory shall identify overcurrent protective device space(s) reserved for future EV charging purposes as “EV CAPABLE” in accordance with the California Electrical Code. |
| | **Tier 1 & Tier 2** | **A4.106.8** | **EV Charging** | **REVISED AS TIER 1 & 2. Electric vehicle (EV) charging for new construction.**<br>• New construction shall comply with Sections A4.106.8.1 and A4.106.8.2 to facilitate future installation and use of electric vehicle chargers.<br>• Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. |
| | **Tier 1 & Tier 2** | **A4.106.8.1 & A4.106.8.1.1** | **EV Charging 1 - 2 family; townhomes with attached private garages** | **REVISED AS TIER 1 & 2. New one- and two-family dwellings and townhouses with attached private garages.**<br>• A dedicated 208/240-volt branch circuit shall be installed in the raceway required by Section 4.106.4.1 for each dwelling unit. Branch circuit and associated overcurrent protective device shall be rated at 40 amperes minimum.<br>• Other electrical components, including a receptacle or blank cover, related to this section shall be installed in accordance with the California Electrical Code.<br>• Service panel or subpanel circuit directory shall identify the overcurrent protective device designated for future EV charging purposes as “EV READY” in accordance with the California Electrical Code. The receptacle or blank cover shall be identified as “EV READY.” |
| | **Tier 1 & Tier 2** | **A4.106.8.2** | **Electric Vehicle Charging (EVCS) Multifamily** | **REVISED AS TIER 1 & 2. New multifamily dwellings.**<br>• Applies when 17 or more multifamily dwelling units are constructed on a building site.<br>• 5 percent of total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be EVCS capable of supporting future EVSE and shall be identified on construction documents. Calculations for number of EVCS shall be rounded up to the nearest whole number.<br>• See Section 4.106.4.2 for additional requirements related to EVCS for multifamily dwellings. |
| | **Notes for Sections 4.106.4 and A4.108.1** | **Notes:**<br>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. Website: www.dot.ca.gov/hq/traffops/signtech/signdel/policy.htm<br>2. See Vehicle Code Section 22511 for EV charging space signage in off-street parking facilities and for use of EV charging spaces.<br>3. The Governor’s Office of Planning and Research (OPR) published a “Zero-Emission Vehicle Community Readiness Guidebook” which provides helpful information for local governments, residents and businesses. Website: http://opr.ca.gov/docs/ZEV_Guidebook.pdf<br>4. The Governor’s Office of Planning and Research (OPR) has developed draft guidelines, “Plug-In Electric Vehicles: Universal Charging Access Guidelines and Best Practices”, addressing physical accessibility standards and design guidelines for EVs. Website: http://opr.ca.gov/docs/PEV_Access_Guidelines.pdf. | | |