

DOCKETED

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Attachment B

Section 1. Section 14.04.040 of the Half Moon Bay Municipal Code is hereby repealed in its entirety and replaced with the following Section 14.04.040 to be entitled, numbered, and to read as follows:

14.04.040 Energy Code

Those certain codes and standards known as the 2019 California Energy Code, Title 24, Part 6, published by the California Building Standards Commission, are hereby adopted by reference as if fully set forth in this chapter with the following amendments:

(a) Subchapter 5, “Nonresidential, High-Rise Residential, and Hotel/Motel Occupancies – Performance and Prescriptive Compliance Approaches for Achieving Energy Efficiency,” is amended as follows:

Section 140.3 is amended by adding the following subsection:

Section 140.3(a)(10) Photovoltaic Requirements for Nonresidential Buildings. A solar photovoltaic system equivalent in size to 15 percent of the roof area, excluding any skylight area, shall be installed on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building or on covered parking installed with the building project.

Exceptions:

1. The City Manager or his/her designee may grant a modification if the applicant demonstrates that the required percentage of solar photovoltaic installation will over-generate the annual kWh required to operate the proposed building;
2. The solar photovoltaic system size may be reduced in size to the maximum that can be accommodated by the effective annual solar access due to shading from existing permanent natural or manmade barriers external to the building, including but not limited to trees, hills, and adjacent structures. The effective annual solar access shall be 70 percent or greater of the output of an unshaded solar photovoltaic array on an annual basis. No solar photovoltaic system is required if the effective annual solar access is restricted to less than 200 contiguous square feet. If the applicant demonstrates that conditions exist where excessive shading occurs, a performance equivalency approved by the Building Official may be used as an alternative.

3. Vegetative roofs covering 35 percent of the roof area or greater, meeting all relevant code requirements including considerations for wind, fire, and structural loads.

Section 140.3(a)(11) Photovoltaic Requirements for Hotel/Motel Occupancies. A solar photovoltaic system equivalent in size to 5 percent of the roof area, excluding any skylight area, shall be installed on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building or on covered parking installed with the building project.

Exceptions:

1. The City Manager or his/her designee may grant a modification if the applicant demonstrates that the required percentage of solar photovoltaic installation will over-generate the annual kWh required to operate the proposed building;
2. The solar photovoltaic system size may be reduced in size to the maximum that can be accommodated by the effective annual solar access due to shading from existing permanent natural or manmade barriers external to the building, including but not limited to trees, hills, and adjacent structures. The effective annual solar access shall be 70 percent or greater of the output of an unshaded solar photovoltaic array on an annual basis. No solar photovoltaic system is required if the effective annual solar access is restricted to less than 200 contiguous square feet. If the applicant demonstrates that conditions exist where excessive shading occurs, a performance equivalency approved by the Building Official may be used as an alternative.
3. Vegetative roofs covering 35 percent of the roof area or greater, meeting all relevant code requirements including considerations for wind, fire, and structural loads

(b) Subchapter 8, "Low-Rise Residential Buildings – Performance and Prescriptive Compliance Approaches," is amended as follows:

Section 150.1(c) is amended by adding the following subsection:

Section 150.1(c)15 Battery Storage Pre-Wire. All new single-family residential units, duplexes, triplexes, and ADUs shall be prewired for the installation of Battery Storage. The prewiring shall be in accordance with California Building, Residential, and Electrical Codes and be adequately sized by a licensed professional to accommodate the back-up loads installed in the critical load panel with a minimum of 5 kwh.

Section 2. Section 14.04.120 of the Half Moon Bay Municipal Code is hereby repealed in its entirety and replaced with the following Section 14.04.120 to be entitled, numbered, and to read as follows:

14.04.120 Green building standards code

Those certain codes and standards known as the 2019 California Green Building Standards Code, Title 24, Part 11, published by the California Building Standards Commission, are hereby adopted by reference as if fully set forth in this chapter with the following amendments:

(a) Chapter 2, "Definitions," is amended to add or change the following definitions:

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.

Automatic Load Management Systems (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 a minimum of 8-amperes and not less than 1.4-kiloWatts at the provided voltage, to each EV Capable, EV Ready or EVCS space served by the ALMS, and meet the requirements of California Electrical Code Article 625. 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.

Electric Vehicle (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. The parking space shall contain signage with at least a ½" font adjacent to the parking space indicating the space is designated as EV Capable for future connection of infrastructure at the designed voltage and amperage levels.

Electric Vehicle Charging Station (EVCS): ~~One or more electric vehicle charging spaces served by electric vehicle charger(s) or other charging equipment allowing charging of~~

~~electric vehicles. Electric vehicle charging stations are not considered parking spaces. 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. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.~~

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.

(b) Chapter 4, "Residential Mandatory Measures," is amended as follows:

Section 4.106.4-4.106.4.2.5 is amended to read:

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. ~~Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.~~

Exceptions:

- ~~1. On a case by case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:~~
 1. Where there is no commercial power supply
 - ~~1.1. Where there is evidence substantiating that meeting the requirements will alter the local utility infra-structure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than \$400.00 per dwelling unit.~~
 2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities and without electrical panel upgrade or new panel

installation. Notwithstanding the foregoing, ADUs and JADUs without additional parking but with electrical panel upgrades or new panels must have reserved breakers and electrical capacity according to the requirements of 4.106.4.1.

3. Multifamily residential building projects with valid entitlements granted by the City that have not otherwise expired before the effective date of this ordinance shall provide at least ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, with Level 2 EV Ready Circuits. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

4.106.4.1 New one- and two-family dwellings, town- houses with attached private garages, and ADUs with parking.

~~For each dwelling unit, install a Level 2 EV Ready Space and Level 1 EV Ready Space. listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The 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.~~

~~Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the California Electrical Code.~~

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

~~4.106.4.1.1 Identification. The service panel or sub-panel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "Level 2 EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE". "Level 2 EV-Ready".~~

4.106.4.2 New multifamily dwellings. ~~If residential parking is available, ten (10) present in total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number. 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. Install one Level 2 EV Ready Space in the first 20 dwelling unit parking spaces.
 - b. For each additional dwelling unit over 20, 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.
 - c. 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. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.~~
- ~~2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.~~
1. 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.
2. The requirements apply to multifamily buildings with parking spaces including: a) assigned or leased to individual dwelling units, and b) unassigned residential parking.
3. 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 for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See *Vehicle Code* Section 22511.2 for further details.

4. In order to adhere to accessibility requirements in accordance with California Building Code Chapters 11A and/or 11B, it is recommended that all accessible parking spaces for covered newly constructed multifamily dwellings are provided with Level 1 or Level 2 EV Ready Spaces.

4.106.4.2.1 Electric vehicle charging space (EV space) locations.

Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EV Space shall be located in the common use parking area and shall be available for use by all residents.

4.106.4.2.1.1 Electric vehicle charging stations (EVCS). When EV chargers are installed, EV spaces required by Section 4.106.4.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space 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.
2. The EV space shall be located on an accessible route, as defined in the *California Building Code*, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1. and Section 4.106.4.2.2, Item 3.

Note: Electric vehicle charging stations serving public housing are required to comply with the *California Building Code*, Chapter 11 B.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).
2. The minimum width of each EV space shall be 9 feet (2743 mm).
3. One in every 25 EV spaces, but not less than one, 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 EV space is 12 feet (3658 mm).
 - a) Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

Exception: Where Half Moon Bay's Municipal Code permits parking space dimensions that are less than the minimum requirements stated in this section 4.106.4.2.2, and the compliance with these minimum requirements would be infeasible due to particular circumstances of a project, an exception may be granted while remaining in compliance with 2019 California Building Code Section Table 11B-228.3.2.1 and 11B-812, as applicable.

4.106.4.2.3 Automated Load Management Systems.

1. As defined in Chapter 2, ALMS shall be allowed to meet the requirements of 4.106.4.2.
2. Where ALMS serve Direct Current Fast Charging stations, the power demand from the Direct Current Fast Charging station shall be prioritized above Level 1 and Level 2 spaces.

~~Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The 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 EV spaces. Construction documents shall identify the raceway termination point. The 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 over-current protective device.~~

~~Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger, at the time of original construction in accordance with the California Electrical Code.~~

~~4.106.4.2.4 Multiple EV spaces required. Construction raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.~~

~~**Exception:** A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger, at the time of original construction in accordance with the *California Electrical Code*.~~

4.106.4.2.5 Identification. The service panel or sub-panel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as “EV CAPABLE” in accordance with the California Electrical Code.

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