

DOCKETED

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ORDINANCE NO. 2487**AN ORDINANCE OF THE CITY OF REDWOOD CITY ADDING ARTICLE XV OF CHAPTER 9 OF THE REDWOOD CITY CODE TO ADOPT LOCAL AMENDMENTS TO 2019 EDITION OF THE CALIFORNIA ENERGY CODE AND GREEN BUILDING STANDARDS CODES, TOGETHER WITH CERTAIN AMENDMENTS, EXCEPTIONS, MODIFICATIONS AND ADDITIONS THERETO**

WHEREAS, the City of Redwood City has adopted the 2019 editions of the California Energy Code and Green Building Standards Codes; and

WHEREAS, pursuant to Sections 17922, 17958, 17958.5, 17958.7 and 18941.5 of the California Health and Safety Code, the City may adopt amendments, modifications, changes, and additions to the provisions of these codes, which are reasonably necessary to protect the health, welfare and safety of the citizens of Redwood City because of local climatic, geological and topographical conditions; and

WHEREAS, Public Resources Code Section 25402.1 (h) 2 and Section 10-106 of the Building Energy Efficiency Standards (Standards) establish a process which allows local adoption of energy standards that are more stringent than the statewide Standards, provided that such local standards are cost-effective and the California Energy Commission finds that the standards will require buildings to be designed to consume no more energy than permitted by the California Energy Code; and

WHEREAS, the City, through the Statewide Codes & Standards Program, has performed a cost-effectiveness analysis as required by the California Energy Commission for the local amendments to the California Energy Code contained in this ordinance which memo is hereby incorporated by reference; and

WHEREAS, the City has completed review of the proposed amendments and has determined that the requirements of the local amendments to the California Energy Code and Green Building Standards Code will require buildings to consume no more energy than permitted by the California Energy Code; and

WHEREAS, adoption of these local amendments is consistent with the goals of reducing greenhouse gas emissions as identified in the City's Climate Action Plan.

NOW THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF REDWOOD CITY:

SECTION 1. A new Article XV of Chapter 9 of the Redwood City Code is hereby adopted to read as follows:

ARTICLE XV. AMENDMENTS TO 2019 CALIFORNIA ENERGY CODE AND GREEN BUILDING STANDARDS CODE**Sec. 9.249. - SECTION 100.0(e) (2) A OF THE ENERGY CODE AMENDED:**

ATTY/ORD.522/CC ORD ALL ELECTRIC REACH CODES
REV: 09-16-2020 RL

ORDINANCE NO. 2487
MUFF NO. 305

Section 100.0(e) (2) A of the Energy Code is amended to read as follows:

(e) Sections applicable to particular buildings. TABLE 100.0-A and this subsection list the provisions of Part 6 that are applicable to different types of buildings covered by Section 100.0(a).

2. Newly constructed buildings.

A. All newly constructed buildings. Sections 110.0 through 110.12 apply to all newly constructed buildings within the scope of Section 100.0(a). In addition, newly constructed buildings shall meet the requirements of Subsections B, C, D or E, as applicable; and shall be an All-Electric Building, as defined in Section 9.250.

Exception 1: Non-residential buildings that will be constructed to Office of Statewide Health Planning and Development (OSHPD) Hospital standards [“OSHPD 1” as described in California Building Code Vol. 1, section 1224] or Clinic standards [“OSHPD 3” as described in California Building Code Vol. 1, section 1226] may contain non-electric space-conditioning, water-heating, and process load systems.

Exception 2: Buildings containing a Scientific Laboratory Area may contain non-electric space-conditioning and water-heating systems.

Exception 3: Non-Residential Buildings containing a kitchen may contain non-electric cooking appliances, including but not limited to stoves, ovens, cooking ranges, and broilers.

Exception 4: Non-Residential Buildings containing F or H occupancies, as defined in the California Building Code, or Scientific Laboratory Areas may have gas piping installed for use of natural gas in manufacturing, research, and development.

Exception 5: All-Electric Building requirements shall not apply to projects with planning entitlements approved by the City prior to the effective date of this ordinance.

Exception 6: All-Electric Building requirements shall not apply to new residential structures that designate 100% of the dwelling units to be affordable, excluding any onsite manager unit(s), for persons earning 80% or less of the Area Median Income (AMI), as evidenced by instruments recorded against the property that restrict the units as affordable for a period of at least 55 years.

Exception 7: All-Electric Building requirements shall not apply to Accessory Dwelling Units, as defined by Section 37.2 of the Redwood City Zoning Ordinance, or to Junior Accessory Dwelling Units, as defined by Government Code Section 65852.22.

Exception 8: If an applicant maintains that circumstances exist that make it infeasible for their building to be an all-electric building, the applicant may request an exception in writing. In requesting an exception, the burden is on the applicant to identify why the requirements for an All-Electric Building are infeasible and must submit any information, as requested by the Building Official or their designee, substantiating the infeasibility. All costs associated with the City's review of the infeasibility request will be charged to the applicant. The final determination of infeasibility shall be made by the Building Official or their designee. If the exception is granted, the Building Official or their designee shall document their findings in the files of the Building Division.

Note 1: Standby Power Systems, as defined in the California Building Code and Fire Code are not covered under the California Energy Code Section 110.2 through 110.5, which are for space-conditioning equipment; water-heating systems and equipment; pool and spa systems and equipment; furnaces, cooking equipment, pool and spa heaters, and fireplaces: pilot lights prohibited.

Note 2: A building required to be brought into conformity with standards for new construction pursuant to Redwood City Code Section 9.43 shall not be considered a newly constructed building for the purposes of Redwood City Code Section 9.249.

Sec. 9.250. - SECTION 100.1(b) OF THE ENERGY CODE AMENDED:

Section 100.1(b) of the Energy Code is amended to add definitions for "All-Electric Building" "Scientific Laboratory Area", and "Shading", to read as follows:

ALL-ELECTRIC BUILDING is a building that has no natural gas or propane plumbing installed within the building and that uses electricity as the source of energy for its space-conditioning, water-heating (including pools and spas), cooking appliances, and clothes drying appliances. All-Electric Buildings may include solar thermal pool heating.

SCIENTIFIC LABORATORY AREA is a room or area where research, experiments, and measurement in medical, physical and life sciences are performed requiring examination of fine details. The area may include workbenches, countertops, scientific instruments, and supporting offices. Scientific laboratory does not refer to film, computer, and other laboratories where scientific experiments are not performed.

SHADING is the protection from heat gains because of direct solar radiation by permanently attached exterior devices of building elements, interior shading devices, glazing material, or adherent materials, including items located outside the building footprint such as trees or high rise buildings that may affect shading.

Sec. 9.251. - SECTION 110.2 "Certification by manufacturers" OF THE ENERGY CODE AMENDED:

Section 110.2 "Certification by manufacturers" of the Energy Code is amended to read as follows:

SECTION 110.2 – MANDATORY REQUIREMENTS FOR SPACE-CONDITIONING EQUIPMENT

Certification by manufacturers. Any space-conditioning equipment listed in this section that meets the requirements of section 100.0(e) 2A may be installed only if the manufacturer has certified to the Commission that the equipment complies with all the applicable requirements of this section.

Sec. 9.252. - SECTION 110.3(a) OF THE ENERGY CODE AMENDED:

Section 110.3(a) of the Energy Code is amended to read as follows:

SECTION 110.3 – MANDATORY REQUIREMENTS FOR SERVICE WATER-HEATING SYSTEMS AND EQUIPMENT

(a) Certification by Manufacturers. Any service water-heating system or equipment that meets the requirements of section 100.0(e) 2A may be installed only if the manufacturer has certified that the system or equipment complies with all the requirements of this subsection for that system or equipment.

Sec. 9.253. - SECTION 110.4(a) OF THE ENERGY CODE AMENDED:

Section 110.4(a) of the Energy Code is amended to read as follows:

SECTION 110.4(a) – MANDATORY REQUIREMENTS FOR POOL AND SPA SYSTEMS AND EQUIPMENT

(a) Certification by Manufacturers. Any pool or spa heating system or equipment that meets the requirements of section 100.0(e)2A may be installed only if the manufacturer has certified that the system or equipment has all of the following:

Sec. 9.254. - SECTION 110.5 OF THE ENERGY CODE AMENDED:

Section 110.5 of the Energy Code is amended to read as follows:

SECTION 110.5 – NATURAL GAS CENTRAL FURNACES, COOKING EQUIPMENT, POOL AND SPA HEATERS, AND FIREPLACES: PILOT LIGHTS PROHIBITED

Any natural gas system or equipment in a building listed below that falls within one of the exceptions to Section 100.0(e) 2A, as amended by this Code, may be installed only if it does not have a continuously burning pilot light:

- (a) Fan-type central furnaces.
- (b) Household cooking appliances.

Exception to Section 110.5(b): Household cooking appliances without an electrical supply voltage connection and in which each pilot consumes less than 150 Btu/hr.

- (c) Pool heaters.
- (d) Spa heaters.
- (e) Indoor and outdoor fireplaces.

Note: Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code. Reference: Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code.

Sec. 9.255. - SECTION 110.10 OF THE ENERGY CODE AMENDED:

Section 110.10 of the Energy Code is amended to read as follows:

SECTION 110.10 – MANDATORY REQUIREMENTS FOR SOLAR READY BUILDINGS

(a) Covered Occupancies.

1. Single-family residences. Single family residences located in subdivisions with ten or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete or approved by the enforcement agency, which do not have a photovoltaic system installed, shall comply with the requirements of Section 110.10(b) through 110.10(e).
2. Low-rise multifamily buildings. Low-rise multifamily buildings that do not have a photovoltaic system installed shall comply with the requirements of Section 110.10(b) through 110.10(d).
3. Hotel/motel occupancies and high-rise multifamily buildings. Hotel/motel occupancies and high-rise multifamily buildings with ten habitable stories or fewer shall comply with the requirements of Section 110.10(b) through 110.10(d) and Table 2.
4. Nonresidential buildings. Nonresidential buildings with three habitable stories or fewer, other than healthcare facilities, shall comply with the requirements of Section 110.10(b) through 110.10(d) and Table 2.

Table 2	
Square Footage of Building	Size of System
Less than 10,000 sq. ft.	Minimum of 3-kilowatt photovoltaic systems
Greater than or equal to 10,000 sq. ft.	Minimum of 5-kilowatt photovoltaic systems
EXCEPTION: As an alternative to a solar photovoltaic system, the building may provide a solar hot water system (solar thermal) with a minimum 40 square feet of solar thermal panels, additional to any other solar thermal equipment otherwise required for compliance with Part 6.	
EXCEPTION: As an alternative to a solar photovoltaic system, the building may have 25% or more of the roof area covered with vegetation.	

(b) Solar Zone.

1. Minimum Solar Zone Area. The solar zone shall have a minimum total area as described below. The solar zone shall comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area shall be comprised of areas that have no dimension less than five feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet.

A. Single Family Residences. The solar zone shall be located on the roof or overhang of the building and have a total area no less than 250 square feet.

EXCEPTION 1 to Section 110.10(b) 1A: Single-family residences with a permanently installed domestic solar water-heating system meeting the installation criteria specified in the Reference Residential Appendix RA4 and with a minimum solar savings fraction of 0.50.

EXCEPTION 2 to Section 110.10(b)1A: Single family residences with three habitable stories or more and with a total floor area less than or equal to 2000 square feet and having a solar zone total area no less than 150 square feet.

EXCEPTION 3 to Section 110.10(b)1A: Single family residences located in the Wildland-Urban Interface Fire Area as defined in Title 24, Part 2 and having a whole house fan and having a solar zone total area no less than 150 square feet.

EXCEPTION 4 to Section 110.10(b)1A: Buildings with a designated solar zone area that is no less than 50 percent of the potential solar zone area. The potential solar zone area is the total area of any low-sloped roofs where the annual solar access is 70 percent or greater and any steep-sloped roofs oriented between 90 degrees and 300 degrees of true north where the annual solar access is 70 percent or greater. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

EXCEPTION 5 to Section 110.10(b)1A: Single family residences having a solar zone total area no less than 150 square feet and where all thermostats are demand responsive controls and comply with Section 110.12(a), and are capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency.

EXCEPTION 6 to Section 110.10(b) 1A: Single-family residences meeting the following conditions:

A. All thermostats are demand responsive controls that comply with Section 110.12(a), and are capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency.

B. Comply with one of the following measures:

- i. Install a dishwasher that meets or exceeds the ENERGY STAR Program requirements with a refrigerator that meets or exceeds the ENERGY STAR Program requirements, a whole house fan driven by an electronically commutated motor, or an SAE J1772 Level 2 Electric Vehicle Supply Equipment (EVSE or EV Charger) with a minimum of 40 amperes; or
- ii. Install a home automation system capable of, at a minimum, controlling the appliances and lighting of the dwelling and responding to demand response signals; or
- iii. Install alternative plumbing piping to permit the discharge from the clothes washer and all showers and bathtubs to be used for an irrigation system in compliance with the California Plumbing Code and any applicable local ordinances; or
- iv. Install a rainwater catchment system designed to comply with the California Plumbing Code and any applicable local ordinances, and that uses rainwater flowing from at least 65 percent of the available roof area.

B. Low-rise and high-rise multifamily buildings, hotel/motel occupancies, and nonresidential buildings. The solar zone shall be located 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, and shall have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.

EXCEPTION 1 to Section 110.10(b) 1B: High-rise multifamily buildings, hotel/hotel Occupancies, and Nonresidential Buildings with a permanently installed domestic solar electric system having a nameplate DC power rating, measured under Standard Test Conditions, of no less than one watt per square foot of roof area.

EXCEPTION 2 to Section 110.10(b)1B: High-rise multifamily buildings, hotel/motel occupancies with a permanently installed domestic solar water-heating system complying with Section 150.1(c) 8Biii and having an

additional 40 square feet of solar thermal panels.

EXCEPTION 3 to Section 110.10(b) 1B: Buildings with a designated solar zone area that is no less than 50 percent of the potential solar zone area. The potential solar zone area is the total area of any low-sloped roofs where the annual solar access is 70 percent or greater and any steep-sloped roofs oriented between 90 degrees and 300 degrees of true north where the annual solar access is 70 percent or greater. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

EXCEPTION 4: Low-rise and high-rise multifamily buildings with all thermostats in each dwelling unit are demand response controls that comply with Section 110.12(a), and are capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency. In addition, either A or B below:

A. In each dwelling unit, comply with one of the following measures:

- i. Install a dishwasher that meets or exceeds the ENERGY STAR Program requirements with either a refrigerator that meets or exceeds the ENERGY STAR Program requirements or a whole house fan driven by an electronically commutated motor; or
- ii. Install a home automation system that complies with Section 110.12(a) and is capable of, at a minimum, controlling the appliances and lighting of the dwelling and responding to demand response signals; or
- iii. Install alternative plumbing piping to permit the discharge from the clothes washer and all showers and bathtubs to be used for an irrigation system in compliance with the California Plumbing Code and any applicable local ordinances; or
- iv. Install a rainwater catchment system designed to comply with the California Plumbing Code and any applicable local ordinances, and that uses rainwater flowing from at least 65 percent of the available roof area.

B. Meet the Title 24, Part 11, Section A4.106.8.2 requirements for electric vehicle charging spaces.

EXCEPTION 5 to Section 110.10(b) 1B: Buildings where the roof is designed and approved to be used for vehicular traffic or parking or for a heliport.

EXCEPTION 6 to section 110.10(b) 1B: Performance equivalency approved

by the Building Official.

2. Azimuth. All sections of the solar zone located on steep-sloped roofs shall be oriented between 90 degrees and 300 degrees of true north.
3. Shading.
 - A. No obstructions, including but not limited to, vents, chimneys, architectural features, and roof mounted equipment, shall be located in the solar zone.
 - B. Any obstruction, located on the roof or any other part of the building that projects above a solar zone shall be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.

EXCEPTION to Section 110.10(b) 3: Any roof obstruction, located on the roof or any other part of the building that is oriented north of all points on the solar zone.

- C. The solar zone needs to account for Shading from obstructions that may impact the area required in 110.10(b) 1B. When determined by the Building Official that conditions exist where excessive Shading occurs and solar zones cannot be met, a performance equivalency approved by the Building Official may be used as an alternative.
4. Structural design loads on construction documents. For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.

NOTE: Section 110.10(b) 4 does not require the inclusion of any collateral loads for future solar energy systems.

(c) Interconnection Pathways.

- A. The construction documents shall indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service.
- B. For single-family residences and central water-heating systems, the construction documents shall indicate a pathway for routing of plumbing from the solar zone to the water-heating system.

- (d) Documentation. A copy of the construction documents or a comparable document indicating the information from Sections 110.10(b) through 110.10(c) shall be provided to the occupant.

(e) Main Electrical Service Panel.

1. The main electrical service panel shall have a minimum busbar rating of 200 amps.
2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space shall be permanently marked as "For Future Solar Electric".

Sec. 9.256. - SECTION 202 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

SECTION 202 of the Green Building Standards Code is amended to add definitions for "Affordable Housing", "Automatic Load Management Systems (ALMS)", "EV Capable", "Level 1 EV Ready Space", "Level 2 EV Ready Space", and "Electric Vehicle Charging Station (EVCS)" to read as follows:

AFFORDABLE HOUSING: Residential buildings that consist entirely of housing that costs no more than 30 percent of gross household income. Housing costs include rent or mortgage payments, utilities, taxes, insurance, homeowner association fees, and other related costs.

AUTOMATIC LOAD MANAGEMENT SYSTEMS (ALMS): A control system which allows multiple electric vehicle chargers or electric vehicle ready chargers 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 is only allowed for Level 2 Electrical Vehicle Charging Stations (EVCS), Level 2 EV Ready Spaces, and Level 1 EV Ready Spaces. ALMS systems must be designed to deliver at least 1.4kW to each EVCS, Level 2 EV Ready Spaces, and Level 1 EV Ready Spaces. 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 CHARGING STATION (EVCS): A parking space that includes installation of electric vehicle supply equipment (EVSE) with a minimum output of 30 amperes connected to a Level 2 EV Ready Space. EVCS installation may be used to satisfy a Level 2 EV Ready Space requirement.

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.

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.

**Sec. 9.257. - SECTION 4.106.4 OF THE GREEN BUILDING STANDARDS CODE
AMENDED:**

Section 4.106.4 of the Green Building Standards Code is 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.

EXCEPTION 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:

1.1 Where there is no commercial power supply.

1.2 Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure 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.

EXCEPTION 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 either the ADU, JADU, or single-family dwelling located on the same lot, in which case only the electrical capacity requirements apply.

EXCEPTION 3: Parking spaces accessible only by automated mechanical car parking systems.

**Sec. 9.258. - SECTION 4.106.4.1 OF THE GREEN BUILDING STANDARDS CODE
AMENDED:**

Section 4.106.4.1 of the Green Building Standards Code is 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.

4.106.4.1.1 Identification. The raceway termination location shall be permanently and visibly marked as "Electric Vehicle Outlet."

Sec. 9.259. - SECTION 4.106.4.2 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

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 City.
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. 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 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 space.

2. The EV space shall be located adjacent 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 11B.

Sec. 9.260. - SECTION 4.106.4.2.2 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

Section 4.106.4.2.2 of the Green Building Standards Code is amended to read as follows:

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. EV spaces shall be designed to comply with Redwood City Zoning Ordinance Section 30.6.A.

Sec. 9.261. - SECTION 5.106.5.3 OF THE GREEN BUILDING STANDARDS CODE AMENDED:

Section 5.106.5.3 of the Green Building Standards Code is amended to read as follows:

5.106.5.3 Electric vehicle (EV) charging. [N] 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.

EXCEPTION: Where there is no commercial power supply.

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.

EXCEPTION: Parking spaces accessible only by automated mechanical car parking systems are exempt from providing EV charging infrastructure.

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.

Note: 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.

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; and
2. An additional 5% shall be at least Level 1 EV Ready.

Calculations for the required minimum number of spaces equipped with Level 2 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 EV Ready spaces after a minimum of 6 Level 2 EVCS and 5 Level 1 EV Ready spaces are installed.

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.
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.
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. EV Ready Spaces may be designated as "EV Space Preferred."

5.106.5.3.4 [N] Identification. The raceway termination location shall be permanently and visibly marked as "EV Ready".

SECTION 2. If any section, paragraph, sentence or word of this ordinance or of the Code hereby adopted should for any reason, be found invalid, it is intended that all other portions of this ordinance independent of any such portion as may be declared invalid shall be valid.

SECTION 3. This adoption of this ordinance is exempt from CEQA pursuant to Section 15061(b) (3) because it can be seen with certainty that adoption of this ordinance will not have a significant adverse effect on the environment.

SECTION 4. This ordinance shall take effect upon approval by the California Energy Commission.

* * *

ORDINANCE NO. 2487

At a Joint City Council/Successor Agency Board/Public Financing Authority Meeting thereof held on the 21st day of September 2020 by the following votes:

AYES, and in favor of the passage and adoption of the foregoing ordinance:

- AYES: Aguirre, Bain, Borgens, Hale, Howard, Masur and Reddy
- NOES: None
- ABSENT: None
- ABSTAINED: None
- RECUSED: None



Diane Howard
Mayor of the City of Redwood City

Attest:



Pamela Aguilar, CMC
City Clerk of Redwood City

I hereby approve the foregoing Ordinance
this 23rd day of September 2020.



Diane Howard
Mayor of the City of Redwood City