

**DOCKETED**

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| <b>Project Title:</b>   | Local Ordinance Applications Exceeding the 2022 Energy Code |
| <b>TN #:</b>            | 248489-4  |
| <b>Document Title:</b>  | City of Menlo Park - 2022 Ordinance # 1093                  |
| <b>Description:</b>     | Plain text of City of Menlo Park ordinance No. 1093         |
| <b>Filer:</b>           | Danuta Drozdowicz   |
| <b>Organization:</b>    | California Energy Commission                                |
| <b>Submitter Role:</b>  | Commission Staff  |
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**ORDINANCE NO. 1093**

**ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MENLO PARK  
AMENDING TITLE 12 [BUILDINGS AND CONSTRUCTION] OF THE MENLO  
PARK MUNICIPAL CODE TO ADOPT TITLE 24, CALIFORNIA CODE OF  
REGULATIONS, 2022 BUILDING STANDARDS CODE AND LOCAL  
AMENDMENTS TO THE 2022 CALIFORNIA BUILDING STANDARDS CODE,  
ADDING REQUIREMENTS FOR POOLS UNDER CONSTRUCTION, AND  
AMENDING FLOOD DAMAGE PREVENTION REQUIREMENTS**

WHEREAS, the City of Menlo Park ("City") is required pursuant to state law to adopt and enforce the 2022 Building Standards Code, Title 24 California Code of Regulations, as adopted by the California Standards Building Commission, subject to such local amendments as may be adopted by the City of in accordance with applicable law;

WHEREAS, California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5 provide that the City may make changes or modifications to the building standards contained in the California Building Standards based upon express findings that such changes or modifications are reasonably necessary because of local climatic, geological or topographical conditions;

WHEREAS, the City Council of the City of Menlo Park finds that each of the amendments, additions and deletions to the California Energy Code contained in this ordinance are reasonably necessary because of local climatic, geological or topographical conditions described in Section 1;

WHEREAS, Public Resources Code Section 25402.1(h)2 establishes 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;

WHEREAS, the California Codes and Standards Reach Code Program, has determined specific modifications to the Energy Code for each climate zone that are cost effective, and the City of Menlo Park is proposing adoption of measures previously studied;

WHEREAS, that such modifications will result in designs that consume less energy than they would under the 2022 California Energy Code;

WHEREAS, based upon these analyses, the City Council of the City of Menlo Park finds that the local amendments to the California Energy Code contained in this ordinance are cost effective and will require buildings to be designed to consume no more energy than permitted by the California Energy Code;

WHEREAS, because of the City's unique local climatic, geologic and topographic conditions, the City desires to make amendments and additions to the code.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MENLO PARK DOES ORDAIN  
AS FOLLOWS:

**SECTION 1: Findings and Determinations.**

The City Council of the City of Menlo Park hereby finds that the following local climatic, geological, and topographic conditions justify the adoption of local modifications to the California Building Standards Code, as further set forth in this Ordinance:

- A. Climatic: The City is located in Climate Zone 3 as established in the 2022 California Energy Code. Climate Zone 3 incorporates mostly coastal communities from Marin County to southern Monterey County including San Francisco. The City experiences precipitation ranging from 13 to 20 inches per year with an average of approximately 15 inches per year. Ninety-five percent of precipitation falls during the months of November through April, leaving a dry period of approximately six months each year. Relative humidity remains moderate most of the time. Temperatures in the summer average around 80 degrees Fahrenheit and in the winter in the mid 50 degrees Fahrenheit. Prevailing winds in the area come from the west with velocities generally in the 12 miles per hour range, gusting from 25 to 35 miles per hour. These climatic conditions along with the greenhouse emissions generated from structures in both the residential and non-residential sectors requires exceeding the energy standards for building construction established in the 2022 California Buildings Standards Code. The City Council also adopted a 2030 Climate Action Plan that has a goal to be carbon neutral by 2030. In order to achieve and maintain this goal, the City needs to adopt policies and regulations that reduce the use of fossil fuels that contribute to climate change, such as natural gas in buildings, in new development. Human activities, such as burning natural gas to heat buildings, releases greenhouse gases into the atmosphere and causes an overall increase in global average temperature. This causes sea levels to rise, affecting the City's shoreline and infrastructure.

Many new buildings in Menlo Park will be built near the coastline in an area known as the Bayfront Area that is situated on marshlands and former salt ponds. San Francisquito Creek also runs through the City, which creates an increasing potential flooding risk with climate change as a result of human generated greenhouse gas emissions. Menlo Park is vulnerable to sea level rise where new development is proposed in this code cycle. New buildings that are directly vulnerable to sea level rise should avoid generating additional greenhouse gas emissions. The proposed Reach Code would ensure that new buildings use cleaner sources of energy that are greenhouse gas free.

- B. Geologic: The City of Menlo Park is subject to earthquake hazard caused by its proximity to San Andreas Fault. This fault runs from Hollister, through the Santa Cruz Mountains, epicenter of the 1989 Loma Prieta earthquake, then on up the San Francisco Peninsula, then offshore at Daly City near Mussel Rock. This is the approximate location of the epicenter of the 1906 San Francisco earthquake. The other fault is Hayward Fault. This fault is about 74 mi long, situated mainly along the western base of the hills on the east side of San Francisco Bay. Both of these faults are considered major Northern California earthquake faults, which may experience rupture at any time. Thus, because the City is within a seismic area, which includes these earthquake faults, the modifications and changes cited herein are designed to better limit property damage as a result of seismic activity and to establish criteria for repair of damaged properties following a local emergency.
- C. Topographic: The City of Menlo Park is contiguous with the San Francisco Bay, resulting in a natural receptor for storm and waste water run-off. Also the City is located in an area that is relatively high liquefaction potential given its proximity to the Bay. The surface condition consists mostly of stiff to dense sandy clay, which is highly plastic and expansive in nature. The aforementioned conditions within the City create hazardous conditions for which departure from California Building Standards Code is warranted.

**SECTION 2: Adoption of 2022 Building Standards Code.**

Section 12.040.10 of Chapter 12.04 [Adoption of Codes] Title 12 [Buildings and Construction] of the Menlo Park Municipal Code is hereby repealed and replaced to read in entirety as follows:

**12.04.010 – Adoption of California Building Standards Code.**

The following codes, as approved by the California Building Standards Commission, are hereby adopted by reference:

- 1) The 2022 California Administrative Code, Part 1 of the California Building Standards Code, Title 24 California Code of Regulations;
- 2) The 2022 California Building Code, Part 2 of the California Building Standards Code, Title 24 California Code of Regulations, including Appendices I and J;
- 3) The 2022 California Residential Code, Part 2.5 of the California Building Standards Code, Title 24 California Code of Regulations, including Appendices AH, AQ, AS, and AX;
- 4) The 2022 California Electrical Code, Part 3 of the California Building Standards Code, Title 24 California Code of Regulations;
- 5) The 2022 California Mechanical Code, Part 4 of the California Building Standards Code, Title 24 California Code of Regulations;
- 6) The 2022 California Plumbing Code, Part 5 of the California Building Standards Code, Title 24 California Code of Regulations;
- 7) The 2022 California Energy Code, Part 6 of the California Building Standards Code, Title 24 California Code of Regulations;
- 8) The 2022 California Historical Building Code, Part 8 of the California Building Standards Code, Title 24 California Code of Regulations;
- 9) The 2022 California Fire Code, Part 9 of the California Building Standards Code, Title 24 California Code of Regulations;
- 10) The 2022 California Existing Building Code, Part 10 of the California Building Standards Code, Title 24 California Code of Regulations;
- 11) The 2022 California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations; and
- 12) The 2022 California Referenced Standards Code, Part 12 of the California Building Standards Code, Title 24 California Code of Regulations.

A copy of each code, subject to such amendments as may be adopted by the City in this Title 12, is on file in the office of the city clerk. The provisions of this title, including said codes and amendments thereto, shall be known as the building code of the city.

**SECTION 3: Adoption of Penalties.**

Section 12.04.020 of Chapter 12.04 [Adoption of Codes] Title 12 [Buildings and Construction] of the Menlo Park Municipal Code is hereby repealed and replaced to read in entirety as follows:

**12.04.020 – Penalties for Violations of California Building Standards Code.**

Persons who shall violate a provision of the code adopted under section 12.04.010, as may be amended by this title, or who fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the Building Official or Fire Official, or of a permit or certificate used under provisions of the above codes, shall be subject to penalty in accordance with chapter 1.12. Persons committing such violation shall be guilty of a misdemeanor, punishable by a fine of not more than \$1000 or by imprisonment not exceeding six months, or both fine and imprisonment, unless the violation is made an infraction by the prosecuting authority.

SECTION 4: Amendment of 2022 California Building Code.

Chapter 12.06 of Title 12 [Buildings and Construction] of the Menlo Park Municipal Code is hereby repealed and replaced to read as follows:

Chapter 12.06  
California Building Code Amendments

**Sections:**

**12.06.010 – Amendment of Section 105.2 – Work exempt from permit.**

**12.06.020 – Appendix J, Section J107.4.1 – Imported Fill added.**

**12.06.010 – Amendment of Section 105.2 – Work exempt from permit.**

Section 105.2 of the California Building Code, Part 2 of the California Building Standards Code, Title 24 California Code of Regulations is amended for the first paragraph and “Building” exemptions to read as follows:

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other law or ordinance of the City of Menlo Park. Permits shall not be required for the following:

**Building:**

1. One-story detached accessory buildings used as tool and storage sheds, playhouses, garden sheds or similar uses, provided the height does not exceed eight feet, the projected roof area does not exceed 64 square feet, and the structure complies with Section 16.68.030 of the City of Menlo Park Municipal Code. These structures shall still be regulated by section 710A, despite exemption from permit.
2. Wood fences not over seven feet high.
3. Oil Derricks.
4. Retaining walls which are not over two feet high measured from the top of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II, or III liquids.
5. Detached free-standing water tanks supported directly on a concrete foundation at grade if the capacity does not exceed 500 gallons and the height above grade does not exceed six feet and the height to width ratio does not exceed two to one.
6. Platforms, walks, and driveways not more than 12 inches above grade and not over any basement or story below and are not part of an accessible route.
7. Painting, papering, carpeting, tiling except in showers, cabinets, countertops and similar finish work.
8. Temporary motion picture, television and theater stage sets and scenery.
9. Prefabricated swimming pools accessory to a Group R Division 3 occupancy that are less than 24 inches deep, do not exceed 5,000 Gallons and are installed entirely above ground.
10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems
11. Swings and other playground equipment accessory to detached one- and two-family dwellings not exceeding 120 square feet as measured at the supports or nine feet in height as measured from existing natural grade to the top of the highest structural member, guard rail, or appendage.
12. Windows awnings supported by an exterior wall of Group R Division 3 occupancy when projecting not more than 36 inches from the exterior wall and do not require additional support.
13. Non-fixed and moveable fixtures, cases, racks, counters, and partitions not over five feet nine inches in height.

**12.06.020 – Appendix J, Section J107.4.1 – Imported Fill added.**

Section J107.4.1 is added to Appendix J 2 of the California Building Standards Code, Title 24 California Code of Regulations to read in entirety as follows:

J107.4.1 Imported Fill. Prior to the import of fill, the origin of the fill shall be identified by a licensed geotechnical engineer and samples of the soil shall be tested and shown to meet the standards established in the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) guidelines for clean imported fill material. The test results from the samples shall be submitted to and approved by the Building Official prior to the fill being brought on site.

SECTION 5: Amendment of 2022 California Residential Code.

Chapter 12.08 [California Residential Code Amendments] of Title 12 [Buildings and Construction] of the Menlo Park Municipal Code is hereby repealed and replaced to read in entirety as follows:

Chapter 12.08  
California Residential Code Amendments

**Sections:**

**12.08.010 – Amendment of Section R105.2 – Work exempt from permit.**

**12.08.020 – Amendment of Table R301.2 – Climatic and Geographic Design Criteria.**

**12.08.030 – Amendment of Section R322.1 – General.**

**12.08.040 – Limits on Repair and Remodel.**

**12.08.010 Amendment of Section R105.2 – Work exempt from permit.**

Section R105.2 of the California Residential Code, Part 2.5 of the California Building Standards Code, Title 24 California Code of Regulations is amended for the first paragraph and “Building” exemptions to read as follows:

R105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other law or ordinance of the City of Menlo Park. Permits will not be required for the following:

**Building:**

1. Other than storm shelters, one story detached accessory structures, provided the height does not exceed eight feet, the projected roof area does not exceed 64 square feet, and the structure complies with Section 16.68.030 of the City of Menlo Park Municipal Code. These structures shall still be regulated by section 710A despite exemption from permit.
2. Wood fences not over seven feet high.
3. Retaining walls which are not over two feet high measured from the top of the footing to the top of the wall, unless supporting a surcharge.
4. Detached free-standing water tanks supported directly on a concrete foundation at grade if the capacity does not exceed 500 gallons and the height above grade does not exceed six feet and the height to width ratio does not exceed two to one.
5. Sidewalks and driveways.
6. Painting, papering, carpeting, tiling except in showers, cabinets, countertops and similar finish work.
7. Prefabricated swimming pools that are less than 24 inches deep.
8. Swings and other playground equipment accessory to detached one- and two-family dwellings not exceeding 120 square feet as measured at the supports or nine feet in height as

measured from existing natural grade to the top of the highest structural member, guard rail, or appendage.

9. Windows awnings supported by an exterior wall of Group R Division 3 occupancy when projecting not more than 36 inches from the exterior wall and do not require additional support.
10. Decks not exceeding 200 square feet in area, that are not more than 30 inches above grade at any point, are not attached to a dwelling unit and do not serve the exit door required by Section 311.4.

**12.08.020 – Amendment of Table R301.2 – Climatic and Geographic Design Criteria.**

Table R301.2 of the California Residential Code, Part 2.5 of the California Building Standards Code, Title 24 California Code of Regulations is amended to read as follows:

Table R301.2 Climatic and Geographic Design Criteria

| GROUND SNOW LOAD | WIND DESIGN              |                                  |                                  |                                     | SEISMIC DESIGN CATEGORY <sup>f</sup> |
|------------------|--------------------------|----------------------------------|----------------------------------|-------------------------------------|--------------------------------------|
|                  | Speed <sup>d</sup> (mph) | Topographic effects <sup>k</sup> | Special wind region <sup>l</sup> | Wind-borne debris zone <sup>m</sup> |                                      |
| NA               | 110                      | NA                               | NA                               | NA                                  | D-E                                  |

| SUBJECT TO DAMAGE FROM  |                               |                      | WINTER DESIGN TEMP <sup>e</sup> | ICE BARRIER UNDER-LAYMENT REQUIRED <sup>h</sup> | FLOOD HAZARDS <sup>g</sup>  | AIR FREEZING INDEX <sup>i</sup> | MEAN ANNUAL TEMP <sup>j</sup> |
|-------------------------|-------------------------------|----------------------|---------------------------------|---|---|---------------------------------|-------------------------------|
| Weathering <sup>a</sup> | Frost line depth <sup>b</sup> | Termite <sup>c</sup> |                                 |   |   |                                 |                               |
| NA                      | NA                            | NA                   | NA                              | NA  | National Flood Insurance program Date – Feb 4, 1981 revised April 21, 1999.<br><br>Adoption of first code management of flood hazard areas – June 14, 1974<br><br>Flood insurance Study - Oct 16, 2012 revised July 16, 2015<br><br>Panel number – 06081C0195F, 06081C0215F, 06081C0302F, 06081C0306F, 06081C0307F, 06081C0308E, 06081C0309F, | NA                              | 58.55                         |

| SUBJECT TO DAMAGE FROM  |                               |                      | WINTER DESIGN TEMP <sup>e</sup> | ICE BARRIER UNDER-LAYMENT REQUIRED <sup>h</sup> | FLOOD HAZARDS <sup>g</sup>                   | AIR FREEZING INDEX <sup>i</sup> | MEAN ANNUAL TEMP <sup>j</sup> |
|-------------------------|-------------------------------|----------------------|---------------------------------|---|--|---------------------------------|-------------------------------|
| Weathering <sup>a</sup> | Frost line depth <sup>b</sup> | Termite <sup>c</sup> |                                 |   |  |                                 |                               |
|                         |                               |                      |                                 |   | 06081C0311E,<br>06081C0326F,<br>06081C0328F, |                                 |                               |

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index, "negligible," "moderate" or "severe" for concrete as determined from Figure R301.2(1). The grade of masonry units shall be determined from ASTM C34, C55, C62, C73, C90, C129, C145, 0216 or C652.
- b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(2). Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- e. Temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.
- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of the currently effective Flood Insurance Study or other flood hazard map adopted by the authority having jurisdiction, as amended.
- h. In accordance with Sections R905.1.2, R905.4.3.1, 8905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
- i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)."
- j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)."
- k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- l. In accordance with Figure R301.2(4)A, where there is local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with "YES" and identify



any specific requirements, Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

- m. In accordance with Section R301.2.1.2.1. the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- n. The jurisdiction shall fill in these sections of the table to establish the design criteria using Table 1a or 1b from ACCA manual J or established criteria determined by the jurisdiction.
- o. The jurisdiction shall fill in this section of the table using the ground snow loads in figures R301.2(3) and R301.2(4).

**12.308.30 – Amendment of Section R322.1 – General.**

Section R322.1 of the California Residential Code, Part 2.5 of the California Building Standards Code, Title 24 California Code of Regulations is amended to read in entirety as follows:

R322.1 General. Buildings and structures constructed in whole or part in flood hazard areas including A or V Zones and Coastal A Zones, as established in Table R301.2, and substantial improvement and restoration of substantial damaged of buildings and structures in flood hazard areas, shall be designed and constructed in accordance with the provisions contained in this section and Chapter 12.42, Flood Damage Prevention, of the City of Menlo Park’s Municipal Code. Buildings and structures that are located in more than one flood hazard area shall comply with the provisions of associated with the most restrictive flood hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

**12.08.040 – Limits on Repair and Remodel**

When the scope of work for R3 and U occupancies involves the alteration or removal of any existing structural framing that meets or exceeds seventy-five percent (75%) or greater of the linear footage of interior and exterior walls, including the removal of roof structure in those wall areas, cumulative within a two (2) year period, the project shall be considered as new construction.

SECTION 6: Amendment of 2022 California Plumbing Code.

Chapter 12.14 [California Plumbing Code Amendments] of Title 12 [Buildings and Construction] of the Menlo Park Municipal Code is hereby repealed and replaced to read in entirety as follows:

Chapter 12.14  
California Plumbing Code Amendments

**Sections:**

**12.14.010 – Addition of Section 808.2 - Single pass water systems prohibited.**

**12.14.010 – Addition of Section 808.2 of Chapter 8.**

Section 808.2 is added to the 2022 California Plumbing Code, Part 5 of the California Building Standards Code, Title 24 California Code of Regulations to read in entirety as follows:

808.2 Single Pass Cooling Water Systems Prohibited. Clean running water used only once for exclusively as a cooling medium in an appliance, device, or apparatus is prohibited.

SECTION 7: Amendment of 2022 California Energy Code.

Chapter 12.16 [California Energy Code Amendments] of Title 12 [Buildings and Construction] is hereby repealed and replaced to read as follows:

Chapter 12.16

## California Energy Code Amendments

### Sections:

#### **12.16.010 – California Energy Code amendments.**

#### **12.16.020 – Prohibition on Conversion to Mixed-Fuel Buildings.**

#### **12.16.010 – California Energy Code amendments.**

The 2022 California Energy Code, Part 6 of the California Building Standards Code, Title 24 California Code of Regulations is amended with the modifications set forth below:

Section 100.0(e), paragraphs (1) and (2) are modified to read as follows:

#### SECTION 100.0 – Scope.

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).

1. All buildings. Sections 100.0 through 110.12 apply to all buildings.

EXCEPTION to Section 100.0(e) 1: Spaces or requirements not listed in TABLE 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 100.1(b).

Exception 1: Non-Residential Buildings containing a Scientific Laboratory Building, such area may apply for approval to contain a non-electric Space Conditioning System or appliances or laboratory equipment, subject to demonstrating infeasibility or lack of cost-effectiveness in accordance with administrative guidelines as may be established by the Building Official.

To take advantage of this exception applicant shall provide third party verification that All-Electric space heating requirement is not cost effective and feasible.

Exception 2: All Residential buildings may contain non-electric Cooking Appliances and Fireplaces except buildings defined in the Energy Code as “Multifamily buildings” that are four stories or more.

Exception 3: Exemption for public agency owned and operated emergency centers. To take advantage of this exception applicant shall provide third party verification that All-Electric space heating requirement is not cost effective and feasible.

Exception 4: Non-residential buildings containing a for-profit restaurant open to the public or an employee kitchen may apply to the Environmental Quality Commission (EQC) for an exception to install gas-fueled cooking appliances. This request must be based on a business-related reason to cook with a flame that cannot be reasonably achieved with an electric fuel source. Examples include barbeque-themed restaurants and pizza ovens. The Environmental Quality Commission (EQC) shall grant this exception if they find the following:

1. There is a business-related reason to cook with a flame;

2. This need cannot be reasonably achieved with an electric fuel source;
3. The applicant has employed reasonable methods to mitigate the greenhouse gas impacts of the gas-fueled appliance;
4. The applicant shall comply with the pre-wiring provision of Note 1 below.

The Environmental Quality Commission's decision shall be final unless the applicant appeals to the City Council within 15 days of the appointed body's decision. The City Council's decision on the appeal shall be final.

Note 1: If natural gas appliances are used in any of the above exceptions 1-4, natural gas appliance locations must also be electrically pre-wired for future electric appliance installation. They shall include the following:

1. A dedicated circuit, phased appropriately, for each appliance, with a minimum amperage requirement for a comparable electric appliance (see manufacturer's recommendations) with an electrical receptacle or junction box that is connected to the electric panel with conductors of adequate capacity, extending to within 3 feet of the appliance and accessible with no obstructions. Appropriately sized conduit may be installed in lieu of conductors;
2. Both ends of the unused conductor or conduit shall be labeled with the words "For Future Electric appliance" and be electrically isolated;
3. A reserved circuit breaker space shall be installed in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled for each circuit, an example is as follows (i.e "For Future Electric Range;") and
4. All electrical components, including conductors, receptacles, junction boxes, or blank covers, related to this section shall be installed in accordance with the California Electrical Code.

Note 2: If any of the exceptions 1-4 are granted, the Building Official shall have the authority to approve alternative materials, design and methods of construction or equipment per CBC 104.

Subdivision (b), Definitions, of Section 100.1 — Definitions and Rules of Construction, is modified by adding the following definitions of "All Electric Building" "Scientific Laboratory Building" and replacing the definition of "Shading" 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 heating, water heating, cooking appliances, and clothes drying appliances. All Electric Buildings may include solar thermal pool heating.

**SCIENTIFIC LABORATORY BUILDING** is a building or area where research, experiments, and measurement in medical, and life sciences are performed and/or stored requiring examination of fine details. The building may include workbenches, countertops, scientific instruments, and supporting offices.

**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, adherent materials, including items located outside the building footprint such as heritage trees or Multifamily buildings that may affect shading.

Section 110.2, Mandatory Requirements for Space Conditioning Equipment is amended for the first paragraph to read as follows:

Certification by Manufacturers. Any space-conditioning equipment listed in this section, may be installed only if the manufacturer has certified to the Commission that the equipment complies with all the applicable requirements of this section and the building will still meet applicable All-Electric Building requirements as set forth in section 100.0 (e)2A.

Subdivision (a), Certification by manufacturers, of Section 110.3, Mandatory Requirements for Service Water-Heating Systems and Equipment, is modified for the first sentence to read as follows:

- a) Certification by manufacturers. Any service water-heating system or equipment may be installed only if the manufacturer has certified that the system or equipment complies with all of the requirements of this subsection for that system or equipment, and the building will still meet applicable All-Electric Building requirements as set forth in section 100.0 (e)2A.

Subdivision (a), Certification by manufacturers, of Section 110.4, Mandatory Requirements for Pool and Spa Systems and Equipment, is modified to read as follows:

- a) Certification by Manufacturers. Any pool or spa heating system or equipment, may be installed only if the manufacturer has certified that the system or equipment has all of the following, and the building will still meet applicable All-Electric Building requirements as set forth in section 100.0 (e)2A.:
  1. Efficiency. For equipment subject to state or federal appliance efficiency standards, listings in the commissions directory of certified equipment showing compliance with applicable standards; and
  2. On-off Switch. A readily accessible on-off switch, mounted on the outside of the heater that allows shutting off the heater without adjusting the thermostat setting; and
  3. Instructions. A permanent, easily readable and weatherproof plate or card that gives instruction for the energy efficient operation of the pool or spa heater and for the proper care of pool or spa water when a cover is used; and
  4. Electric resistance heating. No electric resistance heating.  
Exception 1 to section 110.4(a) 4: Listed package units with fully insulated enclosures, and with tight-fitting covers that are insulated to at least R-6.  
Exception 2 to section 110.4 (a) 4: Pools or spas deriving at least 60 percent of the annual heating energy from site solar energy or recovered energy.
- b) Installation. Any pool or spa system or equipment shall be installed between with all of the following:
  1. Piping. At least 36 inches of pipe shall be installed between the filter and the heater or dedicated suction and return lines, or built-in or built-up connection shall be installed to allow for the future addition of solar heating equipment;
  2. Covers. A cover for outdoor pools or outdoor spas that have a heat pump or gas heater; and
  3. Directional inlets and time switches for pools. If the system or equipment is for a pool:
    - i. The pool shall have directional inlets the adequately mix the pool water; and
    - ii. A time switch or similar control mechanism shall be installed as part of a pool water circulation control system the will allow all pumps to be set or programmed

to run only during off-peak electric demand periods, and for the minimum time necessary to maintain the water the condition required by applicable public health standards.

Subdivision (a), Certification by manufacturers, of Section 110.5, Natural Gas Central Furnaces, Cooking Equipment, Pool and Spa Heaters, is modified for the first sentence to read as follows:

Any natural gas system or equipment listed below may be installed only if it does not have a continuously burning pilot light, and the building will still meet applicable All-Electric Building requirements as set forth in section 100.0 (e)2A:

- 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.

Section 110.10, Mandatory Requirements for Solar Readiness, is amended to read as follows:

**SECTION 110.10 – Mandatory Requirements for Solar Readiness.**

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 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. Residential buildings, other than single family, with less than 4 stories 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 that do not have a photovoltaic system installed shall comply with the requirements of Section 110.10(b) through 110.10(d) and Table 2.
4. Nonresidential buildings with three habitable stories or fewer, other than I-2 and I-2.1 buildings, that do not have a photovoltaic system installed, shall comply with the requirements of Sections 110.10(b) through 110.10(d) and Table 2.

| <b>Table 2: Solar panel requirements for all new nonresidential and high rise residential buildings</b> |                                  |
|---|----------------------------------|
| <b>Square footage of building</b>   | <b>Size of panel</b>             |
| Less than 10,000 sq. ft.  | Minimum of 3-kilowatt PV systems |

| <b>Table 2: Solar panel requirements for all new nonresidential and high rise residential buildings</b>   |                                  |
|---|----------------------------------|
| <b>Square footage of building</b>   | <b>Size of panel</b>             |
| Greater than or equal to 10,000 sq. ft.   | Minimum of 5-kilowatt PV systems |
| EXCEPTION: As an alternative to a solar PV system, the building type may provide a solar hot water system (solar thermal) with a minimum collector area of 40 square feet, additional to any other solar thermal equipment otherwise required for compliance with Part 6. |                                  |

## 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/Motel Occupancies, and Nonresidential Buildings with a permanently installed 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 an additional collector area of 40 square feet.

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 to Section 110.10(b)1B: 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 have an azimuth range and 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.

1. 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.
2. 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".

**12.16.020 – Prohibition on Conversion to Mixed-Fuel Buildings.**

No building that is required to be constructed as an All-Electric building, or that currently uses electricity as its sole fuel source for appliances, space conditioning systems, water heating systems, pool and spa systems, or any other building systems, shall be altered or modified to use any fuel source other than electricity for appliances, space conditioning systems, water heating systems, pool and spa systems, or any other building systems.

SECTION 8: Amendment of Green Building Standards Code.

Chapter 12.18 of Title 12 [Buildings and Construction] of the Menlo Park Municipal Code is hereby repealed and replaced to read in entirety as follows:

California Green Building Standards Code Amendments

**Sections:**

**12.18.010 – Amendments to Section 202 – Definitions.**

**12.18.020 – Amendment of Section 4.106.4 – Electric vehicle (EV) charging for new construction.**

**12.18.030 – Amendment of Section 4.106.4.1 – New one and two-family dwellings and town houses with attached private garages.**

**12.18.040 – Amendment of Section 4.106.4.2 – Multifamily dwellings with residential parking facilities.**

**12.18.050 – Amendment of Section 4.408.1 – Construction Waste Management.**

**12.18.060 – Amendment of Section 5.106.5.3 – Electric Vehicle Charging.**

**12.18.070 – Addition of Section 5.106.5.5.1 – Additions and Alterations.**

**12.18.080 – Amendment of Section 5.408.1 – Construction Waste Management.**

**12.18.010 – Amendment to Section 202 – Definitions.**

Section 202 of the California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations is amended to (1) add definitions of Affordable Housing and Direct Current Fast Charging, Level 1 EV Ready, Level 2 EV Capable, Level 2 EV Ready, Low Power Level 2 EV Ready, and (2) revise definitions of Automatic Load Management System (ALMS), Electric Vehicle Charging Station, with enacted definitions to read as follows:

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 SYSTEM (ALMS). A control system designed to manage load across one or more electric vehicle supply equipment (EVSE), circuits, panels and to share electrical capacity and/or automatically manage power at each connection point. ALMS systems shall be designed to deliver no less than 3.3 kVa (208/240 volt, 16-ampere) 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 to the building site for the EV charging infrastructure shall not be lower than the required connected amperage per California Green Building Standards Code, Title 24 Part 11.

DIRECT CURRENT FAST CHARGING (DCFC). A parking space provided with electrical infrastructure that meets the following conditions:

- i. A minimum of 48 kVa (480 volt, 100-ampere) capacity wiring.
- ii. Electric vehicle supply equipment (EVSE) located within three (3) feet of the parking space providing a minimum capacity of 80-ampere.

ELECTRIC VEHICLE CHARGING STATION (EVCS). A parking space that includes installation of electric vehicle supply equipment (EVSE) at an EV Ready space. An EVCS space may be used to satisfy EV Ready space requirements. EVSE shall be installed in accordance with the California Electrical Code, Article 625.

LEVEL 1 EV READY. A parking space that is served by a complete electric circuit with the following requirements:

- i. A minimum of 2.2 kVa (110/120 volt, 20-ampere) capacity wiring.
- ii. A receptacle labeled “Electric Vehicle Outlet” or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 16-ampere.
- iii. Conduit oversized to accommodate future Level 2 EV Ready (208/240 volt, 40-ampere) at each parking space.

LEVEL 2 EV CAPABLE. A parking space provided with electrical infrastructure that meets the following requirements:

- i. Conduit that links a listed electrical panel with sufficient capacity to a junction box or receptacle located within three (3) feet of the parking space.

- ii. The conduit shall be designed to accommodate at least 8.3 kVa (208/240 volt, 40-ampere) per parking space. Conduit shall have a minimum nominal trade size of 1 inch inside diameter and may be sized for multiple circuits as allowed by the California Electrical Code. Conduit shall be installed at a minimum in spaces that will be inaccessible after construction, either trenched underground or where penetrations to walls, floors, or other partitions would otherwise be required for future installation of branch circuits, and such additional elements deemed necessary by the Building Official. Construction documents shall indicate future completion of conduit from the panel to the parking space, via the installed inaccessible conduit.
- iii. The electrical panel shall reserve a space for a 40-ampere overcurrent protective device space(s) for EV charging, labeled in the panel directory as "EV CAPABLE."
- iv. Electrical load calculations shall demonstrate 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 a minimum of 40 amperes.
- v. The parking space shall contain signage with at least a 12" font adjacent to the parking space indicating the space is EV Capable.

LEVEL 2 EV READY. A parking space that is served by a complete electric circuit with the following requirements:

- i. A minimum of 8.3 kVa (208/240 volt, 40-ampere) capacity wiring.
- ii. A receptacle labeled "Electric Vehicle Outlet" or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 30-ampere.

LOW POWER LEVEL 2 EV READY. A parking space that is served by a complete electric circuit with the following requirements:

- i. A minimum of 4.1 kVA (208/240 Volt, 20-ampere) capacity wiring.
- ii. A receptacle labeled "Electric Vehicle Outlet" or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 16-ampere.

Conduit oversized to accommodate future Level 2 EV Ready (208/240 volt, 40-ampere) at each parking space.

**12.18.020 – Amendment of Section 4.106.4 – Electric Vehicle (EV) charging for new construction.**

Section 4.106.4 of the California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations is amended to read in entirety as follows:

4.106.4 Electric vehicle (EV) charging. Residential construction shall comply with Section 4.106.4.1 or 4.106.4.2, and 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. For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s). Calculation for spaces shall be rounded up to the nearest whole number.

Exceptions:

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based on one or more of the following conditions:
  - 1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
  - 1.2. Where there is evidence suitable to the local enforcing agency substantiating that meeting the requirements will alter the local utility infrastructure design requirements may increase construction cost by an average of \$4,500 per parking space for market rate housing or \$400 per parking space for affordable housing. EV infrastructure shall be provided up to the level that would not exceed this cost for utility service. For 100 percent Below Market Rate affordable housing developments, EVSE with a minimum of Level 2 ready shall be provided for a minimum of 10 percent of the total number of dwelling units.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units without additional parking facilities

**12.18.030 – Amendment of Section 4.106.4.1 – New one and two-family dwellings and town houses with attached private garages.**

Section 4.106.4.1 of the California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations is amended to read in entirety as follows:

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

For each dwelling unit, one parking space provided shall be a Level 2 EV Ready space. If a second parking space is provided, it shall be provided with a Level 1 EV Ready space.

**12.18.040 – Amendment of Section 4.106.4.2 – Multifamily dwellings with residential parking facilities.**

Section 4.106.4.2 of the California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations is amended revise sections 4.106.4.2 and 4.106.4.2.1, and 4.106.4.2.2 to read as follows:

4.106.4.2 Multifamily dwellings with residential parking facilities. Requirements apply to parking spaces that are assigned or leased to individual dwelling units, as well as unassigned residential parking. Visitor or common area parking is not included. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

4.106.4.2.1 New Construction. At least fifteen percent (15%) of dedicated parking spaces for any project shall be EVCS with minimum of Level 2 EV Ready. Automatic Load Management System (ALMS) shall be permitted to reduce load when multiple vehicles are charging. All remaining dedicated parking spaces required for a project shall, at a minimum, meet requirements to be considered a Low Power Level 2 EV Ready space. EVCS shall comply with the accessibility provisions for EV chargers in the California Building Code,

Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A.

Note: The total number of EV spaces should be one-hundred percent (100%) of dwelling units or one-hundred percent (100%) of parking spaces, whichever is less. Construction plans and specifications shall include the following:

- The type and location of the vehicle supply equipment (EV Ready and / or EVSE).
- The raceway shall not be less than trade size 1"
- The raceway and wiring shall originate at a service panel or a subpanel serving the area and shall terminate into a receptacle or EVSE.
- The service panel or subpanel shall have sufficient capacity to accommodate a 208/240 minimum 40-ampere dedicated branch circuit for the future installation of the EVSE. The service panel or subpanel circuit directory shall identify the overcurrent protective device as "EV Ready or EV Capable" in accordance with the California Electrical Code
- 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 charge required EV at its full rated amperage
- Plan design shall be capable of accommodating a 208/240-volt dedicated circuit based upon 40 ampere branch circuit requirements. Required 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.

#### **4.106.4.2.2 EVCS Provisions.**

##### **4.106.4.2.2.1 Electric Vehicle Charging Stations (EVCS).**

Electric vehicle charging stations shall comply with the following requirements, except for EVCS serving public accommodations, public housing, motels and hotels shall not be required to comply with this section (see California Building Code, Chapter 11B, for applicable requirements):

##### **4.106.4.2.2.1.1 Location.**

EVCS shall comply with at least one of the following options:

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

Exception: EVCS designed and constructed in compliance with California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3.

##### **4.106.4.2.2.1.2 EVCS Dimensions**

The charging spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet.
  2. The minimum width of each EV space shall be 9 feet.
  3. One in every 25 charging spaces, but not less than one, shall also have an 8-foot wide minimum aisle. A 5 foot wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet.
- 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.

#### **4.106.4.2.2.1.3 Accessible EV spaces.**

In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A.

### **12.18.050 – Amendment of Section 4.408.1 – Construction Waste Management.**

Section 4.408.1 of the California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations is amended to read in entirety as follows:

4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of both inert and non-inert nonhazardous demolition waste and 65 percent of both inert and non-inert nonhazardous construction waste in accordance with Section 4.408.2, 4.408.3 or 4.408.4 and meet the requirements of Chapter 12.48 Recycling and Salvaging of Construction and Demolition Debris City of Menlo Park Municipal Code.

Exceptions:

1. Excavated soil and land clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the job site.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

### **12.18.060 – Amendment of Section 5.106.5.3 – Electric Vehicle Charging.**

Section 5.106.5.3 of the California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations is amended to read in entirety as follows:

5.106.5.3 Electric vehicle (EV) charging. [N] Construction to provide electric vehicle infrastructure and facilitate electric vehicle charging shall comply with Section 5.106.5.3.1 and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code. Accessible EVCS shall be provided in accordance with the California Building Code Chapter 11B Section 11B-228.3. For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s). Calculation for spaces shall be rounded up to the nearest whole number.

**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 increase construction cost by an average of \$4,500 per parking space. EV infrastructure shall be provided up to the level that would not exceed this cost for utility service.

Table 5.106.5.3.1 of Chapter 5 is amended and replaced with:

Table A5.106.5.3.1 Electric Vehicle (EV) charging Tier 1 [N] shall be used to determine the number of EV capable spaces required. Refer to Section 5.106.5.3.2 for design space requirements. When EV capable spaces are provided with EVSE to create EVCS per Table A5.106.5.3.1 refer to Section 5.106.5.3.2 for allowed use of Level 2 or Direct Current Fast Charger (DCFC) and Section 5.106.5.3.3 for the allowed use of Automatic Load Management System (ALMS).

| Total Number of actual parking spaces | Tier 1 Number of Required EV capable spaces     | Tier 1 Number of EVCS (EV capable spaces provided with EVSE) <sup>2</sup> |
|---------------------------------------|---|---|
| 0-9                                   | 2   | 0   |
| 10-25                                 | 5   | 2   |
| 26-50                                 | 11  | 4   |
| 76-100                                | 26  | 9   |
| 101-105                               | 38  | 13  |
| 151-150                               | 38  | 13  |
| 151-200                               | 53  | 18  |
| 201 and over                          | 30 percent of total parking spaces <sup>1</sup> | 33 percent of EV capable spaces <sup>1</sup>                              |

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.

### 12.18.070 – Addition of Section 5.106.5.5.1 – Additions and Alterations.

Section 5.106.5.5.1 is added to the California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations is amended to read in entirety as follows:

Section 5.106.5.5.1 Additions and Alterations. Level 2 EV capable spaces and EVSE spaces that meet Level 2 Ready requirements shall be constructed and installed for additions and alterations as specified below in Table 5.105.5.1.

| Table 5.106.5.5.1 Additions and Alterations <sup>1</sup> |  |  |
|--|--|--|
|  | NUMBER OF REQUIRED LEVEL 2 EV CAPABLE SPACES | NUMBER OF REQUIRED EVSE THAT ARE LEVEL 2 EV READY <sup>3</sup>   |
| 1 - 9,999 sq.ft.   | Voluntary                                    | Voluntary  |
| 10,000 - 25,000 sq.ft.                                   | 5%   | 1 Can be located in an EV capable space  |
| Greater than 25,000 sq.ft.                               | 10%  | One + 1% of total required parking spaces for the affected area. Can be located in an EV capable space |

<sup>1</sup>The EV space requirement is based on the required parking associated with the building where the work is being performed, inclusive of landscape reserve parking. For additions and alterations, percentages are based on the required parking for the affected area of the scope of work.

<sup>2</sup>Calculations for spaces shall be rounded up to the nearest whole number.

<sup>3</sup>The maximum number of required EV spaces and electric vehicle supply equipment (EVSE) shall not exceed the requirement for EV spaces for new construction of an equivalent development on a parcel or project site unless it is voluntary.

Construction plans and specifications shall include, all of the below:

1. The type and location of the EVSE.
2. A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.
3. The raceway shall not be less than trade size 1"
4. The raceway shall originate at a service panel or a subpanel serving the area and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure or equivalent.
5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.



6. 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 charge required EV at its full rated amperage. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

**12.18.080 – Amendment of Section 5.408.1 – Construction Waste Management.**

Section 5.408.1 of the California Green Building Standards Code, Part 11 of the California Building Standards Code, Title 24 California Code of Regulations is amended to read in entirety as follows:

5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of both inert and non-inert nonhazardous demolition waste and 65 percent of both inert and non-inert nonhazardous construction waste in accordance with Section 5.408.2, 5.408.3 or 5.408.4 and meet the requirements of Chapter 12.48 Recycling and Salvaging of Construction and Demolition Debris City of Menlo Park Municipal Code.

Exceptions:

1. Excavated soil and land clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the job site.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

**SECTION 9: Amendment of Section 12.32.050.**

Section 12.32.050 [Filing Fee] of Chapter 12.32 [Moving Buildings] of Title 12 [Buildings and Construction] of the Menlo Park Municipal Code is hereby amended to read in entirety as follows:

**Section 12.32.040 – Filing Fee.**

Prior to, or at the time of, filing any application for a permit to move or remove a building or structure a fee in an amount established by resolution of the City Council shall be paid to the building department by the applicant to defray the reasonable cost of investigations and other services required of the building department pursuant to this chapter. The filing fee provided in this section shall be in addition to other permit fees which are required to erect, construct, enlarge, alter, repair, improve and convert any structural, electrical, plumbing, and heating work required for any building, or to demolish any building or structure pursuant to other applicable laws or ordinances.

**SECTION 10: Enactment of Section 12.36.060.**

Section 12.36.060 [Pools under construction] is hereby added to Chapter 12.36 [Swimming Pools] of Title 12 [Buildings and Construction] of the Menlo Park Municipal Code, to read as follows:

**Section 12.36.060 – Pools under construction.**

During construction, pools shall be enclosed by a fence or solid structure with a height of 60-84 inches. The fence shall not have any openings larger than 50 square inches other than a gate. Fences with rectangular openings having a horizontal dimension 4 inches or less may exceed 50 square inches. All gates leading into the area shall be self-closing self-latching. The latch shall be at least 60 inches above the ground.

**SECTION 11: Amendment of Code on Flood Damage Prevention.**

Chapter 12.42 [Flood Damage Prevention] of Title 12 [Buildings and Construction] of the Menlo Park Municipal Code is hereby amended to modify Sections 12.42.12, 12.42.20, 12.42.41, 12.42.43, 12.42.51 to read as set forth below:

**Section 12.42.12 – Findings of fact.**

- a. The flood hazard areas of the city of Menlo Park are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- b. These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

**Section 12.42. – Definitions.**

Unless specifically defined below, words and phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

1. "Accessory structure" means a structure that is either: solely for the parking of no more than two (2) cars or a small, low cost shed for limited storage, less than one hundred fifty (150) square feet and one thousand five hundred dollars (\$1,500) in value.
2. "Appeal" means a request for a review of the floodplain administrator's interpretation of any provision of this chapter or a request for a variance.
3. "Area of shallow flooding" means a designated AO or AH zone on the flood insurance rate map (FIRM). The base flood depths range from one (1) to three (3) feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.
4. "Area of special flood hazard." See "Special flood hazard area."
5. "Base flood elevation (BFE)" means the elevation shown on the flood insurance rate map for zones AE, AH, A1-30, VE and V1-V30 that indicates the water surface elevation resulting from a flood that has a one percent (1%) or greater chance of being equaled or exceeded in any given year.
6. "Basement" means any area of the building having its floor subgrade (below ground level) on all sides.
7. "Breakaway walls" are any type of walls, whether solid or lattice, and whether constructed of concrete, masonry, wood, metal, plastic or any other suitable building materials, which are not part of the structural support of the building and which are designed to break away under abnormally high tides or wave action without causing any damage to the structural integrity of the building on which they are used or any buildings to which they might be carried by floodwaters. A breakaway wall shall have a safe design loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Use of breakaway walls must be certified by a registered engineer or architect and shall meet the following conditions:
  - A. Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and

- B. The elevated portion of the building shall not incur any structural damage due to the effects of wind and water loads acting simultaneously in the event of the base flood.
8. "Building." See "structure."
  9. "Coastal A Zones" means a special flood hazard area landward of a V Zone or landward of an open coast without a mapped V Zone, where the principle source of flooding are associated with astronomical tides, storm surges, seiches or tsunamis, not riverine flooding. During base flood conditions, the potential for breaking wave heights between 1.5 feet and 3.0 feet will exist.
  10. "Coastal high hazard area" means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. It is an area subject to high velocity waters, including coastal and tidal inundation or tsunamis. The area is designated on a flood insurance rate map (FIRM) as zone V1-V30, VE, or V.
  11. "Design Flood Elevation (DFE)" means the elevation of the design flood, including wave height, relative to the datum specified on a community's flood hazard map.
  12. "Development" means any manmade change to improved or unimproved real estate including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.
  13. "Dry floodproofing" means a combination of measures that results in a structure, including the attendant utilities and equipment, being watertight with all elements substantially impermeable to the entrance of floodwater and with structural components having the capacity to resist flood loads.
  14. "Encroachment" means the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain which may impede or alter the flow capacity of a floodplain.
  15. "Existing manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.
  16. "Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).
  17. "Flood, flooding, or floodwater" means a general and temporary condition of partial or complete inundation of normally dry land areas from (A) the overflow of floodwaters; (B) the unusual and rapid accumulation or runoff of surface waters from any source; and/or (C) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in this definition.
  18. "Flood boundary and floodway map" means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of flood hazard and the floodway.
  19. "Flood hazard boundary map" means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated the areas of flood hazards.

20. "Flood insurance rate map" means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
21. "Flood insurance study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the FIRM, the flood boundary and floodway map, and the water surface elevation of the base flood and supporting technical data.
22. "Floodplain or flood-prone area" means any land area susceptible to being inundated by water from any source (see definition of "flooding").
23. "Floodplain administrator" means the community official designated by title to administer and enforce the floodplain management regulations.
24. "Floodplain management" means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain including, but not limited to, emergency preparedness plans, flood control works and floodplain management regulations and open space plans.
25. "Floodplain management regulations" means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. This term describes such federal, state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.
26. "Floodproofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.
27. "Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Also referred to as "regulatory floodway."
28. "Floodway fringe" means that area of the floodplain on either side of the regulatory floodway where encroachment may be permitted.
29. "Fraud and victimization," as related to Section 12.42.61, means that the variance granted must not cause fraud on or victimization of the public. In examining this requirement, the city will consider the fact that every newly constructed building adds to government responsibilities and remains a part of the community for fifty (50) to one hundred (100) years. Buildings that are permitted to be constructed below the base flood elevation are subject during all those years to increased risk of damage from floods, while future owners of the property and the community as a whole are subject to all the costs, inconvenience, danger, and suffering that those increased flood damages bring. In addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high flood insurance rates.
30. "Functionally dependent use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.
31. "Governing body" means the City Council.
32. "Hardship," as related to Section 12.42.61, means the exceptional hardship that would result from a failure to grant the requested variance. The city requires that the variance be exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot,

as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere, or put the parcel to a different use than originally intended.

33. "Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
34. "Historic structure" means any structure that is:
- A. Listed individually in the National Register of Historic places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
  - B. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
  - C. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
  - D. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states without approved programs.
35. "Levee" means a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.
36. "Levee system" means a flood protection system which consists of a levee or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accord with sound engineering practices.
37. "Lowest floor" means the lowest floor of the lowest enclosed area, including basement (see "basement" definition).
- A. An unfinished or flood resistant enclosure below the lowest floor that is usable solely for parking of vehicles, building access or storage in an area other than a basement area, is not considered a building's lowest floor provided it conforms to applicable nonelevation design requirements, including, but not limited to:
    - i. The wet floodproofing standard in Section 12.42.51(3)(D);
    - ii. The anchoring standards in Section 12.42.51(1);
    - iii. The construction materials and methods standards in Section 12.42.51(2);
    - iv. The standards for utilities in Section 12.42.52.
  - B. For residential structures, all subgrade enclosed areas are prohibited as they are considered to be basements. This prohibition includes below-grade garages and storage areas.

(Note: This definition allows attached garages to be built at grade. Below grade garages are not allowed as they are considered to be basements.)

38. "Manufactured home" means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term "manufactured home" also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than one hundred eighty (180) consecutive days.
39. "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for sale or rent.
40. "Market value" is defined in the city of Menlo Park's substantial damage/improvement procedures.

41. "Mean sea level" means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's flood insurance rate map are referenced.
42. "New construction" means, for floodplain management purposes, structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by this community and includes any subsequent improvements to such structure.
43. "New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by this community.
44. "Obstruction" includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.
45. "One-hundred-year flood" or "100-year flood" means a flood which has a one percent (1%) annual probability of being equaled or exceeded in any given year. It is identical to the "base flood," which will be the term used throughout this chapter.
46. "Person" means an individual or his agent, firm, partnership, association or corporation, or agent of the aforementioned groups, or this state or its agencies or political subdivisions.
47. "Primary frontal dune" means a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively mild slope.
48. "Public safety and nuisance," as related to Section 12.42.62, means that the granting of a variance must not result in anything which is injurious to safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage of use, in the customary manner, of any navigable lake, river, bay, stream, canal or basin.
49. "Recreational vehicle" means a vehicle which is:
  - A. Built on a single chassis;
  - B. Four hundred (400) square feet or less when measured at the largest horizontal projection;
  - C. Designed to be self-propelled or permanently towable by a light-duty truck; and
  - D. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.
50. "Regulatory floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.
51. "Remedy a violation" means to bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this chapter or otherwise deterring future similar violations, or

reducing state or federal financial exposure with regard to the structure or other development.

52. "Riverine" means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.
53. "Sand dunes" mean naturally occurring accumulations of sand in ridges or mounds landward of the beach.
54. "Sheet flow area." See "area of shallow flooding."
55. "Special flood hazard area (SFHA)" means an area having special flood or flood related erosion hazards, and shown on an FHBM or FIRM as zone A, AO, A1-A30, AE, A99, AR, AO, AH, E, M, V1-V30, VO, VE or V.
56. "Start of construction" includes substantial improvement and other proposed new development, and means the date the building permit was issued; provided, the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the state of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation of the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
57. "Structure" means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.
58. "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.
59. "Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:
  - A. Before the improvement or repair is started; or
  - B. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed.

For the purpose of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either:

- A. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code violations identified by the building official and are the minimum necessary to assure safe living conditions; or
  - B. Any alterations of a structure meeting the "historic structure" definition as defined in this section; provided, that the alteration will not preclude the structure's continued designation as a historic structure.
60. "V zone." See "coastal high hazard area."
  61. "Variance" means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.
  62. "Violation" means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other

certifications, or other evidence of compliance required in this chapter is presumed to be in violation until such time as that documentation is provided.

63. "Water surface elevation" means the height, in relation to the North American Vertical Datum of 1988 (NAVD 88), (or other datum, where specified) of floods of various magnitudes and frequencies in the flood plains of coastal or riverline areas.
64. "Watercourse" means a lake, river, creek, stream, wash, arroyo, channel or other topographical feature on or over which waters flow at least periodically. "Watercourse" includes specifically designated areas in which substantial flood damage may occur. (Ord. 1022 § 8 (part), 2016).
65. "Wet floodproofing" means the use of flood damage resistant materials and construction techniques to minimize flood damage to areas below the flood protection level of a structure, which is intentionally allowed to flood.

#### **Section 12.42.41 – Development Permit.**

- a) A development permit shall be obtained before construction or development begins within any area of special flood hazards established in Section 12.42.32. Application for a development permit shall be made on forms furnished by the floodplain administrator and may include, but not be limited to: Plans in duplicate, drawn to scale, showing:
  - 1) Location, dimensions, and elevation of the area in question, existing or proposed structures, storage of materials and equipment and their location;
  - 2) Proposed locations of water supply, sanitary sewer, and other utilities;
  - 3) Grading information showing existing and proposed contours, any proposed fill, and drainage facilities;
  - 4) Location of the regulatory floodway when applicable;
  - 5) Base flood elevation information as specified in Section 12.42.32 or 12.42.43(3);
  - 6) Proposed elevation in relation to mean sea level of the lowest floor (including basement) of all structures; and
  - 7) Proposed elevation in relation to mean sea level to which any nonresidential structure will be floodproofed, as required in Section 12.42.51(3)(C) and detailed in FEMA Technical Bulletin TB 3-93.
- b) Certification from a registered civil engineer or architect that the nonresidential floodproofed building meets the floodproofing criteria in Section 12.42.51(3)(C).
- c) For a crawl-space foundation, location and total net area of foundation openings as required in Section 12.42.51(3)(D) of this ordinance and detailed in FEMA Technical Bulletins 1 and 7.
- d) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
- e) All appropriate certifications listed in Section 12.42.43(7).

#### **Section 12.42.43 – Duties and responsibilities of floodplain administrator.**

The duties and responsibilities of the floodplain administrator shall include, but not be limited to:

- 1) Permit Review.
  - A. Review all development permits to determine that the permit requirements of this ordinance have been satisfied;
  - B. All other required state and federal permits have been obtained;
  - C. The site is reasonably safe from flooding;
  - D. The proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined but a floodway has not been



- designated. For purposes of this chapter, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will increase the water surface elevation of the base flood more than one (1) foot at any point.
- E. All letters of map revision (LOMRs) for flood control projects are approved prior to the issuance of building permits. Building permits must not be issued based on conditional letters of map revision (CLOMRs). Approved CLOMRs allow construction of the proposed flood control project and land preparation as specified in the "start of construction" definition.
- 2) Development of Substantial Improvement and Substantial Damage Procedures.
- A. Using FEMA publication FEMA 213, "Answers to Questions About Substantially Damaged Buildings," develop detailed procedures for identifying and administering requirements for substantial improvement and substantial damage, to include defining "market value."
- B. Assure procedures are coordinated with other departments/divisions and implemented by community staff.
- 3) Review, Use, and Development of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Section 12.42.32, the floodplain administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer Sections 12.42.51 through 12.42.56. Any such information shall be submitted to the city council for adoption.
- NOTE: A base flood elevation may be obtained using one (1) of two (2) methods from the FEMA publication FEMA 265, "Managing Floodplain Development in Approximate Zone A Areas – A Guide for Obtaining and Developing Base (100-year) Flood Elevations" dated July 1995.
- 4) Whenever a watercourse is to be altered or relocated:
- A. Notify adjacent communities and the California Department of Water Resources prior to such alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency; and
- B. Require that the flood-carrying capacity of the altered or relocated portion of said watercourse is maintained.
- 5) Base Flood Elevation Changes Due to Physical Alterations.
- A. Within six (6) months of information becoming available or project completion, whichever comes first, the floodplain administrator shall submit or assure that the permit applicant submits technical or scientific data to FEMA for a letter of map revision (LOMR).
- B. All LOMR's for flood control projects are approved prior to the issuance of building permits. Building permits must not be issued based on conditional letters of map revision (CLOMRs). Approved CLOMRs allow construction of the proposed flood control project and land preparation as specified in the "start of construction" definition. Such submissions are necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements are based on current data.
- 6) Changes in Corporate Boundaries. Notify FEMA in writing whenever the corporate boundaries have been modified by annexation or other means and include a copy of a map of the community clearly delineating the new corporate limits.
- 7) Obtain and maintain for public inspection and make available as needed:
- A. The certification required in Section 12.42.51(3)(A)  
(lowest floor elevations);

- B. The certification required in Section 12.42.51(3)(C)(iii) (elevation or floodproofing of nonresidential structures);
  - C. The certification required in Section 12.42.51(3)(D)(i) or (3)(D)(ii) or (3)(D)(iv) (wet floodproofing standard);
  - D. The certification required in Section 12.42.53(b) (subdivision standards);
  - E. The certification required in Section 12.42.55(1) (floodway encroachments);
  - F. Information required by Section 12.42.56 (coastal construction standards).
- 8) Make interpretations where needed, as to the location of the boundaries of the areas of special flood hazards. Where there appears to be a conflict between a mapped boundary and actual field conditions, grade and base flood elevations shall be used to determine the boundaries of the special flood hazard area. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Sections 12.42.61 and 12.42.62.
- 9) Take action to remedy violations of this chapter as specified in Section 12.42.33.

### **Section 12.42.51 – Standards of construction.**

In all areas of special flood hazards the following standards are required:

- 1) Anchoring.
  - A. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
  - B. All manufactured homes shall meet the anchoring standards of Section 12.42.54.
- 2) Construction Materials and Methods.
  - A. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
  - B. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
  - C. All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
  - D. All new construction and substantial improvements shall be constructed within zone AH or AO, so that there are adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
- 3) Elevation and Floodproofing.
  - A. Residential construction (as defined by the California Residential Code as amended from time to time, i.e., single-family homes, duplex and townhomes) shall comply with the elevation requirement provisions of the California Residential Code in effect at the time of permit submittal. Other residential construction, and new or substantial improvement, shall have the lowest floor, including basement, comply with the following:
    - i. In areas of shallow flooding (AO zone), elevated to a height above the highest adjacent grade of not less than the depth number specified in feet on the FIRM plus one (1) foot, or not less than three (3) feet if no depth number is specified;
    - ii. In all other Zone A, including Coastal A zones, elevated to or above the base flood elevation plus 1 foot, or the design flood elevation, whichever is higher.
    - iii. In all other zones, elevated to or above the base flood elevation.

Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, and verified by the community building inspector to be properly elevated. Such certification and verification shall be provided to the floodplain administrator.

- B. Nonresidential new construction shall be elevated to conform with subsection (3)(A) of this section and have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- C. Nonresidential substantial improvement shall either be elevated to conform with subsection (3)(A) of this section or together with attendant utility and sanitary facilities:
- i. Be dry floodproofed below the elevation required under subsection (3)(A) of this section so that the structure is watertight with walls substantially impermeable to the passage of water;
  - ii. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
  - iii. Be certified by registered professional engineer or architect that the standards of subsection (3)(C) of this section are satisfied in accordance with ASCE 24 and shall include the flood emergency plan specified in Chapter 6 of ASCE 24. Such certification shall be provided to the floodplain administrator.
- D. All new construction and substantial improvement with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage, and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement shall follow the guidelines in FEMA Technical Bulletins 1, 7 and 11 as revised, amended and constructed to meet the following requirements:
- i. Be certified by a registered professional engineer or architect;
  - ii. Have a minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one (1) foot above exterior adjacent grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwater;
  - iii. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Crawl space construction is not allowed in areas with flood velocities greater than five (5) feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer;
  - iv. The crawl space is an enclosed area below the DFE and, as such, must have openings that equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters. For guidance on flood openings, see Technical Bulletin 1, Openings in Foundation Walls. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24;
  - v. Crawl space construction is not permitted in V zones. Open pile or column foundations that withstand storm surge and wave forces are required in V zones;
  - vi. Portions of the building below the DFE must be constructed with materials resistant to flood damage that conform to the provisions of FEMA Technical Bulletin 2. This includes not only the foundation walls of the crawl space used to elevate the building, but also any joists, insulation, or other materials that extend below the DFE; and
  - vii. Any building utility systems within the crawl space must be elevated above DFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions.
  - viii. Requirements for all below-grade crawl space construction, in addition to the above requirements, include the following provisions, per Technical Bulletin 11:

- a. The interior grade of a crawl space below the DFE must not be more than two (2) feet below the lowest adjacent exterior grade (LAG), shown as D in figure 3 of Technical Bulletin 11;
  - b. The height of the below-grade crawl space, measured from the interior grade of the crawl space to the top of the crawl space foundation wall must not exceed four (4) feet (shown as L in figure 3 of Technical Bulletin 11) at any point;
  - c. There must be an adequate drainage system that removes floodwaters from the interior area of the crawl space within a reasonable period of time after a flood event;
  - d. The velocity of floodwaters at the site should not exceed five (5) feet per second for any crawl space. For velocities in excess of five (5) feet per second, other foundation types should be used; and
  - e. Below-grade crawl space construction in accordance with the requirements listed above will not be considered basements.
- E. Manufactured homes shall also meet the standards in Section 12.42.54.
- F. Accessory structures defined in Section 16.68.030 used solely for parking (two (2) car detached garages or smaller) or limited storage (low cost, not exceeding one hundred fifty (150) square feet) may be constructed such that its floor is below the design flood elevation (DFE) and not be required to apply for a variance, provided the structure is designed and constructed in accordance with the following requirements:
- i. Use of the accessory structure must be limited to parking or limited storage;
  - ii. The portion of the accessory structure located below the DFE must be built using flood damage resistant materials;
  - iii. The accessory structure must be adequately anchored to prevent flotation, collapse or lateral movement of the structure and meet the FEMA regulations as specified in this section;
  - iv. Any mechanical and utility equipment in the accessory structure must be elevated to or above the DFE or wet-floodproofed as defined in FEMA regulations;
  - v. The accessory structure must comply with floodplain encroachment provisions in FEMA Regulation 60.3(C)(10) or (d)(3); and
  - vi. The accessory structure must be designed to allow for the automatic entry of floodwaters. (Ord. 1022 § 8 (part), 2016).

### **Section 12.42.56 – Coastal high hazard areas and Coastal A zones.**

Within coastal high hazard areas and coastal A zones, as established under Section 12.42.32, the following standards shall apply:

- 1) Dry floodproofing of structures is not permitted in coastal high hazard areas and coastal A zones.
- 2) All new construction and substantial improvement shall be elevated on adequately anchored pilings or columns and securely anchored to such pilings or columns so that the lowest horizontal portion of the structural members of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state or local building standards. Construction documents shall include a statement that the building is designed in accordance with ASCE 24.

- 3) All new construction and other development shall be located on the landward side of the reach of mean high tide.
- 4) All new construction and substantial improvement shall have the space below the lowest floor free of obstructions or constructed with breakaway walls in accordance with FEMA Technical Bulletins 5 and 9 as amended or revised and as defined in Section 12.42.20. Such enclosed space shall not be used for human habitation and will be usable solely for parking of vehicles, building access or storage.
- 5) Fill shall not be used for structural support of buildings.
- 6) Manmade alteration of sand dunes which would increase potential flood damage is prohibited.
- 7) For breakaway walls designed to have a resistance of more than 20 psf determined using allowable stress design, construction documents shall include a statement that the breakaway wall is designed in accordance with ASCE 24.
- 8) For breakaway walls where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24.
- 9) The floodplain administrator shall obtain and maintain the following records:
  - A. Certification by a registered engineer or architect that a proposed structure complies with subsection (1) of this section.
  - B. (B) The elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings or columns) of all new and substantially improved structures, and whether such structures contain a basement. (Ord. 1022 § 8 (part), 2016).

#### SECTION 12: Exemption from CEQA.

The City Council finds, pursuant to Title 14 of the California Administrative Code, Section 15061(b)(3) that this Ordinance is exempt from the requirements of the California Environmental Quality Act ("CEQA") on the grounds that these standards are more stringent than the State standards, there are no reasonably foreseeable adverse impacts and there is no possibility that the activity in question may have a significant effect on the environment.

#### SECTION 13: Severability.

If any part of this Ordinance is held to be invalid or inapplicable to any situation by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance or the applicability of this Ordinance to other situations.

#### SECTION 14: Effective Date.

This Ordinance shall become effective thirty days following adoption or on January 1, 2023, whichever is later. However, where applications and plans for building have been filed and are pending for building permits prior to the effective date of this Ordinance, such permits may be issued, and the applicant may proceed with construction in strict compliance with the California Building Standards Codes, 2019 Editions, California Code of Regulations, Title 24, as previously adopted and amended by any ordinances of the City of Menlo Park, but only to the extent that the issuance of such permit is required by Health and Safety Code section 18938.5 and any other applicable law.

#### SECTION 15: Posting and Filing.

Within fifteen (15) days of its adoption, the Ordinance shall be posted in three (3) public places within the City of Menlo Park, and the Ordinance, or a summary thereof shall be published in a local newspaper used to publish official notices for the City of Menlo Park prior to the effective

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date. The City Clerk shall file this ordinance with the California Energy Commission and/or California Building Standards Commission in the manner as may be required by law.

INTRODUCED on the first day of November, 2022.

PASSED AND ADOPTED as an ordinance of the City of Menlo Park at a regular meeting of said City Council on the fifteenth day of November, 2022, by the following votes:

AYES: Combs, Mueller, Nash, Taylor, Wolosin

NOES: None

ABSENT: None

ABSTAIN: None

APPROVED:

DocuSigned by:  
*Betsy Nash*  
415F4B216DBF480...

Betsy Nash, Mayor

ATTEST:

DocuSigned by:  
*Judi A. Herren*  
39280A20D0BE491...

Judi A. Herren, City Clerk