

DOCKETED

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Ordinance No. 5485
Ordinance of the Council of the City of Palo Alto Repealing and
Restating Chapter 16.17 of the Palo Alto Municipal Code, California
Energy Code, 2019 Edition, and Local Amendments and Related Findings

The Council of the City of Palo Alto does ORDAIN as follows:

SECTION 1. Chapter 16.17 of the Palo Alto Municipal is hereby amended by repealing in its entirety Chapter 16.17 and adopting a new Chapter 16.17 to read as follows:

16.17 CALIFORNIA ENERGY CODE

16.17.010 2019 California Energy Code adopted.

The California Energy Code, 2019 Edition, Title 24, Part 6 of the California Code of Regulations together with those omissions, amendments, exceptions and additions thereto, is adopted and hereby incorporated in this Chapter by reference and made a part hereof the same as if fully set forth herein. Except as amended herein, all requirements of the California Energy Code, 2019 Edition, Title 24, Part 6 of the California Code of Regulations shall apply.

Unless superseded and expressly repealed, references in City of Palo Alto forms, documents and regulations to the chapters and sections of the former California Code of Regulations, Title 24, shall be construed to apply to the corresponding provisions contained within the California Code of Regulations, Title 24, 2016. Ordinance No. 5383 of the City of Palo Alto and all other ordinances or parts of ordinances in conflict herewith are hereby suspended and expressly repealed.

One copy of the California Energy Code, 2019 Edition, has been filed for use and examination of the public in the Office of the Building Official of the City of Palo Alto.

16.17.020 Violations -- Penalties.

It is unlawful for any person to violate any provision or to fail to comply with any of the requirements of this Chapter or any permits, conditions, or variances granted under this Chapter. Violators shall be subject to any penalty or penalties authorized by law, including but not limited to: administrative enforcement pursuant to Chapters 1.12 and 1.16 of the Palo Alto Municipal Code; and criminal enforcement pursuant to Chapter 1.08 of the Palo Alto Municipal Code. Each separate day or any portion thereof during which any violation of this Chapter occurs or continues shall be deemed to constitute a separate offense.

When the chief building official determines that a violation of this Chapter has occurred, the chief building official may record a notice of pendency of code violation with the Office of the County Recorder stating the address and owner of the property involved. When the violation has been corrected, the chief building official shall issue and record a release of the notice of

pendency of code violation.

16.17.030 Enforcement -- Criminal Enforcement authority.

The employee positions designated in this section are authorized to exercise the authority provided in California Penal Code section 836.5 for violations of this Chapter. The designated employee positions are: (1) chief building official, (2) assistant chief building official, (3) building inspection manager, and (4) code enforcement officer.

16.17.040 Local Amendments.

The provisions of this Chapter shall constitute local amendments to the cross-referenced provisions of the California Energy Code, 2019 Edition, and shall be deemed to replace the cross-referenced sections of said Code with the respective provisions set forth in this Chapter.

16.17.050 Section 100.1 Definitions and Rules of Construction

Section 100.1(b) is amended by adding the following definitions:

ALL-ELECTRIC BUILDING or ALL-ELECTRIC DESIGN is a building or building design that uses a permanent supply of electricity as the source of energy for all space heating, water heating (including pools and spas), cooking appliances, and clothes drying appliances, and has no natural gas or propane plumbing installed in the building.

CERTIFIED ENERGY ANALYST is a person registered as a Certified Energy Analyst with the California Association of Building Energy Consultants as of the date of submission of a Certificate of Compliance as required under Section 10-103 of the Building Energy Efficiency Standards for Residential and Non-Residential Buildings.

FREE STANDING ACCESSORY DWELLING UNIT is a detached building that is not intended for sale separate from the primary residence, on a lot that is zoned for single-family or multifamily use, located on the same lot as an existing dwelling, and does not exceed 900 square feet of total floor area.

MIXED-FUEL BUILDING or MIXED-FUEL DESIGN is a building or building design that uses natural gas or propane as fuel for space heating, water heating (including pools and spas), cooking appliances or clothes drying appliances or is plumbed for such equipment.

16.17.60 Section 110.10 Mandatory Requirements For Solar Ready Buildings.

Section 110.10 Mandatory Requirements for Solar Ready Buildings is amended as follows:

(f) Subsection 110.10(f) is added to read:

(f) Existing tree canopies. In the event of a conflict between the provisions of this Code, the Solar Shade Act of 2009, and the Palo Alto Tree Ordinance (Chapter 8.10), the most protective of existing tree canopies shall prevail.

16.17.070 SUBCHAPTER 5 -NONRESIDENTIAL, HIGH-RISE RESIDENTIAL AND HOTEL/MOTEL OCCUPANCIES – PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES FOR ACHIEVING ENERGY EFFICIENCY

Section 140.0 - Performance and Prescriptive Compliance Approaches

Section 140.0 of the 2019 California Energy Code is amended to as follows:

- (b) The requirements of Sections 120.0 through 130.5 (mandatory measures for nonresidential, high-rise residential and hotel/motel buildings) and:

for all newly constructed buildings and additions, including new equipment installed to serve additions:

1. The entire solar zone, as specified in Section 110.10, shall have a solar PV system installed that meets the minimum qualification requirements as specified in Joint Appendix JA11, subject to the exceptions in Section 110.10.

A. Exception to 140.0(b)1. Additions.

2. **Electric-Ready Mixed-Fuel Buildings.** Mixed-fuel buildings shall meet the following requirements:

A. **Water Heating**

- i. A dedicated 240 volt 30-amp electrical receptacle is required, that is connected to the electric panel with conductors of adequate capacity, within 3 feet from the water heater and accessible to the water heater with no obstructions.
- ii. Both ends of the unused conductor shall be labeled with the words “For Future Heat Pump Water Heater” and shall be electrically isolated.
- iii. A condensate drain is required, that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance.
- iv. Water heaters shall be located in an area with a minimum of 700 cubic feet of volume, or a ducting plan is required for eight-inch supply and exhaust ducts to the exterior or to a space with 700 cubic feet of volume.

Exception to 140.0(b)2.A.iv. The space and ventilation requirements may be reduced to conform with the manufacturer’s recommendations for a specific heat pump hot water heater that meets the requirements of Sections 110.0, 110.1 and 110.3.

1. **Clothes Drying**

- i. A dedicated 240-volt, 40 amp electrical receptacle is required that is connected to the electric panel with conductors of adequate capacity, within 3 feet of the appliance and accessible with no obstructions.

- ii. Both ends of the unused conductor shall be labeled with the words “For Future Heat Pump Clothes Drying” and be electrically isolated.
2. **Cooktop or Range.**
- i. A dedicated 240-volt, 50 amp electrical receptacle that is connected to the electric panel with conductors of adequate capacity, within 3 feet of the appliance and accessible with no obstructions.
 - ii. Both ends of the unused conductor shall be labeled with the words “For Future Inductive Range” and shall be electrically isolated.

EXCEPTION to 140.0(b)2.A, B, and C: If gas or propane plumbing is not installed for the specified end uses.

3. **Other Gas Equipment.**
- i. For equipment that is specified or connected to natural gas or propane plumbing, the building shall include designated raceways and reserved capacity on the main electrical panel and subpanels, if applicable, sufficient to power electric equipment that provides the equivalent function to the intended function of the gas equipment; or,
 - ii. If gas plumbing exists but no gas equipment is specified or connected, the building shall include designated raceways and reserved capacity on the main electrical panel and subpanels, if applicable, sufficient to provide equivalent power at a maximum gas flow rate under normal gas service pressure. Plans shall include calculations for delivered gas power and equivalent electrical power, conductors, raceway sizes and panel capacities.

Exception to 140.0(b)2.D. If the applicant demonstrates that there is no viable electrical equipment that can perform the intended function of the gas equipment.

- 4. All newly installed raceways between the main electric panel and any subpanels, and the point at which the conductors serving the building connect to the common conductors of the utility distribution system shall be sized for conductors adequate to serve all of the building’s electrical requirements, including PV as specified Section 140.0(b)1 and future electric loads as specified in Section 140.0(b)2.
- 5. If the building includes an electrical transformer(s) feeding the main panel or any subpanels, the transformer(s) shall be located in a space large enough to accommodate a transformer(s) with a rated capacity sufficient to serve all of the building’s electrical requirements, including PV as specified in Section 140.0(b)1 and future electric loads as specified in Section 140.0(b)2.

16.17.80 Section 140.1 – Performance Approach: Energy Budgets

Section 140.1 of the 2019 California Energy Code is amended to read as follows:

A newly constructed All-Electric Building complies with the performance approach if the energy budget calculated for the proposed design building under Subsection (b) is no greater than the energy budget calculated for the Standard Design Building under Subsection (a).

A newly constructed Mixed-Fuel Building complies with the performance approach if the energy budget calculated for the proposed design building under Subsection (b) has a compliance margin, relative to the energy budget calculated for the Standard Design Building under Subsection (a), of at least the value specified for the corresponding occupancy type in Table 140.1-A below.

Table 140.1-A Mixed Fuel Building Compliance Margins

<u>Occupancy Type</u>	<u>Compliance Margins</u>
<u>Office Building</u>	<u>12%</u>
<u>Retail Store</u>	<u>12%</u>
<u>Hotel/motel and High-rise residential</u>	<u>5%</u>
<u>Industrial/Manufacturing</u>	<u>0%</u>
<u>All other Nonresidential occupancies</u>	<u>5%</u>

- (a) **Energy Budget for the Standard Design Building.** The energy budget for the Standard Design Building is determined by applying the mandatory and prescriptive requirements to the proposed design building. The energy budget is the sum of the TDV energy for space-conditioning, indoor lighting, mechanical ventilation, service water heating, and covered process loads.
- (b) **Energy Budget for the Proposed Design Building.** The energy budget for a proposed design building is determined by calculating the TDV energy for the proposed design building. The energy budget is the sum of the TDV energy for space-conditioning, indoor lighting, mechanical ventilation and service water heating and covered process loads.
- (c) **Calculation of Energy Budget.** The TDV energy for both the Standard Design Building and the proposed design building shall be computed by Compliance Software certified for this use by the Commission. The processes for Compliance Software approval by the Commission are documented in the ACM Approval Manual.
- (d) **Certificate of Compliance.** The Certificate of Compliance shall be prepared and signed by a Certified Energy Analyst and the energy budget for the Proposed Design shall be no greater than the Standard Design Building.

16.17.90 Section 140.2 - Prescriptive Approach

Section 140.2 of the 2019 California Energy Code is amended to read as follows:

To comply using the prescriptive approach, a building shall be designed with and shall have constructed and installed systems and components meeting the applicable requirements of Sections 140.3 through 140.9, and the following requirements, as applicable:

(a) Mixed-Fuel Buildings of Hotel, Motels or High-Rise Multifamily Occupancies

1. Install fenestration with a solar heat gain coefficient no greater than 0.22.
2. Design Variable Air Volume (VAV) box minimum airflows to be equal to the zone ventilation minimums.
3. Include economizers and staged fan control in air handlers with a mechanical cooling capacity \geq 33,000 Btu/h.
4. Reduce the lighting power density (Watts/ft²) by ten percent (10%) from that required from Table 140.6-C.
5. In common areas, improve lighting without claiming any Power Adjustment Factor credits:
 - A. Control to daylight dimming plus off per Section 140.6(a)2H, and
 - B. Perform Institutional Tuning per Section 140.6(a)2J
6. Install one drain water heat recovery device per every three guest rooms that is field verified as specified in the Reference Appendix RA3.6.9.

(b) All Other Nonresidential Mixed-Fuel Buildings

1. Install fenestration with a solar heat gain coefficient no greater than 0.22.
2. Limit the fenestration area on east-facing and west-facing walls to one-half of the average amount of north-facing and south-facing fenestration.
3. Design Variable Air Volume (VAV) box minimum airflows to be equal to the zone ventilation minimums where VAV systems are installed.
4. Include economizers and staged fan control in air handlers with a mechanical cooling capacity \geq 33,000 Btu/h.
5. Reduce the lighting power density (Watts/ft²) by ten percent (10%) from that required from Table 140.6-C.
6. Improve lighting without claiming any Power Adjustment Factor credits:
 - A. Perform Institutional Tuning per Section 140.6(a)2J, and
 - B. In office spaces, control to daylight dimming plus off per Section 140.6(a)2H, and
 - C. Install Occupant Sensing Controls in Large Open Plan Offices per Section 140.6(a)2I.

16.17.100 SUBCHAPTER 7 - LOW-RISE RESIDENTIAL BUILDINGS- MANDATORY FEATURES AND DEVICES

Section 150.0 - Mandatory Features and Devices. Section 150.0 of the 2019 California Energy Code is amended to read as follows:

Low-rise residential buildings shall comply with the applicable requirements of Sections 150(a) through 150(r).

NOTE: The requirements of Sections 150.0 (a) through (r) apply to newly constructed buildings. Sections 150.2(a) and 150.2(b) specify which requirements of Sections 150.0(a) through 150.0(r) also apply to additions or alterations. The amendments to sections 150.0 (h), 150.0 (n), and 150.0 (s) do not apply to additions, alterations, or ADUs.

Sections 150.0 (a) – (d) are adopted without modifications

Section 150.0(e) Installation of fireplaces. Fireplaces shall be electric, not fueled by natural gas.

Section 150.0(f) is adopted without modifications.

Section 150.0(h) is amended to read:

Section 150.0(h) Space-conditioning equipment. Space-conditioning equipment shall be electric, not fueled by natural gas.

Sections 150.0(i) - (m) are adopted without modifications

Section 150.0(n) Water heating system. Section 150.0 (n) is modified as follows:

(n) **Water Heating System.**

1. Water heating systems and equipment shall be electric, not fueled by natural gas.
 - A. Deleted
 - B. Deleted
 - C. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance, and
 - D. Deleted
2. Water heating recirculation loops serving multiple dwelling units shall meet the requirements of Section 110.3(c)5.

3. Solar water-heating systems and collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the chief building official.
4. Deleted

Sections 150.0(o) – (r) are adopted without modifications.

Section 150.0 is amended to add a new subsection (s) as follows:

(s) **Clothes Drying and Cooking.**

1. **Clothes Drying.** Clothes dryers shall be electric, not fueled by natural gas.
2. **Cooking Range.** Cooking appliances shall be electric, not fueled by natural gas.

16.17.110 SUBCHAPTER 8 – LOW-RISE RESIDENTIAL BUILDINGS- PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES

Section 150.1 - Performance and Prescriptive Compliance Approaches for Low-Rise Residential Buildings. Section 150.1 of the 2019 California Energy Code is amended to read as follows:

- (a) Section (a) is adopted without modification
- (b) **Performance Standards.** A building complies with the performance standards if the energy consumption for the proposed design building is no greater than the energy budget calculated for the Standard Design Building using Commission-certified compliance software as specified by the Alternative Calculation Methods Approval Manual.
 1. **Newly Constructed Buildings.** The Energy Budget for newly constructed buildings is expressed in terms of the Energy Design Rating, which is based on TDV energy. The Energy Design Rating (EDR) has two components, the Energy Efficiency Design Rating, and the Solar Electric Generation and Demand Flexibility Design Rating. The Solar Electric Generation and Demand Flexibility Design Rating shall be subtracted from the Energy Efficiency Design Rating to determine the Total Energy Design Rating. The Proposed Building shall separately comply with the Energy Efficiency Design Rating and the Total Energy Design Rating.
 - A. An All-Electric Building complies with the performance standard if both the Total Energy Design Rating and the Energy Efficiency Design Rating for the Proposed Building are no greater than the corresponding Energy Design Ratings for the Standard Design Building.

2. **Additions and Alterations to Existing Buildings.** The Energy Budget for additions and alterations is expressed in terms of TDV energy. A building complies with the performance standards if the energy consumption calculated for the Proposed Building is no greater than the energy budget calculated for the Standard Design Building.

3. **Compliance demonstration requirements for performance standards.** Section 150.1(b)3A is modified to add subsection is as follows:

i. **Certificate of Compliance.** The Certificate of Compliance is prepared and signed by a Certified Energy Analyst and the Total Energy Design Rating of the Proposed Design shall be no greater than the Standard Design Building.

16.17.120 Infeasibility Exemption.

(a) **Exemption.** If an applicant for a Covered Project believes that circumstances exist that makes it infeasible to meet the requirements of this Chapter, the applicant may request an exemption as set forth below. In applying for an exemption, the burden is on the Applicant to show infeasibility.

(b) **Application.** If an applicant for a Covered Project believes such circumstances exist, the applicant may apply for an exemption at the time of application submittal in accordance with the Planning and Development Services administrative guidelines. The applicant shall indicate the maximum threshold of compliance he or she believes is feasible for the covered project and the circumstances that make it infeasible to fully comply with this Chapter. Circumstances that constitute infeasibility include, but are not limited to the following:

- (1) There is conflict with the compatibility of the currently adopted green building ordinance and/or California Building Standards Code;
- (2) There is conflict with other City goals, such as those requiring historic preservation or the Architectural Review criteria;
- (3) There is a lack of commercially available materials and technologies to comply with the requirements of this Chapter;
- (4) Applying the requirements of this Chapter would effectuate an unconstitutional taking of property or otherwise have an unconstitutional application to the property.

(c) **Review by Architectural Review Board (ARB).** For any covered project for which an exemption is requested and Architectural Review is required by the ARB, the ARB shall provide a recommendation to the Director of Planning and Development Services or designee regarding whether the exemption shall be granted or denied, along with its recommendation on the project.

- (d) **Granting of Exemption.** If the Director of Planning and Development Services, or designee, determines that it is infeasible for the applicant to fully meet the requirements of this Chapter based on the information provided, the Director, or designee, shall determine the maximum feasible threshold of compliance reasonably achievable for the project. The decision of the Director, or designee, shall be provided to the applicant in writing. If an exemption is granted, the applicant shall be required to comply with this Chapter in all other respects and shall be required to achieve, in accordance with this Chapter, the threshold of compliance determined to be achievable by the Director or designee.
- (e) **Denial of Exemption.** If the Director of Planning and Development Services or designee determines that it is reasonably possible for the applicant to fully meet the requirements of this Chapter, the request shall be denied and the Director or designee shall so notify the applicant in writing. The project and compliance documentation shall be modified to comply with this Chapter prior to further review of any pending planning or building application.
- (f) **Council Review of Exemption.** For any covered project that requires review and action by the City Council, the Council shall act to grant or deny the exemption, based on the criteria outlined above, after recommendation by the Director of Planning and Development Services.

16.17.130 Appeal.

- (a) Any aggrieved Applicant may appeal the determination of the Director of Planning and Development Services or designee regarding the granting or denial of an exemption pursuant to 16.17.070.
- (b) Any appeal must be filed in writing with the Planning and Development Services Department not later than fourteen (14) days after the date of the determination by the Director. The appeal shall state the alleged error or reason for the appeal.
- (c) The appeal shall be processed and considered by the City Council in accordance with the provisions of Section 18.77.070(f) of the City of Palo Alto Municipal Code.

SECTION 2. The Council adopts the findings for local amendments to the California Energy Code, 2019 Edition, attached hereto as Exhibit "A" and incorporated herein by reference.

SECTION 3. Under the authority granted by Public Resources Code Section 25402.1(h)(2), which permits local California Energy Code amendments, and based on staff's analysis of the "2019 Nonresidential New Construction Reach Code Cost Effectiveness Study" and "2019 Cost-effectiveness Study: Low-Rise Residential New Construction" developed for the California Energy Codes and Standards Program and attached to staff's report to Council, the Council finds the proposed local amendments to the 2019 California Energy Code that affect building energy performance to be cost-effective and consume less energy than permitted by Title 24, Part 6.

SECTION 4. If any section, subsection, clause or phrase of this Ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portion or sections of the Ordinance. The Council hereby declares that it should have adopted the Ordinance and each section, subsection, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be held invalid.

SECTION 5. The Council finds that this action is exempt from the provisions of the California Environmental Quality Act ("CEQA"), under Section 15308 of the CEQA Guidelines, because it is a regulatory action for the protection of the environment, and under Section 15061(b)(3) on the grounds that the proposed standards are more stringent than the State energy standards, there are no reasonably foreseeable adverse environmental impacts and there is no possibility that the activity in question may have a significant effect on the environment.

SECTION 6. This Ordinance shall be effective on April 1, 2020.

INTRODUCED: November 4, 2019

PASSED: December 2, 2019

AYES: CORMACK, DUBOIS, FILSETH, FINE, KNISS, KOU, TANAKA

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:

DocuSigned by:
Beth Minor
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City Clerk

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Eric Filseth
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Mayor

APPROVED AS TO FORM:

DocuSigned by:
Amy Bartell
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Assistant City Attorney

APPROVED:

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Ed Suikada
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City Manager

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Director of Planning and Development Services

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Kiely S. Nossé
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Director of Administrative Services

Exhibit A

FINDINGS FOR LOCAL AMENDMENTS TO CALIFORNIA ENERGY CODE, 2019 EDITION

Section 17958 of the California Health and Safety Code provides that the City may make changes to the provisions in the uniform codes that are published in the California Building Standards Code. Sections 17958.5 and 17958.7 of the Health and Safety Code require that for each proposed local change to those provisions in the uniform codes and published in the California Building Standards Code which regulate buildings used for human habitation, the City Council must make findings supporting its determination that each such local change is reasonably necessary because of local climatic, geological, or topographical conditions.

Regarding the Energy Code, local jurisdictions have the authority to adopt local energy efficiency ordinances—or reach codes—that exceed the minimum standards defined by Title 24 (as established by Public Resources Code Section 25402.1(h)2 and Section 10-106 of the Building Energy Efficiency Standards, provided the City Council finds that the requirements of the proposed ordinance are cost-effective and do not result in buildings consuming more energy than is permitted by Title 24.

Local building regulations having the effect of amending the uniform codes, which were adopted by the City prior to November 23, 1970, were unaffected by the regulations of Sections 17958, 17958.5 and 17958.7 of the Health and Safety Code. Therefore, amendments to the uniform codes which were adopted by the City Council prior to November 23, 1970, and have been carried through from year to year without significant change, need no required findings. Also, amendments to provisions not regulating buildings used for human habitation, including amendments made only for administrative consistency, do not require findings.

Code: Cal Green					
Section(s)	Title	Add	Deleted	Amended	Justification (See below for keys)
100.1	Definitions	✓			C & E
100.3 and 100.4	Local Energy Efficiency Reach Code and Exceptions		✓		C & E
110.10	Mandatory Requirements For Solar Ready Buildings	✓		✓	C
140.0	Nonresidential Performance and Prescriptive Compliance Approaches	✓		✓	C & E
140.1	Performance Approach: Energy Budgets	✓		✓	C & E
140.2	Prescriptive Approach	✓		✓	C & E
150.0	Low-Rise Residential – Mandatory Features and Devices	✓		✓	C & E
150.1	Compliance Approaches for Low-Rise Residential Buildings	✓		✓	C & E

Key to Justification for Amendments to Title 24 of the California Code of Regulations

- C** This amendment is justified on the basis of a local climatic condition. The seasonal climatic conditions during the late summer and fall create severe fire hazards to the public health and welfare in the City. The hot, dry weather frequently results in wild land fires on the brush covered slopes west of Interstate 280. The aforementioned conditions combined with the geological characteristics of the hills within the City create hazardous conditions for which departure from California Energy Code is required. Failure to address and significantly reduce greenhouse gas (GHG) emissions could result in rises in sea level, including in San Francisco Bay, that could put at risk Palo Alto homes and businesses, public facilities, and Highway 101 (Bayshore Freeway), particularly the mapped Flood Hazard areas of the City. Energy efficiency is a key component in reducing GHG emissions, and construction of more energy efficient buildings can help Palo Alto reduce its share of the GHG emissions that contribute to climate change. The burning of fossil fuels used in the generation of electric power and heating of buildings contributes to climate change, which could result in rises in sea level, including in San Francisco Bay, that could put at risk Palo Alto homes and businesses 1 public facilities, and Highway 101. Due to decrease in annual rain fall, Palo Alto experiences the effect of drought and water saving more than some other communities in California.
- E** Energy efficiency enhances the public health and welfare by promoting the environmental and economic health of the City through the design, construction, maintenance, operation and deconstruction of buildings and sites by incorporating green practices into all development. The provisions in this Chapter are designed to achieve the following goals:
- (a) Increase energy efficiency in buildings;
 - (b) Increase resource conservation;
 - (c) Provide durable buildings that are efficient and economical to own and operate;
 - (d) Promote the health and productivity of residents, workers, and visitors to the city;
 - (e) Recognize and conserve the energy embodied in existing buildings; and
 - (f) Reduce disturbance of natural ecosystems.
- G** This amendment is justified on the basis of a local geological condition. The City of Palo Alto 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

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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.

The City of Palo Alto **topography** includes hillsides with narrow and winding access, which makes timely response by fire suppression vehicles difficult. Palo Alto is contiguous with the San Francisco Bay, resulting in a natural receptor for storm and waste water run-off. Also the City of Palo Alto is located in an area that is potentially susceptible to liquefaction during a major earthquake. 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 Codes is warranted.

Certificate Of Completion

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Document Pages: 14	Signatures: 6
Certificate Pages: 5	Initials: 0
AutoNav: Enabled	Envelope Originator:
Envelopeld Stamping: Enabled	Kim Lunt
Time Zone: (UTC-08:00) Pacific Time (US & Canada)	250 Hamilton Ave
	Palo Alto , CA 94301
	kimberly.lunt@cityofpaloalto.org
	IP Address: 12.220.157.20

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Amy Bartell
 Amy.Bartell@CityofPaloAlto.org
 Assistant City Attorney
 City of Palo Alto
 Security Level: Email, Account Authentication (None)

Signature

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Kiely Nose
 kiely.nose@cityofpaloalto.org
 Director, Administrative Services/CFO
 City of Palo Alto
 Security Level: Email, Account Authentication (None)

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Jonathan Lait
 Jonathan.Lait@CityofPaloAlto.org
 Interim Director Planning and Community Environment
 City of Palo Alto
 Security Level: Email, Account Authentication (None)

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 Signature Adoption: Uploaded Signature Image
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Ed Shikada
 ed.shikada@cityofpaloalto.org
 Ed Shikada, City Manager
 City of Palo Alto
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Signer Events	Signature	Timestamp
Eric Filseth eric.filseth@cityofpaloalto.org Mayor Security Level: Email, Account Authentication (None)	 Signature Adoption: Pre-selected Style Using IP Address: 108.169.4.229	Sent: 12/12/2019 8:24:16 AM Viewed: 12/12/2019 1:40:36 PM Signed: 12/12/2019 1:40:57 PM

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Beth Minor Beth.Minor@CityofPaloAlto.org City Clerk City of Palo Alto Security Level: Email, Account Authentication (None)	 Signature Adoption: Pre-selected Style Using IP Address: 12.220.157.20	Sent: 12/12/2019 1:41:00 PM Viewed: 12/12/2019 2:20:06 PM Signed: 12/12/2019 2:20:46 PM
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In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
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Certified Delivery Events	Status	Timestamp
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Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	12/12/2019 1:41:00 PM
Certified Delivered	Security Checked	12/12/2019 2:20:06 PM
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Operating Systems:	Windows2000? or WindowsXP?
Browsers (for SENDERS):	Internet Explorer 6.0? or above
Browsers (for SIGNERS):	Internet Explorer 6.0?, Mozilla FireFox 1.0, NetScape 7.2 (or above)
Email:	Access to a valid email account
Screen Resolution:	800 x 600 minimum
Enabled Security Settings:	<ul style="list-style-type: none"> •Allow per session cookies •Users accessing the internet behind a Proxy Server must enable HTTP 1.1 settings via proxy connection

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