ATTACHEMENT A

Chapter 16.02 of Title 16 of the Cupertino Municipal Code is hereby repealed in its entirety and replaced with the following Chapter 16.02 to be entitled, numbered, and to read as follows:

CHAPTER 16.02: ADMINISTRATIVE CODE

Section

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<u>16.02.010</u> Adoption of the 2019 California Building Code, Volume 1, based on the 2018 International Building code, <u>Volume 1.</u>

A. Except as otherwise provided in this chapter, the provisions of the 2019 California Building Code, Volume 1 inclusive, and specified Appendices and each and all of the regulations, provisions, conditions and terms of the code are referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or amended by this ordinance, and are by such adopted by reference.

<u>B.</u> One (1) copy of each volume of the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

16.02.010-015 Purpose.

A. The purpose of this title is to establish the minimum requirements to safeguard to public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations.

B. This title provides for the administration and enforcement of the building, residential, plumbing, mechanical, electrical, fire prevention, energy, housing, green building, building conservation and historical codes adopted by the City of Cupertino.

16.02.020 Definitions.

For the purposes of this chapter the following terms, phrases, words, and their derivations shall have the meaning given herein. When not inconsistent with the context, words used in the present tense include the future, words in the plural number include the singular number and words in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

- A. "Building" means any structure used or intended for supporting or sheltering any use or occupancy. A structure containing less than one hundred and twenty (120) square feet of floor space shall not fall within this definition;
- B. "Building Official" means the Chief Building Official for the City of Cupertino or authorized designee;
- C. "City" means the City of Cupertino;
- D. "Person" means any person, firm, partnership, association, corporation, company or organization of any kind.

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16.02.030 Scope.

The provisions of this title shall apply to the construction, alteration, relocation, enlargement, replacement, repair, use and occupancy and demolition of every building, structure and building services equipment of every building or structure within the city.

Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

16.02.040 General. Duties and Powers of Building Official.

Adopt Section [A] 104.1 of the 2016-2019 California Building Code as follows:

[A] 104.1 General. The Building Official is hereby authorized and directed to enforce the provisions of this title. The Building Official shall have the authority to render interpretations of the codes identified in this title and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose for each code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in the code.

16.02.050 Applications and permits.

Adopt Section [A] 104.2 of the 2016-2019 California Building Code as follows:

[A] 104.2 Applications and permits. The Building Official shall receive applications, review construction documents and issue permits for the erection, and alteration, demolition and moving of buildings and structures, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

[A] 104.2.1 Determination of substantially improved or substantially damaged existing building and structures in flood hazard areas. For application for reconstruction, rehabilitation, repair, alteration, addition or other improvement of existing buildings or structures located in flood hazard areas, the building official shall determine the proposed work constitutes substantial improvement or repair of substantial damage. Where the building official determines that the proposed work constitutes substantial improvement or repair of substantial damage, and where required by this code, the building official shall require the building to meet the requirements of Section 1612.

16.02.060 Notices and orders.

Adopt Section [A] 104.3 of the 2016 2019 California Building Code as follows:

[A] 104.3 Notices and orders. The Building Official shall issue all necessary notices or orders to ensure compliance with this code.

16.02.070 Inspections.

Adopt Section [A] 104.4 of the 2016 2019 California Building Code as follows:

[A] 104.4 Inspections. The Building Official shall make all of the required inspections, or the Building Official shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The

Building Official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

16.02.080 Identification.

Adopt Section [A] 104.5 of the 2016-2019 California Building Code as follows:

[A] 104.5 Identification. The Building Official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

16.02.090 Right of Entry.

Adopt Section [A] 104.6 of the 2016-2019 California Building Code as follows:

Council Agenda: October 15, 2019 Page: 2 Revision Date: -- [A] 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the Building Official has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the Building Official is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the Building Official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the Building Official shall have recourse to the remedies provided by law to secure entry.

16.02.100 Department records.

Adopt Section [A] 104.7 of the 2016-2019 California Building Code as follows:

[A] 104.7 Department records. The Building Official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

16.02.110 Liability.

Amend Section [A] 104.8 of the 2016-2019 California Building Code as follows:

[A] 104.8 Liability. The Building Official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be <u>civilly or criminally</u> rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

[A] 104.8.1 Legal defense. -Any suit or criminal complaint instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The Building Official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

16.02.120 Approved materials and equipment.

Adopt Section [A] 104.9 of the 2016-2019 California Building Code as follows:

[A] 104.9 Approved materials and equipment. Materials, equipment and devices approved by the Building Official shall be constructed and installed in accordance with such approval.

[A] 104.9.1 Used materials and equipment. The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the Building Official.

16.02.130 Modifications.

Adopt Section [A] 104.10 of the 2016-2019 California Building Code as follows:

[A] 104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the Building Official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the Building Official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and

that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

16.02.140 Alternate materials, design and methods of construction and equipment.

Amend Section [A] 104.11 of the 2016-2019 California Building Code as follows:

[A] 104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the Building Official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved.

Council Agenda: October 15, 2019 Page: 3 Revision Date: -- **[A] 104.11.1 Research reports.** Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

[A] 104.11.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official shall have the authority to require tests as evidence of compliance to be made without expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the building official for at least the period required for retention of public records.

16.02.150-050 Permits. Required.

Adopt Section [A] 105.1 of the 2016-2019 California Building Code as follows:

[A] 105.1 Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by the California Code of Regulations this code, or to cause any such work to be done performed, shall first make application to the Building Official and obtain the required permit.

Adopt Section [A] 105.2 of the 2016-2019 California Building Code as follows:

[A] 105.2 Work exempt from permit. Exemptions from permit requirement 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 laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

- 1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area is not greater than 120 square feet (11 m²).
- 2. Fences not over 7 feet (2134 mm) high.
- 3. Oil derricks.
- 4. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or IIIA liquids.
- 5. Water tanks supported directly on grade if the capacity is not greater than 5,000 gallons (18,925 L) and the ratio of height to diameter or width is not greater than 2:1.
- 6. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade, and not over any basement or story below and are not part of an accessible route.
- 7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
- 8. Temporary motion picture, television and theater stage sets and scenery.
- 9. Prefabricated swimming pools accessory to a group R-3 occupancy that are less than 24 inches (610 mm) deep, are not greater than 5,000 gallons (18,925 L) and are installed entirely about ground.
- 10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
- 11. Swing and other playground equipment accessory to detached one- and two-family dwellings.
- 12. Window awnings in Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
- 13. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

Electrical:

Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installation of towers and antennas.

Temporary testing systems: A permit shall not be required for the installations of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

- 1. Portable heating appliance.
- 2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

- 1. Portable heating appliance.
- 2. Portable ventilation equipment.
- 3. Portable cooling unit.
- 4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.
- 5. Replacement of any part that does not alter its approval or make it unsafe.
- 6. Portable evaporative cooler.
- 7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (0.75 kW) or less.

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Plumbing:

- 1. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.
- 2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

[A] 105.2.1 Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the building official.

Adopt Section [A] 105.3 of the 2016-2019 California Building Code as follows:

[A] 105.3 Application for permit. To obtain a permit, the applicant shall first file an application therefor in writing on a form furnished by the City for that purpose. Such application shall:

3.1. Identify and describe the work to be covered by the permit for which application is made.

- 4.2.Describe the land on which the proposed work is to be done by legal description, street address or similar
- description that will readily identify and definitely locate the proposed building or work.
- 5.3.Indicate the use and occupancy for which the proposed work is intended.
- 6.4.Be accompanied by construction documents and other information as required in Section 107.
- 7.<u>5.</u>State the valuation of the proposed work.
- **8.6** Be signed by the applicant, or the applicant's authorized agent.
- 9.7. Give such other data and information as required by the building official.

Adopt Section [A] 105.3.1 of the 2019 California Building Code as follows

[A] 105.3.1 Action on application. The building official shall examine or cause to be examined applications for permits and amendments thereto within 180 days after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the building official shall reject such application in writing, stating the reasons therefor. If the building official is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the building official shall issue a permit therefor as soon as practicable.

Adopt Section [A] 105.3.2 of the 2019 California Building Code as follows:

[A] 105.3.2 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the Building Official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

Adopt Section [A] 105.4 of the 2016 2019 California Building Code as follows:

[A] 105.4 Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the Building Official from requiring the correction of errors in the construction documents and other data. The Building Official is also authorized to prevent occupancy or use of a structure where in violation of this code or of any other ordinances of this jurisdiction.

<u>Amend and Adopt Section [A] 105.5 of the 2016-2019</u> California Building Code as follows:

[A] 105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within <u>180 days 12 months</u> after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of <u>180 days 12 months</u> after the time the work is commenced. The Building Official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

Adopt Section [A] 105.6 of the 2016-2019 California Building Code as follows:

[A] 105.6 Suspension or revocation. The Building Official is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code.

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[A] 105.7 Placement of permit. The building permit or copy shall be kept on the site of the work until the completion of the project. The Job Card or copy shall be posted at a location visible from the street frontage on site of the building or structure being permitted and is not to be removed until building final.

16.02.200-060 Submittal Documents.

<u>Amend and Adopt Section [A] 107.1</u> of the <u>2016-2019</u> California Building Code as follows:

[A] 107.1 General. Submittal documents consisting of construction documents, statement of special inspections, geotechnical report and other data shall be submitted in two or more sets<u>electronically</u> with each permit application. The construction document shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed <u>building official</u>. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that the review of construction documents is not necessary to obtain compliance with this code.

Adopt Section [A] 107.2 of the 2019 California Building Code as follows:

[A] 107.2 Construction documents. Construction documents shall be in accordance with Sections 107.2.1 through 107.2.6<u>107.2.8</u>.

[A] 107.2.1 Information on construction documents. Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the building official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official.

[A] 107.2.2 Fire protection system shop drawings. Shop drawings for the fire protection system(s) shall be submitted to the Fire Department to indicate conformance to this code and the construction documents and shall be approved prior to the start of system installation unless prior approval is granted by the fire code official. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9.

[A] 107.2.3 Means of egress. The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress including the path of the exit discharge to the public way in compliance with the provisions of this code. In other than occupancies in Groups R 2, R 3, and I 1, the construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

[A] 107.2.4 Exterior wall envelope. Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water resistive membrane and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior

Language already adopted in model code.

wall system which was tested, where applicable, as well as the test procedure used.

[A] 107.2.5 Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The building official is authorized to waive or modify the requirements for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

[A] 107.2.5.1 Design flood elevations. Where design flood elevations are not specified, they shall be established in accordance with Section 1612.3.1.

[A] 107.2.6 Structural information. The construction documents shall provide the information specified in Section 1603.

Council Agenda: October 15, 2019 Page: 6 Revision Date: -- Adopt Section [A] 107.3, [A] 107.3.1, [A] 107.3.2, [A] 107.3.3, [A] 107.3.4, [A] 107.4.1, [A] 107.4, [A] 107.5 of the 2019 California Building Code as follows:

[A] 107.3 Examination of documents. The building official shall examine or cause to be examined the accompanying submittal documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

[A] 107.3.1 Approval of construction documents. When the building official issues a permit, the construction documents shall be approved, in writing or by stamp, as "Reviewed for Code Compliance". It shall be the responsibility of the owner or owner's representative to obtain a hard-copy of the approved plans and documents which shall be kept at the site of work and shall be open to inspection by the building official or a duly authorized representative.

[A] 107.3.2 Previous approvals. This code shall not require changes in the construction documents, construction or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

[A] 107.3.3 Phased approval. The building official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for the foundation or other parts of a building or structure shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure will be granted.

[A] 107.3.4 Design professional in responsible charge. Where it is required that documents be prepared by a registered design professional, the building official shall be authorized to require the owner or the owner's authorized agent to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible charge. If the circumstances require, the owner or the owner's authorized agent shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original registered design professional in responsible charge. The building official shall be notified in writing by the owner or the owner's authorized agent if the registered design professional in responsible charge is changed or is unable to continue to perform the duties.

The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building.

[A] 107.3.4.1 Deferred submittals. Deferral of any submittal items shall have the prior approval of the building official. The registered design professional in responsible charge shall list the deferred submittals on the construction documents for review by the building official.

Documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the building official with a notation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until the deferred submittal document have been approved by the building official.

[A] 107.4 Amended construction documents. Work shall be installed in accordance with the approved construction documents, and any changes made during construction that are not in compliance with the approved construction shall be submitted for approval as an amended set of construction documents.

[A] 107.5 Retention of construction documents. One set of approved construction documents shall be retained by the building official for a period of not less than required by the approved City's document retention plan.

16.02.240-070 Responsibility of permittee.

Responsibility of permittee. Building permits shall be presumed to incorporate the provision that the applicant, the applicant's agent, employees or contractors shall carry out the proposed work in accordance with the approved plans and with all requirements of this code and any other laws or regulations applicable thereto, whether specified or not. No approval shall relieve or exonerate any person from the responsibility of complying with the provisions and intent of this code.

16.02.250 080 Fees.

Fees shall be paid to the city as set forth in the latest resolution adopted by the city.

16.02.260 090 Inspections.

Adopt Section [A] 110.1 of the 2016-2019 California Building Code as follows:

Council Agenda: October 15, 2019 Page: 7 Revision Date: -- **[A] 110.1 General.** Construction or work for which a permit is required shall be subject to inspection by the Building Official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of any of the codes or amendments specified in this title. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the Building Official nor the City of Cupertino shall be liable for expense entailed in the removal or replacement of any material required to allow inspections.

Adopt Section [A] 110.2 of the 2016-2019 California Building Code as follows:

[A] 110.2 Preliminary inspection. Before issuing a permit, the Building Official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

Amend Section [A] 110.3 of the 2016-2019 California Building Code as follows:

[A] 110.3 Required inspections. The Building Official, upon notification, shall make the inspections set forth in Section 110.3.1 through <u>110.3.10</u> <u>110.3.11</u>.

[A] 110.3.1 Footing and foundation inspection. Footing and foundation inspection shall be made after excavations for footings are complete any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Material for the foundation shall be on the job, except where concrete is ready mixed in accordance with ASTM C94, the concrete need not be on the job.

An engineering survey, pad certification and/or geotechnical letter may be required by the Building Official prior to the approval of the foundation inspection.

[A] 110.3.2 Concrete slab and under floor inspection. Concrete slab and under floor inspections shall be made after in slab or under floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor.

[A] 110.3.3 Lowest floor elevation. In flood hazard areas, upon placement of the lowest floor, including the basement, and prior to further vertical construction, the elevation certification required in Section 1612.5 shall be submitted to the building official.

[A] 110.3.4 Frame inspection. Framing inspection shall be made after the roof deck or sheathing, all framing, fire blocking and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes and ducts are approved.

[A] 110.3.4.1 Moisture content verification. Moisture content of framing members shall be verified in accordance with the California Green Building Standards Code (CALGreen), Chapter 4, Division 4.5.

[A] 110.3.5 Lath, gypsum board and gypsum panel product inspection. Lath, gypsum board and gypsum panel product, interior and exterior, are in place, but before any plastering is applied or gypsum board and gypsum panel product joints and fasteners are taped and finished.

Exception: Gypsum board and gypsum panel products that are not part of a fire-resistance-rated assembly or a shear assembly.

Adopt Section [A] 110.3.7 of the 2019 California Building Code as follows:

[A] <u>110.3.6</u> <u>110.3.7</u> Fire- and smoke-resistant penetrations. Protection of joints and penetrations in fire-resistance-rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.

<u>Same code language has already</u> been adopted by the model code.

Adopt Section [A] 110.3.8 of the 2019 California Building Code as follows:

[A] <u>110.3.7</u> <u>110.3.8</u> Energy efficiency inspections. Inspections shall be made to determine compliance with Chapter 13 and shall include, but not be limited to, inspection for: envelope insulation R- and U-values, fenestration U-value, duct system R-value, and HVAC and water-heating equipment efficiency.

[A] 110.3.8 Other Inspections. In addition to the inspections specified in Sections 110.3.1 through 110.3.7, the Building Official is authorized to make or require any other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the Building Department. For the purpose of determining compliance, the Building Official may cause any structure to be reinspected. If any inspection is made at the request of any individual, property owner or lending institution, a fee equal to the cost of making such inspection shall be charged as set forth in the latest resolution adopted by the city.

[A] 110.3.9 Special inspections. For special inspections, see Chapter 17.

Council Agenda: October 15, 2019 Page: 8 Revision Date: -- [A] 110.3.10 Final inspection. The final inspection shall be made after all work required by the building permit is completed.

All surveys, pad certifications, engineering certifications, structural observation reports, special inspection reports, and any other documentation related to each of the required inspections as required by the Building Official shall be reviewed and approved by the City prior to the approval of each inspection unless approval is granted by the Building Official to allow required documentation to be reviewed and approved prior to final inspection.

[A] 110.3.10.1 Flood hazard documentation. If located in a flood hazard area, documentation of the elevation of the lowest floor as required in Section 1612.5 shall be submitted to the building official prior to the final inspection.

110.3.10.2 *Operation and maintenance manual.* At the time of final inspection, an electronic copy of the operation and maintenance manual acceptable to the enforcing agency shall be placed in the building in accordance with the California Green Building Standards Code (CALGreen), Chapter 4, Division 4

Adopt Section [A] 110.4 of the 2019 California Building Code as follows:

[A] 110.4 Inspection agencies. The building official is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

Adopt Section [A] 110.5 of the 2019 California Building Code as follows:

[A] 110.5 Inspection requests. It shall be the duty of the holder of the building permit or their duly authorized agent to notify the building official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspection of such work that are required by this code.

Adopt Section [A] 110.6 of the 2019 California Building Code as follows:

[A] 110.6 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the building official. The building official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the building official

16.02.270-100 Certificate of Occupancy.

Adopt Section [A] 111.1 of the 2016-2019 California Building Code as follows:

[A] 111.1 Use and occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made, until the Building Official has issued a certificate of occupancy therefor as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of any provision of this code or any ordinance of the City of Cupertino.

Adopt Section [A] 111.2 of the 2016-2019 California Building Code as follows:

[A] 111.2 Certificate issued. After the Building Official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the Building Department, the Building Official may issue a certificate of occupancy that contains the following:

- 1. The building permit number.
- 2. The address of the building or structure.
- 3. The name and address of the owner.

<u>Language already</u> adopted by model code.

- 4. A description of that portion of the structure for which the certificate is issued.
- 5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
- 6. The name of the Building Official.
- 7. The edition of the code under which the permit was issued.
- 8. The use and occupancy, in accordance with the provision of Chapter 3 of the California Building Code.
- 9. The type of construction as defined in Chapter 6 of the California Building Code.
- 10. The design occupant load.
- 11. If the automatic sprinkler system is provided, whether the sprinkler system is required.
- 12. Any special stipulations and conditions of the building permit.

Adopt Section [A] 111.3 of the 2019 California Building Code as follows:

[A] 111.3 Temporary occupancy. The Building Official is authorized to issue a temporary certificate of occupancy before the completion of the entire work covered by the permit, provided that such portion of portions shall be occupied safely. The Building Official shall set a time period during which the temporary certificate of occupancy is valid.

Council Agenda: October 15, 2019 Page: 9 Revision Date: -- Adopt Section [A] 111.4 of the 2016-2019 California Building Code as follows:

[A] 111.4 Revocation. The Building Official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of the California Building Code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of the California Building Code.

16.02.280-110 Board of Appeals.

Amend and Adopt Section [A] 113.1 of the 2016-2019 California Building Code and amend to read as follows:

[A] 113.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to application and interpretation of the codes identified in this Titlethis code, there shall be and is hereby created a board of appeals consisting of five members who are qualified by experience and training to pass upon matters pertaining to building construction installations and materials. The board of appeals shall be appointed by the Mayor, subject to the approval of the City Council city manager, and the appointed members of the board of appeals shall not be employees of the City. The board shall adopt reasonable rules and regulations for conducting its investigations and shall render all decisions and findings in writing to the building official, with a duplicate copy to the appellant, and may recommend to the City Council such new legislation as is consistent therewith. To the extent permitted by law, the same personnel of the Board of Appeals appointed under this code may act as the Board of Appeals under this Title. In the event where no such board of appeals has been established, the City Council shall serve as said appeals board.

<u>Amend and Adopt Section [A] 113.1.1 of the 2019 California Building Code to read as follows:</u>

[A] 113.1.1 Access Compliance. Per Health and Safety Code 19955 – 19959.5, in order to hear and decide appeals of orders, decisions or determinations made by the building official relative to access compliance, there shall be and is hereby created a board of appeals consisting of five members to hear written appeals brought by any person regarding action taken by the building department. Two members of accessibility board of appeals shall be physically handicapped persons, two members shall be persons experienced in construction, and one member shall be a public member. The accessibility board of appeals shall be appointed by the <u>Mayor</u>, <u>subject to the approval of the City Council city manager</u>, and the appointed members of the board of appeals shall not be employees of the <u>City</u>. The accessibility board of appeals shall adopt reasonable rules and regulations for conducting its investigations and shall render all decisions and findings in writing to the building official, with a duplicate copy to the appellant₂₇ and may recommend to the <u>City Council such new legislation as is consistent therewith</u>. In the event where no such board of appeals has been established, the City Council shall serve as said appeals board.

Adopt Section [A] 113.2 of the 2019 California Building Code to read as follows:

[A] 113.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall not have authority to waive requirements of this code.

16.02.<u>290–120</u> Violations.

Adopt Section [A] 114.1 of the 2016-2019 California Building Code as follows:

[A] 114.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, extend, repair, move, remove, demolish or occupancy any building, structure or equipment regulated by the codes identified in this title, or cause same to be done, in conflict with or in violation of any of the provisions of any code identified in this title.

Adopt Section [A] 114.2 of the 2016-2019 California Building Code as follows:

[A] 114.2 Notice of violation. The building official is authorized to serve a notice of violation or order on the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition or occupancy of a building or structure in violation of any provisions of any code identified in this title, or in violation of a permit or certificate issued under the provisions of any code identified in this title. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

16.02.300-130 Stop Work Order.

Adopt Section [A] 115.1 of the 2016-2019 California Building Code as follows:

[A] 115.1 Authority. Whenever the Building Official finds any work regulated by this code being performed in a manner either contrary to the provisions of any code identified in this title or dangerous or unsafe, the Building Official is authorized to issue a stop work order.

Council Agenda: October 15, 2019 Page: 10 Revision Date: -- Adopt Section [A] 115.2 of the 2016-2019 California Building Code as follows:

[A] 115.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

Adopt Section [A] 115.3 of the 2019 California Building Code as follows:

[A] 115.3 Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform by the building official to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law.

Chapter 16.04 of Title 16 of the Cupertino Municipal is hereby repealed in its entirety and replaced with the following Chapter 16.04 to be entitled, numbered, and to read as follows:

CHAPTER 16.04: BUILDING CODE

Section

16.04.010 Code adop	tion. Adoption of the 2019 California Building Code, Volumes 1 and 2, based on the 2018
Internation	nal Building Code, Volumes 1 and 2.
16.04.015 Adoption	of <u>A</u> appendix <u>C</u> ehapters.
16.04.050 16.04.020	<u>Section 501.2 -</u> Address identification.
16.04.070<u>16.04.040</u>	<u>Chapter 7A – Materials and Construction Methods for</u> Exterior <u>W</u> wildfire <u>E</u> exposure.
16.04.080<u>16.04.060</u>	Chapter 15 - Roof covering classification. Assemblies and Rooftop Structures
16.04.200 16.04.080	Chapter 17 - Concrete isolated footings. Special Inspection and Tests.
16.04.210 16.04.100	Chapter 19 - Revise Section 1905.1.7 ACI 318, Section 14.1.4. Concrete.
16.04.400 16.04.120	Section 3109 - Swimming pools Pool Enclosures and Safety Devices.

16.04.010 Code Adoption. Adoption of the 2019 California Building Code, Volumes 1 and 2, based on the 2018 International Building Code, Volumes 1 and 2.

<u>A. Except as otherwise provided in this chapter, The the provisions of the 2016-2019</u> California Building Code, Volumes 1 and 2 inclusive, and <u>specified</u> Appendices which follow and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or amended by this ordinance, and is by such reference adopted by reference.

<u>B.</u>One (1) copy of each volume of the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

16.04.015 Adoption of Appendix Chapters.

The following Appendix Chapters from the 2016-2019 California Building Code are hereby adopted.

Appendix C: Group U – Agricultural Buildings; Appendix F: Rodentproofing; Appendix G: Flood-Resistant Construction; Appendix I: Patio Covers; California Code Part 8: 2016 2019 California Historical Building Code; California Code Part 10: 2016 2019 California Existing Building Code;

California Code Part 12: 2016 2019 California Referenced Standards Code

16.04.050-020 Section 501.2 - Address Identification.

Adopt Section 501.2 of the 2016-2019 California Building Code and amend to read as follows:

New and existing buildings shall be provided with approved address numbers or letters. Each character shall be not less than 4 inches in height and not less than 0.5 inch in width. They shall be installed on a contrasting background and be plainly visible from the street or road fronting the property. When required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other approved sign or means shall be used to identify the structure. Address numbers shall be maintained.

No Certificate of Occupancy or final building approval for new construction or alterations shall be granted until the building or residence has a street address number posted. Subdivisions and Planned Developments shall submit a numbering schedule for approval by the Building Department and the Fire Department. All commercial buildings

Council Agenda: October 15, 2019 Page: 11 Revision Date: -- having a single address assigned with multi-suite arrangements shall have the suite-numbering system approved or assigned by the Building Department with an approved copy to the Fire Department for emergency use.

16.04.070-040 Chapter 7A - Materials and Construction Methods for Exterior Wildfire Exposure.

Amend Section 707A.9 of the 2016-2019 California Building Code to read as follows:

707A.9 Underside of appendages. The underside of overhanging appendages shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:

- 1. Noncombustible material.
- 2. Ignition-resistant material.
- 3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
- 4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
- 5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in the SFM Standard 12-7A-3 or ASTM E2957.

Exception: Heavy timber structural columns and beams do not require protection. <u>Structural columns and beams</u> do not require protection when they are constructed with sawn lumber or glue-laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Sawn or glue-laminated planks splined, tongue-and-grove, or set close together and well spiked.

Amend Section 710A.3 of the 2019 California Building Code to read as follows:

710A.3. Where required. Accessory structures shall comply with the requirements of this section.

Delete Section 710A.3.1 in its entirety.

Delete Section 710A.3.2 in its entirety.

Delete Section 710A.3.3 in its entirety.

-710A.4 Requirements. Accessory structures shall be constructed on noncombustible or ignition resistant materials.

16.04.080 Ochapter 15 - Roof Covering Classification. Assemblies and Rooftop Structures.

Amend Section 1505.1.3 of the 2016-2019 California Building Code to read as follows:

1505.1.3 Roof coverings in all other areas. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class A.

Amend Section 1505.1.4 of the 2016 2019 California Building Code to read as follows:

1505.1.4 Roofing requirements in a Wildland-Urban Interface Fire Area. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class A.

Roofing requirement for structures located in a Wildland-Urban Interface Fire Area shall also comply with Section

705A.

16.04.200-080 Chapter 17 - Concrete Isolated Footings. Special Inspection and Tests.

Amend Section 1705.3 Exception #1 of the 2016-2019 CBC-California Building Code to read as follows:

1705.3 Concrete Construction. The special inspections and verifications for concrete construction shall be as required by this section and Table 1705.3.

Exception:

Special inspections shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less above grade plane that are fully supported on earth or rock, where the structural design of the footing is based on a specified compressive strength, f'c, no greater than 2,500 pound per square inch (psi) (17.2 Mpa).

Council Agenda: October 15, 2019 Page: 12 Revision Date: --

16.04.210 _ 100 Chapter 19 - Revise Section 1905.1.7 ACI 318, Section 14.1.4 Concrete.

Delete Adopt and amend Section 1905.1.7 and ACI 318 Section 14.1.4 to read as follows: and replace with the following:

1905.1.7 ACI 318, Section 14.1.4.

14.1.4 - Plain concrete in structures assigned to Seismic Design Category C, D, E or F. 14.1.4.1- Structures assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, except as follows:

(a) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

Exception:

In detached one and two-family dwelling three stories or less in height, the projection of the footing beyond the face of the supported member is permitted to exceed the footing thickness.

(b) Plain concrete footing supporting walls are permitted, provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. A minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

Exception:

In detached one and two-family dwellings three stores or less in height and constructed with stud bearing walls, plain concrete footings with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross–sectional area of the footing.

16.04.120 Chapter 23 – Wood.

Add Section 2308.6.3.1 to the 2019 California Building Code to read as follows:

2308.6.3.1 Limits on methods GB, SFB, HPS, PBS and PCP. In Seismic Design Categories D, E, and F, Methods GB, SFB, HPS, and PBS are not permitted for use as intermittent braced wall panels, but gypsum board is permitted to be installed when required by this Section to be placed on the opposite side of the studs from other types of braced wall panel sheathing. In Seismic Design Categories D, E, and F the use of Method PCP is limited to one-story building and structures.

<u>Amend Table 2308.6.3(1) of the 2019 California Building Code, to add a new footnote "b" to the end of California</u> <u>Building Code Table 2308.6.3(1) to read as follows:</u>

b. In Seismic Design Categories D, E, and F Methods GB, SFB, HPS and PBS are not permitted and the use of Method PCP is limited to one-story buildings and structures.

16.04.400-140 Section 3109 - Swimming Pools- Enclosures and Safety Devices.

Adopt Section 3109 of the 2016-2019 California Building Code.

Add Section 3109.3 to the 2019 California Building Code to read as follows:

3109.3 Inspections for Swimming Pools.

A. All Work to Be Inspected. All pool installations or alterations thereto including equipment, piping and

appliances related thereto shall be inspected by the Building Department to insure compliance with the requirements of the California Building Code.

B. Called Inspections. It shall be the duty of the person doing the work authorized by the building permit to notify the Building Department that said work is ready for inspection. Such notification shall be given not less than twenty-four hours before the work is to be inspected.

1. Pregunite inspection is required when all steel is in place, piping from the pool area is in with pressure test, all steel and related attachments are properly bonded and underwater light housing is installed;

2. An inspection is required for all conduit and gas piping under slabs before decks are poured;

3. Final inspection is required after all equipment is in place and operating, the pool is filled with water and all fences and gates are installed;

4. A reinspection fee per the adopted fee schedule per inspection will be charged for each inspection over two where the work is not ready or corrections have not been completed;

5. The owner shall arrange with the Building Department for inspectors to enter the property to make necessary inspections in connection with the pool.

Council Agenda: October 15, 2019 Page: 13 Revision Date: -- Chapter 16.06 of Title 16 of the Cupertino Municipal Code is hereby repealed in its entirety and replaced with the following Chapter 16.06 to be entitled, numbered, and to read as follows:

CHAPTER 16.06 RESIDENTIAL CODE

Section

16.06.010 Code adoption. Adoption of the 2019 California Residential Code based on the 2018 International Residential Code.
16.06.015 Adoption of <u>A</u>appendix <u>C</u>ehapters.
16.06.020 Section R310 – Emergency Escape and Rescue Openings
16.06.050 – 16.06.040 Section R313 - Automatic <u>F</u>fire <u>S</u>sprinkler <u>S</u>systems.
16.06.060 – 16.06.060 Section R337 - Materials and <u>C</u>eonstruction <u>Mm</u>ethods for <u>E</u>exterior <u>W</u>wildfire <u>E</u>exposure.
16.06.070 – 16.06.080 Chapter 4 - <u>Footings-Foundations.</u>
16.06.100 Chapter 6 – Wall Construction.
16.06.090 – 16.06.120 Chapter 9 - Roof covering classification. <u>Assemblies.</u>
16.06.100 Chapter 10 - <u>Spark arrestors. Chimneys and Fireplaces – Spark Arrestors.</u>

16.06.110 Intermittent brace wall panel construction methods.

16.06.010 Code Adoption. Adoption of the 2019 California Residential Code based on the 2018 International Residential Code.

A. <u>Except as otherwise provide in this chapter, The-the provisions of the 2016-2019</u> California Residential Code and specified Appendices and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, <u>except such portions as are hereinafter deleted</u>, <u>modified or amended by this ordinance</u>, and is by such <u>adopted by</u> reference <u>adopted</u>.

B. One (1) copy of <u>each volume of</u> the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

16.06.015 Adoption of Appendix Chapters.

The following Appendix Chapters from the 2016-2019 California Residential Code are hereby adopted:

Appendix C: Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems;Appendix H: Patio Covers;Appendix J: Existing Building and Structures;Appendix K: Sound Transmission;Appendix V: Swimming Pool Safety Act

16.06.020 Section R310 – Emergency Escape and Rescue Openings.

Amend Section R310.1 of the 2019 California Residential Code to delete Exception #2.

16.06.050-040 Section R313 - Automatic Fire Sprinkler Systems.

Amend Section R313.1 of the 2016-2019 California Residential Code to read as follows:

R313.1 Townhouse automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in all new townhouses and in existing townhouses when additions are made that increase the building area to

more than 3,600 square feet.

Exception:

One or more additions made to a building after January 1, 2011 that does not total more than 1,000 square feet of building area.

Amend Section R313.2 of the 2016-2019 California Residential Code to read as follows:

R313.2 One- and two-family dwellings automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in one- and two-family dwellings and Accessory Dwelling Units as follows:

 In all new one- and two-family dwellings, rebuild of existing one- and two-family dwellings as defined by the Building Official, and in existing one- and two-family dwellings when additions are made that increase the building area to more than 3,600 square feet.

Exception:

Council Agenda: October 15, 2019 Page: 14 Revision Date: -- One or more additions made to a building after January 1, 2011 that does not total more than 1,000 square feet of building area.

- 2. In all new basements and in existing basements that are expanded by more than 50%.
- 3. In all attached Accessory Dwelling Units and/or additions to an existing one- and two-family dwelling that have an existing fire sprinkler system.
- 4. In all attached accessory dwelling units and/or additions to an existing non-sprinklered one- and two-family dwelling, when the building area is increased to more than 3,600 square feet.

Exception:

One or more additions made to a building after January 1, 2011 that does not total more than 1,000 square feet of building area and meets all access and water supply requirements of Chapter 5 and Appendix B and C of the 2019 California Fire Code.

5. Detached Accessory Dwelling Units that meets the definition of an Accessory Dwelling Unit as defined in the Government Code Section 65852.2.

Exception: Fire Sprinklers are not required if all the following provisions are met:

- 1. The existing primary residence does not have automatic fire sprinklers; and
- 2. The accessory detached dwelling unit does not exceed 1,000 square feet in size; and
- 3. The unit is on the same lot as the primary residence; and
- 4. The unit meets all access and water supply requirements of Chapter 5 and Appendix B and C of the 2019 California Fire Code.
- 1. A fire sprinkler system is not required for an accessory dwelling unit if a fire sprinkler system is not provided for the primary residence it serves.
- <u>In all new attached Accessory Dwelling Units when additions to the existing building are made that increase the</u> <u>building area to more than 3,600 square feet.</u>

Exception:

- An automatic residential sprinkler system shall be installed in the attached Accessory Dwelling Unit if an automatic residential sprinkler system is provided in the existing building.
- An automatic residential sprinkler system shall be installed in the attached Accessory Dwelling Unit if all access and water supply requirements of Chapter 5 and Appendix B and C of the 2019 California Fire Code are not met.
- <u>In all new attached Accessory Dwelling Units if one or more additions made to the existing building after January</u> <u>1, 2011, totals more than 1,000 square feet.</u>

Exception:

- An automatic residential sprinkler system shall be installed in the attached Accessory Dwelling Unit if an automatic residential sprinkler system is provided in the existing building.
- <u>An automatic residential sprinkler system shall be installed in the attached Accessory Dwelling Unit if all access</u> and water supply requirements of Chapter 5 and Appendix B and C of the 2019 California Fire Code are not met.
- <u>In all new detached Accessory Dwelling Units.</u>

<u>Exception (if all the following conditions are met):</u>

- The existing primary residence is not provided with an automatic fire sprinkler system; and

 The detached Accessory Dwelling Unit meets the definition of an Accessory Dwelling Unit as defined in the

 Government Code Section 65852.2; and

 The label Accessory Dwelling Unit meets the label Accessory Dwelling Unit as defined in the
- The detached Accessory Dwelling Unit meets all access and water supply requirements in Chapter 5 and Appendix <u>B & C of the 2019 California Fire Code; and</u>
- The detached Accessory Dwelling Unit does not exceed 1,000 square feet in size.

2. In all new basements and in existing basements that are expanded.

Exception: Existing basements that are expanded by not more than 50%.

16.06.060-060 Section R337 - Materials and Construction Methods for Exterior Wildfire Exposure.

Amend Section R337.7.9 of the 2016-2019 California Residential Code to read as follows:

R337.7.9 Underside of appendages. The underside of overhanging appendages shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:

- 1. Noncombustible material.
- 2. Ignition-resistant material.
- 3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.

Council Agenda: October 15, 2019 Page: 15 Revision Date: --

- 4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
- 5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in either of the following:
 - 5.1 SFM Standard 12-7A-3; or
 - 5.2 ASTM E2957;

Exception:

Heavy timber structural columns and beams do not require protection. <u>Structural columns and beams do not</u> require protection when they are constructed with sawn lumber or glue-laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Sawn or glue-laminated planks splined, tongue-and-grove, or set close together and well spiked.

Amend Section R337.10.3 of the 2016 2019 California Residential Code to read as follows:

R337.10.3. Where required. Accessory structures shall comply with the requirements of this section.

Delete Section R337.10.3.1 in its entirety.

— R337.10.3.1. Attached accessory structures shall comply with the requirements of this section.

Delete Section R337.10.3.2 in its entirety.

Delete Section R337.10.3.3 in its entirety.

R337.10.4. Requirements. Accessory structures shall be constructed on noncombustible or ignition resistant materials.

16.06.070 080 Chapter 4 - Footings. Foundations.

Amend Section R403.1 of the 2016-2019 California Residential Code to read as follows:

R403.1 General. All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, or other approved structural systems which shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character of the soil. Footings shall be supported on undisturbed natural soils or engineered fill. Concrete footings shall be designed and constructed in accordance with the provisions of Section R403 or in accordance with ACI 332.

Amend Section R403.1.1 of the 2016-2019 California Residential Code to read as follows:

R403.1.1 Minimum size. Minimum sizes for concrete and masonry footings shall be as set forth in Table R403.1(1) to Table R403.1(3) and Figure R403.1.3. The footing width, W, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. Spread footings shall be at least 6 inches (152 mm) in thickness, T. Footing projection, *P*, shall be at least 2 inches (51 mm) and shall not exceed the thickness of the footing. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1.

Delete Figure R403.1(2) and Figure R403.1(3).

Delete Section R403.2 in its entirety.

16.06.110 <u>Intermittent Brace Wall Panel Construction Methods. Wall Construction.</u>

Amend Section R602.10.4 of the 2016-2019 California Residential Code, to add a new footnote "f" to the end of CRC

Table <u>R602.10.3(3)</u><u>R602.10.4</u> to read as follows:

f. In Seismic Design Categories D₀, D₁, and D₂, Method<u>s</u> GB<u>, SFB, HPS, PBS, and CS-SFB</u> is are not permitted and the use of Method PCP is limited to one-story single family dwellings and accessory structures.

Add the "f" footnote notation in the title<u>for Methods GB, SFB, HPS, PBS, CS-SFB, and PCP</u> of Table R602.10.3(3)R602.10.4 to read as follows:

TABLE R602.10.3(3)[∉]

BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY

Add a new subsection R602.10.4.4-45 of the 2016-2019 California Residential Code, to read as follows:

R602.10.4.4–5 Limits on methods GB, SFB, HPS, PBS, CS-SFB and PCP. In Seismic Design Categories D₀, D₁, and D₂, Methods GB, SFB, HPS, PBS, and CS-SFB is-are not permitted for use as intermittent braced wall panels, but gypsum board is permitted to be installed when required by this Section to be placed on the opposite side of the studs from other

Council Agenda: October 15, 2019 Page: 16 Revision Date: -- types of braced wall panel sheathing. In Seismic Design Categories D₀, D₁, and D₂, the use of Method PCP is limited to one-story single family dwellings and accessory structures.

16.06.090-120 Chapter 9 - Roof Covering Classification. Assemblies.

Amend Section R902.1.3 of the 2016-2019 California Residential Code to read as follows:

R902.1.3 Roof coverings in all other areas. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class A.

Amend Section R902.1.4 of the 2016-2019 California Residential Code to read as follows:

R902.1.4 Roofing coverings within the Wildland-Urban Interface Fire Area. The entire roof covering of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of every existing structure, shall be a fire-retardant roof covering that is at least Class A.

Roofing requirement for structures located in a Wildland-Urban Interface Fire Area shall also comply with Section R337.5.

16.06.100-140 Chapter 10 - Chimneys and Fireplaces - Spark Arrestors.

In new construction or when alterations, repairs or additions requiring a permit and having a valuation in excess of one thousand dollars occur, all new and existing fireplace chimneys shall terminate in a substantially constructed spark arrestor complying with the requirements of the 2016-2019 California Residential Code Section R1003.9.2.

[Title 16 – Chapter 16.08 – No Change]

[Title 16 – Chapter 16.12 – No Change]

Chapter 16.16 of Title 16 of the Cupertino Municipal Code is hereby repealed in its entirety and replaced with the following Chapter 16.16 to be entitled, numbered, and to read as follows:

CHAPTER 16.16: ELECTRICAL CODE

Section

16.16.010	Code adoption. Adoption of the 2019 California Electrical Code based on the 2017 National Electrical Code.
16.16.015	Adoption of <u>A</u> appendix <u>C</u> ehapters.
16.16.020	Article 100 amended – Definitions.
16.16.030	Electrical <u>W</u> w ork.
16.16.040	Electrical <u>F</u> fee <u>S</u> schedule.
16.16.050	Interpretation.
16.16.060	Electrical <u>M</u> maintenance <u>P</u> program.

16.16.010 Code Adoption. Adoption of the 2019 California Electrical Code based on the 2017 National Electrical Code.

A. Except as otherwise provided in this chapter, The the provisions of the 2016-2019 California Electrical Code and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or amended by this ordinance, and is by such adopted by reference, adopted.

B. One (1) copy of <u>each volume of</u> the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

16.16.015 Adoption of Appendix Chapters.

No Appendix Chapters from the 2016-2019 California Electrical Code have been adopted.

16.16.020 Article 100-Amended – Definitions.

Adopt-<u>Amend</u> Article 100 of the <u>2016-2019</u> California Electrical Code with the following definitions added:

Council Agenda: October 15, 2019 Page: 17 Revision Date: -- **Electrical Contractors.** For the purpose of this article, an Electrical Contractor shall be a person holding a valid electrical contractor's license issued by the State of California.

Journeyman Electrician. A journeyman electrician is an electrician qualified by training and experience to do electrical work in conjunction with new construction and/or rework of existing systems.

Maintenance Electrician. A maintenance electrician in an electrician qualified by training and experience to do the recurring work required to keep a facility in such condition that it may be utilized at its designated capacity and efficiency, to do repair work or replacement or overhaul of constituent parts or materials to keep or restore a facility to a condition substantially equivalent to its original or design capacity or efficiency.

16.16.030 Electrical Work.

Electrical work shall be done only by:

- a. Owner/Builder;
- b. Electrical contractors who are in compliance with the state licensing laws and whose employees are under the direct supervision of a qualified journeyman electrician;
- c. A general building contractor if scope of work involves at least two unrelated trades or crafts other than framing or carpentry, or if the general building contractor holds the appropriate license classification;
- d. Maintenance electrician.

16.16.040 Electrical Fee Schedule.

Electrical fees shall be paid to the city as set forth in the latest resolution adopted by the city.

16.16.050 Interpretation.

- A. The language used in this code, and the California Electrical Code, which is made a part of this code by reference, is intended to convey the common and accepted meaning familiar to the electrical industry.
- B. The Building Official or his assistants is authorized to determine the intent and meaning of any provisions of this code. Such determination shall be made in writing and a record kept, which record shall be open to the public.

16.16.060 Electrical Maintenance Program.

Any person regularly employing one or more full-time qualified electricians for the purpose of installation, alteration, maintenance or repair on any property which such person owns or occupies, may designate a qualified electrician as a maintenance electrician. Upon being approved by the Chief Building Official, the maintenance electrician shall make monthly or quarterly reports to the city covering all installations, additions, or alterations. All such work shall be installed and done in accordance with the provisions of the Electrical Code, and shall be subject to the payment of fees, and to inspection by the electrical inspector to the same extent as similar work performed by other persons and for which such inspection is provided.

Chapter 16.20 of Title 16 of the Cupertino Municipal Code is hereby repealed in its entirety and replaced with the following Chapter 16.20 to be entitled, numbered, and to read as follows:

CHAPTER 16.20: PLUMBING CODE

Section

16.20.010 Code Adoption. Adoption of the 2019 California Plumbing Code based on the 2018 Uniform Plumbing Code.

16.20.015 Adoption of <u>A</u>appendix <u>C</u>ehapters.

16.20.020 Name <u>linsertion</u>.

16.20.010 Code Adoption. Adoption of the 2019 California Plumbing Code based on the 2018 Uniform Plumbing Code.

A. Except as otherwise provided in this chapter, The the provisions of the 2016-2019 California Plumbing Code and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or amended by this ordinance, and is by such adopted by reference, adopted.

B. One (1) copy of <u>each volume of</u> the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

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16.20.015 Adoption of Appendix Chapters.

The following Appendix Chapters from the 2016-2019 California Plumbing Code are hereby adopted:

Appendix A: Recommended Rules for Sizing the Water Supply System;

Appendix B: Explanatory Notes on Combination Waste and Vent Systems;

Appendix C: Alternate Plumbing Systems;

Appendix D: Sizing Storm Water Drainage Systems;

Appendix H: Private Sewage Disposal Systems;

Appendix I: Installation Standards for PEX Tubing Systems for Hot- and Cold-Water Distribution;

16.20.020 Name Insertion.

The names "Cupertino" and/or "California" shall be inserted in the appropriate places provided therefor in each and every section of such California Plumbing Code wherein either the name of the city or state is left blank.

Chapter 16.24 of Title 16 of the Cupertino Municipal Code is hereby repealed in its entirety and replaced with the following Chapter 16.24 to be entitled, numbered, and to read as follows:

CHAPTER 16.24: MECHANICAL CODE

Section

16.24.010 Code adoptions. Adoption of the 2019 California Mechanical Code based on the 2018 Uniform Mechanical Code. 16.24.015 Adoption of <u>Aappendix Cehapters</u>.

16.24.020 Name Linsertion.

16.24.010 Code Adoption. Adoption of the 2019 California Mechanical Code based on the 2018 Uniform Mechanical Code.

A. Except as otherwise provided in this chapter, The the provisions of the 2016-2019 California Mechanical Code and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter. except such portions as are hereinafter deleted, modified or amended by this ordinance, and is by such adopted by reference.-adopted.

B. One (1) copy of each volume of the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

16.24.015 Adoption of Appendix Chapters.

No Appendix Chapters from the 2016-2019 California Mechanical Code have been adopted.

16.24.020 Name Insertion.

The names "Cupertino" and/or "California" shall be inserted in the appropriate places provided therefor in each and every section of such California Mechanical Code wherein either the name of the city or state is left blank.

[Title 16 – Chapter 16.28 – No Change]

[Title 16 – Chapter 16.36 – No Change]

Chapter 16.40 of Title 16 of the Cupertino Municipal Code is hereby repealed in its entirety and replaced with the following Chapter 16.40 to be entitled, numbered, and to read as follows:

CHAPTER 16.40: FIRE CODE

Section

Adoption of the 2016-2019 California Fire Code and 2015-2018 International Fire Code. 16.40.010 16.40.015 Adoption of <u>A</u>appendix <u>C</u>ehapters. Chapter 1 - Administration. <u>16.40.020</u> 16.40.060 Permits. 16.40.070<u>16.40.040</u> <u>Chapter 2 -</u> Definitions. 16.40.08016.40.060Hazards to firefighters. Chapter 3 - General Requirements.

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16.40.12016.40.080 Fire apparatus access roads. Chapter 5 - Fire Service Features. 16.40.130 Access to building openings and roofs. 16.40.180<u>16.40.100</u> Chapter 6 - Electrical equipment, wiring and hazards. Building Services and Systems. 16.40.20016.40.120 Chapter 8 -Decorative vegetation in new and existing buildings. Interior Finish, Decorative Materials and Furnishings. 16.40.210<u>16.40.140</u> Chapter 9 - Automatic sprinkler systems. Fire Protection and Life Safety Systems. 16.40.22016.40.160 Precautions against fire-Chapter 11 – Construction Requirements for Existing Buildings. 16.40.230<u>16.40.180</u> <u>Chapter 33 – Fire Safety D</u>during <u>Ceonstruction and D</u>demolition<u>means of egress</u>. 16.40.300<u>16.40.200</u> Definitions-Chapter 49 - Requirements for Wildland- Urban Interface Fire Areas. 16.40.310 Application. 16.40.320 Defensible space. 16.40.330 Fire protection plan. 16.40.340 Water supply. 16.40.350 Ignition source control. 16.40.355 Ceneral-hazardous materials. 16.40.360<u>16.40.220</u> Chapter 50 – General requirements hazardous materials-Hazardous Materials – General Provisions. 16.40.365 Storage hazardous materials. 16.40.370<u>16.40.240</u> <u>Chapter 56 – General – Eexplosives and Efireworks</u>. 16.40.380 — Establishment of limits of districts in which storage of Class I and II liquids in aboveground tanks is prohibited. Storage flammable and combustible liquids. Chapter 57 – Flammable and Combustible 16.40.38516.40.260 Liquids. 16.40.390 Establishment of limits of districts in which storage of Class I and II liquids in outside aboveground tanks is prohibited. 16.40.400 On demand mobile fueling. 16.40.41016.40.280 Establishment of limits of districts in which the storage of stationary tanks of flammable cryogenic fluids are to be prohibited. Chapter 58 – Flammable Gases and Flammable Cryogenic Fluids. 16.40.420<u>16.40.300</u> Genera-highly toxic, toxic and moderately toxic materials. Chapter 60 – Highly Toxic and Toxic Materials. 16.40.430 Highly toxic, toxic and moderately toxic compressed gasses including those used as refrigerants. 16.40.440<u>16.40.320</u> Establishment of limits in which storage of liquefied petroleum gases is prohibited. Chapter 61 - Liquefied Petroleum Gases. 16.40.440<u>16.40.340</u> Use silane distribution systems automatic shutdown.Chapter 64 – Pyrophoric Materials. 16.40.460 Reference standards.

16.40.010 Adoption of the 2016-2019 California Fire Code and 2015-2018 International Fire Code.

- A. There is hereby adopted by the City of Cupertino for the purpose of prescribing regulations governing conditions hazardous to life and property from fire or explosion, that certain code known as the 2016 California Fire Code based on the 2015 International Fire Code, including Appendix Chapters B, C and N and the whole thereof, save and except such portions as are hereinafter deleted, modified or amended by this ordinance, Except as otherwise provided in this chapter, the provisions of the 2019 California Fire Code and also the 2018 International Fire Code, and specified Appendices and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or as are hereinafter deleted, modified, added or amended by this ordinance, and is by such adopted by reference.
- B. One (1) copy of <u>each volume of</u> the code therefore is on file in the office of the Building Official and the Fire Code Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

16.40.015 Adoption of Appendix Chapters.

The following Appendix Chapters from the 2016-2019 California Fire Code are hereby adopted.

Appendix B: Fire-Flow Requirement for Buildings.

Appendix C: Fire Hydrant Locations and Distribution. Appendix NO: Temporary Haunted Houses, Ghost Walks and Similar Amusement Uses.

16.40.020 Chapter 1 - Administration.

Add Section 101.3.1 to the 2016-2019 California Fire Code to read as follows:

101.3.1 Administration. The City Manager, through the powers vested by the City Council, shall have the authority to delegate any and all responsibility for the maintenance and enforcement of the provisions of this Code to whichever legal entity he feels best serves the interests of the City.

Wherever the words "Chief," "Fire Marshal, "fire code official," "Fire Department," "Fire Prevention Bureau," "Fire Chief," and other such similar words are used, they shall mean and refer to such legal entity designated by the City Manager of Cupertino under the authority of the City Council of Cupertino.

Wherever the words "municipality," "jurisdiction," or "city" are used, they shall mean the City of Cupertino. Wherever the words "Executive Body" are used, they shall mean the City Council of Cupertino.

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Wherever the words "Board of Appeal" are used, they shall mean the City Council of Cupertino or the body appointed by the Council to pass on matters pertaining to fire safety.

Amend Section 105.6.9 of the 2016 California Fire Code to read as follows:

105.6.9 Compressed gases. An operational permit is required for the storage, use or handling at normal temperature and pressure (NPT) of compressed gases in excess of the amounts listed in Table 105.6.9. *Exceptions:* –

Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle.
 Inert and simple asphyxiants at or below the amounts listed in Table 105.6.9.

Amend Table 105.6.9 of the 2016 California Fire Code to read as follows:

TABLE 105.6.9

PERMIT AMOUNTS FOR COMPRESSED GASES

<u> </u>	AMOUNT
	cubic feet at NTP
Corrosive	<u>200</u>
Flammable (except cryogenic and liquefied petroleum gases)	<u>200</u>
Highly toxic	Any amount
Inert and simple asphyxiant*	<u>6,000</u>
Moderately toxic	<u>20</u>
Other health hazards	<u>200</u>
Oxidizing (including oxygen)	<u>504</u>
Pyrophoric	Any amount
Toxic	Any amount

For SI: 1 cubic foot = 0.02832 m²

For carbon dioxide used in beverage dispensing applications, see Section 105.6.4.

Amend Section 105.6.10 of the 2016 California Fire Code to read as follows:

- 105.6.10 Cryogenic fluids. An operational permit is required to produce, store transport on site, use, handle or dispense cryogenic fluids in excess of the amounts listed in Table 105.6.10 or to install a cryogenic vessel or piping system for the storage or distribution of cryogens.

- Exception: Permits are not required for vehicles equipped for and using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading.

Amend Table 105.6.20 of the 2013 California Fire Code to read as follows:

TABLE 105.6.20 PERMIT AMOUNTS FOR HAZARDOUS MATERIALS

TYPE OF MATERIAL	AMOUNT
Carcinogens	10 pounds
Combustible liquids	See Section 105.6.16
Corrosive materials:	
Cases	See Section 105.6.8
Liquids	55 gallons
Solids	500 pounds
Cryogens	See Section 105.6.10
Explosive materials	See Section 105.6.14
Flammable materials:	
Cases	See Section 105.6.8
Liquids	See Section 105.6.16
Solids	100 pounds
Highly toxic materials:	
Gases	See Section 105.6.8
Liquids	Any amount
Solids	Any amount
Moderately toxic gas	See Section 105.6.8
Organic peroxides:	
Liquids: Class I IV	Any Amount
Liquids: Class V	No Permit Required
Solids: Class I IV	Any Amount

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Solids: Class V	No Permit Required
Oxidizing materials:	
Gases	See Section 105.6.8
Liquids	Any amount
Solids:	Any amount
Other health hazards:	
Liquids	55 gallons
Solids	500 pounds
Pyrophoric materials:	
Gases	See Section 105.6.8
Liquids	Any amount
Solids	Any amount
Radioactive materials:	
Cases	See Section 105.6.8
Liquids	See Section 105.6.50
Solids	See Section 105.6.50
Toxic materials:	
Cases	See Section 105.6.8
Liquids	Any amount
Solids	Any amount
Unstable (reactive) materials:	
Cases	See Section 105.6.8
Liquids	Any amount
Solids	Any amount
Water reactive materials:	
Liquids	Any amount
Solids	Any amount

For SI: 1 gallon = 3.785 L, 1 pound = 0.454 kg.

- a. 20 gallons when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 20 gallons or less.
- 200 pounds when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 b. are provided for quantities of 200 pounds or less.

Amend Section 105.6.17-16 the 2016-2019 California Fire Code to read as follows:

105.6.17 Flammable and combustible liquids. An operation permit is required:

- 1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the offsite transportation in pipelines regulated by the Department of Transportation (DOTn) nor does it apply to piping systems.
- To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:
 - 2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the fire code official, would cause an unsafe condition.
 - 2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures where such liquids are stored for maintenance, painting or similar purpose for a period of not more than 30 days.
- 3.- To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil burning equipment.
- To store, handle or use Class IIIB liquids I tanks or portable tanks for fueling motor vehicles at motor fuel dispensing facilities or where connected to fuel burning equipment.
 - **Exception:** Fuel oil and used motor oil used for space heating or water heating.
- To remove Class I or II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary onsite pumps normally used for dispensing purp
- 6. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries, and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.
- 7. To place temporarily out of service (for more than 90 days) an underground, protected above ground or aboveground flammable or combustible liquid tank.
- 8. To change the type of contents stored in a flammable or combustible liquid tank to a materials that poses a greater hazard than that for which the tank was designed and constructed.
- To manufacture, process, blend or refine flammable or combustible liquids.
- 10. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments in_accordance with Section 5706.5.4 or to engage in on demand mobile fueling operations in accordance with Section 5707.
- 11. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles, marine craft and other special equipment at commercial, industrial, governmental or manufacturing establishments in accordance with Section 5706.5.4 or to utilize a site for on-demand mobile fueling operations in accordance with Section 5707.

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Delete Section 105.6.30 of the 2019 California Fire Code.

Amend Table <u>105.6.21</u> <u>105.6.20</u> of the <u>2016-2019</u> California Fire Code to read as follows:

TABLE 105.6.21 105.6.20PERMIT AMOUNTS FOR HAZARDOUS MATERIALS

TYPE OF MATERIAL	AMOUNT
Combustible liquids	See Section <u>105.6.17105.6.16</u>
Corrosive materials:	
Gases	See Section <u>105.6.9</u> <u>105.6.8</u>
Liquids	55 gallons
Solids	500 pounds
Explosive materials	See Section <u>105.6.15</u> 105.6.14
Flammable materials:	
Gases	See Section <u>105.6.9105.6.8</u>
Liquids	See Section <u>105.6.17105.6.16</u>
Solids	100 pounds
	Too pounds
Highly toxic materials:	
Gases	See Section <u>105.6.9</u> <u>105.6.8</u>
Liquids	Any Amount
Solids	Any Amount
Moderately toxic materials:	
Gases	See Section <u>105.6.9</u> <u>105.6.8</u>
Other health hazard materials:	
Gases	See Section <u>105.6.9</u> 105.6.8
Liquids	55 gallons
Solids	500 pounds
Oxidizing materials:	
Gases	See Section <u>105.6.9105.6.8</u>
	See Section 105.0.9 105.0.0
Liquids:	
Class 4	Any Amount
Class 3	1 gallonª
Class 2	10 gallons
Class 1	55 gallons
Solids:	
Class 4	Any Amount
Class 3	10 pounds ^b
Class 2	100 pounds
Class 1	500 pounds
Organic peroxides:	
Liquids	
Class I	
	Any Amount
Class II	Any Amount
Class III	1 gallon
Class IV	2 gallons
Class V	No Permit Required
Solids	
Class I	Any Amount
Class II	Any Amount
Class III	10 pounds
Class IV	20 pounds
Class V	No Permit Required
Pyrophoric materials:	k
Gases	Any amount
Liquids	Any amount
Solids	
	Any amount
Toxic materials:	
Gases	See Section <u>105.6.9</u> <u>105.6.8</u>
Liquids	10 gallons
Solids	100 pounds
Unstable (reactive) materials:	
Liquids	
Class 4	Any Amount
Class 3	Any Amount
Class 2	5 gallons
Class 2 Class 1	10 gallons
	10 ganons
Solids	
Solids Class 4	Any Amount
Solids	Any Amount Any Amount 50 pounds

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Class 1	100 pounds
Water-reactive materials:	
Liquids	
Class 3	Any Amount
Class 2	5 gallons
Class 1	55 gallons
Solids	
Class 3	Any Amount
Class 2	50 pounds
Class 1	500 pounds

For SI: 1 gallon = 3.785 L, 1 pound = 0.454 kg.

- a. 20 gallons for Class 3 oxidizers when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 20 gallons or less.
- b. 200 pounds for Class 3 oxidizers when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 200 pounds or less.

Delete Section 105.6.30 of the 2019 California Fire Code.

<u>Adopt Add</u> Section <u>105.6.50105.6.52</u> to the <u>2016-2019</u> California Fire Code to read as follows:

<u>105.6.50</u> 105.6.52 Day care facility. An operational permit is required to operate a business as a day care facility for more than 6 people.

<u>_Adopt_Add</u> Section <u>105.6.51105.6.53</u> to the <u>2016-2019</u> California Fire Code to read as follows:

<u>105.6.51</u> <u>105.6.53</u> **Institutional.** A permit is required to operate, maintain, or use any institutional type occupancy. For the purpose of this Section, an institution shall be, but is not limited to: hospitals, children's home, home or institution for insane or mentally retarded persons, home or institution for the care of aged or senile persons, sanitarium, nursing or convalescent home, certified family care homes, residential care homes for the elderly, out of home placement facilities, halfway house, and day care nurseries or similar facility of any capacity.

Add Section 105.6.54 to the 2019 California Fire code to read as follows:

105.6.54 Lithium Batteries. An operational permit is required to collect or store more than 1,000 pounds (454 kg) of lithium batteries.

Add Section 105.6.55 to the 2019 California Fire Code to read as follows:

105.6.55 Additive Manufacturing. An operational permit is required to conduct additive manufacturing operations as covered in Section 321.3.

Amend Section 105.7.34 of the 2016 2019 California Fire Code to read as follows:

105.7.3[A] 105.7.4 Compressed Gases. A construction permit is required to install any piped distribution system for compressed gases, or to install a non-flammable medical gas manifold system. A construction permit is required to install, repair damage to, abandon, remove, place temporarily out of service, close or substantially modify a compressed gas system.

Exceptions:

- 1. Routine maintenance.
- 2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

The permit applicant shall apply for approval to close storage, use or handling facilities at least 30 days prior to the termination of the storage, use or handling of compressed or liquefied gases. Such application shall include any change or alteration of the facility closure plan. This 30-day period may be waived by the chief if there are special circumstances requiring such waiver.

Amend Section 105.7.4-5 of the 2016-2019 California Fire Code to read as follows:

105.7.4[A] **105.7.5 Cryogenic fluids.** A construction permit is required for installation of or alteration to cryogenic fluid storage systems where the system capacity exceeds the amounts listed in Table **105.6.11** <u>105.6.10</u>. Maintenance performed in accordance with this code is not considered an alteration and does not require a construction permit.

16.40.065 Permits.

Amend Add Section 105.1.7 106.2.1 to of the 2016 2019 California Fire Code to read as follows:

105.1.7 <u>106.2.1</u> **Construction permit fees.** Construction permit fees and plan review fees for fire hydrant systems, fire extinguishing systems and fire alarm systems shall be paid to the Santa Clara County Fire Department in accordance with the following table based on valuation. The valuation shall be limited to the value of the system for which the

Council Agenda: October 15, 2019 Page: 24 Revision Date: -- permit is being issued. Plan review fees are 65% of the Permit Fee amount. For the purposes of determining the total fee amount for each permit, the plan review fee shall be added to the Permit Fee.

TOTAL VALUATIONS	PERMIT FEE	
\$1.00 TO \$500.00	\$23.50	
\$501.00 TO \$2,000.00	\$23.50 for the first \$500.00 plus \$3.05 for each additional	
	\$100.00, or fraction thereof, to and including \$2,000.00	
\$2001.00 TO \$25,000.00	\$69.25 for the first \$2,000.00 plus \$14.00 for each	
	additional \$1,000.00 or fraction thereof, to and including	
	\$25,000.00	
\$25,001.00 TO \$50,000.00	\$391.25 for the first \$25,000.00 plus \$ 10.10<u>4</u>.00 for each	
	additional \$1,000.00, or fraction thereof, to and	
	including \$50,000.00	
\$50,001.00 TO \$100,000.00	\$ <u>643.75630.15</u> for the first \$50,000.00 plus \$ <u>7.0013.60</u> for	
	each additional \$1,000.00, or fraction thereof, to and	
	including \$100,000.00	
\$100,001.00 to \$500,000.00	\$ 993.75 986.75 for the first \$100,000.00 plus \$ 5.60 7.00 for	
	each additional \$1,000.00, or fraction thereof, to and	
	including \$500,000.00	
\$500,001 to \$1,000,000.00	\$ 3,233.75 3,228.15 for the first \$500,000.00 plus \$ <u>5.35</u> 4 .75	
	for each additional \$1,000.00, or fraction thereof, to and	
	including \$1,000,000.00	
\$1,000,001 and up	\$ 5,608.75<u>5,604.00</u> for the first \$1,000,000.00 plus	
	\$ 3.15<u>4.75</u> for each additional \$1,000.00, or fraction	
	thereof	
Additional re-inspections, in connection with the permits above, are to be paid at		
\$50.00120.00 for each occurrence at the discretion of the fire code official.		
Cancelled inspections with	out advance notice are to be paid at \$112.00120.00 for each	
occurrence.		

Amend Add Section 105.1.8 106.2.2 the 2016-2019 California Fire Code to read as follows:

105.1.8 106.2.2 Operational permit fees. Operational permit fees shall be paid to the Santa Clara County Fire Department as follows:

	FACILITY TYPE	PERMIT FEE
1.	Institutional	
	A. More than 6 persons	\$75.00 - Annually
	B. Over 50 persons	\$100.00 - Annually
2.	Day Care Facilities	
	More than 6 clients	\$35.00 - Annually
3.	Places of Assembly	
	A. 50-300 persons	\$50.00 - Annually
	B. Over 300 persons	\$85.00 - Annually
4.	Temporary Membrane Structures, Tents and Canopies	\$85.00 – Each
	(Only those requiring permits in accordance with Section	occurrence
	105.6. <u>43_47</u>).	

106.5107.5 Final Inspection. No final inspection as to all or any portion of a development shall be deemed completed until the installation of the required fire protection facilities and access ways have been completed and approved. No final certificate of occupancy may be granted until the Fire Department issues notice of final clearance of such fire protection facilities and access ways to the Building Department.

16.40.070-040 Chapter 2 - Definitions.

I

Add the following definitions to read: <u>Amend Chapter 2 of the 2019 California Fire Code and 2018 International Fire</u> Code with the following definitions added:

3D PRINTER. A machine used in the additive manufacturing process for fabricating objects through the deposition of a material using a print head, nozzle, or another printer technology.

ADDITIVE MANUFACTURING. A process of joining materials to make objects from 3D model data, usually layer upon layer, sometimes referred to as 3D printing. The Code recognizes two types of additive manufacturing:

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- Industrial additive manufacturing. 3D printing operations that typically utilize combustible powders or metals, an inert gas supply, a combustible dust collection system. or that create a hazardous (classified) location area or zone outside of the equipment.
- Non-industrial additive manufacturing. 3D printing operations that do create a hazardous (classified) location area outside of the equipment, and do not utilize an inert gas supply or a combustible dust collection system.

— CONTINUOUS CAS DETECTION SYSTEM. An approved gas detection system where the analytical instrument is maintained in continuous operation and sampling is performed without interruption. Analysis is allowed to be performed on a cyclical basis at intervals not to exceed 30 minutes. In occupied areas where air is re circulated and not exhausted to a treatment system (e.g. breathing zone), the Chief may require a cyclical basis at intervals not to exceed 5 minutes. The gas detection system shall be able to detect the presence of a gas at or below the permissible exposure limit in occupiable areas and at or below ½ IDLH (or 0.05 LC 50 if no established IDLH) in unoccupiable areas.

CORROSIVE LIQUID. Corrosive liquid is:

- 1. any liquid which, when in contact with living tissue, will cause destruction or irreversible alteration of such tissue by chemical action;
- 2. any liquid having a pH of 2 or less or 12.5 or more;
- 3. any liquid classified as corrosive by the U.S. Department of Transportation; and
- 4. any material exhibiting the characteristics of corrosivity in accordance with Title 22, California Code of Regulations §66261.22.

— *MAXIMUM THRESHOLD QUANTITY (MAX TQ)*. Maximum Threshold Quantity (Max TQ) is the maximum quantity of a moderately toxic or toxic gas, which may be stored in a single vessel before a more stringent category of regulation is applied.

MINIMUM THRESHOLD QUANTITY. Minimum threshold quantity is the aggregate of highly toxic, toxic or moderately toxic gases in a control area which, due to the minimum aggregate quantities, need only comply with the requirements set forth in Section 6004.1.

MODERATELY TOXIC GAS. A chemical or substance that has a median lethal concentration (LC50) in air more than 2000 parts per million but not more than 5000 parts per million by volume of gas or vapor, when administered by continuous inhalation for an hour, or less if death occurs within one hour, to albino rats weighing between 200 and 300 grams each.

OTHER HEALTH HAZARD MATERIAL. is a hazardous material which affects target organs of the body, including but not limited to, those materials which produce liver damage, kidney damage, damage to the nervous system, act on the blood to decrease hemoglobin function, deprive the body tissue of oxygen or affect reproductive capabilities, including mutations (chromosomal damage) or teratogens (effect on fetuses).

SECONDARY CONTAINMENT. Secondary containment is that level of containment that is external to and separate from primary containment and is capable of safely and securely containing the material, without discharge, for a period of time reasonably to ensure detection and remedy of the primary containment failure.

SPILL CONTROL. That level of containment that is external to and separate from the primary containment and is capable of safely and securely containing the contents of the largest container and prevents the materials from spreading to other parts of the room.

WORKSTATION. A defined space or an independent principal piece of equipment using hazardous materials with a hazard rating of 3 or <u>4 in accordance with higher as ranked by</u> NFPA 704 where a specific function, laboratory procedure or research activity occurs. Approved or listed hazardous materials storage cabinets, flammable liquid storage cabinets or gas cabinets serving a workstation are included as part of the workstation. A workstation is allowed to contain ventilation equipment, fire protection devices, <u>detection devices</u>, electrical devices, and other processing and scientific equipment.

16.40.060 Chapter 3 - General Requirements.

Add Section 315.8 to the 2019 California Fire Code to read as follows:

315.8 LITHIUM BATTERY STORAGE AND HANDLING

315.8 Lithium Battery Storage and Handling. The storage and handling of lithium ion and lithium metal batteries or cells in quantities exceeding 1,000 pounds (4086 kg) shall comply with Section 315.8.1 through 315.8.10, and Chapter 32 where applicable.

315.8.1 Permits. Permits shall be required as set forth in Section 105.6.54.

315.8.2 Maximum quantity in a fire area. The aggregate amount of lithium batteries stored and handled in a single fire area shall not exceed 9,000 pounds (4086 kg).

315.8.3 Construction requirements. Fire areas shall be separated from each other by fire barriers having not less than 2-hour fire resistance rating constructed in accordance with Section 707 of the Building Code and horizontal assemblies constructed in accordance with Section 711 of the Building Code.

315.8.4 Number of fire areas. The maximum number of fire areas within a building shall be four.

Council Agenda: October 15, 2019 Page: 26 Revision Date: -- **315.8.5 Group H, Division 2 occupancy.** Storage and handling of more than 9,000 pounds of lithium batteries per fire area shall be in an approved Group H, Division 2 occupancy constructed in accordance with the Building Code and provided throughout with approved automatic smoke detection and radiant-energy detection systems.

315.8.6 Automatic sprinkler system. Buildings containing fire areas used for lithium battery storage or handling shall be equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1. The design of the sprinkler system within each fire area shall not be less than that required for Extra Hazard Group 2 with a minimum design area of 2,500 square feet. Where the storage arrangement is required by other provisions of this code to be provided with a higher level of sprinkler system protection, the higher level of sprinkler system protection shall be provided.

315.8.7 Automatic smoke detection system. An approved automatic smoke detection system that activates an approved occupant notification system shall be provided throughout each fire area in accordance with Section 907.

315.8.8 Radiant energy detection. An approved radiant-energy detection system that activates an approved occupant notification system shall be installed throughout each fire area in accordance with Section 907.

315.8.9 Collection containers. Containers used to collect or store lithium batteries shall be noncombustible and shall not have an individual capacity exceeding 30 gallons (113.6 L), or be approved for transportation in accordance with the Department of Transportation (DOT).

315.8.10 Storage configuration. Lithium batteries shall be considered a high-hazard commodity in accordance with Chapter 32 and where applicable, lithium battery storage shall comply with Chapter 32 in addition to Section 315.8.

16.40.080 Hazards to Firefighters.

Adopt Add Section 316.7 of to the 2016 2019 California Fire Code to read as follows:

316.7 Roof guardrails at interior courts. Roof openings into interior courts that are bounded on all sides by building walls shall be protected with guardrails. The top of the guardrail shall not be less than 42 inches in height above the adjacent roof surface that can be walked on. Intermediate rails shall be designed and spaced such that a 12-inch diameter sphere cannot pass through.

Exception:

Where the roof opening is greater than 600 square feet in area.

Add Section 321 to the 2019 California Fire Code to read as follows:

321.1 General. Additive manufacturing equipment and operations shall comply with Section 320.

321.1.1 Scope. Additive manufacturing shall comply with one of the following:

Non-industrial additive manufacturing shall comply with Section 321.2.
 1.2.Industrial additive manufacturing shall comply with Section 321.3.

321.1.2 Installation, operation and maintenance. 3D printers and associated additive manufacturing equipment shall be installed, operated and maintained in accordance with this Code, the listing and the manufacturer's instructions.

321.1.3 Production materials. Only the production materials listed for use with the equipment and included in the manufacturer's instructions shall be used.

321.2 Non-industrial additive manufacturing. Non-industrial additive manufacturing equipment and operations shall comply with Section 321.2.1 through 321.2.4. Additive manufacturing equipment and operations that do not comply with Section 321.2 shall comply with Section 321.3.

321.2.1 Listing. 3D printers used in non-industrial additive manufacturing shall be listed and labeled in accordance with UL 60950-1, UL 62368-1 or UL 2011. The listing shall also verify:

1. The 3D printers are self-contained and utilize maximum 30 liter pre-packaged production materials.

2. The operation of the 3D printers shall not create a hazardous (classified) electrical area or outside of the unit.

3. If any hazardous (classified) electrical area or zone exists inside of the unit's outer enclosure, the area shall be protected by intrinsically safe electrical construction or other acceptable protection methods.

1.4.The 3D printers shall not utilize inert gas or an external combustible dust collection.

321.2.2 Occupancies. Non-industrial additive manufacturing shall be permitted in all occupancy groups.

321.3 Industrial additive manufacturing. Industrial additive manufacturing equipment and operations shall comply with Section 321.3.1 through 321.3.13.

321.3.1 Permits required. Permits shall be obtained from the fire code official in accordance with Section 105.6.55 prior to engaging in industrial additive manufacturing operations.

Council Agenda: October 15, 2019 Page: 27 Revision Date: -- **321.3.2 Listing.** 3D printers used in industrial additive manufacturing shall be listed and labeled in accordance with UL 2011 or approved for the application based on a field evaluation conducted by an approved agency.

321.3.3 Combustible dusts and metals. Industrial additive manufacturing operations that store, use or produce combustible dust, combustible particulate solids or combustible metals shall comply with Chapter 22 and this section.

321.3.4 Powder evaluation. Printing powders used in industrial additive manufacturing operations shall be tested for combustibility in accordance with NFPA 484 or NFPA 652 as applicable. A copy of test reports shall be provided to the fire code official upon request.

321.3.5 Combustible (non-metallic) dusts. Industrial additive manufacturing that uses operations that store, use or produce combustible (non-metallic) dusts shall comply with NFPA 654.

321.3.6 Combustible metals. Industrial additive manufacturing operations that store or use combustible metals shall also comply with NFPA 484.

321.3.7 Ancillary equipment. Ancillary equipment provided for recycling, sieving, vacuuming or handling combustible powders shall be designed and approved for such use.

321.3.8 Hazardous materials. Industrial additive manufacturing operations that store or use hazardous materials exceeding the maximum allowable quantity limits shall comply with Chapter 50.

321.3.9 Inert Gas. Additive manufacturing processes that utilize inert gases shall comply with Chapter 53. Ventilation or gas detection shall be provided in accordance with Section 5307.

321.3.10 Technical assistance. Where required by the fire code official, a report evaluating the acceptability of technologies, processes, products, facilities, materials and uses associated with the operation shall be provided in accordance with 104.7.2 and approved.

321.3.11 Performance based design alternative. Where approved by the fire code official, buildings and facilities where industrial additive manufacturing is performed shall be permitted to comply with the performance-based design options in Section 5001.3 as an alternative to compliance with the other requirements set forth in this Section.

321.3.12 Occupancies. Industrial additive manufacturing shall only be conducted in the occupancy groups associated with manufacturing operations. The occupancy may be required by the fire code official to comply with Chapter 50 maximum allowable quantity tables. Where approved, the requirements in Sections 321.2.5 and 321.3.6 shall be permitted to provide the technical basis for determining compliance with Table 5003.1.1(1), footnote <u>q</u>.

321.3.13 Safety Certification. The equipment, process, training procedures and occupancy associated with industrial additive manufacturing may be required by the fire code official to receive a safety certification from Underwriter's Laboratory or equivalent.

16.40.120 <u>080</u> Fire apparatus access roads. Chapter 5 - Fire Service Features.

Amend Section 503.1 of the 2016-2019 California Fire Code to read as follows:

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3 and as <u>per-required by the</u> Fire Department access road Standards.

Amend Section 503.1.1 as follows:

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus

access road shall comply with the requirements for this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exceptions:

- In other than R-3 or U occupancies, when the building is equipped throughout with an approved automatic sprinkler system, installed in accordance with Sections 903.3.1.1, the dimension may be increased to a maximum of 300 feet when approved by the fire code official.
- 2. When there are not more than two Group R-3 or accessory Group U occupancies, the dimension may be increased to a maximum of 200 feet.
- 3. When apparatus roads cannot be installed because of topography, waterways, nonnegotiable grades or other similar conditions, an approved alternative means of fire protection shall be provided.

Amend Section 503.2.1 of the 2016-2019 California Fire Code to read as follows:

Council Agenda: October 15, 2019 Page: 28 Revision Date: -- **503.2.1 Dimensions.** Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, or as required by fire department access road standards, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of 13 feet 6 inches (4115 mm).

Exception:

When there are not more than two Group R, Division 3, or Group U occupancies, the access road width may be modified by the fire code official.

Amend Section 503.2.2 of the 2016-2019 California Fire Code as follows:

503.2.2 Authority. The fire code official shall have the authority to require or permit modifications to the required access widths and/or vertical clearance where they are inadequate for fire or rescue operations or where necessary to meet the public safety objectives of the jurisdiction.

16.40.130 Access to buildings and roofs.

Adopt Section 504.5 to the 2016-2019 California Fire Code to read as follows:

504.5 Access Control Devices. When access control devices including bars, grates, gates, electric or magnetic locks or similar devices, which would inhibit rapid fire department emergency access to or within the building are installed, such devices shall be approved by the fire code official. All electrically powered access control devices shall be provided with an approved means for deactivation or unlocking from a single location or otherwise approved by the fire code official.

Access control devices shall also comply with Chapter 10 Egress.

Amend Section 510.1 of the 2019 California Fire Code to read as follows:

510.1 Emergency responder radio coverage in new buildings. Approved radio coverage for emergency responders shall be provided within all buildings meeting any one of the following conditions:

- 1. There are more than 3 stories above grade plane (as defined by the Building Code Section 202);
- 2. The total building area is 30,000 square feet or more;
- 3. The total basement area is 5,000 square feet or more;

<u>4. Where required by the fire code official and radio coverage signal strength levels are not consistent with the minimum levels set forth in Section 510.4.1</u>

Exceptions:

- <u>1. Where approved by the fire code official, a wired communication system in accordance with Section</u> <u>907.2.12.2 shall be permitted to be installed or maintained in lieu of an approved radio coverage system.</u>
- 2. Where it is determined by the fire code official that the radio coverage system is not needed.
- 3. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the fire code official shall have the authority to accept an automatically activated emergency responder radio coverage system.
- <u>4. Buildings and areas of buildings that have minimum radio coverage signal strength levels of the Silicon</u> <u>Valley Regional Interoperability Authority (SVRIA) P25 Phase 2 700 MHz Digital Trunked Radio System</u> within the building in accordance with Section 510.4.1 without the use of an indoor radio coverage system.

The radio coverage system shall be installed and maintained in accordance with Sections 510.4 through 510.6.4 of this code and with the applicable provisions of NFPA 1221, Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems.

The coverage shall be based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety



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communication systems.

Add Section 510.1.1 of the 2019 California Fire Code to read as follows:

510.1.1 Obstruction by new buildings. No obstruction of the public safety system backhaul shall be allowed without an approved mitigating plan.

Delete Section 510.2 of the 2019 California Fire Code.

Amend Section 510.3 of the 2019 California Fire Code to read as follows:

510.3 Permit required. A construction permit, for the installation of, or modification of, emergency responder radio coverage systems and related equipment is required as specified in Section 105.7.6. Maintenance performed in

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accordance with this code is not considered a modification and does not require a permit. A frequency change made to an existing system is considered to be new construction and will require a construction permit

Amend Section 510.4 of the 2019 California Fire Code to read as follows:

510.4 Technical requirements. Systems, components and equipment required to provide the emergency responder radio coverage system shall comply with the current Emergency Responders Radio Coverage Systems Standard Details & Specification enforced by the Santa Clara County Fire Department.

Amend Section 510.4.1.1 of the 2019 California Fire Code to read as follows:

510.4.1.1 Minimum signal strength into the building. The minimum inbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the fire code official. The inbound signal level shall be sufficient to provide not less than a Delivered Audio Quality (DAQ) of 3.0 for analog communications and DAQ of 3.4 for digital communications systems or an equivalent Signal-to-Interference-Plus-Noise Ratio (SINR) applicable to the technology.

Amend Section 510.4.1.2 of the 2019 California Fire Code to read as follows:

510.4.1.2 Minimum signal strength out of the building. The minimum outbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the fire code official. The outbound signal level shall be sufficient to provide not less than a DAQ of 3.0 for analog communications and DAQ of 3.4 for digital communications systems or an equivalent SINR applicable to the technology.

Amend Section 510.5 of the 2019 California Fire Code to read as follows:

510.5 Installation requirement. The installation of the emergency responder radio coverage system shall be in accordance with NFPA 1221 and the current Emergency Responder Radio Coverage Systems Standard Details & Specification enforced by the Santa Clara County Fire Department.

Amend Section 510.5.1 of the 2019 California Fire Code to read as follows:

510.5.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC or other radio licensing authority shall not be installed without prior coordination and approval of the fire code official and the agency FCC license holder or systems administrator.

Amend the First Paragraph of Section 510.5.3 of the 2019 California Fire Code to read as follows:

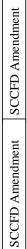
510.5.3 Acceptance test procedure. Where an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building is not less than 95 percent. Final system acceptance will require ERRCS power level and DAO testing with agency FCC license holder, systems administrators, or designee.

16.40.180 100 Chapter 6 - Electrical equipment, wiring and hazards. Building Services and Systems.

Amend Section 603.4.2.1.1 by deleting the exception:

<u>603.4.2.1.1 Prohibited locations.</u> The storage or use of portable outdoor gas-fired heating appliances is prohibited in any of the following locations:

- 1. Inside of any occupancy where connected to the fuel gas container.
- 2. Inside of tents, canopies and membrane structures.
- 3. On exterior balconies- and rooftops in other than R-3 occupancies.







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Adopt Add Section 605.13 604.12 of to the 2016-2019 California Fire Code to read as follows:

605.11604.12 **Immersion Heaters.** All electrical immersion heaters used in dip tanks, sinks, vats and similar operations shall be provided with approved over-temperature controls and low liquid level electrical disconnects. Manual reset of required protection devices shall be provided.

16.40.<u>200–120 Chapter 8 -</u> Decorative Vegetation in New and Existing Buildings.

Amend Section 806.1.1 of the 2016-2019 California Fire Code to read as follows:

806.1.1 <u>Display inside buildingsRestricted occupancies</u>. The display of <u>Christmas trees_natural cut trees</u> and other decorative vegetation shall be in accordance with the California Code of Regulations, Title 19, Division 1, §3.08 and Sections 806.1 through <u>806.5_806.4</u>.

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16.40.210-140 Chapter 9 - Automatic sprinkler systems.

Amend Section 901.6.3 of the 2019 California Fire Code to read as follows:

901.6.3 Records. Records of all system inspections, tests and maintenance required by the referenced standard shall be maintained on the premises for a minimum of five years. Inspections and tests performed on fire alarm systems shall be documented on NFPA 72 forms.

Amend Section 903.2 of the 2016-2019 California Fire Code to read as follows:

903.2 Where required. Approved automatic sprinkler systems in new and existing buildings and structures shall be provided in the locations described in this Section or in Sections 903.2.1 through <u>903.2.19_903.2.18</u> whichever is the more restrictive.

For the purposes of this section, firewalls and fire barriers used to separate building areas shall be constructed in accordance with the California Building Code and shall be without openings or penetrations, not be utilized as a means of area reduction for the purposes of circumventing automatic fire sprinkler system installation requirement.

1. In other than residential buildings which require the installation of fire sprinklers for all new buildings according to the California Residential Code, an <u>An approved</u> automatic sprinkler system shall be provided throughout all new buildings and structures.

Exceptions:

- a. Buildings and structures that do not exceed 1,000 square feet of building area and that are not located in the Wildland-Urban Interface Fire Area.
- b. Buildings and structures that are located in the Wildland-Urban Interface Fire Area and do not exceed 500 square feet of building area.
- c. Group S-2 or U occupancies that are not located in the Wildland-Urban Interface and used exclusively for vehicle parking and meeting all of the following conditions:
 - i. Noncombustible construction
 - ii. Maximum building area not to exceed 5,000 square feet
 - iii. Structure is open on three (3) or more sides
 - iv. Minimum of 10 feet separation from existing buildings unless area is separated by fire walls complying with CBC 706.

2. An automatic sprinkler system shall be provided throughout existing buildings and structures when alterations or additions are made that create conditions described in Sections 903.2.1 through <u>903.2.19</u> <u>903.2.18</u>.

3. An automatic sprinkler system shall be provided throughout existing buildings and structures, when additions are made that increase the building area to more than 3,600 square feet.

Exception:

One or more additions made to a building after January 1, 2011 that does not total more than 1,000 square feet of building area.

4. An automatic sprinkler system shall be provided throughout all new basements regardless of size and throughout existing basements that are expanded by more than 50%.

5. Any change in the character of occupancy or in use of any building with a building area equal to or greater than 3,600 square feet which, in the opinion of the fire code official or Building Official, would place the building into a more hazardous division of the same occupancy group or into a different group of occupancies and constitutes a greater degree of life safety¹ or increased fire risk², shall require the installation of an approved automatic fire sprinkler system.

¹ Life Safety – Increased occupant load, public assembly areas, public meeting areas, churches, indoor amusement attractions, buildings with complex exiting systems due to increased occupant loads, large schools/day-care facilities,

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large residential care facilities with non-ambulatory;

² Fire Risks – High-piled combustible storage, woodworking operations, hazardous operations using hazardous materials, increased fuel loads (storage of moderate to highly combustible materials), increased sources of ignition (welding, automotive repair with the use of flammable liquids and open flames).

Amend Section 903.2.18 of the 2019 California Fire Code to delete the Exception:

Amend Section 909.20.1 of the 2019 California Fire Code to read as follows:

Council Agenda: October 15, 2019 Page: 31 Revision Date: -- **909.20.1 Schedule.** A routine maintenance and operational testing program shall be initiated immediately after the smoke control system has passed the acceptance tests. A written schedule for routine maintenance and operational testing shall be established and both shall occur at least annually.

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16.40.160 Chapter 11 - Construction Requirements for Existing Buildings.

Delete Chapter 11 of the 2018 International Fire Code in its entirety.

16.40.220 180 Precautions against fire. Chapter 33 - Fire Safety During Construction and Demolition.

Adopt-Add Section 3304.8 3304.9 of to the 2016-2019 California Fire Code to read as follows:

<u>3304.8</u> <u>3304.9</u> Fire Walls. When firewalls are required in combustible construction, the wall construction shall be completed (with all openings protected) immediately after the building is sufficiently weather-protected at the location of the wall(s).

16.40.230 Means of egress.

Amend Section 3311.1 of the 2016-2019 California Fire Code to read as follows:

3311.1 Stairways Required. Each level above the first story in new multi-story buildings that require two exit stairways shall be provided with at least two usable exit stairways after the floor decking is installed. The stairways shall be continuous and discharge to grade level. Stairways serving more than two floor levels shall be enclosed (with openings adequately protected) after exterior walls/windows are in place. Exit stairs in new and in existing, occupied buildings shall be lighted and maintained clear of debris and construction materials at all times.

Exception: For new multi-story buildings, one of the required exit stairs may be obstructed on not more than two contiguous floor levels for the purposes of stairway construction (i.e., installation of gypsum board, painting, flooring, etc.).

Adopt Section 3311.1.1 of the 2016-2019 California Fire Code to read as follows:

Section 3311.1.1 Required Means of Egress. All new buildings under construction shall have at least one unobstructed means of egress. All means of egress shall be identified in the prefire plan. See Section 3308.23308.3.

16.40.300 <u>200</u> Definitions <u>Wildland Urban Interface Fire Areas. Chapter 49 - Requirements for Wildland-Urban</u> Interface Fire Areas.

Amend Section 4902 of the <u>2016-2019</u> California Fire Code for with the <u>following</u> definition of <u>Wildland Urban</u> <u>Interface Fire Area as followsamended</u>:

Wildland-Urban Interface Fire Area. is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. The Wildland-Urban Interface Fire Area shall be defined as all areas within the City of Cupertino as set forth and delineated on the map entitled "Wildland-Urban Interface Fire Area" which map and all notations, references, data and other information shown thereon are hereby adopted and made a part of this chapter. The map properly attested, shall be on file in the Office of the City Clerk of the City of Cupertino.

16.40.310 Application.

Amend Section 4906.2 of the 2016-2019 California Fire Code to read as follows:

4906.2 Application. Buildings and structures located in the following areas shall maintain the required hazardous vegetation and fuel management:

1. All unincorporated lands designated by the State Board of Forestry and Fire Protection as State Responsibility Areas (SRA) including:

- 1.1. Moderate Fire Hazard Severity Zones
- 1.2. High Fire Hazard Severity Zones
- 1.3. Very-High Fire Hazard Severity Zones

2. Land designated as a Very-High Fire Hazard Severity Zone or as a Wildland Urban Interface Fire Area by the City of Cupertino.

16.40.320 Defensible space.

Amend Section 4907.1 of the 2016-2019 California Fire Code to read as follows:

Council Agenda: October 15, 2019 Page: 32 Revision Date: -- **4907.1 General.** Defensible space will be maintained around all buildings and structures in State Responsibility Area (SRA) as required in Public Resources Code 4290 and "SRA Fire Safe Regulations" California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 2, Section 1270.

Buildings and structures within the Very-High Fire Hazard Severity Zones of a Local Responsibility Area (LRA) shall maintain defensible space as outlined in Government Code 51175 – 51189 and any local ordinance of the authority having jurisdiction.

Persons owning, leasing, controlling, operating or maintaining buildings or structures in the locally adopted Wildland-Urban Interface Fire Area but that are not within the Very-High Fire Hazard Severity Zone and persons owning, leasing or controlling land adjacent to such buildings or structures, shall at all times:

1. Maintain an effective defensible space by removing and clearing away flammable vegetation and combustible growth from areas within 30 feet (9144 mm) of such buildings or structures.

Exception: Single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided that they do not form a means of rapidly transmitting fire from the native growth to any structure.

2. Maintain additional effective defensible space by removing brush, flammable vegetation and combustible growth located 30 feet to 100 feet (9144 mm to 30480 mm) when required by the fire code official due to steepness of terrain or other conditions that would cause a defensible space of only 30 feet (9144 mm) to be insufficient.

Exception: Grass and other vegetation located more than 30 feet (9144 mm) from buildings or structures and less than 18 inches (457 mm) in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

3. Remove portions of trees, which extend within 10 feet (3048 mm) of the outlet of a chimney.

4. Maintain trees adjacent to or overhanging a building free of deadwood; and

5. Maintain the roof of a structure free of leaves, needles or other dead vegetative growth.

6. Defensible space shall also be provided around water tank structures, water supply pumps and pump houses.

7. Remove flammable vegetation a minimum of 10 feet around liquefied petroleum gas tanks/containers.

8. Firewood and combustible materials shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs. The storage of firewood and combustible material within the defensible space shall be located a minimum of 30 feet (6096 mm) from structures and separated from the crown of trees by a minimum horizontal distance of 15 feet (4572 mm).

Exception: Firewood and combustible materials not for consumption on the premises shall be stored as approved by the fire code official.

9. Clear areas within 10 feet (3048 mm) of fire apparatus access roads and driveways of non-fire-resistive vegetation growth.

Exception: Single specimens of trees, ornamental vegetative fuels or cultivated ground cover, such as green grass, ivy, succulents or similar plants used as ground cover, provided they do not form a means of readily transmitting fire.

Adopt Section 4907.2 of the 2016-2019 California Fire Code to read as follows:

4907.2 Corrective Actions. The executive body is authorized to instruct the fire code official to give notice to the owner of the property upon which conditions regulated by Section 4907.1 exist to correct such conditions. If the owner fails to correct such conditions the executive body is authorized to cause the same to be done and make the expense of such

correction a lien upon the property where such conditions exists.

16.40.330 Fire protection plan.

Adopt Section 4908 of the 2016-2019 California Fire Code to read as follows:

4908.1 General. When required by the code official, a fire protection plan shall be prepared.

4908.2 Content. The plan shall be based upon a site-specific wildfire risk assessment that includes considerations of location, topography, aspect, flammable vegetation, climatic conditions and fire history. The plan shall address water supply, access, building ignition and fire-resistance factors, fire protection systems and equipment, defensible space and vegetation management.

4908.3 Cost. The cost of fire protection plan preparation and review shall be the responsibility of the applicant.

4908.4 Plan Retention. The fire protection plan shall be retained by the fire code official.

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16.40.340 Water Supply.

Adopt Section 4909 of the 2016-2019 California Fire Code to read as follows:

4909.1 General. Buildings and structures, or portions thereof, hereafter constructed or relocated into or within the Wildland-Urban Interface Fire Area shall be provided with fire protection water supplies in accordance with Chapter 5 and Section 4909.2.

Exception:

Buildings containing only private garages, carports, sheds and agricultural buildings with a building area of not more than 500 square feet (56 m2).

4909.2 Standby power. Standby power shall be provided to pumps, controllers and related electrical equipment so that stationary water supply facilities within the wildland-urban interface area that are dependent on electrical power can provide the required water supply. The standby power system shall be in accordance with the Electrical Code. The standby power source shall be capable of providing power for a minimum of two hours.

Exceptions:

1. When approved by the code official, a standby power supply is not required where the primary power service to the stationary water supply facility is underground.

2. A standby power supply is not required where the stationary water supply facility serves no more than one single-family dwelling.

16.40.350 Ignition source control.

Adopt Section 4910 of the 2016-2019 California Fire Code to read as follows:

4910.1 Fireworks. Fireworks shall not be used or possessed in the Wildland-Urban Interface Fire Area.

16.40.355-220 General-Chapter 50 - Hazardous Materials - General Provisions.

Amend Section 5001.2.2.2 of the 2016-2019 California Fire Code to read as follows:

5001.2.2.2 Health Hazards The material categories listed in this section are classified as health hazards. A material with a primary classification as a health hazard can also pose a physical hazard.

- 1. Highly toxic and toxic materials.
- 2. Corrosive materials.
- 3. Moderately toxic gas.
- 4. Other health hazards.

Add Section 5001.5.3 to the 2019 California Fire Code to read as follows:

5001.5.3 Hazardous materials business plan (HMBP). Where required by the fire code official, facilities shall submit a Hazardous Materials Business Plan (HMBP) as required by California Health & Safety Code (HSC), Chapter 6.95, Sections 25500 through 25545, and Title 19, Division 2, Chapter 4. The HMBP shall be electronically submitted in accordance with the fire code official's requested timeframe and no less frequently than is required by the HSC.



16.40.360 General requirements - Hazardous Materials.

Adopt Add_Section 5003.1.5_5003.1.3.1 of to the 2016-2019 California Fire Code to read as follows:

5003.1.55003.1.3.1 Highly Toxic, Highly Toxic, Moderately Toxic Gases and Similarly Used or Handled

Materials. The_-storage, use and handling of <u>highly_toxic</u>, <u>highly_toxic</u> and moderately toxic gases in amounts exceeding Table <u>6004.26004.2.1.4 or 6004.3</u> shall be in accordance with this chapter and Chapter 60. Any <u>highly_toxic</u>, <u>highly_toxic</u> or moderately toxic material that is used or handled as a gas or vapor shall be in accordance with the requirements for <u>highly_toxic</u>, <u>highly_toxic</u> or moderately toxic gases.

Adopt-Add Section 5003.1.6 5003.1.5 of to the 2016-2019 California Fire Code to read as follows:

5003.1.65003.1.5 Other Health Hazards. The storage, use and handling of materials classified as other health hazards including carcinogens, irritants and sensitizers in amounts exceeding 810 cubic feet for gases, 55 gallons for liquids and 5,000 pounds for solids shall be in accordance with this Section 5003.

Adopt-Add Section 5003.1.75003.1.6 of to the 2016-2019 California Fire Code to read as follows:

5003.1.75003.1.6 Additional Spill Control and Secondary Containment Requirements. In addition to the requirements set forth in Section 5004.2, an approved containment system is required for any quantity of hazardous materials, that are liquids or solids at normal temperature, and pressure (NTP) where a spill is determined to be a plausible event and where such an event would endanger people, property or the environment. The approved

Council Agenda: October 15, 2019 Page: 34 Revision Date: -- containment system may be required to include a combination of spill control and secondary containment meeting the design and construction requirements set forth in Section 5004.2.

Amend Section 5003.2.2.1 of the 2016-2019 California Fire Code to read as follows:

5003.2.2.1 Design and Construction. Piping, tubing, valves, fittings and related components used for hazardous materials shall be in accordance with the following:

1. Piping, tubing, valves, fittings and related components shall be designed and fabricated from materials that are compatible with the material to be contained and shall be of adequate strength and durability to withstand the pressure, structural and seismic stress, and exposure to which they are subject.

2. Piping and tubing shall be identified in accordance with ASME A13.1 and the Santa Clara County Fire Chiefs⁴ Marking Requirements and Guidelines for Hazardous Materials and Hazardous Waste to indicate the material conveyed.

3. Readily accessible manual values or automatic remotely activated fail-safe emergency shutoff values shall be installed on supply piping and tubing at the following locations:

- 1. The point of use.
- 2. The tank, cylinder or bulk use.

4. Manual emergency shutoff valves and controls for remotely activated emergency shutoff valves shall be identified and the location shall be clearly visible, accessible and indicated by means of a sign.

5. Backflow prevention or check valves shall be provided where the backflow of hazardous materials could create a hazardous condition or cause the unauthorized discharge of hazardous materials.

 Where gases or liquids having a hazard ranking of: Health hazard Class 3 or 4 Flammability Class 4 <u>Instability Reactivity</u> Class 3 or 4

in accordance with NFPA 704 are carried in pressurized piping above 15 pounds per square inch gauge (psig) (103 Kpa), an approved means of leak detection and emergency shutoff or excess flow control shall be provided. Where the piping originates from within a hazardous material storage room or area, the excess flow control shall be located within the storage room or area. Where the piping originates from a bulk source, the excess flow control shall be located as close to the bulk source as practical.

Exceptions:

- 1. Piping for inlet connections designed to prevent backflow.
- 2. Piping for pressure relief devices.

7. Secondary containment or equivalent protection from spills or leaks shall be provided for piping for liquid hazardous materials and for highly toxic and toxic corrosive gases above threshold quantities listed in Tables <u>6004.16004.2.1.4</u>. Secondary containment includes, but is not limited to double-walled piping.

Exceptions:

- 1. Secondary containment is not required for toxic corrosive gases if the piping is constructed of inert materials.
- 2. Piping under sub-atmospheric conditions if the piping is equipped with an alarm and fail-safe-to-close valve activated by a loss of vacuum.

8. Expansion chambers shall be provided between valves whenever the regulated gas may be subjected to thermal expansion. Chambers shall be sized to provide protection for piping and instrumentation and to accommodate the expansion of regulated materials.

Amend Section 5003.2.2.2 of the 2016-2019 California Fire Code to read as follows:

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5003.2.2.2 Additional Regulation for Supply Piping for Health Hazard Materials. Supply piping and tubing for gases and liquids having a health hazard ranking of 3 or 4 shall be in accordance with ASME B31.3 and the following:

1. Piping and tubing utilized for the transmission of toxic, highly toxic, or highly volatile corrosive liquids and gases shall have welded or brazed connections throughout except for connections within an exhausted enclosure if the material is a gas, or an approved method of drainage or containment is provided for connections if the material is a liquid.

2. Piping and tubing shall not be located within corridors, within any portion of a means of egress required to be enclosed in fire-resistance-rated construction or in concealed spaces in areas not classified as Group H Occupancies.

Exception: Piping and tubing within the space defined by the walls of corridors and the floor or roof above or in concealed space above other occupancies when installed in accordance with Section <u>415.8.6.4</u> <u>415.11</u> of the California Building Code for H-5 Occupancies.

3. All primary piping for toxic, highly toxic and moderately toxic gases shall pass a helium leak test of 1×10^{-9} cubic centimeters/second where practical, or shall pass testing in accordance with an approved, nationally recognized standard. Tests shall be conducted by a qualified "third party" not involved with the construction of the piping and control systems.

Council Agenda: October 15, 2019 Page: 35 Revision Date: -- Amend Section 5003.3.1 of the 2016-2019 California Fire Code to read as follows:

5003.3.1 Unauthorized Discharges. When hazardous materials are released in quantities reportable under state, federal or local regulations or when there is release or a threatened release that presents a threat to health, property or the environment, the fire code official shall be notified immediately in an approved manner and the following procedures required in accordance with Sections 5003.3.1.1 through 5003.3.1.4.

Adopt Section 5003.5.2 of the 2016-2019 California Fire Code to read as follows:

5003.5.2 Ventilation Ducting. Product conveying ducts for<u>Ducts</u> venting hazardous materials operations shall be labeled with the hazard class of the material being vented and the direction of flow.

Adopt Section 5003.5.3 of the 2016-2019 California Fire Code to read as follows:

5003.5.3 "H" Occupancies. In "H" occupancies, all piping and tubing may be required to be identified when there is any possibility of confusion with hazardous materials transport tubing or piping. Flow direction indicators are required.

Adopt Sec. 5003.9.11 of the 2016-2019 California Fire Code to read as follows:

5003.9.11 Fire Extinguishing Systems For Workstations Dispensing, Handling or Using Hazardous Materials. Combustible and non-combustible workstations, which dispense, handle or use hazardous materials, shall be protected by an approved automatic fire extinguishing system in accordance with Section 2703.10.

Exception: Internal fire protection is not required for Biological Safety Cabinets that carry NSF/ANSI certification where quantities of flammable liquids in use or storage within the cabinet do not exceed 500ml.

Amend Section 5003.10.4, 5003.10.4.1, 5003.10.4.2, 5003.10.4.3, 5003.10.4.4 of the 2016-2019 California Fire Code to read:

5003.10.4 Elevators utilized to transport hazardous materials.

5003.10.4.1 When transporting hazardous materials, elevators shall have no other passengers other than in the individual(s) handling the chemical transport cart.

5003.10.4.2 Hazardous materials liquid containers shall have a maximum capacity of 20 liters (5.265.28 gal).

5003.10.4.3 <u>Highly toxic Toxic</u>, <u>highly toxic and asphyxiant moderately toxic gases shall be limited to a container of</u> a maximum water capacity of 1 lb.

5003.10.4.4 Means shall be provided to prevent the elevator from being summoned to other floors. **16.40.365** Storage – Hazardous Materials.

Amend Section 5004.2.1 of the 2016 2019 California Fire Code to read as follows:

5004.2.1 Spill control for hazardous material liquids. Rooms, buildings or areas used for storage of hazardous material liquids in individual vessels having a capacity of more than 55 gallons (208 L) or in which the aggregate capacity of multiple vessels exceeds 1,000 gallons (3785 L), shall be provided with spill control to prevent the flow of liquids to adjoining areas. Floors in indoor locations and similar surfaces in outdoor locations shall be constructed to contain a spill from the largest single vessel by one of the following methods:

- 1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in outdoor locations.
- 2. Liquid-tight floors in indoor <u>and outdoor</u> locations or similar areas provided with liquid-tight raised or recessed sills or dikes.
- 3. Sumps and collection systems, including containment pallets in accordance with Section 5004.2.3.
- 4. Other approved engineered systems.

Except for surfacing, the floors, sills, dikes, sumps and collection systems shall be constructed of noncombustible material, and the liquid-tight seal shall be compatible with the material stored. When liquid-tight sills or dikes are provided, they are not required at perimeter openings having an open-grate trench across the opening that connects to an approved collection system.

Amend Section 5004.2.2.2 of the 2016-2019 California Fire Code to read as follows:

5004.2.2.2 Incompatible Materials. Incompatible materials shall be separated from each other in independent secondary containment systems.

Amend Section 5004.2.3 of the 2016-2019 California Fire Code as follows:

5004.2.3 Containment pallets. Combustible containment pallets shall not be used inside buildings to comply with Section 5004.2 where the individual container capacity exceeds 55 gallons (208 L) or an aggregate capacity of multiple containers exceeds 1,000 gallons (3785 L) for liquids or where the individual container capacity exceeds 550 pounds (250 kg) or an aggregate of multiple containers exceeds 10,000 pounds (4540 kg) for solids.

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- 1. A liquid-tight sump accessible for visual inspection shall be provided;
- 2. The sump shall be designed to contain not less than 66 gallons (250L);
- 3. Exposed surfaces shall be compatible with material stored;
- 4. Containment pallets shall be protected to prevent collection of rainwater within the sump of the containment pallet.

16.40.370-240 Chapter 56 - General - Explosives and Fireworks.

Amend Section 5601.1.3 of the 2016-2019 California Fire Code to read as follows:

5601.1.3 Fireworks. The possession, manufacture, storage, sale, handling, and use of fireworks, including those fireworks classified as Safe and Sane by the California State Fire Marshal, are prohibited.

Exceptions: The use of fireworks for firework displays as allowed in Section 5608.

- 1.-Storage and handling of fireworks as allowed in Section 5604.
- 2. Manufacture, assembly and testing of fireworks as allowed in Section 5605 and Health and Safety Code Division 11.
- The use of fireworks for fireworks displays, pyrotechnics before a proximate audience and pyrotechnic special effects in motion pictures, television theatrical or group entertainment productions as allowed in Title 19, Division 1, Chapter 6 Fireworks reprinted in Section 5608 and Health and Safety Code Division 11.

16.40.385-260 Storage Chapter 57 - Flammable and Combustible Liquids.

Amend Section 5704.2.7.5.8 of the 2019 California Fire Code to delete Exception and to read as follows:

5704.2.7.5.8 Overfill Prevention. An approved means or method in accordance with Section 5704.2.9.7.5 shall be provided to prevent the overfill of all Class I, II and IIIA liquid storage tanks. Storage tanks in refineries, bulk plants or terminals regulated by Sections 5706.4 or 5706.7 shall have overfill protection in accordance with API 2350.

Exception: Outside aboveground tanks with a capacity of 1320 gallons (5000 L) or less provided an independent means of notifying the person filling the tank that the fluid level has reached 90 percent of tank capacity by providing an audible or visual alarm signal, or providing a tank level gauge marked at 90 percent of tank capacity.

An approved means or method in accordance with Section <u>5704.2.9.7.65704.2.9.7.5</u> shall be provided to prevent the overfilling of Class IIIB liquid storage tanks connected to fuel-burning equipment inside buildings.

Adopt Section 5704.2.7.5.9 of the 2019 California Fire Code to read as follows:

5704.2.7.5.9 Automatic Filling of Tanks. Systems that automatically fill flammable or combustible liquid tanks shall be equipped with overfill protection, approved by the fire code official, that sends an alarm signal to a constantly attended location and immediately stops the filling of the tank. The alarm signal and automatic shutoff shall be tested on an annual basis and records of such testing shall be maintained on-site for a period of five (5) years.

The limits referred to in Section 5704.2.9.6.1 of the California Fire Code, in which the storage of flammable or combustible liquids in aboveground tanks is prohibited are hereby established as all locations of the City of Cupertino that are residential or congested commercial areas as determined by the fire code official.

Amend Section 5704.2.9.6.1 of the 2019 California Fire Code as follows:

5704.2.9.6.1 Locations where above-ground tanks are prohibited. Storage of Class I and II liquids in aboveground tanks outside of buildings is prohibited in all locations of the City of Cupertino which are residential or congested commercial areas as determined by the fire code official.

16.40.380 Establishment of limits of districts in which storage of Class I and II liquids in aboveground tanks is prohibited.

— The limits referred to in Section 5704.2.4.4 of the California Fire Code, in which the storage of flammable or combustible liquids in aboveground tanks is prohibited are hereby established as all locations of the City of Cupertino that are residential or congested commercial areas as determined by the fire code official. Amend Section 5706.2.4.4 of the 2019 California Fire Code as follows:

5706.2.4.4 Locations where above-ground tanks are prohibited. Storage of Class I and II liquids in aboveground tanks outside of buildings is prohibited in all locations of the City of Cupertino which are residential or congested commercial areas as determined by the fire code official.

16.40.400 On-Demand Mobile Fueling

Adopt Section 5707 of the 2016 California Fire Code to read as follows:

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This language is in the model code

motor vehicles shall comply with Sections 5707.1 through 5707.7. **Exception:** Fueling from an *approved* portable container in cases of an emergency or for personal use.

5707.1 General. On demand mobile fueling operations that dispense Class I, II, and III liquids into the fuel tanks of

5707.1.1 Approval required. Mobile fueling operations shall not be conducted without first obtaining a *permit* and approval from the *fire code official*. Mobile fueling operations shall occur only at *approved* locations.

5707.2 Mobile fueling vehicle. An on demand mobile fueling vehicle shall be one of the following:

1. A tank vehicle complying with NFPA 385 that has chassis mounted *tanks* or *containers* where the aggregate cargo capacity does not exceed 1200 gallons (4542 L).

2. A vehicle with one or more chassis mounted *tanks* or *containers* that do not exceed 110 gallons (415 L) individual capacity and having an aggregate capacity that does not exceed 1200 gallons (4542 L).

3. A vehicle that carries a maximum of 60 gallons (227 L) of motor fuel in metal *safety cans listed* in accordance with UL 30 or other *approved* metal *containers* each not to exceed 5 gallons (19 L) in capacity.

The mobile fueling vehicle shall comply with the requirements of all local, state and federal requirements.

Mobile fueling vehicles with a chassis mounted *tank* in excess of 110 gallons (415 L) shall comply with the requirements of Section 5706.6, Section 5707, and NFPA 385.

The mobile fueling vehicle and its equipment shall be maintained in good repair.

Safety cans and approved metal containers shall be secured to the mobile fueling vehicle except when in use.

5707.3 Required documents. Documents developed to comply with Sections 5707.3.1 through 5707.3.3 shall be updated as necessary by the owner of the mobile fueling operation and shall be maintained in compliance with Section 107.3.

5707.3.1 Safety and emergency response plan. Mobile fueling operators shall have an *approved* written safety and emergency response plan that establishes policies and procedures for fire safety, spill prevention and control, personnel training and compliance with other applicable requirements of this code.

5707.3.2 Training records. Training records of operators shall be maintained. Mobile fueling vehicle operators shall possess evidence of training on proper fueling procedures and the safety and emergency response plan.

Amend section 5707.3.3 of the 2019 California Fire Code as follows:

5707.3.3 Site plan. A site plan shall be developed for each location at which mobile fueling occurs. The site plan shall be in sufficient detail to indicate: all buildings, structures, *lot lines*, property lines and appurtenances on site and their use and function; all uses adjacent to the *lot lines* of the site; fueling locations, the locations of all storm drain openings and adjacent waterways or wetlands; information regarding slope, natural drainage, curbing, impounding and how a spill will be kept on the site property; and the scale of the site plan.

5707.4 Mobile fueling areas. Mobile fueling shall not occur on public streets, public ways, or inside buildings. Fueling on the roof level of parking structures or other buildings is prohibited.

5707.4.1 Separation. Mobile fueling shall not take place within 25 feet (7620 mm) of *buildings*, property lines, or combustible storage.

Exception: The *fire code official* shall be authorized to decrease the separation distance for dispensing from metal *safety cans* or other *approved* metal *containers* in accordance with Section 5707.2.

When dispensing operations occur within 15 feet (4572 mm) of a storm drain, an *approved* storm drain cover or an *approved* equivalent method that will prevent any fuel from reaching the drain shall be used.

SCCFD Amendment



5707.4.2 Sources of ignition. Smoking, open flames, and other sources of ignition shall be prohibited within 25 feet (7620 mm) of fuel dispensing activities. Signs prohibiting smoking or open flames within 25 feet (7620 mm) of the vehicle and the point of fueling shall be prominently posted on the mobile fueling vehicle. The engines of vehicles being fueled shall be shut off during fueling.

5707.5 Equipment. Mobile fueling equipment shall comply with Sections 5707.5.1 through 5707.5.5.

5707.5.1 Dispensing hoses and nozzles. Where equipped, the dispensing hose shall not exceed 50 feet (15 240 mm) in length. The dispensing nozzles, and hoses and appurtenances shall be of an *approved* and *listed* type.

5707.5.2 Break-away device. A listed break away device shall be provided at the nozzle.

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Exception: Mobile fueling vehicles equipped with an *approved* brake interlock tied to the nozzle holder that prohibits movement of the mobile fueling vehicle when the nozzle is removed from its holder.

5707.6 Operations. Mobile fueling vehicles shall be constantly attended during fueling operations with brakes set and warning lights in operation. Mobile fueling vehicles shall not obstruct emergency vehicle access roads.

5707.6.1 Dispensing hose. Where equipped, mobile fueling vehicles shall be positioned in a manner to preclude traffic from driving over the dispensing hose. The dispensing hose shall be placed on an *approved* reel or in an *approved* compartment prior to moving the mobile fueling vehicle.

5707.6.2 Drip control. Operators shall place a drip pan or an absorbent pillow under the nozzle to catch drips and under each fuel fill opening prior to and during dispensing operations.

5707.6.3 Nighttime deliveries. Nighttime deliveries shall only be made in areas deemed adequately lighted by the *fire code official*.

5707.6.4 Vehicle lights. The mobile fueling vehicle flasher lights shall be in operation while dispensing operations are in progress.

5707.6.5 Safety cones. Safety cones or barriers shall be employed as warning devices to highlight the vehicle fueling area.

5707.6.6 Bonding. A means for bonding the mobile fueling vehicle to the motor vehicle shall be provided. Such bonding means shall be employed during fueling operations.

5707.6.7 Spill reporting. Spills shall be reported in accordance with Section 5003.3.1.

5707.7 Training. Mobile fueling vehicles shall be operated only by designated personnel who are trained on proper fueling procedures and the safety and emergency response plan. The vehicle operator training shall be approved by the *fire code official*.

16.40.410-280 Establishment of limits of districts in which the storage of stationary containers of flammable cryogenic fluids are to be prohibited. Chapter 58 - Flammable Gases and Flammable Cryogenic Fluids.

The limits referred to in Section 5806.2 of the California Fire Code in which the storage of flammable cryogenic fluids in stationary containers is prohibited are hereby established as all locations of the City of Cupertino which are residential and congested commercial areas as determined by the fire code official.

Amend Section 5806.2 of the 2019 California Fire Code as follows:

5806.2 Limitations. Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited in all locations of the City of Cupertino which are residential or congested commercial areas as determined by the fire code official.

Amend Section 5809.3.4 of the 2019 California Fire Code as follows:

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5809.3.4 Site plan. For other than emergency roadside service, a site plan shall be developed for each location at which mobile gaseous hydrogen fueling occurs. The site plan shall be in sufficient detail to indicate; all buildings, structures, lot lines, property lines and appurtenances on site and their use and function, and the scale of the site plan.

16.40.420 <u>300</u> <u>General Highly Toxic, Toxic and Moderately Toxic Materials.</u> <u>Chapter 60 – Highly Toxic and Toxic Materials.</u>

Amend Section 6001.1 of the 2019 California Fire Code to read as follows:

6001.1 Scope. The storage and use of highly toxic, toxic and moderately Toxic materials shall comply with this chapter. Compressed gases shall also comply with Chapter 53.

Exceptions:

1. Display and storage in Group M and storage in Group S occupancies complying with Section 5003.11

2. Conditions involving pesticides or agricultural products as follows:

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- 2.1 Application and release of pesticide, agricultural products and materials intended for use in weed abatement, erosion control, soil amendment or similar applications when applied in accordance with the manufacturer's instruction and label directions.
- 2.2 Transportation of pesticides in compliance with the Federal Hazardous Materials Transportation Act and regulations thereunder.
- 2.3 Storage in dwellings or private garages of pesticides registered by the U.S. Environ- mental Protection Agency to be utilized in and around the home, garden, pool, spa and patio.

Amend Section 6002.1 of the 2016 California Fire Code to read as follows:

6002.1 Definitions. The following terms are defined in Chapter 2:

CONTAINMENT SYSTEM. CONTAINMENT VESSEL. EXCESS FLOW VALVE. HIGHLY TOXIC. MAXIMUM THRESHOLD QUANTITY. MINIMUM THRESHOLD QUANTITY. MODERATELY TOXIC CAS. OZONE GAS GENERATOR. PHYSIOLOGICAL WARNING THRESHOLD. REDUCED FLOW VALVE. TOXIC.

16.40.430 Highly Toxic, Toxic and Moderately Toxic Compressed Gases including those used as Refrigerants.

Amend Section 6004.1 of the 2016-2019 California Fire Code to read as follows:

6004.1 General. Materials stored and used as a gas whether or not the material meets the definition of a compressed gas, and meets the definition of a highly toxic, toxic and moderately toxic gas shall comply with Section 6004. The storage and use of highly toxic, toxic, and moderately toxic compressed gases shall comply with this section.

The minimum threshold quantity for highly toxic, toxic and moderately toxic gases, vapors and mists for indoor and exterior storage and use are set forth in Table 6004.1.

Add Table 6004.1 of the 2016 California Fire Code to read as follows:

Table 6004.1	
Minimum Threshold Quantities for Highl	y Toxic, Toxic and Moderately Toxic Gases
Highly Toxic	θ
Toxic	10 cubic feet
Moderately Toxic	20 cubic feet

Amend Section 6004.1.1, 6004.1.1.1, 6004.1.1.2, 6004.1.1.3 of the 2016-2019 California Fire Code to read as follows:

6004.1.1 Special limitations for indoor storage and use by occupancy. The indoor storage and use of highly toxic, toxic and moderately toxic <u>compressed</u> gases in certain occupancies shall be subject to the limitations contained in Sections 6004.1.1.1 through 6004.1.1.3.

6004.1.1.1 Group A, E, I or U occupancies. <u>Highly toxic Toxic</u>, <u>highly toxic and moderately toxic compressed</u> gases shall not be stored or used within Group A, E, I or U occupancies.

Exception: Cylinders not exceeding 20 cubic feet (0.556m³) at normal temperature and pressure (NTP) are allowed

within gas cabinets or fume hoods.

6004.1.1.2 Group R occupancies. <u>Highly toxic Toxic</u>, <u>highly</u> toxic and moderately toxic <u>compressed</u> gases shall not be stored or used in Group R occupancies.

6004.1.1.3 Offices, retail sales and classrooms. <u>Highly toxic Toxic</u>, <u>highly</u> toxic and moderately toxic <u>compressed</u> gases shall not be stored or used in offices, retail sales or classroom portions of Group B, F, M or S occupancies.

Exception: In classrooms of Group B occupancies, cylinders with a capacity not exceeding 20 cubic feet (0.566 m³) at NTP are allowed in gas cabinets or fume hoods. <u>Amend Section 6004.1.2 of the 2016 California Fire Code to read as follows:</u>

6004.1.2 Gas cabinets. Gas cabinets containing highly toxic, toxic and moderately toxic gases shall comply with Section 5003.8.6 and the following requirements:

Council Agenda: October 15, 2019 Page: 40 Revision Date: -- 1. The average ventilation velocity at the face of gas cabinet access ports or windows shall not be less than 200 cubic feet per minute (1.02 m/s) with a minimum of 150 feet per minute (0.76 m/s) at any point of the access port or window.

2. Cas cabinets shall be connected to an exhaust system.

3. Cas cabinets shall not be used as the sole means of exhaust for any room or area.

4. The maximum number of cylinders located in a single gas cabinet shall not exceed three, except that cabinets containing cylinders not exceeding 1 pound (0.454 kg) net contents are allowed to contain up to 100 cylinders.

Gas cabinets required by Section 6004.2 or 6004.3 shall be equipped with an approved automatic sprinkler system in accordance with Section 903.3.1.1. Alternative fire extinguishing systems shall not be used.

Amend Section 6004.1.3 of the 2016 California Fire Code to read as follows:

6004.1.3 Exhausted enclosures. Exhausted enclosures containing highly toxic, toxic or moderately toxic gases shall comply with Section 5003.8.5 and the following requirements:

1. The average ventilation velocity at the face of the enclosure shall not be less than 200 feet per minute (1.02 m/s) with a minimum of 150 feet per minute (0.76 m/s).

2.-Exhausted enclosures shall be connected to an exhaust system.

3. Exhausted enclosures shall not be used as the sole means of exhaust for any room or area.

Exhausted enclosures required by Section 6004.2 or 6004.3 shall be equipped with an approved automatic sprinkler system in accordance with Section 903.3.1.1. Alternative fire extinguishing system shall not be used.

Adopt Section 6004.1.4 to the 2016 California Fire Code to read as follows:

6004.1.4 Automatic Shut-Off Valve. An automatic shut off valve, which is of a fail safe to close design, shall be provided to shut off the supply of highly toxic gases for any of the following:

- 1. Activation of a manual fire alarm system.
- 2. Activation of the gas detection system.
- 3. Failure of emergency power.
- 4. Failure of primary containment.
- 5. Seismic activity.
- 6. Failure of required ventilation.
- 7. Manual activation at an approved remote location.

Add Section 6004.1.5 to the 2016 California Fire Code to read as follows:

6004.1.5 Emergency Control Station. Signals from emergency equipment used for highly toxic gases shall be transmitted to an emergency control station or other approved monitoring station, which is continually staffed by trained personnel.

Adopt Section 6004.1.6 to the 2016 California Fire Code to read as follows:

6004.1.6 Maximum Threshold Quantity. Toxic gases stored or used in quantities exceeding the maximum threshold quantity in a single vessel per control area or outdoor control area shall comply with the additional requirements for highly toxic gases of Section 6004 of this code.

Moderately toxic gases stored or used in quantities exceeding the maximum threshold quantity in a single vessel per control area or outdoor control area shall comply with the additional requirements for toxic gases of Section 6004 of this

This language is in the model code

code.

The following formula shall be used to calculate the maximum threshold quantity:

Max TQ (pounds) = LC_{50} (ppm) x 2 lb.

For gas mixtures containing one or more toxic, highly toxic or moderately toxic components, the LC₅₀ shall be calculated using CCA Standards P 20 and P 23.

Adopt Section 6004.1.7 to the 2016 California Fire Code to read as follows:

6004.1.7 Reduced Flow Valve. All containers of materials other than lecture bottles containing Highly Toxic material and having a vapor pressure exceeding 29 psia shall be equipped with a reduced flow valve when available. If a reduced flow valve is not available, the container shall be used with a flow limiting device. All flow limiting devices shall be part of the valve assembly and visible to the eye when possible; otherwise, they shall be installed as close as possible to the cylinder source.

Council Agenda: October 15, 2019 Page: 41 Revision Date: -- Adopt Section 6004.1.8 to the 2016 California Fire Code to read as follows:

6004.1.8 Fire Extinguishing Systems. Buildings and covered exterior areas for storage and use areas of materials regulated by this Chapter shall be protected by an automatic fire sprinkler system in accordance with NFPA 13. The design of the sprinkler system for any room or area where highly toxic, toxic and moderately toxic gases are stored, handled or used shall be in accordance with Section 5004.5.

Adopt Section 6004.1.9 to the 2016 California Fire Code to read as follows:

6004.1.9 Local Gas Shut Off. Manual activation controls shall be provided at locations near the point of use and near the source, as approved by the fire code official. The fire code official may require additional controls at other places, including, but not limited to, the entry to the building, storage or use areas, and emergency control stations.

- Manual activated shut off valves shall be of a fail safe to close design.

Adopt Section 6004.1.10 to the 2016 California Fire Code to read as follows:

6004.1.10 Exhaust Ventilation Monitoring. For highly toxic gases and toxic gases exceeding threshold quantities, a continuous monitoring system shall be provided to assure that the required exhaust ventilation rate is maintained. The monitoring system shall initiate a local alarm. The alarm shall be both visual and audible and shall be designed to provide warning both inside and outside of the interior storage, use, or handling area.

Adopt Section 6004.1.11 to the 2016 California Fire Code to read as follows:

6004.1.11 Emergency Response Plan. If the preparation of an emergency response plan for the facility is not required by any other law, responsible persons shall prepare, or cause to be prepared, and filed with the fire code official, a written emergency response plan. If the preparation of an emergency response plan is required by other law, a responsible person shall file a copy of the plan with the fire code official.

Adopt Section 6004.1.12 to the 2016 California Fire Code to read as follows:

6004.1.12 Cylinder Leak Testing. Cylinders shall be tested for leaks immediately upon delivery and again immediately prior to departure. Testing shall be approved by the fire code official in accordance with appropriate nationally recognized industry standards and practices, if any. Appropriate remedial action shall be immediately undertaken when leaks are detected.

Adopt Section 6004.1.13 to the 2016 California Fire Code to read as follows:

6004.1.13 Inert Gas Purge System. Gas systems shall be provided with dedicated inert gas purge systems. A dedicated inert gas purge system may be used to purge more than one gas, provided the gases are compatible. Purge gas systems inside buildings shall be located in an approved gas cabinet unless the system operates by vacuum demand.

Adopt Section 6004.1.14 to the 2016 California Fire Code to read as follows:

6004.1.14 Seismic Shutoff Valve. An automatic seismic shut-off valve, which is of a fail-safe to close design, shall be provided to shutoff the supply of highly toxic, toxic and moderately toxic gases with an LC⁵⁰ less than 3000 parts per million upon a seismic event within 5 seconds of a horizontal sinusoidal oscillation having a peak acceleration of 0.3G (1.47m/sec²) and a period of 0.4 seconds.

Amend Section 6004.2 of the 2016-2019 California Fire Code to read as follows:

6004.2 Indoor Storage and Use. The indoor storage or use of highly toxic, toxic or moderately toxic compressed gases shall be in accordance with Sections 6004.2.1 through <u>6004.2.2.10.4.6004.2.4.</u>

Amend Section 6004.2.1 of the 2016-2019 California Fire Code to read as follows:

This language is in the model code

6004.2.1 Applicability. The applicability of regulations governing the indoor storage and use of highly toxic, toxic, and moderately toxic compressed gases shall be as set forth in Sections 6004.2.1.1 through <u>6004.2.1.5.6004.2.1.4</u>.

Amend Sec. 6004.2.1.1 of the 2016 California Fire Code to read as follows:

6004.2.1.1 Quantities Not Exceeding the Maximum Allowable Quantity per Control Area. The indoor storage or use of highly toxic, toxic and moderately toxic gases in amounts not exceeding the maximum allowable quantity per control area set forth in Table 5003.1.1(2) shall be in accordance with Sections 5001, 5003, 6001, 6004.2.1.4 and 6004.2.1.5.

Adopt Section 6004.2.1.4 of the 2016-2019 California Fire Code to read as follows:

6004.2.1.4 Quantities not exceeding the minimum threshold quantity quantities, but not exceeding the maximum allowable per control area. The indoor storage or use of highly toxic, toxic and moderately toxic gases in amounts not exceeding the minimum threshold quantity quantities per control area set forth in Table 6004.2.1.4

Council Agenda: October 15, 2019 Page: 42 Revision Date: -- but not exceeding maximum allowable quantity per control area set forth in Table 5003.1.1(2) 6004.1 shall be in accordance with Sections 5001, 5003, 6001, and 6004.1 and Chapter 506004.4.

Add Table 6004.2.1.4 to the 2019 California Fire Code to read as follows:

Minimum Threshold Quantities for Hig	hly Toxic, Toxic and Moderately Toxic	
Gases for Indoor Storage and Use		
Highly Toxic	<u>20</u>	
Toxic	405 cubic feet	
Moderately Toxic	405 cubic feet	

Adopt Section 6004.2.1.5 of the 2016 California Fire Code to read as follows:

6004.2.1.5 Quantities exceeding the minimum threshold quantity per control area. The indoor storage or use of highly toxic, toxic and moderately toxic gases in amounts exceeding the minimum threshold quantity per control area set forth in Table 6004.1 shall be in accordance with Sections 6001, 6004.1, 6004.2 and Chapter 50.

Amend Sec. 6004.2.2 of the 2016 California Fire Code to read as follows:

6004.2.2 General Indoor Requirements. The general requirements applicable to the indoor storage and use of highly toxic and toxic compressed gases shall be in accordance with Sections 6004.2.2.1 through 6004.2.2.10.4.

Moderately toxic gases with an LC⁵⁰ equal to or less than 3000 parts per million shall comply with the requirements for toxic gases in Sections 6004.2.2.1 through 6004.2.2.10.4.

Moderately toxic gases with an LC₅₀ more than 3000 parts per million but not greater than 5000 parts per million and exceeding the maximum threshold quantity, as determined by 6004.1.6, shall comply with the requirements for toxic gases in Sections 6004.2.2.1 through 6004.2.2.7.

Moderately toxic gases shall not be considered as toxic gases for maximum allowable quantities determinations under Table 5003.1.1(2).

Amend Sec. 6004.2.2.7 of the 2016 California Fire Code to read as follows:

6004.2.2.7 Treatment Systems. The exhaust ventilation from gas cabinets, exhausted enclosures and gas rooms and local exhaust systems required in Section 6004.2.2.4 and 6004.2.2.5 shall be directed to a treatment system. The treatment system shall be utilized to handle the accidental release of gas and to process exhaust ventilation. The treatment system shall be designed in accordance with Sections 6004.2.2.7.1 through 6004.2.2.7.5 and Chapter 5 of the California Mechanical Code.

Exceptions:

1. Highly toxic, toxic and moderately toxic gases storage. A treatment system is not required for cylinders, containers and tanks in storage when all of the following are provided:

- 1.1. Valve outlets are equipped with gas tight outlet plug or caps.
- 1.2. Hand wheel operated valves have handles secured to prevent movement.

1.3. Approved containment vessels or containment systems are provided in accordance with Section 6004.2.2.3.

Amend 6004.2.2.10.2 of the 2016 California Fire Code to read as follows:

6004.2.2.10.2. Alarms. The gas detection system shall initiate a local alarm and transmit a signal to a constantly attended control station when a short term hazard condition is detected. The alarm shall be both visual and audible and shall provide warning both inside and outside the area where the gas is detected. The audible alarm shall be distinct from all other alarms.

This language is in the model code

6004.3 Outdoor Storage and Use. The outdoor storage or use of highly toxic, toxic and moderately toxic compressed gases shall be in accordance with Sections 6004.3.1 through 6004.3.4. The minimum threshold quantity for highly toxic, toxic and moderately toxic gases for outdoor storage and use are set forth in Table 6004.1.

Amend Section 6004.3.1 of the 2016 California Fire Code to read as follows:

6004.3.1 Applicability. The applicability of regulations governing the outdoor storage and use of highly toxic, toxic, and moderately toxic compressed gases shall be as set forth in Sections 6004.3.1.1 through 6004.3.1.5.

Amend Section 6004.3.1.1 of the 2016 California Fire Code to read as follows:

6004.3.1.1 Quantities Not Exceeding The Maximum Allowable Quantity Per Control Area. The outdoor storage or use of highly toxic and toxic gases in amounts exceeding the maximum allowable quantity per control area set forth in Table 5004.3.1.1(4) shall be in accordance with Sections 5001, 5003, 6001, 6004.1, 6004.3.1.4 and 6004.3.1.5.

Adopt Section 6004.3.1.4 of the 2016 California Fire Code to read as follows:

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This language is in the model code

6004.3.1.4 Quantities not exceeding the minimum threshold quantity per control area. The outdoor storage or use of highly toxic, toxic and moderately toxic gases in amounts not exceeding the minimum threshold quantity per control area set forth in Table 6004.1 shall be in accordance with Sections 6001, 6004.1 and Chapter 50.

Adopt Section 6004.3.1.5 of the 2016 California Fire Code to read as follows:

6004.3.1.5 Quantities exceeding the minimum Threshold Quantity per control area. The outdoor storage or use of highly toxic, toxic and moderately toxic gases in amounts exceeding the minimum threshold quantity per control area set forth in Table 6004.1 shall be in accordance with Sections 6001, 6004.3 and Chapter 50.

Amend Section 6004.3.2 of the 2016 California Fire Code to read as follows:

6004.3.2 General outdoor requirements. The general requirements applicable to the outdoor storage and use of highly toxic, toxic and moderately toxic gases shall be in accordance with Sections 6004.3.2.1 through 6004.3.2.4.

Moderately toxic gases with an LC₃₀ equal to or less than 3000 parts per million shall comply with the requirements for toxic gases in Sections 5001, 5003, 6001, 6004.1 and 6004.3.

Moderately toxic gases with an LC⁵⁰ more than 3000 parts per million but not greater than 5000 parts per million and exceeding the maximum threshold quantity, as determined by 6004.1.6, shall comply with the requirements for toxic gases in Sections 5001, 5003, 6001, 6004.1 and 6004.3.2.1 through 6004.3.2.4.

Moderately toxic gases shall not be considered as toxic gases for maximum allowable quantities determinations under Table 5003.1.1(4).

— Amend Section 6004.3.3 of the 2016 California Fire Code to read as follows:

Add Section 6004.4 to the 2019 California Fire Code to read as follows:

6004.4 General indoor requirements. The general requirements applicable to the indoor storage and use of highly toxic, toxic and moderately toxic compressed gases shall be in accordance with Sections 6004.4 through 6004.4.8.2.

Add Section 6004.4.1 to the 2019 California Fire Code to read as follows:

6004.4.1 Cylinder and tank location. Cylinders shall be located within gas cabinets, exhausted enclosures or gas rooms. Portable and stationary tanks shall be located within gas rooms or exhausted enclosures.

Exceptions:

1. Where a gas detection system is provided in accordance with 6004.4.8

Add Section 6004.4.2 to the 2019 California Fire Code to read as follows:

6004.4.2. Ventilated areas. The room or area in which gas cabinets or exhausted enclosures are located shall be provided with exhaust ventilation. Gas cabinets or exhausted enclosures shall not be used as the sole means of exhaust for any room or area.

Add Section 6004.4.3 to the 2019 California Fire Code to read as follows:

6004.4.3. Piping and controls. In addition to the requirements of Section 5003.2.2, piping and controls on stationary tanks, portable tanks, and cylinders shall comply with the following requirements:





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1. Stationary tanks, portable tanks, and cylinders in use shall be provided with a means of excess flow control on all tank and cylinder inlet or outlet connections.

Exceptions:

1. Inlet connections designed to prevent backflow.

2. Pressure relief devices.

Add Section 6004.4.4 to the 2019 California Fire Code to read as follows:

6004.4.4 Gas rooms. Gas rooms shall comply with Section 5003.8.4 and both of the following requirements:

1. The exhaust ventilation from gas rooms shall be directed to an exhaust system.

2. Gas rooms shall be equipped with an approved automatic sprinkler system. Alternative fire- extinguishing systems shall not be used.

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Add Section 6004.4.5 to the 2019 California Fire Code to read as follows:

6004.4.5 Treatment systems. The exhaust ventilation from gas cabinets, exhausted enclosures and gas rooms, required in Section 6004.4.1 shall be directed to a treatment system. The treatment system shall be utilized to handle the accidental release of gas and to process exhaust ventilation. The treatment system shall be designed in accordance with Sections 6004.2.2.7.1 through 6004.2.2.7.5 and Chapter 5 of the California Mechanical Code.

Exceptions:

<u>1. Highly toxic, toxic, and moderately toxic gases—storage. A treatment system is not required for cylinders, containers and tanks in storage where all of the following controls are provided:</u>

1.1 Valve outlets are equipped with gas- tight outlet plugs or caps.
1.2 Hand wheel-operated valves have handles secured to prevent movement.
1.3 Approved containment vessels or containment systems are provided in accordance with Section 6004.2.2.3.

2. Highly toxic, toxic, and moderately toxic gases — use. Treatment systems are not required for highly toxic, toxic, and moderately toxic gases supplied by stationary tanks, portable tanks, or cylinders where a gas detection system complying with Section 6004.4.8 and listed or approved automatic-closing fail- safe valves are provided. The gas detection system shall have a sensing interval not exceeding 5 minutes. Automatic-closing fail- safe valves shall be located immediately adjacent to cylinder valves and shall close when gas is detected at the permissible exposure limit (PEL) by a gas sensor monitoring the exhaust system at the point of discharge from the gas cabinet, exhausted enclosure, ventilated enclosure or gas room.

Add Section 6004.4.5.1 to the 2019 California Fire Code to read as follows:

6004.4.5.1. Design. Treatment systems shall be capable of diluting, adsorbing, absorbing, containing, neutralizing, burning or otherwise processing the contents of the largest single vessel of compressed gas. Where a total containment system is used, the system shall be designed to handle the maximum anticipated pressure of release to the system when it reaches equilibrium.

Add Section 6004.4.5.2 to the 2019 California Fire Code to read as follows:

6004.4.5.2. Performance. Treatment systems shall be designed to reduce the maximum allowable dis- charge concentrations of the gas to one-half immediate by dangerous to life and health (IDLH) at the point of discharge to the atmosphere. Where more than one gas is emitted to the treatment system, the treatment system shall be designed to handle the worst-case release based on the release rate, the quantity and the IDLH for all compressed gases stored or used.

Add Section 6004.4.5.3 to the 2019 California Fire Code to read as follows:

6004.4.5.3. Sizing. Treatment systems shall be sized to process the maximum worst-case release of gas based on the maximum flow rate of release from the largest vessel utilized. The entire contents of the largest compressed gas vessel shall be considered.

Add Section 6004.4.5.4 to the 2019 California Fire Code to read as follows:

6004.4.5.4 Stationary tanks. Stationary tanks shall be labeled with the maximum rate of release for the compressed gas contained based on valves or fittings that are inserted directly into the tank. Where multiple valves or fittings are provided, the maximum flow rate of release for valves or fittings with the highest flow rate shall be indicated. Where liquefied compressed gases are in contact with valves or fittings, the liquid flow rate shall be utilized for computation purposes. Flow rates indicated on the label shall be converted to cubic feet per minute (cfm/min) (m3/s) of gas at normal temperature and pressure (NTP).

Add Section 6004.4.5.5 to the 2019 California Fire Code to read as follows:











6004.4.5.5 Portable tanks and cylinders. The maximum flow rate of release for portable tanks and cylinders shall be calculated based on the total release from the cylinder or tank within the time specified in Table 6004.2.2.7.5. Where portable tanks or cylinders are equipped with approved excess flow or reduced flow valves, the worst-case release shall be determined by the maximum achievable flow from the valve as determined by the valve manufacturer or compressed gas supplier. Reduced flow and excess flow valves shall be permanently marked by the valve manufacturer to indicate the maximum design flow rate. Such markings shall indicate the flow rate for air under normal temperature and pressure.

Add Section 6004.4.6 to the 2019 California Fire Code to read as follows:

6004.4.6. Emergency power. Emergency power shall be provided for the following systems in accordance with Section 604:

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1. Exhaust ventilation system.

<u>2. Treatment system.</u>

3. Gas detection system.

4. Smoke detection system.

Add Section 6004.4.6.1 of the 2019 California Fire Code to read as follows:

6004.4.6.1. Fail-safe systems. Emergency power shall not be required for mechanical exhaust ventilation and treatment systems where approved fail-safe systems are installed and designed to stop gas flow.

Add Section 6004.4.7 of the 2019 California Fire Code to read as follows:

6004.4.7 Automatic fire detection system. An approved automatic fire detection system shall be installed in rooms or areas where highly toxic, toxic, and moderately toxic compressed gases are stored or used. Activation of the detection system shall sound a local alarm. The fire detection system shall comply with Section 907.

Add Section 6004.4.8 of the 2019 California Fire Code to read as follows:

6004.4.8. Gas detection system. A gas detection system complying with Section 916 shall be provided to detect the presence of gas at or below the PEL or ceiling limit of the gas for which detection is provided.

Exceptions:

- 1. A gas detection system is not required for toxic and moderately toxic gases when the physiological warning threshold level for the gas is at a level below the accepted PEL for the gas.
- 2. A gas detection system is not required for highly toxic, toxic, and moderately toxic gases where cylinders, portable tanks, and all non-continuously welded connects are within a gas cabinet or exhausted enclosures.

Add Section 6004.4.8.1 of the 2019 California Fire Code to read as follows:

6004.4.8.1. Alarms. The gas detection system shall initiate a local alarm and transmit a signal to an approved location.

Add Section 6004.4.8.2 of the 2019 California Fire Code to read as follows:

6004.4.8.2. Shut off of gas supply. The gas detection system shall automatically close the shut off value at the source on gas supply piping and tubing related to the system being monitored for whichever gas is detected.

Exception: Automatic shutdown is not required for highly toxic, toxic, and moderately toxic compressed gas systems where all of the following controls are provided:

<u>1. Constantly attended / supervised.</u>

2. Provided with emergency shutoff valves that have ready access.

16.40.440-320 Establishment of limits in which storage of liquefied petroleum gases is prohibited. Chapter 61 – Liquefied Petroleum Gases.

— The limits referred to in Section 6104.2 of the California Fire Code, in which storage of liquefied petroleum gas is restricted, are hereby established as all locations of the City of Cupertino that are residential or congested commercial areas.

Amend Section 6104.2 of the 2019 California Fire Code as follows:

6104.2 Maximum capacity within established limits. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one



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installation shall not exceed a water capacity of 2,000 gallons (7,570 L) in all locations of the City of Cupertino which are residential or congested commercial areas as determined by the fire code official.

Exception: LPG may be used for industrial operations or when natural gas would not provide a viable substitute for LPG. Portable containers for temporary heating and/or cooking uses may be permitted if stored and handled in accordance with this code. Facilities in commercial areas for refueling portable or mobile <u>LGP-LPG</u> containers may be approved by the fire code official on a case by case basis.

16.40.450-340 Silane Distribution systems automatic shutdown. Chapter 64 - Pyrophoric Materials.

Adopt Add Section 6405.3.1 of to the 2016 2019 California Fire Code to read as follows:

6405.3.1 Silane distribution systems automatic shutdown. Silane distribution systems shall automatically shut down at the source upon activation of the gas detection system at levels above the alarm level and/or failure of the ventilation system for the silane distribution system.

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16.40.460 Reference Standards.

Adopt Chapter 80 of the 2016 California Fire Code with the following amendments:

CGA

... 3505.2.1

C. 7 (2014) Cuide to Classification and Labeling of Compressed Cases 5303.4.2, 5503.4.2
C 7 (2014) Guide to Classification and Labeling of Compressed Gases 5303.4.2, 5503.4.2
G 13 (2015) Storage and Handling of Silane and Silane Mixtures
P 1 (2000) Safe Handling of Compressed Cases in Containers 5305.7
ANSI/P 18 (2013) Standard for Bulk Inert Cas Systems
S 1.1 (2011) Relief Device Standards – Part 1 – Cylinders for Compressed Gases 5003.3.2, 5503.2
S 1.2 (2009) Pressure Relief Device Standards – Part 2 Portable Containers for
S 1.3 (2008) Pressure Relief Device Standards – Part 3 – Stationary Storage Containers for Compressed Cases
. 5003.3.2, 5503.2
V 1 (2013) Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections

Section 16.54.010 of Chapter 16.54 of Title 16 of the Cupertino Municipal Code is hereby <u>repealed in its entirety and</u> <u>replaced with the following Chapter 16.54 to be entitled, numbered, and</u> amended to read as follows:

CHAPTER 16.54: ENERGY CODE

16.54.010 Code Adoption. Adoption of the 2019 California Energy Code.

- A. The provisions of the 2016 California Energy Code and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, and is by such reference adopted.
- A. The provisions of the 2019 California Energy Code and specified Appendices and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or amended by this ordinance, and is by such adopted by reference.
- B. One (1) copy of the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

[Title 16 – Chapter 16.56 – No Change]

Amend Chapter 16.58.010 of the Cupertino Municipal Code to read as follows: Section 16.58.010 of Chapter 16.58 of Title 16 of the Cupertino Municipal Code is hereby repealed in its entirety and replaced with the following Chapter 16.58 to be entitled, numbered, and amended to read as follows:

16.58.010 Code Adoption. Adoption of the 2019 California Green Building Standards Code.

- A. The provisions of the 2016-2019 California Green Building Standards Code and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, and is by such reference adopted.
- B. One (1) copy of the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and is made available for public inspection.

Amend Chapter 16.58.015 of the 2019 California Green Building Standards Code to read as follows:

This language is in the model code

16.58.015 Adoption of Appendix Chapters.

No Appendix Chapters from the 2016-2019 California Green Building Standards Code have been adopted.

Amend Chapter 16.58.040 of the 2019 California Green Building Standards Code to read as follows:

16.58.040 Local Amendments.

The following provisions of this Chapter shall constitute local amendments to the cross-referenced provisions of the 2016 2019 California Green Building Standards Code and shall be deemed to amend the cross-referenced sections of said Code with the respective provisions set forth in this Chapter.

Amend Chapter 16.58.100 of the 2019 California Green Building Standards Code to read as follows:

16.58.100 Section 101.10-Amended.

Council Agenda: October 15, 2019 Page: 47 Revision Date: -- Amend Section 101.10 to read as follows:

101.10 Mandatory requirements. This code contains mandatory green building measures. In addition, this Chapter contains required minimum green building measures as amended by the City of Cupertino. All new buildings and structures, additions, renovations and tenant improvements subject to requirements in Table 101.10 shall comply with the mandatory measures of the <u>2016-2019</u> California Green Building Standards Code as adopted by the state in addition to local amendments included in this code, regardless of height or number of stories, unless specifically exempted by this code.

[Title 16 – Chapter 16.60 – No Change]

Add Chapter 16.62 to be entitled, numbered, and to read as follows:

CHAPTER 16.62: HISTORICAL BUILDING CODE

Section

16.62.010 Adoption of the 2019 California Historical Building Code

16.62.010 Adoption of the 2019 California Historical Building Code

- A. Except as otherwise provided in this chapter, the provisions of the 2019 California Historical Building Code and specified Appendices and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or amended by this ordinance, and is by such adopted by reference.
- <u>B.</u> One (1) copy of each volume of the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

Add Chapter 16.64 to be entitled, numbered, and to read as follows:

CHAPTER 16.64: EXISTING BUILDING CODE

Section

16.64.010 Adoption of the 2019 California Existing Building Code.

16.64.010 Adoption of the 2019 California Existing Building Code.

- <u>A. Except as otherwise provided in this chapter, the provisions of the 2019 California Existing Building Code and specified Appendices and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or amended by this ordinance, and is by such adopted by reference.</u>
- <u>B.</u> One (1) copy of each volume of the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

Add Chapter 16.68 to be entitled, numbered, and to read as follows:

CHAPTER 16.68: REFERENCED STANDARDS CODE

Section

16.68.010 Adoption of the 2019 California Referenced Standards Code.

16.68.010 Adoption of the 2019 California Referenced Standards Code.

A. Except as otherwise provided in this chapter, the provisions of the 2019 California Referenced Standards Code and specified Appendices and each and all of the regulations, provisions, conditions and terms of the code is referred to as if fully set forth in this chapter, except such portions as are hereinafter deleted, modified or amended by this ordinance, and is by such adopted by reference.

B. One (1) copy of each volume of the code therefore is on file in the office of the Building Official pursuant to Health and Safety Code Section 18942 and are made available for public inspection.

[Title 16 – Chapter 16.70 – No Change] [Title 16 – Chapter 16.72 – No Change] [Title 16 – Chapter 16.74 – No Change]

Council Agenda: October 15, 2019 Page: 48 Revision Date: -- [Title 16 – Chapter 16.80 – No Change]

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