

**ORDINANCE NO. \_\_\_\_\_**

**AN ORDINANCE OF THE CITY OF SAN JOSE AMENDING CHAPTER 17.12 OF TITLE 17 OF THE SAN JOSE MUNICIPAL CODE TO ADOPT THE 2019 CALIFORNIA FIRE CODE WITH LOCAL AMENDMENTS RELATING TO FIRE FLOW; SPRINKLER AND FIRE ALARM SYSTEMS AND STANDARDS; LITHIUM BATTERY; 3D PRINTING ADDITIVE MANUFACTURING; MOBILE FUELING; PLANT PRODUCTION EXTRACTION PROCESSING SYSTEMS; AND HIGHLY TOXIC, TOXIC, AND MODERATELY TOXIC GASES; AND TO MAINTAIN EXISTING FIRE PROTECTION AND REGULATORY AUTHORITY; AND REPEALING CHAPTER 17.78 OF TITLE 17 OF THE SAN JOSE MUNICIPAL CODE**

**WHEREAS**, the Fire Marshal of the State of California has adopted that certain fire code, entitled "2019 California Fire Code", which, with certain deletions, amendments, exceptions and additions, and including certain appendices has been copyrighted and published by the California Building Standards Commission; and

**WHEREAS**, pursuant to Sections 13143.5 and 18941.5 of the California Health and Safety Code, certain amendments to the building standards contained in the 2019 California Fire Code, as set forth in this Ordinance, are reasonably necessary to protect the health, welfare and safety of the citizens of San José because of local climatic, geological and topographical conditions; and

**WHEREAS**, the City Council of the City of San José (the "City" or "San José") hereby makes the following findings with respect to local geological, topographical and climatic conditions relating to the amendments to the 2019 California Fire Code for which such findings are required:

- A. The City's dense population creates constant challenge for the Fire Department in providing overall effective service to the community by protecting life, property, and the environment through prevention and response. The high density metropolitan environment contributes to the likelihood of an impeded response. Heavy traffic congestion on the City's major streets already acts as a barrier to timely response for fire and emergency vehicles. Roadway traffic flow is increasing due to the population growth associated with the construction of new high density facilities such as High Rise Buildings. The increased congestion increases the likelihood of injury or property damage. In the event of an accident or other emergency at one of the key points of intersection, sections of the City could be isolated and response time could be sufficiently delayed so as to further increase the likelihood of undesirable consequences.

- B. San José is part of the Santa Clara County region which is made of several exceptional communities. The seamless fire protection efforts provided through "automatic or mutual aid" agreements allow for each community to support each other, but this can also reduce coverage of fire stations during first-response and subsequent multiple-response incidents. A high rise incident will draw multiple alarm assignments taking numerous fire stations out of service. This situation would cause a "move-up" of other fire stations to cover the empty stations. Thus, many fire stations will ultimately be affected for an alarm assignment/dispatch. Hence, even with mutual aid or possibly due to it, extended response times could further increase the likelihood of undesirable consequences.
- C. Climate is one of the understated factors that impact fire behavior and other major emergency events in the Santa Clara Valley region, as the local climate is generally considered to be temperate. However, because climate cannot be controlled, significant impacts on fire and emergency response may result when it is unusually hot or wet. Moisture loss during a long, hot, dry, season will increase combustibility throughout the City's less developed and Wildland areas resulting in fires and increased medical calls such as heat stroke. Conversely, heavy rains increase the likelihood of traffic congestion on the City's streets, creating a barrier to timely response for fire and emergency vehicles.
- D. The City is located within a very active seismic area. Severe seismic action could disrupt communications, damage gas mains, cause extensive electrical hazards, and place extreme demands on both private fire protection systems and equipment. The limited and widely dispersed resources of the Fire Department could result in failure to meet and provide the fire protection and life safety needs of the community.
- E. The major earthquake faults in the region are the San Andreas, Hayward and Calaveras Faults. Other active and potentially active faults include the Silver Creek Fault. A US Geological Survey Study, released in April 2009 charts the course of the Silver Creek Fault throughout the densely populated area of downtown San José, where many of the City's highest buildings are located. Earthquakes can result in the hazard of liquefaction, which is the transformation of soil from a solid state to a liquid state. According to the most recently published maps prepared by the California Geological Survey, the City's downtown is in an area that has potential for liquefaction during a major earthquake.
- F. The local geographic, topographic and climatic conditions pose an increased hazard in the acceleration, spread, magnitude, and severity of potential fires in the City of San José, and may cause disruptions in operation of private fire protection systems and equipment and delayed fire response time, allowing for further fire growth and spread.

- G. Amendments to the California Fire Code have been adopted in the past by the San José City Council based on specific findings of local geographic, topographic and climatic conditions; and the Council hereby reaffirms such findings and confirms that the facts on which such findings were based continue to exist.
- H. The provisions of this Ordinance establishing certain more restrictive standards than the 2019 California Fire Code are reasonably necessary to protect the health, welfare and safety of the citizens of San José because of the local conditions noted above and will better serve to prevent or minimize fire damage resulting from the local conditions stated above; and

**WHEREAS**, Chapter 17.12 of the San José Municipal Code must be amended to adopt the 2019 California Fire Code with local amendments and to maintain the existing level of fire protection and regulatory authority within the City of San José; and

**WHEREAS**, this Ordinance was found to be categorically exempt from environmental review, per the provisions of Section 15061(b)(3) of the California Environmental Quality Act of 1970, as amended, and Section 21.08.500 of the San José Municipal Code, under PP 10-173;

**NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SAN JOSE:**

SECTION 1. Section 17.12.010 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**Part 1  
General**

**17.12.010 San José Fire Code**

The San José Fire Code shall consist of the ~~2016~~ 2019 California Fire Code (CFC) as copyrighted and published by the California Building Standards Commission which is hereby adopted and incorporated by reference into this Chapter, subject to the deletions, amendments, exceptions, and additions which are specified in this Chapter.

SECTION 2. Section 17.12.020 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**17.12.020 Compliance Required**

It shall be unlawful for any person to erect, construct, enlarge, alter, repair, move, improve, remove, convert, demolish, equip, use, occupy or maintain any building, structure or equipment, or maintain any use, or cause or permit or suffer the same to be

done, in a manner which does not conform to the requirements of this Chapter, any provision of the ~~2016-2019~~ California Fire Code as adopted under this Chapter, or any permit issued under this Chapter.

**SECTION 3.** Section 17.12.090 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**17.12.090 Exemption for Pending Applications**

- A. The provisions of the ~~2016-2019~~ California Fire Code related to construction, as adopted and amended herein, shall not apply to any building or structure for which application for a building permit was made prior to January 1, ~~2020~~~~2017~~, except as may be found by the Chief to constitute a distinct hazard to life or property. Such buildings or structure shall be erected, constructed, enlarged, altered or repaired in accordance with the provisions of this Chapter in effect at the date of the application.
- B. All other applications shall be processed in accordance with the provisions of the ~~2016-2019~~ California Fire Code, as adopted and amended herein.

**SECTION 4.** Section 17.12.110 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**17.12.110 Cross - References to the ~~2016-2019~~ California Fire Code**

The provisions of this Chapter contain cross-references to the provisions of the ~~2016-2019~~ California Fire Code in order to facilitate reference and comparison to those provisions.

**SECTION 5.** Section 17.12.120 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**17.12.120 Local Amendments to the ~~2016-2019~~ California Fire Code**

The provisions of this Chapter shall constitute local amendments to the cross-referenced provisions of the ~~2019-2016~~ California Fire Code and shall be deemed to replace the cross-referenced sections of the ~~2019-2016~~ California Fire Code with the respective provisions set forth in this Chapter.

**Findings**

The amendments set forth in 17.12 are reasonably necessary because of the following local geological, topographical and climatic conditions:

- I. The City of San José is located within a very active seismic area. Severe seismic action could disrupt communications, damage gas mains, cause extensive electrical hazards, and place extreme demands on both private fire protection systems and equipment. The limited and widely dispersed resources of the Fire Department could result in failure to meet and provide the fire protection and life safety needs of the community.
- II. The local geographic, topographic and climatic conditions pose an increased hazard in the acceleration, spread, magnitude, and severity of potential fires in the City of San José, and may cause disruptions in operation of private fire protection systems and equipment and delayed fire response time, allowing for further fire growth and spread.
- III. This section adopts the latest standards currently listed by the State of California Fire Marshal's Office for automatic fire protection systems and includes references to the amendments to the standards made in the California Fire Code.

**SECTION 6.** Part 2 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**Part 2**

**Adoption of Administrative Provisions of the ~~2019 2016~~ California Fire Code**

**17.12.200 Adoption of Chapter 1 of the ~~2019 2016~~ California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 1 of the ~~2019 2016~~ California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.210 Provisions of Chapter 1 of the ~~2019 2016~~ California Fire Code Which are Not Adopted or Incorporated By Reference**

The following provisions, including all subparts thereof, of Chapter 1 of the ~~2019 2016~~ California Fire Code, are not adopted or incorporated in this Chapter by reference, and shall not be deemed to be a part of this Chapter nor a part of the Fire Code of the City of San José: Sections 1.1.1, 1.1.8, 1.1.9, 1.1.10, 1.1.11, ~~1.01.1, 101.1~~, 103.1, 103.2, 103.3, 104, ~~109108~~ and ~~110409~~.

**17.12.220 Change of Use or Occupancy (2019 2016-CFC Chapter 1 Section 102.3)**

Chapter 1 Section 102.3 of the 2019 California Fire Code is amended to add the following:

**102.3.1** An approved automatic sprinkler system shall be provided throughout buildings or structures when an automatic sprinkler system is required per the California Fire Code due to a change of use or occupancy.

**17.12.230 Authority to Inspect (2019 2016-CFC Chapter 1 Section 106.1)**

Chapter 1 Section ~~106.4~~107.1 of the California Fire Code is amended to read as follows:

**107.1~~106.4~~ Inspection Authority.** The fire prevention bureau shall have authority to inspect buildings and premises as often as necessary, for the purpose of ascertaining and causing to be corrected, any conditions which could tend to cause fire or contribute to its spread, result in an unauthorized discharge of hazardous materials, or any violation of this Code or any other law or standard affecting fire safety, life safety, or environmental safety.

**17.12.240 Types of Permits (2019 2016-CFC Chapter 1 Section 105.1.2)**

Chapter 1 Section 105.1.2 of the 2019 California Fire Code is amended to read as follows:

**105.1.2 Types of permits.** There shall be two types of permits as follows:

1. Operational permit. An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Chapter 1, Section 105.6 for either:
  - 1.1. A prescribed period. If no period is prescribed, the permit shall be for one year.
  - 1.2. Until renewed or revoked.
2. Construction permit. A construction permit allows the applicant to install or modify systems and equipment for which a permit is required by Chapter 1, Section 105.7.

**17.12.250 Amended Operational Permit Requirements (2019 2016-CFC, Chapter 1 Section 105.6)**

The following subparts of Chapter 1 Section 105.6 of the 2019 ~~2016~~-California Fire Code are amended to read as follows:

**105.6.9105.6.10 Covered and open mall buildings:** An operational permit is required for:

1. The placement of kiosks, retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid-or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.
4. The use of a covered mall as a place of assembly.

**105.6.256 Lumberyards, woodworking and firewood storage:** An operational permit is required to store lumber in excess of 100,000 board feet (8,333 ft<sup>3</sup>/236 m<sup>3</sup>); or to store fire wood in excess of ten (10) cords; or to conduct woodworking operations involving mass production or involving more than one of each type of machine, or where machines are used continuously (as opposed to intermittently) or substantial products of sawdust may be a problem. See Chapter 28.

**105.6.441 Repair garages and motor fuel-dispensing facilities:** An operational permit is required for operation of repair garages and automotive, marine and fleet motor fuel-dispensing facilities, including fueling with flammable or combustible liquids, liquefied petroleum gases, compressed natural gas, liquefied natural gas, or hydrogen.

**105.6.464 Storage of tires, scrap tires and tire byproducts:** An operational permit is required to establish, conduct or maintain outdoor storage of tires, scrap tires and tire byproducts that exceeds 1,000 cubic feet (92 m<sup>3</sup>) of total volume of scrap tires and for indoor storage of tires and tire byproducts.

**17.12.260 Additional Operational Permit Requirements (2019 2016-CFC Chapter 1 Section 105.6.49)**

Chapter 1 Section 105.6.5149 of the 2019 2016-California Fire Code is amended to add the following to the list of activities, operations, practices, or functions for which an operational permit is required:

~~**105.6.49.4 Battery System:** An operational permit is required to operate stationary battery systems having a liquid capacity of more than 50 gallons (189 L).~~

**105.6.51.4 3D Printing Industrial Additive Manufacturing:** An operational permit is required to operate industrial additive manufacturing as described in San Jose Municipal Code 17.12.415.

**105.6.51.5** **Battery Storage System:** An operational permit is required to operate Stationary Storage Systems having capacities exceeding the values shown in 2019 California Fire Code Table in Section 1206.2.

**105.6.51.6** ~~105.6.49.5~~ **Day Care Facility:** An operational permit is required to operate any day care home or facility which provides day care for adults or children.

**105.6.51.7** **Lithium Battery Storage System:** An operational permit is required to collect or store more than 1,000 pounds (454 kg) of lithium batteries.

**105.6.51.7** ~~105.6.49.6~~ **High-Rise Buildings:** An operational permit is required to operate any high-rise building.

**105.6.51.8** ~~105.6.49.7~~ **Institutions:** An operational permit is required to operate any health facility as defined in Section 1250 of the California Health and Safety Code, with an occupant load of more than six (6) persons, or to operate any jail or facility where personal liberties of the occupants are restrained. See California Code of Regulations Title 24 Part 2.

**105.6.51.9** ~~105.6.49.8~~ **Multi-story building:** An operational permit is required to operate any building which is not a high-rise building, but has four or more floors. See Section 3.09 of Title 19 of the California Code of Regulations.

**105.6.51.10** ~~105.6.49.9~~ **Residential care facility:** An operational permit is required to operate any residential care or service facility, as described in the California Building Code, accommodating more than six (6) persons.

**105.6.51.11** ~~105.6.49.10~~ **Emergency Responder Radio Coverage (ERRC):** An operational permit is required to operate ERRC systems and related equipment.

**105.6.51.12** ~~105.6.49.11~~ **Fire Breathing Air Replenishments System (FBARS):** An operational permit is required to operate FBARS systems and related equipment.

**105.6.51.13** ~~105.6.49.12~~ **Multifamily Residential Building:** An operational permit is required to operate any Residential Group R-2 or R-2.1 as defined in CBC 310.34



**105.6.51.14 On-Demand Mobile Fueling Operations:** An operational permit is required to operate on-demand mobile fueling operations as defined in the 2019 California Fire Code, Section 5707.

**17.12.270 Failure to Comply with Stop Work Order (2019 2016-CFC, Chapter 1 Section 112.4111.4)**

Section 112.4111.4 of the 2019 2016-California Fire Code is amended to read as follows:

**112.4111.4 Failure to comply.** No person shall fail to comply after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition.

SECTION 7. Part 3 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

### **Part 3 Definitions**

**17.12.300 Adoption of Chapter 2 of the 2019 2016-California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 2 of the 2019 2016-California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.310 Amendments to Section 202 of the 2019 California Fire Code Adding and Amending Definitions Definitions (2016-CFC Section 202)**

Section 202 of the 2016-2019 California Fire Code is amended to modify and add the following defined terms to read as follows ~~and to define Corrosive Liquid and Spill Control:~~

**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:

1. 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 as defined in NFPA 70 including locations outside of

the 3D printing equipment that may create a hazardous location during loading or unloading parts, sieving, introducing powder for parts build or during an upset condition.

2. 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, utilize aluminum or titanium dusts or a combustible dust collection system.

**BATTERY SYSTEM.** ~~A system which consists of three interconnected subsystems:~~

- ~~1. 1. A battery.~~
- ~~2. A battery charger.~~
- ~~3. A collection of rectifiers, inverters, converters and associated electrical equipment as required for a particular application.~~

**CONTINUOUS GAS DETECTION SYSTEM.** ~~A 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 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 at or below ½ IDLH (or 0.05 LC 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; or
2. Any liquid having a pH of 2 or less or 12.5 or more; or
3. Any liquid classified as corrosive by the U.S. Department of Transportation; or
4. Any material exhibiting the characteristics of corrosivity in accordance with Title 22, California Code of Regulations Section 66261.

**DESOLVENTIZING.** The process of removing solvent from solute of an extract.

**DISTILLATION.** The process of separating the components or substances from a liquid mixture by using selective boiling and condensation.

**EXTRACTION.** A process that uses Type 6 Solvents with pressure or temperature to pull the desired phytochemicals from plant material.

**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.

**PLANT EXTRACTION PROCESS SYSTEM** any system that removes and refines from plants the oils and fats by producing a solvent from raw plant material, desolventizing of the raw material and production of the miscella, distillation of the solvent from the miscella and solvent recovery.

**PLANT EXTRACTION PROCESS SYSTEM WASTE** is the waste products from the plant extraction process.

**PLANT POST OIL PROCESSING** includes distillation, winterization, and solvent recovery.

**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 necessary to ensure detection and remedy of the primary containment failure.

**SOLVENT.** A substance capable of dissolving or dispersing one or more other substances.

**SOLVENT RECOVERY** is a process system that takes effluent and extracts useful solvents and raw materials back out of the plant extract processing systems waste stream.

**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 preventing the materials from spreading to other parts of the room.

**TYPE 6 SOLVENTS** are the “non-volatile solvents” as defined and listed as part of the cannabis manufacturing Department of Public Health Manufacturing Cannabis Licensing System Type 6 per California Code of Regulations Title 17 Chapter 13, Article 2. General Provisions §40118. For the purposes of this Code, these solvents include carbon dioxide and ethanol.

**WINTERIZATION PROCESS** involves putting the raw cannabis extract through an ethanol wash that filters some of the undesirable plant materials. The raw extract is immersed in the ethanol, where it is then frozen, hence its name. This process separates the refined plant product from other compounds like terpenes and wastes such as waxes, lipids, and plant chlorophyll.

~~**WORKSTATION.** A defined space or an independent piece of equipment using hazardous materials within a fabrication area 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, detection devices, electrical devices and other processing and scientific equipment. A defined space or an independent piece of equipment using hazardous materials with a hazard rating of 3 or 4 in accordance with 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, detection devices, electrical devices and other processing and scientific equipment.~~

**SECTION 8.** Part 4 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

#### **Part 4**

#### **General Precautions Against Fire, Emergency Planning and Fire Service Features**

#### **17.12.400 Adoption of Chapters 3, 4 and 5 and Appendix Chapter 4 of the 2019 2016 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 3, 4 and 5 and Appendix Chapter 4 of the 2019 2016 California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

#### **17.12.410 Amendment to Section 404 of the 2016 California Fire Code to Add Provision Related to Emergency Plan and Hazardous Materials Management Plan Cabinets**

~~Section 404 of the 2016 California Fire Code is amended to add the following new subsection to be numbered and entitled as follows:~~

~~**404.7 Emergency Plan and Hazardous Materials Management Plan Cabinets.** In large commercial, industrial or residential complexes, the Chief may require the fire~~

~~safety and evacuation plans and/or the Hazardous Materials Management Plan to be locked in approved cabinets in approved locations that are accessible to the Fire Department in the event of an emergency.~~

**17.12.410 Amendment to Section 315.3 of the 2019 California Fire Code to Delete Hose Stream or Sprinkler Stream Ceiling Clearance Exceptions for High Piled Storage:**

Section 315.3.1 of the 2019 California Fire Code is amended to read as follows:

**315.3.1 Ceiling Clearance:**

Ceiling clearance shall be maintained 2 feet (610 mm) or more below the ceiling in non-sprinklered building and not less than 18 inches (457 mm) below the sprinkler head deflectors in sprinklered areas of the building.

**Exceptions:**

1. Deleted

2. Deleted

**17.12.420 Amendment of Section 503.1 of the 2016 California Fire Code Related to Fire Apparatus Access Road**

~~Section 503.1 of the 2016 California Fire Code is amended 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 California Fire Code Appendix D as modified herein.~~

**17.12.420 Amendment to Table 315.7 of the 2019 California Fire Code to Correct Wood Pallet Separation Distance Entry Error**

Table 315.7.6(1) of the 2019 California Fire Code is amended to read as follows:

Table 315.7.6(1)  
SEPARATION DISTANCES BETWEEN WOOD PALLET STACKS AND BUILDINGS

| <u>WALL CONSTRUCTION</u>         | <u>OPENING TYPE</u>                            | <u>WOOD PALLET SEPARATION DISTANCE (feet)</u> |                          |                        |
|----------------------------------|--|---|--------------------------|------------------------|
|                                  |  | <u>≤ 50 Pallets</u>                           | <u>51 to 200 Pallets</u> | <u>&gt;200 Pallets</u> |
| <u>Masonry</u>                   | <u>None</u>                                    | <u>2</u>                                      | <u>2</u>                 | <u>2</u>               |
| <u>Masonry</u>                   | <u>Fire-rated glazing with open sprinklers</u> | <u>2</u>                                      | <u>5</u>                 | <u>20</u>              |
| <u>Masonry</u>                   | <u>Fire-rated glazing</u>                      | <u>10</u>                                     | <u>15</u>                | <u>20</u>              |
| <u>Masonry</u>                   | <u>Plain glass with open sprinklers</u>        | <u>10</u>                                     | <u>15</u>                | <u>20</u>              |
| <u>Noncombustible</u>            | <u>None</u>                                    | <u>10</u>                                     | <u>15</u>                | <u>20</u>              |
| <u>Wood with open sprinklers</u> | <u>-</u>                                       | <u>10</u>                                     | <u>15</u>                | <u>20</u>              |
| <u>Wood</u>                      | <u>None</u>                                    | <u>15</u>                                     | <u>30</u>                | <u>90</u>              |
| <u>Any</u>                       | <u>Plain glass</u>                             | <u>15</u>                                     | <u>30</u>                | <u>90</u>              |

**17.12.430 Amendment of Section 505.1 of the 2016 California Fire Code Related to Identification Numbers**

Section 505.1 of the 2016 California Fire Code is amended to be entitled and read as follows:

**505.1 Address Identification:** Approved numbers or addresses shall be placed on all new and existing buildings in such a position as to be plainly visible and legible from the street or road fronting the property. Numbers shall contrast with their background. Subunits of any building or complex, not having individual addresses, shall be identified in a consistent manner, either numerically or alphabetically, using a logical sequence. Unit numbers or letters shall be affixed near the main entrance of each occupancy in such a position as to be plainly visible and legible. Lighted directory maps may be required at building complex entrances or other locations, as specified by the Fire Code Official.

**17.12.430 Amendment to Section 315 of the 2019 California Fire Code to Add Subsection 315.8 Relating to Lithium Battery Storage and Handling Requirements**

Section 315 of the 2019 California Fire Code is amended to add the following new subsection to be numbered and titled as follows:

**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 105.6.51.

**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.

**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.

#### **17.12.440 Amendment of Section 507.5.1 of the 2016 California Fire Code Related to Fire Hydrants**

Section 507.5.1 of the 2016 California Fire Code is amended to read as follows:

**507.5.1 Where required.** Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an approved route around the



~~exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the Fire Code Official.~~

~~**Exception:** For Group R-3 and Group U occupancies equipped throughout with an approved automatic sprinkler system, the distance requirements may be modified by the Fire Code Official.~~

#### **17.12.440 Amendment to Add Section 321 of the 2019 California Fire Code for Additive Manufacturing Requirements**

Chapter 3 of the 2019 California Fire Code is amended to add the following new section to be numbered and titled as follows:

### **SECTION 321 ADDITIVE MANUFACTURING**

**321.1 General.** Additive manufacturing equipment and operations shall comply with Section 321.

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

1. Non-industrial additive manufacturing shall comply with Section 321.2.
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 321.2.2. Additive manufacturing equipment and operations that do not comply with Section 321.2 shall comply with Section 320.3.

**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.
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 320.3.1 through 320.3.13.

**321.3.1 Permits required.** Permits shall be obtained from the fire code official in accordance with Section 105.6 prior to engaging in industrial additive manufacturing operations.

**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. Gas detection will include oxygen depletion alarm monitoring system along piping and areas where gases are expected to accumulate interlocked with automatic shutoff valves. Ventilation system shall be interlocked with automatic shutoff when ventilation system fails.

**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 q.

**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

#### **17.12.450 Amendment to Section 404 of the 2019 California Fire Code to Add Provision Related to Emergency Plan and Hazardous Materials Management Plan Cabinets**

Section 404 of the 2019 California Fire Code is amended to add the following new subsection to be numbered and titled as follows:

**404.7 Emergency Plan and Hazardous Materials Management Plan Cabinets.** In large commercial, industrial or residential complexes, the Chief may require the fire safety and evacuation plans and/or the Hazardous Materials Management Plan to be locked in approved cabinets in approved locations that are accessible to the Fire Department in the event of an emergency.

**17.12.460 Amendment of Section 505.1 of the 2019 California Fire Code Related to Identification Numbers**

Section 505.1 of the 2019 California Fire Code is amended to be titled and read as follows:

**505.1 Address Identification:** Approved numbers or addresses shall be placed on all new and existing buildings in such a position as to be plainly visible and legible from the street or road fronting the property. Numbers shall contrast with their background. Subunits of any building or complex, not having individual addresses, shall be identified in a consistent manner, either numerically or alphabetically, using a logical sequence. Unit numbers or letters shall be affixed near the main entrance of each occupancy in such a position as to be plainly visible and legible. Lighted directory maps may be required at building complex entrances or other locations, as specified by the Fire Code Official.

**17.12.470 Amendment of Section 508.1 of the 2019 California Fire Code Related to Fire Command Center Building Requirements**

Section 508.1.2 of the California Fire Code Section is amended to read as follows:

**508.1.2 Separation.** The fire command center shall be separated from the remainder of the building by not less than a 2-hour fire barrier constructed in accordance with section 707 of the California Building Code or horizontal assembly constructed in accordance with section 711 of the California Building Code, or both.

**508.1.7 Ventilation.** The fire command center shall be provided with an independent ventilation or air-conditioning system with 100% outdoor air supply and connected to emergency power.

SECTION 9. Part 5 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**Part 5**

**Building Services and Systems, Fire Resistance Rated Construction and Interior Finish, Decorative Materials and Furnishings**

**17.12.500 Adoption of Chapters 6, 7 and 8 of the ~~2019~~ 2016 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 6, 7 and 8 of the ~~2019~~ 2016 California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.510 Amendment of Section 608.6.1 of the 2016 California Fire Code Related to Ventilation of Stationary Storage Battery Rooms**

Section 608.6.1 of the 2016 California Fire Code, shall be amended to read as follows:

**~~608.6.1 Room Ventilation.~~** Ventilation shall be provided in accordance with the California Mechanical Code and the following:

- ~~1. For flooded lead acid, flooded Ni-Cd, and VRLA batteries, the ventilation system shall be designed to limit the maximum concentration of hydrogen to 1 percent (1%) of the total volume of the room; or~~
- ~~2. Continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot [(1 ft<sup>3</sup>/min/ft<sup>2</sup> or 0.0051 m<sup>3</sup>/(s·m<sup>2</sup>)] of the floor area of the room.~~

~~—Exception: Deleted.~~

SECTION 10. Part 6 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**Part 6**

**Fire Protection, ~~Sprinkler~~Suppression, and Alarm Detection and ~~Smoke Control~~  
Systems**

**17.12.610 Adoption of Chapter 9 of the 2019 ~~2016~~ California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 9 of the ~~2016~~ 2019 California Fire Code, including the Tables therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.620 Amendment of Section 903 of the 2019 California Fire Code Relating to Automatic Fire Sprinkler System Requirements**

**Findings**

The amendments set forth in this Part are reasonably necessary because of the findings set forth above in 17.12.120 and the following additional local geological, topographical and climatic conditions:

- ~~I. The City of San José is located within a very active seismic area. Severe seismic action could disrupt communications, damage gas mains, cause extensive electrical hazards, and place extreme demands on both private fire protection systems and equipment. The limited and widely dispersed resources~~

~~of the Fire Department could result in failure to meet and provide the fire protection and life safety needs of the community.~~

- ~~II. The local geographic, topographic and climatic conditions pose an increased hazard in the acceleration, spread, magnitude, and severity of potential fires in the City of San José, and may cause disruptions in operation of private fire protection systems and equipment and delayed fire response time, allowing for further fire growth and spread.~~
- ~~III. This section adopts the latest standards currently listed by the State of California Fire Marshal's Office for automatic fire protection systems and includes references to the amendments to the standards made in the California Fire Code.~~

- IV. The type of automatic fire sprinkler systems set forth in the amendment is a more restrictive standard which will better prevent fire damage which can result from local conditions.

II. If not amended, Section 914.2, 914.3, 914.4, 914.6 of the 2019 California Fire Code would allow omission of fire sprinkler coverage in certain areas of covered malls, high-rise buildings, buildings with atriums, stages, and platforms.

III. The requirement for total fire sprinkler coverage set forth in the amendment is a more restrictive standard which will better prevent fire damage, which can result from local conditions.

### **Automatic Sprinkler Systems (2016 CFC 903)**

- A. Subsection 903.2 of the 2019 California Fire Code ~~Section 903~~ is amended to read as follows:

**903.2 Where required.** Approved automatic sprinkler systems shall be provided in the locations described in the following:

1. Throughout existing buildings and structures where an increase is made to the floor area that results in the building exceeding 10,000 square feet or the proposed change in use or contents of the building creates a higher risk as indicated in Section 102.3 of the California Fire Code.
2. Throughout existing one- and two-family dwellings where an increase of over 500 square feet is made to the floor area that results in the building exceeding 3,600 square feet.
3. Throughout buildings and structures that are four or more stories in height, regardless of the floor area.

4. Throughout new buildings and structures that exceed 6,200 square feet.
5. Throughout new buildings and structures described in Sections 903.2.1 through 903.2.~~2019~~ as modified herein.

B. Subsection 903.2.2 of the 2019 California Fire Code is amended to read as follows:

**903.2.2 Ambulatory care facilities.**

An automatic sprinkler system shall be installed throughout the entire floor containing an ambulatory care facility where either of the following conditions exists at any time:

1. Four or more care recipients are incapable of self-preservation.
2. One or more care recipients that are incapable of self-preservation are located at other than the level of exit discharge serving such a facility.

In buildings where ambulatory care is provided on levels other than the level of exit discharge, an automatic sprinkler system shall be installed throughout the entire floor as well as the floors below where such care is provided, and all floors between the level of exit discharge, and all floors below the level of exit discharge.

**Exception: Deleted**

CB. Subsection 903.2.8 of the California Fire Code Section 903 is amended by adding the following new subsection:

**903.2.8.5 Balconies and decks.** Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units and sleeping units, provided there is a roof or deck above. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

D. Subsection 903.2.18 of the California Fire Code is amended to read as follows:  
~~Subsection 905.3 of the California Fire Code is amended to read as follows:~~

~~905.3 Required installations. Standpipe systems shall be installed where required by Sections 905.3.1 through 905.3.11.1. Standpipe systems are NOT allowed to~~

~~be combined with automatic sprinkler systems. Standpipe Systems shall be Manual Wet as defined by NFPA 14-13 Section 3.3.15.5.~~

~~Exception: Standpipe systems are not required in Group R-3 occupancies.~~

**903.2.18 Group U private garages and carports accessory to R-3 occupancies.** Carports with habitable space above and attached garages, accessory to Group R-3 occupancies, shall be protected by residential fire sprinklers in accordance with this section. Residential fire sprinklers shall be connected to and installed in accordance with an automatic residential fire sprinkler system that complies with NFPA 13D as amended by San José. Fire sprinklers shall be residential sprinklers or quick-response sprinklers, design to provide a minimum density of 0.05 gpm/ft<sup>2</sup> (2.04 mm/min.) over the area to the garage and/or carport, but not to exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions with respect to sprinkler placement.

**Exception: Deleted**

E. Subsection 903.3.1.2.1 of the 2019 California Fire Code is amended to read as follows: Subsection 913.4 of the California Fire Code is amended to read as follows:

~~913.4 Valve Supervision. Where provided, the fire and jockey pump suction, discharge and bypass valves, and the isolation valves on the backflow prevention device or assembly shall be supervised open by one of the following methods.~~

~~1. Central station or proprietary station signaling service through the FACU.~~

**903.3.1.2.1 Balconies and decks.** Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units and sleeping units.

Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

F. Section 903.3.1.2.3 of the California Fire Code is amended to add the following fifth requirement to Attics:

**5. Attic Protection.** Where sprinkler protection is not required by CFC 903.3.1.2.3.1 through 903.1.2.3.4, then pilot sprinklers shall be provided in the attics and between floors where floor/ceiling assemblies consist of open web wood joists or trusses. Pilot sprinklers shall be intermediate temperature rated, K=4.2, quick response. Pilot sprinklers shall be located within 12 inches (30.48 cm) of the structure and/or at the



apex of each ridgeline when applicable. A sprinkler is required where the ridgeline and hips converge. Sprinklers shall be spaced a maximum 30 feet (9.144 m) centers (maximum 15 feet (4.572 m) from outside walls) and shall be located at all heat and fire sources including furnaces, hot water heaters, above kitchen ranges, etc.

**CG.** Subsection 903.4 of the 2019 California Fire Code Section 903 is ~~deleted and replaced with the following~~amended to read as follows:

**903.4 Sprinkler system supervision and alarms.** ~~All~~Valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures, waterflow switches on all sprinkler systems and commercial kitchen hood & duct fixed extinguishing systems shall be electrically supervised by a listed fire alarm control unit.

**Exceptions:**

1. Automatic sprinkler systems protecting one- and two-family dwellings.
2. Limited ~~area sprinkler~~area sprinkler systems in accordance with Section 903.3.8.
3. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic water and the automatic sprinkler system, and a separate shutoff valve for the automatic sprinkler system is not provided.
4. Jockey pumps control valves that are sealed or locked in the open position.
5. Control valves to paint spray booths or dip tanks that are sealed or locked in the open position.
6. Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.
7. Trim valves to pressure switches in dry, preaction and deluge sprinkler systems that are sealed or locked in the open position.
8. Commercial kitchen hood & duct fixed extinguishing systems located in buildings where a sprinkler monitoring system is not required or not present.



**17.12.630 Fire Protection Based on Special Detailed Requirements of Use and Occupancy (CFC Chapter 914)**

**Findings**

The amendments set forth in this Part are reasonably necessary because of the following local geological, topographical and climatic conditions:

- I. ~~The City of San José is located within a very active seismic area. Severe seismic action could disrupt communications, damage gas mains, cause extensive electrical hazards, and place extreme demands on both private fire protection systems and equipment. The limited and widely dispersed resources of the Fire Department could result in failure to meet and provide the fire protection and life safety needs of the community.~~
- II. ~~The local geographic, topographic and climatic conditions pose an increased hazard in the acceleration, spread, magnitude, and severity of potential fires in the City of San José, and may cause disruptions in operation of private fire protection systems and equipment and delayed fire response time, allowing for further fire growth and spread.~~
- III. ~~If not amended, Section 914.2, 914.3, 914.4, 914.6 of the California Fire Code would allow omission of fire sprinkler coverage in certain areas of covered malls, high-rise buildings, building with atriums, stages and platforms.~~
- IV. ~~The requirement for total fire sprinkler coverage set forth in the amendment is a more restrictive standard which will better prevent fire damage which can result from local conditions.~~

**Covered Mall Buildings (CFC 914.2)**

- A. ~~Subsection 914.2.1 of the California Fire Code Section 914.2 is amended to read as follows:~~

**~~914.2.1 Automatic sprinkler system.~~** ~~Covered and open mall buildings and buildings connected shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, which shall comply with the following:~~

1. ~~The automatic sprinkler system shall be complete and operative throughout occupied space in the mall building prior to occupancy of any of the tenant spaces. Unoccupied tenant spaces shall be similarly protected unless provided with approved alternative protection.~~
2. ~~Sprinkler protection for the mall shall be independent from that provided for tenant spaces or anchors.~~

- ~~3. Sprinkler protection for tenant spaces of an open mall building shall be independent from that provided for anchor buildings.~~
- ~~4. Sprinkler protection shall be provided beneath exterior circulation balconies located adjacent to an open mall.~~
- ~~5. Where tenant spaces are supplied by the same system, they shall be independently controlled.~~

~~**Exception:** Deleted.~~

### ~~**High-Rise Buildings (CFC 914.3)**~~

- ~~B. Subsection 914.3.1 of the California Fire Code Section 914.3 is amended to read as follows:~~

~~**914.3.1 Automatic sprinkler system.** Buildings and structures shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 914.3.2. A sprinkler water-flow alarm-initiating device and a control valve with a supervisory signal-initiating device shall be provided at the lateral connection to the riser on each floor.~~

~~**Exception:** Deleted.~~

### ~~**Atriums (CFC 914.4)**~~

- ~~C. Subsection 914.4.1 of the California Fire Code Section 914.4 is amended to read as follows:~~

~~**914.4.1 Automatic sprinkler system.** An approved automatic sprinkler system shall be installed throughout the entire building.~~

~~**Exceptions:** Deleted.~~

### ~~**Stages (CFC 914.6)**~~

- ~~D. Subsection 914.6.1 of the California Fire Code Section 914.6 is amended to read as follows:~~

~~**914.6.1 Automatic sprinkler system.** Stages shall be equipped with an automatic fire-extinguishing system in accordance with Section 903.3.1.1. Sprinklers shall be installed under the roof and gridiron and under all catwalks and galleries over the stage. Sprinklers shall be installed in dressing rooms, performer lounges, shops and storerooms accessory to such stages.~~

**Exceptions:** Deleted.

**17.12.630 Amendment of Section 905.3 of the 2019 California Fire Code Relating to Standpipe Requirements**

Subsection 905.3 of the 2019 California Fire Code is amended to read as follows:

**905.3 Required installations.** Standpipe systems shall be installed where required by Sections 905.3.1 through 905.3.11.1. Standpipe systems are NOT allowed to be combined with automatic sprinkler systems. Standpipe Systems shall be Manual Wet as defined by NFPA 14-19 Section 3.3.20.5.

**Exception:** Standpipe systems are not required in Group R-3 occupancies.

**17.12.640 Amendment of Section 907 of the 2019 California Fire Code Relating to Fire Alarm and Detection System Requirements**

Subsection 907.5.2.3.3 of the 2019 California Fire Code is amended to read as follows:

**907.5.2.3.3 Group R-2.** In Group R-2 occupancies required by section 907 to have a fire alarm system, each story that contains dwelling units and sleeping units shall be provided with the future capability to support visible alarm notifications appliances in accordance with NFPA 72. The future capability shall include all of the following:

1. The interconnection of the building fire alarm system with the unit smoke alarms.
2. The replacement of audible appliances with combination audible/visible appliances.
3. The future extension of the existing wiring from the unit smoke alarm locations to required locations for visible appliances.

Subsection 907.6.1.1 of the 2019 California Fire Code is amended to read as:

**907.6.1.1 High-rise buildings.** Wiring for fire alarm system shall be installed in electrical metallic tubing (EMT) in accordance with the California Electrical Code. Flexible metallic conduit (FMC) is permitted when connections are made to initiate devices or notification appliances not to exceed 6 feet in length.

Wiring for fire alarm network communication circuits between multiple controls units shall be in accordance with the following:

1. Class A or class X redundant pathway separated by rated construction and meet the requirements of pathway survivability level 3 of NFPA 72.

2. Fire alarm network communication control units shall be evenly distributed and located on every 3 to 5 floors throughout the building and function independently in case of failure of one or more control units.

Subsection 907.6.6 of the 2019 California Fire Code is amended by adding the following new subsection:

907.6.6.4 Fire Alarm Signal Transmission. All new or replacement of fire alarm panels shall transmit alarm, trouble and supervisory signals descriptively with the correct device identification point and location to UL approved central station. Alarms shall not be permitted to be transmitted as a general alarm or zone condition. Installing contractor shall be responsible to obtain UL certification for the fire alarm system.

#### **17.12.650 Amendment of Section 913.4 of the 2019 California Fire Code Relating to Fire Suppression Valve Supervision Requirements**

Subsection 913.4 of the 2019 California Fire Code is amended to read as follows:

**913.4 Valve Supervision.** Where provided, the fire and jockey pump suction, discharge and bypass valves, and the isolation valves on the backflow prevention device or assembly shall be supervised open by one of the following methods.

1. Central station or proprietary station signaling service through the FACU.

#### **17.12.660 Amendment of Section 914 of the 2019 California Fire Code Relating to Fire Protection Based on Special Detailed Requirements of Use and Occupancy**

#### **Findings**

The amendments set forth in this Part are reasonably necessary because of the local geological, topographical and climatic conditions stated above in 17.12.120 and also because of the following additional local geographical, topographic, and climatic conditions:

- I. If not amended, Section 914.2, 914.3, 914.4, 914.6 of the California Fire Code would allow omission of fire sprinkler coverage in certain areas of covered malls, high-rise buildings, building with atriums, stages and platforms.
- II. The requirement for total fire sprinkler coverage set forth in the amendment is a more restrictive standard which will better prevent fire damage which can result from local conditions.

- A. Subsection 914.2.1 of the 2019 California Fire Code Section 914.2 for Covered and open mall buildings is amended to read as follows:

**914.2.1 Automatic sprinkler system.** Covered and open mall buildings and buildings connected shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, which shall comply with the following:

1. The automatic sprinkler system shall be complete and operative throughout occupied space in the mall building prior to occupancy of any of the tenant spaces. Unoccupied tenant spaces shall be similarly protected unless provided with approved alternative protection.
2. Sprinkler protection for the mall shall be independent from that provided for tenant spaces or anchors.
3. Sprinkler protection for tenant spaces of an open mall building shall be independent from that provided for anchor buildings.
4. Sprinkler protection shall be provided beneath exterior circulation balconies located adjacent to an open mall.
5. Where tenant spaces are supplied by the same system, they shall be independently controlled.

**Exception:** Deleted.

- B. Subsection 914.3.1 of the 2019 California Fire Code for High-Rise Buildings – Automatic Sprinkler System is amended to read as follows:

**914.3.1 Automatic sprinkler system.** Buildings and structures shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 914.3.2. A sprinkler water-flow alarm-initiating device and a control valve with a supervisory signal-initiating device shall be provided at the lateral connection to the riser on each floor.

**Exception:** Deleted.

- C. Subsection 914.4.1 of the 2019 California Fire Code for Atriums – Automatic Sprinkler System is amended to read as follows:

**914.4.1 Automatic sprinkler system.** An approved automatic sprinkler system shall be installed throughout the entire building.

**Exceptions:** Deleted.

D. Subsection 914.6.1 of the 2019 California Fire Code for Stages – Automatic Sprinkler System is amended to read as follows:

**914.6.1 Automatic sprinkler system.** Stages shall be equipped with an automatic fire-extinguishing system in accordance with Section 903.3.1.1. Sprinklers shall be installed under the roof and gridiron and under all catwalks and galleries over the stage. Sprinklers shall be installed in dressing rooms, performer lounges, shops and storerooms accessory to such stages.

**Exceptions:** Deleted.

SECTION 11. Part 7 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**Part 7**

**Means of Egress, Construction Requirements for Existing Buildings, and Energy Requirements**

**17.12.700 Adoption of Chapter 10, 11, and 12 of the ~~2016-2019~~ California Fire Code**

Except as otherwise provided for in this Chapter, Chapters ~~10, 11, and 12~~ of the ~~2019 2016~~ California Fire Code, including the Tables therein, ~~are~~ adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

SECTION 12. Part 8 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**Part 8**

**Special Occupancy and Operation Provisions**

**17.12.800 Adoption of Chapters 20 Through ~~35-38~~ of the ~~2019 2016~~ California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 20 through ~~35-38~~ of the ~~2019 2016~~ California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.810 Amendment of Section 3301.1 of the 2016 California Fire Code Relating to Fire Safety During Construction**

~~Section 1401.1 is renumbered to Section 3301.1 of the 2016 California Fire Code and is amended to read as follows:~~

~~**3301.1 Scope.** This Chapter shall apply to structures in the course of construction, alteration, or demolition, including those in underground locations. Compliance with NFPA 241 is required for items not specifically addressed herein. Additional safeguards are required by local Chapter 17.82 of the San José Municipal Code.~~

**SECTION 13.** Chapter 17.12 of Title 17 of the San José Municipal Code is hereby amended by adding a new Part to be numbered and entitled and to read as follows:

**Part 8.25**  
**Processing and Extraction Facilities**

**17.12.825 Adoption of Chapter 39 of the 2019 California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 39 of the 2019 California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.830 Amendment of Section 3901 of the 2019 California Fire Code Relating to Processing and Extraction Facilities**

Section 3901.1 of the 2019 California Fire Code is amended to read as follows:

**3901.1 Scope.** Plant processing or extraction facilities shall comply with this chapter and the California Building Code. The extraction process includes the act of extraction of the oils and fats by use of a Type 6 solvent, desolventizing of the raw material and production of the miscella, distillation of the Type 6 solvent from the miscella and Type 6 solvent recovery. The use, storage, transfilling, and handling of hazardous materials in these facilities shall comply with this chapter and other applicable provisions of this code provisions including Chapter 53, Chapter 57, Chapter 58, and Chapter 61, the California Mechanical Code and the California Building Code.

Section 3901 of the 2019 California Fire Code is amended by adding the following new subsection:

**3901.4 Approved Uses.** All uses and activities related to Processing and Extraction Facilities shall be in accordance with Chapter 6.88 of Title 6 of the San José Municipal Code.



**17.12.835 Amendment of Section 3902 of the 2019 California Fire Code Relating to Definitions**

Section 3902.1 of the 2019 California Fire Code is amended to read as follows:

**3902.1 Definitions.** The following Terms are defined in Chapter 2:

CHEMICAL FUME HOOD

DESOLVENTIZING

DISTALLATION

EXTRACTION

MISCELLA

PLANT EXTRACTION PROCESSING SYSTEM

POST OIL PROCESSING

SOLUTE

SOLVENT

SOLVENT RECOVERY

TYPE 6 SOLVENT

WINTERIZATION

**17.12.840 Amendment of Section 3903 of the 2019 California Fire Code Relating to Processing and Extraction**

Section 3903.2 of the 2019 California Fire Code is amended to read as follows:

**3903.2 Prohibited Occupancies.** Extraction processes shall not be located in any building containing a Group A, E, I, or R occupancy. Extraction processes shall only be located in Group F or H Occupancy rooms.

Section 3903.6 of the 2019 California Fire Code is amended to read as follows:

**3903.6 is deleted.**

**17.12.845 Amendment of Section 3904 of the 2019 California Fire Code Relating to Systems and Equipment**

Subsection 3904.1 of the 2019 California Fire Code is amended to read as follows:

**3904.1 General requirements.** Systems and equipment used with the processing and extraction of oils and products from plants shall comply with Sections 3904.2 through 3904.7, 5003.2, other applicable provisions of this code, the California Building Code, and the California Mechanical Code.



Section 3904 of the 2019 California Fire Code is amended by adding the following new subsections:

**3904.5 Egress.** Exit doors from extraction rooms utilizing hazardous materials shall swing in the direction of egress and be self-closing. Where latching door hardware is provided on extraction rooms utilizing hazardous materials, panic hardware shall be provided.

**3904.6 Extraction Rooms.** Extraction room shall be fully enclosed. The floor, ceiling, and walls of extraction rooms shall be constructed in accordance with the California Building Code and be continuous, non-combustible, and smooth. Rooms designed in accordance with Section 3903.4.1.1 shall be constructed to permit the free passage of exhaust air from all parts of the room.

**Exception:**

CO2 extraction rooms and extraction rooms containing processes not utilizing hazardous materials.

**3904.7 Extraction room illumination.** Luminaires inside the extraction room shall comply with Section 3903.2.2. Luminaires attached to the walls or ceilings of an extraction room or booth, but outside of any classified area and separated from the flammable vapor areas by vapor-tight glass panels, shall be suitable for use in ordinary hazard locations. Such luminaires shall be serviced from outside the flammable vapor areas.

**17.12.850 Amendment of Section 3905 of the 2019 California Fire Code Relating to Safety Systems**

Subsection 3905.1 of the 2019 California Fire Code is amended to read as follows:

**3905.1 Gas Detection.** A continuous gas detection system shall be provided within rooms, booths or hoods, containing flammable liquids, or CO2 extraction processes. Actuation of the gas detection system shall initiate a local alarm within the room. The gas detection threshold for flammable and combustible liquids shall be no greater than 25 percent of the lower flammable limit (LFL) of the materials. CO2 gas detection systems shall alarm at 5000ppm.

Subsection 3905.1.5 of the 2019 California Fire Code is amended to read as follows:

**3905.1.5 Interlocks.** All electrical components within extraction or post processing rooms utilizing ethanol shall be interlocked with the gas detection system. Activation of the gas detection system shall disable all light switches and electrical outlets.

Subsection 3905.2 of the 2019 California Fire Code is amended to read as follows:

**3905.2 is deleted.**

Section 3905 of the 2019 California Fire Code is amended by adding the following new subsections:

**3905.3 Sources of ignition.** Extraction or post oil processing operations which use ethanol shall comply with Sections 3905.3.1 through 3905.3.2

**3905.3.1 Open flame and sparks.** Smoking, open flames, direct fired heating devices, etc. shall be prohibited in areas where flammable vapors exist.

**3905.3.2 Electrical equipment.** Electrical equipment installed in areas of flammable liquid extractions or post oil processing shall be in accordance with CFC Chapter 50, as amended, and NFPA 70 (NEC).

**17.12.855 Amendment of Chapter 39 of the 2019 California Fire Code Relating to Processing and Extraction Facilities**

Chapter 39 of the 2019 California Fire Code is amended to add the following new section to read as follows:

**3906 VENTILATION**

**3906.1 Exhaust required.** Plant extraction processing systems utilizing carbon dioxide or ethanol, shall be provided with an exhaust system in accordance with Section 3906.1 or 3906.1.4. The exhaust system shall be in operation at all times when extractions or post oil processing is being performed and until ethanol is off gassed from oil and/or plant material removed from ethanol extraction equipment. Fans shall be of the type approved for use when flammable or explosive vapors are present in accordance with the California Mechanical Code. Capture and containment air velocity shall be provided across booths, hoods, or exhausted enclosures to capture and convey emissions to the exhaust system and shall be no less than 75 fpm.

**3906.1.1 Exhaust for Ethanol processes.** A hazardous exhaust system in accordance with the California Building and Fire Code shall be provided for flammable liquid extraction processes.

**Exceptions:**

1. Distillation process with less than 5 gallons of flammable liquid performed under a chemical fume hood installed in accordance with the California Building and Fire Code.
2. Solvent distillation units in compliance with CFC Section 5705.4.

**3906.1.3 Exhausted enclosure.** Where the extraction room is used as the exhausted enclosure, the exhaust system shall be designed to provide capture and containment air velocity across all areas of the enclosure.

**3906.1.4 Electrical Interlocks.** All electrical components within extraction or post processing rooms utilizing ethanol shall be interlocked with the ventilation system, such that non-operation of the ventilation system will disable all light switches and electrical outlets.

**SECTION 14.** Chapter 17.12 of Title 17 of the San José Municipal Code is hereby amended by adding a new Part to be numbered and entitled and to read as follows:

**Part 8.5**  
**Motion Picture, Television Soundstage, Wildland Urban Interface Areas, and**  
**Defensible Space Provisions**

**17.12.870 Adoption of Chapters 48 and 49 of the 2019 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 48 and 49 of the 2019 California Fire Code, including the Tables therein, are adopted.

**17.12.875 Amendment of Section 4902 of the 2019 California Fire Code Related to Definitions**

Subsection 4902 is amended as follows:

**WILDLAND-URBAN INTERFACE FIRE AREA.** 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 also includes all areas within the City of San José as set forth and delineated on the map entitled “San José Fire Department Wildland Urban Interface,” which map and all notations, references, data, and other information shown is hereby adopted and made a part of this chapter. The map shall be on file with the San José Fire Department.

**17.12.880 Amendment of Section 4906.2 of the 2019 California Fire Code to Include Local Classifications of Wildland-Urban Interface Areas**

Section 4906.2 is amended 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 Area (SRA) including:
  - a. Moderate Fire Hazard Severity Zones.
  - b. High Fire Hazard Severity Zones.
  - c. Very-high Fire Hazard Severity Zones.
2. Land designated as Very-high Fire Hazard Severity Zone or Wildland-Urban Interface Areas by the City San José.

**SECTION 15.** Part 9 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

### **Part 9**

#### **Provisions Related to Storage, Handling and Use of Regulated Materials**

##### **17.12.900 Adoption of Chapters ~~50 through 67~~ of the ~~2016-2019~~ California Fire Code**

Except as otherwise provided for in this Chapter, Chapters ~~50 through 67~~ of the ~~2016 2019~~ California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

##### **~~17.12.905 Amendment of Section 5001.1 of the 2016 California Fire Code Expanding the Scope of Chapter 50 to Include Lithium Ion Batteries~~**

~~Section 5001.1 of the 2016 California Fire Code is amended to read as follows:~~

~~**5001.1 Scope.** Prevention, control and mitigation of dangerous conditions related to the storage, dispensing, use and handling of hazardous materials shall be in accordance with this Chapter.~~

~~Additionally, prevention, control and mitigation of dangerous conditions related to the storage and handling of lithium ion batteries shall be in accordance with Section 5001.1.2.~~

~~This Chapter shall apply to all hazardous materials including those materials regulated elsewhere in this code, except that when specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.~~

##### **Exceptions:**

- ~~1. In retail or wholesale sales occupancies, the quantities of medicines, foodstuffs or consumer products and cosmetics containing not more than 50~~

- ~~percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable shall not be limited, provided such materials are packaged in individual containers not exceeding 1.3 gallons (5 L).~~
- ~~2. Quantities of alcoholic beverages in retail or wholesale sales occupancies shall not be limited providing the liquids are packaged in individual containers not exceeding 1.3 gallons (5 L).~~
  - ~~3. Application and release of pesticide and agricultural products and materials intended for use in weed abatement, erosion control, soil amendment or similar application when applied in accordance with the manufacturers' instructions and label directions.~~
  - ~~4. The off-site transportation of hazardous materials where in accordance with Department of Transportation (DOT) regulations.~~
  - ~~5. Building materials not otherwise regulated by this Code.~~
  - ~~6. Refrigeration systems (see Section 606).~~
  - ~~7. Stationary storage battery systems regulated by Section 608.~~
  - ~~8. The display, storage, sale or use of fireworks and explosives in accordance with Chapter 56.~~
  - ~~9. Corrosives, utilized in personal and household products in the manufacturers' original consumer packaging in Group M occupancies.~~
  - ~~10. The storage of distilled spirits and wines in wooden barrels and casks.~~
  - ~~11. The use of wall-mounted dispensers containing alcohol-base hand rubs classified as Class I or II liquids where in accordance with Section 5705.5~~

**17.12.905 Amendment of Section 5001.2.2.2 of the 2019 California Fire Code to Include Moderately Toxic Gas as a Health Hazard**

Subsection 5001.2.2.2 is amended 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.

**17.12.910 Amendment of Section 5001.1 of the 2016 California Fire Code to Add Provision Related to the Storage and Handling of Lithium Ion Batteries**

Section 5001.1.2 of the 2016 California Fire Code is added to read as follows:

**5001.1.2 Lithium ion battery storage and handling.** Rooms or areas where lithium ion batteries are stored or handled shall comply with the following:

- ~~1. Rooms or areas where lithium ion batteries are stored or handled shall be protected throughout with an approved smoke detection system.~~
- ~~2. Indoor storage of lithium ion batteries in excess of 6,000 pounds shall be confined to a Group H Division 2 occupancy designed and constructed in accordance with the Building Code or protected in a manner approved by the Fire Code Official.~~

#### **17.12.910 Amendment of Section 5003.1.3 of the 2019 California Fire Code to Include Moderately Toxic Gas**

Subsection 5003.1.4 is amended to add the following subsection:

**5003.1.4.1 Highly toxic, toxic, moderately toxic gases and similarly used or handled materials.** The storage, use and handling of toxic, highly toxic and moderately toxic gases in quantities exceeding Tables 5003.1.1(1-4) shall be in accordance with this chapter and Chapter 60. Any toxic, highly toxic or moderately toxic material that is used or handled as a gas or vapor shall be in accordance with the requirements for toxic, highly toxic or moderately toxic gases.

#### **17.12.915- Addition-Amendment of Section 5003.1.5 of the 2019 California Fire Code Relating to Spill Control and Secondary Containment Requirements to the 2016 California Fire Code**

Section 5003.1 of the ~~2016~~-2019 California Fire Code is amended to add a new subsection, 5003.1.5 to be ~~entitled~~ and read as follows:

**5003.1.5 Additional Spill Control and Secondary Containment Requirements.** In addition to the requirements set forth in Section 5004.2, approved containment 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. Such containment 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 of the ~~2016~~-2019 California Fire Code.

#### **17.12.920 Amendment of Section 5003.2.2.1 of the 2016-2019 California Fire Code Relating to Design and Construction Hazardous Materials**

Section 5003.2.2.1 of the ~~2016~~-2019 California Fire Code is amended 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, structure and seismic stress, and exposure to which they are subject.
2. Piping and tubing shall be identified in accordance with ASME A 13.1 and the Santa Clara County Fire Chiefs Marking Requirements and Guidelines for Hazardous Materials and Hazardous Waste to indicate the material conveyed.
3. Readily accessible manual valves or automatic remotely activated fail-safe emergency shutoff valves shall be installed on supply piping and tubing at the following locations:
  1. The point of use;
  2. The tank, cylinder or bulk source.
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.
6. When gases or liquids having a hazard ranking of:
  1. Health Class 3 or 4;
  2. Flammability Class 4; or
  3. Instability Class 3 or 4in accordance with NFPA 704 are carried in pressurized piping above 15 pounds per square inch gauge (psig) 1(103 Kpa), then an approved means of leak detection, 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 ~~6004.2 and 6004.3~~ 5003.1.1(1-4). 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.

**17.12.925 Amendment of Section 5003.2.2.2 of the 2016-2019 California Fire Code Relating to Additional Regulations For Supply Piping for Health Hazard Materials**

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

**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 in accordance with NFPA 704 shall be in accordance with ASME B 31.3 and the following:

1. Piping and tubing utilized for the transmission of highly toxic and toxic gases or highly volatile corrosive liquids and gases ~~highly toxic, 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 where installed in accordance with Section 415.11.6.4 of the California Building Code as required for Group H Division 5 Occupancies.

3. All primary piping for highly toxic, toxic and moderately toxic gases ~~toxic and highly toxic gases~~ shall pass a helium leak test of 1x10<sup>-9</sup> cubic centimeters/second where practical, or shall pass testing in accordance with an approved nationally recognized standard. Test shall be conducted by a qualified "third party" not involved with the construction of the piping and control systems.



**17.12.930 Amendment of Subsection 5003.3.1 of the 2019 California Fire Code Relating to Report Unauthorized Discharges to the Environment**

Subsection 5003.3.1 of the 2019 California Fire Code is amended to read as follows:

**5003.3.1 Unauthorized discharges.** Where 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.

**17.12.930-935 Amendment of Section 5003.5. of the ~~2016-2019~~ California Fire Code to Add Provisions Related to Ventilation Ducting Marking and “H” Occupancies Piping and Tubing Markings**

Subsection 5003.5 of the ~~2016-2019~~ California Fire Code is amended to add new subsections 5003.5.2 and 5003.5.3 to be ~~en~~ titled and read as follows:

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

**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.

**17.12.935-940 Amendment of Section 5003.9.8 of the 2019 California Fire Code Related to Separation of Incompatible Materials ~~to the 2016 California Fire Code~~**

Section 5003.9.8 of the ~~2016-2019~~ California Fire Code is amended to read as follows:

**5003.9.8 Separation of Incompatible Materials.** Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated where the stored materials are in containers having a capacity of more than 5 pounds (2 kg) or 0.5 gallons (2 L). Separation shall be accomplished by at least one of the following:

1. Segregating incompatible materials in storage by a distance of not less than 20 feet (6096 mm) and in an independent containment system.
2. Isolating incompatible materials in storage by a noncombustible partition extending not less than 18 inches (457 mm) above and to the sides of the stored material in an independent containment system.
3. Storing liquid and solid materials in hazardous materials storage cabinets.
4. Storing compressed gases in cabinets or exhausted enclosures in accordance with Sections 5003.8.5 and 5003.8.6. Materials that are incompatible shall not be stored within the same cabinet or exhausted enclosure.

**17.12.940-945 Amendment of Section 5003.9 of the 2016-2019 California Fire Code to Add Provisions Related to Fire Extinguishing Systems for Workstations Dispensing, Handling or Using Hazardous Materials**

Section 5003.9-~~11~~ of the 2016-2019 California Fire Code is amended to add~~ed~~ the following subsection to read as follows:

**5003.9.11 Fire Extinguishing Systems for Workstations Dispensing, Handling or Using Hazardous Materials.** Workstations which can be used for materials with a hazard rating of 3 or 4 in accordance with NFPA 704 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 500 ml.

**17.12.950 Amendment of Section 5003.10.4 of the 2019 California Fire Code Relating to Transport of Hazardous Materials in Elevators**

Subsection 5003.10.4 of the 2019 California Fire Code is amended to read as follows:

**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 (5.28 gal).

**5003.10.4.3** Highly toxic, toxic and moderately toxic gases shall be limited to a container of 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.

**17.12.945-955 Amendment of Section 5004.2.1 of the 2016-2019 California Fire Code Relating to Spill Control for Hazardous Material Liquids**

Section 5004.2.1 of the 2016-2019 California Fire Code is amended 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 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 locations and outdoor 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.

**17.12.950-960 Amendment of Section 5004.2.2 of the 2016-2019 California Fire Code Relating to Secondary Containment for Hazardous Materials Liquids and Solids**

Section 5004.2.2 of the 2016-2019 California Fire Code is amended to read as follows:

**5004.2.2 Secondary containment for hazardous materials liquids and solids.** Where required by Table 5004.2.2 buildings, rooms or areas used for the storage of hazardous materials liquids or solids shall be provided with secondary containment in accordance with this section.

Section 5004.2.2.2 of the 2019 California Fire Code is amended to read as follows:

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

**17.12.955-965 Amendment of Section 5004.2.3 of the ~~2016-2019~~ California Fire Code Relating to Containment Pallets**

Section 5004.2.3 of the ~~2016-2019~~ California Fire Code is amended to read 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 500 pounds (250 kg) or an aggregate of multiple containers exceeds 10,000 pounds (4540 kg) for solids.

Where used as an alternative to spill control and secondary containment for outdoor storage in accordance with the exception in Section 5004.2 containment pallets shall comply with all of the following:

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 (250 L).
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.

SECTION 16. A new Part is added to Chapter 17.12 of Title 17 of the San José Municipal Code to be numbered, entitled and to read as follows:

**Part 9.25**  
**Hazardous Materials Provisions**

**17.12.970 Adoption of Chapters 51 through 59 of the 2019 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 51 through 59 of the 2019 California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.960972- Amendment of Section 5601 of the 2016-2019 California Fire Code Relating to Explosives and Fireworks, Including Pyrotechnic Special Effects**

Section 5601.1.3 of the 2019 California Fire Code is amended 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.

Section 5601.2 of the 2016-2019 California Fire Code is amended to add a new subsection 5601.2.5 to be entitled and read as follows:

**5601.2.5 Bond for permit to use explosive materials.** In addition to all other requirements, the applicant for a permit to use explosive material shall furnish a bond or certificate of insurance in the amount deemed adequate by the Chief and the City Risk Manager for payment of damages which could be caused either to a person or persons or to property by reason of the permitted activity and arising from acts of the permittee, agents, employees, or subcontractors.

**17.12.965974- Amendment of Section 5608 of the 2016-2019 California Fire Code Relating to Fireworks, including Pyrotechnic Special Effects**

Section 5608 of the 2016-2019 California Fire Code is amended to add a new Subsection 5608.2, to be entitled and read as follows:

**5608.2 Bond for public display of fireworks.** In addition to all other requirements, the applicant for a permit to use fireworks, including proximate audience displays and pyrotechnic special effects, shall furnish a bond or certification of insurance in the amount deemed adequate by the Chief and the City Risk Manager for payment of damages which could be caused either to a person or persons or to property by reason of the permitted activity and arising from acts of the permittee, agents, employees, or subcontractors.

**~~17.12.975- Amendment of Section 5704.2.4 of the 2016 California Fire Code Related to Smoking in Hazardous Materials Areas~~**

~~Section 5704.2.4 of the 2016 California Fire Code is amended to read as follows:~~

~~**5704.2.4 Sources of ignition, Exception.** Areas designated as hot work areas, and areas where hot work permits have been issued in accordance with this Code.~~

**17.12.980976- Amendment of Section 5704.2.7.5.8 of the 2016-2019 California Fire Code Related to Overfill Protection for Above Ground Tanks**

Section 5704.2.7.5.8 of the 2016-2019 California Fire Code is amended 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.

An approved means or method in accordance with Section 5704.2.9.7.5 shall be provided to prevent the overfilling of Class IIIB liquid storage tanks connected to fuel-burning equipment inside buildings.,

**Exception:** Outside above-ground tanks with a capacity of 500 gallons or less.

**17.12.978 Amendment of Section 5704.2.7.5 of the 2019 California Fire Code Related to Tank openings other than vents**

Section 5704.2.7.5 is amended to add the following subsection:

**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.

**17.12.980 Amendment of Sections 5707.3.2 of the 2019 California Fire Code Related to Training Records**

Section 5707.3.2 of the 2019 California Fire Code is amended to read as follows:

**5707.3.2 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. Persons responsible for dispensing operations shall be trained in the appropriate mitigating actions in the event of a fire, leak or spill. Training records of operators shall be maintained the dispensing company. The training of employees who use and maintain the dispensing system shall be in accordance with CFC Section 406, and provisions for hazard communication in accordance with CFC Section 407 as can be applied to this operation.



**17.12.982 Amendment of Section 5707.3 of the 2019 California Fire Code Related to On-Demand Mobile Fueling Operations**

Section 5707.3 of the 2019 California Fire Code is amended to add the following new subsection:

**5707.3.4 Property Owner Acceptance of Liability.** The Owner of the site is responsible is for all activities on their property. Hence the Property Owner at which mobile fueling is being proposed shall sign in concurrence with the Site; Safety and emergency plans acknowledging their acceptance of liability for the mobile fueling operations on their property.

**17.12.984 Amendment of Sections 5707.4.2 of the 2019 California Fire Code Related to Sources of Ignition**

Section 5707.4.2 of the 2019 California Fire Code is amended to read as follows:

1. Smoking, open flames, and other sources of ignition shall be prohibited within 25 feet (7620 mm) of fuel dispensing activities.
2. Areas within 25 feet (7620 mm) surrounding fuel dispensing activities shall be free from vegetation, debris and other combustible material.
3. 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.
4. The engines of vehicles being fueled shall be shut off during fueling.
5. Electrical wiring and equipment shall be suitable for the locations in which they are installed and shall comply with CFC Section 605, NFPA 30A and the *California Electrical Code*.

**~~17.12.985 Amendment of Section 5705.3.2 of the 2016 California Fire Code Related to Bonding of Vessels~~**

~~Section 5705.3.2 of the 2016 California Fire Code is amended to read as follows~~

~~**5705.3.2 Bonding of vessels.** Where differences of potential could be created, vessels containing Class I or Class II liquids or liquids handled at or above their flash points shall be electrically connected by bond wires, ground cables, piping or similar means to a static grounding system to maintain equipment at the same electrical potential to prevent sparking.~~



**SECTION 17.** A new Part is added to Chapter 17.12 of Title 17 of the San José Municipal Code to be numbered, entitled and to read as follows:

**Part 9.5**  
**Highly Toxic and Toxic Materials**

**17.12.986 Adoption of Chapter 60 of the 2019 California Fire Code Relating to Highly Toxic and Toxic Materials**

Except as otherwise provided for in this Chapter, Chapter 60 to 67 of the 2019 California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.988 Amendment of Sections 6001 of the 2019 California Fire Code Relating to Highly Toxic, Toxic, and Moderately Toxic Compressed Gas**

Subsection 6001.1 of the 2019 California Fire Code is amended to read:

**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 5003.1 1.
2. Conditions involving pesticides or agricultural products as follows:
  - 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. Environmental Protection Agency to be utilized in and around the home, garden, pool, spa and patio.

**17.12.990 Amendment of Sections 6004 of the 2019 California Fire Code Relating to Highly Toxic, Toxic, and Moderately Toxic Compressed Gas**

Section 6004 of the 2019 California Fire Code is amended to be titled as follows:

**SECTION 6004 HIGHLY TOXIC, TOXIC AND MODERATELY TOXIC COMPRESSED GASES**

Section 6004.1. of the 2019 California Fire Code is amended to read as follows:

**6004.1 General.** The storage and use of highly toxic, toxic and moderately toxic compressed gases shall comply with this section.

**17.12.992 Amendment of Section 6004.1.1 of the 2019 California Fire Relating to Highly Toxic, Toxic, and Moderately Toxic Compressed Gas Indoor Storage and Use.**

**6004.1.1 Special limitations for indoor storage and use by occupancy.** The indoor storage and use of highly toxic, toxic and moderately toxic compressed 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.** Highly toxic, toxic and moderately toxic compressed gasses shall not be stored or used within Group A, E, I or U occupancies.

**Exception:** Cylinders not exceeding 20 cubic feet (0.556m<sup>3</sup>) at normal temperature and pressure (NTP) are allowed within gas cabinets or fume hoods.

**6004.1.1.2 Group R occupancies.** Highly toxic, toxic and moderately toxic compressed gases shall not be stored or used in Group R occupancies.

**6004.1.1.3 Offices, retail sales and classrooms.** Highly toxic, toxic and moderately toxic compressed 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 m) at NTP are allowed in gas cabinets or fume hoods.

**17.12.994 Amendment of Section 6004.2 of the 2019 California Fire Relating to Highly Toxic, Toxic, and Moderately Toxic Compressed Gas Indoor Storage and Use**

Section 6004.2 of the 2019 California Fire Code is amended to read as follows:

**6004.2 Indoor storage and use.** The indoor storage or use highly toxic, toxic and moderately toxic compressed gases shall be in accordance with Sections 6004.2.1 through 6004.2.2.10.3.

Section 6004.2.1 of the 2019 California Fire Code is amended to read as follows:

**6004.2.1 Applicability.** The applicability of regulations governing the indoor storage and use of highly toxic, toxic and moderately compressed gases shall be as set forth in Sections 6004.2.1.1 through 6004.2.1.4.

Section 6004.2.1.4 of the 2019 California Fire Code is amended to add the following subsection:

**6004.2.1.4 Quantities exceeding the minimum threshold quantities, but not exceeding the maximum allowable per control area.** The indoor storage or use of highly toxic, toxic and moderately gases in amounts not exceeding the minimum threshold quantities per control area set forth in Table 6004.2.1.4 but not exceeding maximum allowable quantity per control area set forth in Table 5003.1.1(2) shall be in accordance with Sections 5001, 5003, 6001, and 6004.4.

The maximum allowable quantity per control area of moderately toxic gas will be according to the lowest quantity of the maximum allowable quantity physical or health hazards, as set forth in Tables 5003.1.1(1) and 5003.1(2) and Table 5003.11.1 for Group M and S occupancies, as applicable.

**Table 6004.2.1.4**

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

**17.12.996 Amendment of Section 6004 of the 2019 California Fire Related to Highly Toxic, Toxic, and Moderately Toxic Compressed Gas**

Section 6004 of the 2019 California Fire Code is amended to add the following new subsections:

**6004.4 General indoor requirements.** The general requirements applicable to the indoor storage and use of highly toxic, highly toxic and moderately toxic above the minimum thresholds and not exceeding highly maximum allowable per control area set forth in Table 5003.1.1(2) compressed gas above minimum thresholds but not exceeding the maximum allowable per control area shall be in accordance with Sections 6004.4 through 6004.4.10.2.

**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.

**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.

**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:

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.

**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.

**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:**

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:

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.

**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.

**6004.4.5.2 Performance.** Treatment systems shall be designed to reduce the maximum allowable discharge 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 gases are 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.

**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.

**6004.4.6 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).

**6004.4.7 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.

**6004.4.8 Emergency power.** Emergency power shall be provided for the following systems in accordance with Section 1203: Emergency Power

1. Exhaust ventilation system.
2. Treatment system.
3. Gas detection system.
4. Smoke detection system.

**6004.4.8.1 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.

**6004.4.9. 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.K.

**6004.4.10 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.

**6004.4.10.1 Alarms.** The gas detection system shall initiate a local alarm and transmit a signal to an approved location.

**6004.4.10.2 Shut-off of gas supply.** The gas detection system shall automatically close the shut off valve 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:

1. Constantly attended / supervised.
2. Provided with emergency shutoff valves that have ready access.

**SECTION 18.** Part 10 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

#### **Part 10 Referenced Standards**

##### **17.12.1000 Adoption of Chapter 80 of the 2016-2019 California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 80 of the 2016-2019 California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

##### **17.12.1005 Amendment to Chapter 80 of the 2016 California Fire Code to Add Reference to Standards for Hood and Duct Systems**

~~The following standards are added to those referenced in Chapter 80 of the California Fire Code: NFPA 96-14 "Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations".~~



**17.12.1005 Amendment of Chapter 80 of the 2019 California Fire Code Related to NFPA 13D—16, Sprinkler System Standard for One and Two Family Dwellings**

NFPA 13D-16, Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes, is amended to read as follows:

13D—16: Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes as amended\* 903.3.1.3, 903.3.5.1.1 is deleted.

**17.12.1010 ~~Amendment of Chapter 80 of the 2016 California Fire Code Sprinkler System Standard for One and Two Family Dwellings (NFPA 13D-16)~~**

~~The following sections of NFPA 13D-16 edition, Sprinkler Standards for one and two family dwellings are amended to read as follows:~~

~~6.2.1 Deleted.~~

~~6.2.3.2 Deleted.~~

~~Section 7.5 is amended by adding the following new subsection:~~

~~7.5.8 Spare sprinklers shall be provided as required by NFPA 13-16 Section 6.2.9.~~

~~7.6 Local waterflow alarms shall be provided on all sprinkler systems in homes.~~

~~8.3.4 Sprinklers shall be required to be installed under exterior roofs, canopies, balconies, decks, or similar projections exceeding 4 feet in width and in garages, open attached porches, carports, and similar structures. Sprinklers shall be designed commensurate with the design area for the residence.~~

~~8.3.5 Deleted.~~

~~8.3.5.1 Deleted.~~

~~8.3.5.1.1 Deleted.~~

~~8.3.5.1.2 Deleted.~~

~~8.3.6 Deleted.~~

~~8.3.8 Deleted.~~

Section 8.3 is further amended by adding a new subsection to read as follows:

**8.3.10** ~~Pilot sprinklers shall be provided in the attics and between floors where floor/ceiling assemblies consist of open web wood joists or trusses. Pilot sprinklers shall be intermediate temperature rated, K=4.2, quick response. Pilot sprinklers shall be located within twelve inches of the structure and/or at the apex of each ridgeline when applicable. A sprinkler is required where the ridgeline and hips converge. Sprinklers shall be spaced at maximum thirty foot centers (maximum fifteen feet from outside walls) and shall be located at all heat and fire sources including furnaces, hot water heaters, above kitchen ranges, etc.~~

**10.4.9** ~~Deleted.~~

**11.2.1.1** ~~All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi and shall maintain that pressure without loss for 2 hours.~~

**11.2.1.2** ~~Deleted.~~

#### **17.12.1010 Adoption NFPA 13D—19, Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes**

Except as otherwise provided for in this Section, NFPA 13D—19, including the annexes therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

#### **17.12.1015 Amendment of Chapter 80 of the 2016 California Fire Code Sprinkler System Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies (NFPA 13R-16)**

The following sections of NFPA 13R-16 edition, Sprinkler Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies are amended to read as follows:

**6.6.6** ~~Pilot sprinklers shall be provided in the attics and between floors where floor/ceiling assemblies consist of open web wood joists or trusses. Pilot sprinklers shall be intermediate temperature rated, K=4.2, quick response. Pilot sprinklers shall be located within twelve inches of the structure and/or at the apex of each ridgeline when applicable. A sprinkler is required where the ridgeline and hips converge. Sprinklers shall be spaced at maximum thirty foot centers (maximum fifteen feet~~

~~from outside walls) and shall be located at all heat and fire sources including furnaces, hot water heaters, above kitchen ranges, etc.~~

~~6.6.7 Deleted.~~

~~6.8.2 Subparagraphs 2 & 3 are deleted.~~

~~6.8.8 Multistory buildings (exceeding one story in height) shall be provided with a floor control valve, check valve, main drain valve, and flow switch for isolation, control and annunciation of the water flow for each individual floor level or individual multistory unit (as applies).~~

~~6.16.4 Deleted.~~

~~7.4 Deleted.~~

~~10.2.2.1 The system shall be hydrostatically tested for leakage at 200 psi for a duration of 2 hours.~~

~~10.2.2.2 Deleted.~~

**17.12.1015 Amendment of Sections in NFPA 13D—19 Relating to Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes**

Section 6.2.2 of NFPA 13D—19 is amended to read as follows:

6.2.2 Where a well, pump, tank or combination thereof is the source of supply for a fire sprinkler system, the configuration for the system shall be one of the following:

1. The water supply shall serve both domestic and fire sprinkler systems.
  - A. A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.
  - B. Any disconnecting means for the pump shall be approved.
  - C. A method for refilling the tank shall be piped to the tank.
  - D. A method of seeing the water level in the tank shall be provided without having to open the tank.
  - E. The pump shall not be permitted to sit directly on the floor.

2. A stand-alone tank is permitted if the following conditions are met:
- A. The pump shall be connected to a 220-volt circuit breaker shared with a common household appliance (e.g., range, oven, dryer),
  - B. The pump shall be a stainless steel 240-volt pump,
  - C. A valve shall be provided to exercise the pump. The discharge of the exercise valve shall drain to the tank, and
  - D. A sign shall be provided stating: "Valve must be opened monthly for 5 minutes."
  - E. A means for automatically refilling the tank level, so that the tank capacity will meet the required water supply duration in minutes, shall be provided.
  - F. A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.
  - G. Any disconnecting means for the pump shall be approved.
  - H. A method for refilling the tank shall be piped to the tank.
  - I. A method of seeing the water level in the tank shall be provided without having to open the tank.
  - J. The pump shall not be permitted to sit directly on the floor.

Section 7.5 of NFPA 13D—19 is amended to read as follows:

**7.5.6.2(5).** Sprinklers in closets containing clothes dryers shall be of the intermediate temperature classification or higher.

**7.5.10** Spare sprinklers shall be provided as required by NFPA 13-19 Section 16.2.7.

Section 7.6 of NFPA 13D—19 is amended to read as follows:

**7.6** Local waterflow alarms shall be provided on all sprinkler systems in homes.

Section 8.3 of NFPA 13D—19 -is amended to read as follows:

**8.3.4** Sprinklers shall be required to be installed under exterior roofs, canopies, balconies, decks, or similar projections exceeding 4 feet in width and in garages, open attached porches, carports, and similar structures. Sprinklers shall be designed commensurate with the design area for the residence.

**8.3.5.1 is deleted.**

**8.3.5.1.1 is deleted.**

**8.3.5.1.2 is deleted.**

**8.3.6 is deleted.**

**8.3.8 is deleted.**

**8.3.10** Where sprinklers may be subject to excess temperature such as closets containing heat producing equipment, unconditioned garages, Exterior unconditioned space, etc., intermediate temperature sprinklers shall be required.

**8.3.11** Pilot sprinklers shall be provided in the attics and between floors where floor/ceiling assemblies consist of open web wood joists or trusses. Pilot sprinklers shall be intermediate temperature rated, K=4.2, quick response. Pilot sprinklers shall be located within twelve inches of the structure and/or at the apex of each ridgeline when applicable. A sprinkler is required where the ridgeline and hips converge. Sprinklers shall be spaced at maximum thirty feet centers (maximum fifteen feet from outside walls) and shall be located at all heat and fire sources including furnaces, hot water heaters, above kitchen ranges, etc.

Section 10 of NFPA 13D—19 is amended to read as follows:

**10.4.9 is deleted.**

Section 11.2 of NFPA 13D—19 is amended to read as follows:

**11.2.1.1** All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi and shall maintain that pressure without loss for 2 hours.

**11.2.1.2 is deleted.**

**17.12.1020 Amendment of Chapter 80 Standard for the Installation of Sprinkler Systems (NFPA 13-16)**

~~The following sections of NFPA 13-16 edition, Standard for the Installation of Sprinkler Systems, are amended to read as follows:~~

~~Section 8.2.4 is amended to read as follows:~~

~~**8.2.4.1** Multistory buildings (exceeding one story in height) shall be provided with a floor control valve, check valve, main drain valve, and flow~~

~~switch for isolation, control, and annunciation of water flow for each individual floor level.~~

~~8.2.4.2 Deleted.~~

~~8.2.4.3 Deleted.~~

~~8.2.4.4 Deleted.~~

~~Section 8.4.3 is amended to add a new subsection to read as follows:~~

~~8.4.3.1 The use of extended coverage sprinklers shall require prior approval from the San José Fire Department.~~

~~Section 8.15.11 is amended to add a new subsection to read as follows:~~

~~8.15.11.3 Fire sprinkler system risers or other controls shall not be located in electrical rooms.~~

~~Section 11.2.3.2 is amended as follows:~~

~~11.2.3.2.8 For light hazard areas designated for office use, one-inch plugged, threaded outlets shall be provided at each sprinkler. The minimum flow at each sprinkler shall be 22.5 gpm. The equivalent K-factor for each sprinkler shall be 5.08 (5.6 K-factor sprinkler with 20' of 1" Schedule 40 pipe and fittings). The corresponding equivalent K-factor for a K=8.0 sprinkler is 6.73. Note that this equivalent K-factor involves the shell system sprinkler location and the future finished ceiling sprinkler location.~~

~~Only standard spray sprinklers shall be used. Extended coverage sprinkler heads shall not be used.~~

~~11.2.3.2.9 When a fire sprinkler system is required in a building of undetermined use with floor to structure height of fourteen feet or less, it shall be installed for an ordinary hazard occupancy with a minimum design density of not less than 0.20 gpm/square feet, with a minimum design area of three thousand (3,000) square feet. The system demand, including 250 gpm for hose stream, shall be designed at a minimum of ten percent below the available water supply. One-inch plugged, threaded outlets shall be provided at each sprinkler. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the owner and/or occupant to upgrade the system.~~

~~11.2.3.2.10~~ — When a fire sprinkler system is required in a building of undetermined use with floor to structure height greater than fourteen feet (14'), a fire sprinkler system shall be installed for an extra hazard occupancy with a minimum design density of 0.33 gpm/square foot with a minimum design area of three thousand (3,000) square feet. The system demand including 500 gpm for hose stream shall be designed at a minimum of ten percent below the available water supply. One-inch plugged, threaded outlets shall be provided at each sprinkler. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the owner and/or occupant to upgrade the system.

~~11.2.3.2.3~~ — Deleted.

~~23.4.1.7~~ — The safety margin for hydraulic calculations shall be 10% of the water supply data.

~~23.4.4.13~~ — The maximum water velocity in the hydraulic calculations shall be twenty feet per second (20 ft/sec) when designing to the criteria as set forth herein as Sections 11.2.3.2.8, 11.2.3.2.9, and 11.2.3.2.10.

#### **17.12.1020 Amendment of Chapter 80 of the 2019 California Fire Code Related to NFPA 13R—16, Sprinkler System Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies**

NFPA 13R-16, Standard for the Installation of Sprinkler Systems in Low-rise Residential Occupancies, is amended to read as follows:

13R—16: Standard for the Installation of Sprinkler Systems in Low-rise Residential Occupancies, as amended\* 903.3.1.2, 903.3.5.1.1., 903.3.5.1.2, 903.4 is deleted.

#### **17.12.1025 Amendment of Chapter 80 Standard for Installation of Standpipe and Hose Systems (NFPA 14-13)**

The following sections of NFPA 14-13 edition, Standard for Installation of Standpipe and Hose Systems are amended as follows:

~~5.2.4~~ — For Manual Wet Systems, the water supply shall be made prior to the sprinkler system water flow indicator. The connection shall be equipped with a monitored control valve, check valves, flow switch, and include a pipe restriction of three-eighth inch (3/8") orifice or less.



~~Section 5.5 is amended to add the following:~~

~~**5.5.1.5** — Each hose outlet shall be provided with a gauge configured as depicted in 2013 NFPA 14, Figure 7.11.2.1 for system riser drain connections, regardless of the type of standpipe system installed.~~

**17.12.1025 Adoption NFPA 13R—19, Standard for the Installation of Sprinkler Systems in Low-rise Residential Occupancies**

Except as otherwise provided for in this Section, NFPA 13R—19, including the annexes therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.1030 Amendment of Chapter 80 Standard for Installation of Stationary Pumps for Fire Protection (NFPA 20-16)**

~~The following sections of NFPA 20-16 edition are amended as follows:~~

~~**4.13.1** — All exterior fire pumps shall be installed in a dedicated building (pump house).~~

~~**4.16.10.1** — Positive supply pressure shall be maintained through alarms that shall be arranged for audio and visual annunciation at the FACU and in the fire pump room if the water supply drops below 5 psi.~~

~~**4.21.1** — To facilitate flow testing, all fire pumps shall be equipped with both of the following:~~

- ~~1. Test Header. This device is connected to the discharge side of the pump and has a number of hose outlets per Table 4.27(a). When testing the pump, the hose is connected to the outlets with water discharged to a safe location. Flow readings are usually taken from the end of the hose with a Pitot gauge.~~

~~2. Flow Meter. A special pipe is run from the discharge side of the pump back to the water supply (or to some other acceptable discharge point) with a flowmeter and control valve in the line. When testing the pump, the control valve is opened partially (with the pump already running) to achieve the 100 percent flow condition. The valve is opened more to achieve the 150 percent flow condition~~

**17.12.1030 Amendment of Sections in NFPA 13R—19 Relating to Standard for the Installation of Sprinkler Systems in Low-rise Residential Occupancies**

Section 2 of NFPA 13R—19 is amended by adding the following new section:

**Section 2.2 NFPA Publications.** NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2019 California edition

Section 6 of NFPA 13R—19 is amended as follows:

**6.6.6.3 is deleted.**

**6.6.7 is deleted.**

**6.6.10. Solar photovoltaic panel structures.** Sprinklers shall be permitted to be omitted from the following structures:

1. Solar photovoltaic panel structures with no use underneath. Signs may be provided, as determined by the enforcing agency prohibiting any use underneath, including storage.
2. Solar photovoltaic (PV) panels supported by framing that have sufficient uniformly distributed and unobstructed openings throughout the top of the array (horizontal plane) to allow heat and gases to escape, as determined by the enforcing agency.

**6.8.8 Sprinkler systems are required to be zoned by floor per local code**

**Section 6.8.10 is deleted.**

**6.11.2 Fire department connections shall be 2½ in. inlets with female National Standard Hose threads; all inlets shall be equipped with individual check valves (e.g. clappers). The FDC inlets shall be located at a height of 30 to 36" aboveground.**

**6.16.4 Sprinkler systems are required to be zoned by floor per local code.**

Section 10.2 of NFPA 13R—19 is amended to read as follows:

**10.2.2.1** The system shall be hydrostatically tested for leakage at 200 psi for a duration of 2 hours.

**10.2.2.2 is deleted.**

Section 11.4 of NFPA 13R—19 is amended to read as follows:

**11.4 Instructions.** The installing contractor shall provide the property owner or the property owner's authorized representative with the following:

1. All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed.
2. NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems 2013 California Edition and California Code of Regulations, Title 19, Chapter 5.
3. Once the system is accepted by the authority having jurisdiction a label as prescribed by California Code of Regulations, Title 19, Chapter 5, shall be affixed to each system riser.

~~**17.12.1035 Amendment of Chapter 80 of the 2016 California Fire Code Standard for Private Fire Service Mains (NFPA 24-16)**~~

~~Section 7.3 of NFPA 24-16 edition is amended to add the following subsections:~~

~~**7.3.4.9** Fire hydrants shall not be subject to pressure supplied by way of a FDC.~~

~~**17.12.1035 Amendment of Chapter 80 of the 2019 California Fire Code Relating to NFPA 13—16, Standard for the Installation of Sprinkler Systems**~~

NFPA 13-16, Standard for the Installation of Sprinkler Systems, is amended to read as follows:

13—16: Standard for the Installation of Sprinkler Systems, as amended\* is deleted.

~~**17.12.1040 Amendment of Chapter 80 of the 2016 California Fire Code Standard for Fire Alarm Systems (NFPA 72-16)**~~

~~Section 10.6.3 of NFPA 72-16 is amended to add the following:~~

~~**10.6.3.5** Where the engine-driven generator is not constantly attended, audible and visible alarms powered by a source other than the engine starting batteries and not exceeding 125 volts shall be provided at a point of~~

~~constant attendance or to a listed central station. These alarms shall indicate the following:~~

~~(a) Engine running (separate signal).~~

~~(b) The controller main switch has been turned to “off” or “manual” position (separate signal).~~

~~(c) Low fuel and trouble on the controller or engine (separate or common signals).~~

#### **17.12.1040 Adoption NFPA 13—19, Standard for the Installation of Sprinkler Systems**

Except as otherwise provided for in this Section, NFPA 13—19, including the annexes therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

#### **17.12.1045 ~~Amendment of Chapter 80 of the 2016 California Fire Code Standard on Clean Agent Fire Extinguishing Systems (NFPA 2001-15)~~**

~~Section 1-4 of NFPA 2001-15 edition is amended to add the following:~~

~~1.4.2.5 Clean agent systems shall not be used in lieu of required fire sprinkler systems.~~

#### **17.12.1045- Amendment of Sections in NFPA 13—19 Relating to the Standard for the Installation of Sprinkler Systems**

Section 9.2.1 of NFPA 13—19 is amended to delete the following sections:

9.2.1.1, 9.2.1.2, 9.2.1.10, 9.2.1.11, 9.2.1.12, 9.2.1.13, 9.2.1.17, and 9.2.1.18.

Section 2.2 of NFPA 13—19 is amended to add:

#### **2.2 NFPA Publications.**

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2019 California edition.

Section 6.4.3.1.1 of NFPA 13—19 is amended to read as follows:

6.4.3.1.1 Pipe joints shall not be located under foundation footings. The pipe under the building or building foundation shall not contain mechanical joints.

#### **Exceptions:**

1. Where allowed in accordance with Section 6.4.3.2.
2. Alternate designs may be utilized where designed by a registered professional engineer and approved by the enforcing agency.

Section 9 of NFPA 13—19 is amended to read as follows:

**9.2.1.16** Exterior columns under 10 ft<sup>2</sup> (0.93m<sup>2</sup>) in total area, formed by studs or wood joist, with no sources of ignition within the column, supporting exterior canopies that are fully protected with a sprinkler system, shall not require sprinkler protection.

**9.3.6.3 Automatic sprinkler system.** Automatic sprinklers shall not be required to be installed in the elevator hoistway, elevator machine room, elevator machinery space, elevator control space, or elevator control room where all the following are met:

1. Approved smoke detectors shall be installed and connected to the building fire alarm system in accordance with Section 907 in the area where the fire sprinkler was removed per this section.
2. Activation of any smoke detector located in the elevator hoistway, elevator machine room, elevator machinery space, elevator control space, or elevator control room shall cause the actuation of the building fire alarm notification appliances in accordance with Section 907.
3. Activation of any smoke detector located in the elevator hoistway, elevator machine room, elevator machinery space, elevator control space, or elevator control room shall cause all elevators having any equipment located in that elevator hoistway, elevator machine room, elevator machinery space, elevator control space, or elevator control room to recall nonstop to the appropriate designated floor in accordance with CCR Title 8, Division 1, Chapter 4, Subchapter 6, Elevator Safety Orders.
4. The elevator machine room, elevator machinery space, elevator control space, or elevator control room shall be enclosed with fire barriers constructed in accordance with CBC Section 707 or horizontal assemblies constructed in accordance with CBC Section 712, or both. The fire-resistance rating shall not be less than the required rating of the hoistway enclosure served by the machinery. Openings in the fire barriers shall be protected with assemblies having a fire protection rating not less than that required for the hoistway enclosure doors. The exceptions to CBC Section 3005.4 shall not apply.
5. The building fire alarm system shall be monitored by an approved supervising station in accordance with Section 907.

6. An approved sign shall be permanently displayed in the room where the fire sprinkler was removed per this section in a conspicuous location with a minimum of 1½-inch letters on a contrasting background, stating:

NO COMBUSTIBLE STORAGE  
PERMITTED IN THIS ROOM  
By Order of the Fire Marshal [or name of fire authority]

Section 9.3.6.6 of NFPA 13—19 is amended to add the following subsection:

**9.3.6.6.1** The sprinkler required at the top and bottom of the elevator hoistway by 9.3.6.6 shall not be required where permitted by Chapter 30 of the California Building Code.

Section 9.3.19.1\* of NFPA 13—19 is amended to read as follows:

**9.3.19.1\*** Unless the requirements of 9.2.3.2 or 9.2.3.3 are met, sprinklers shall be installed under exterior roofs, canopies, balconies, decks, or similar projections exceeding 4 ft (1.2 m) in width.

Section 9.2.3.2\* of NFPA 13—19 is amended to read as follows:

**9.2.3.2\*** Sprinklers shall be permitted to be omitted where the exterior canopies, roofs, balconies, decks, or similar projections are constructed with materials that are noncombustible, limited-combustible, or fire retardant treated wood as defined in NFPA 703, Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials.

**A.9.2.3.2 is deleted**

Section 9.2.3.3 of NFPA 13—19 is amended to read as follows:

**9.2.3.3** Sprinklers shall be permitted to be omitted from below the canopies, roofs, balconies, decks, or similar projections are combustible construction, provided the exposed finish material on the roof, or canopy is noncombustible, limited-combustible, or fire retardant treated wood as defined in NFPA 703, Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials, and the roofs, or canopies contains only sprinklered concealed spaces or any of the following unsprinklered combustible concealed spaces:

1. Combustible concealed spaces filled entirely with noncombustible insulation.
2. Light or ordinary hazard occupancies where noncombustible or limited-combustible ceilings are directly attached to the bottom of solid wood joists so as to create enclosed joist spaces 160 ft<sup>3</sup> (4.5 m<sup>3</sup>) or less in volume, including

space below insulation that is laid directly on top or within the ceiling joists in an otherwise sprinklered attic [See 19.3.3.1.5.2(4)].

3. Deleted.

**9.2.3.4 is deleted.**

Annex Section A.9.3.19.2 is amended to read as follows:

**A.9.3.19.2** The presence of planters, newspaper machines and similar items, should not be considered storage.

Section 9.2.3 of NFPA 13—19 is amended to add the following subsection:

**9.2.3.6** Sprinklers may be omitted for the following structures:

1. Solar photovoltaic panel structures with no use underneath. Signs may be provided, as determined by the enforcing agency prohibiting any use underneath including storage.
2. Solar photovoltaic (PV) panels supported by framing that have sufficient uniformly distributed and unobstructed openings throughout the top of the array (horizontal plane) to allow heat and gases to escape, as determined by the enforcing agency.

Section 11.1 of NFPA 13—19 is amended to add the following subsection:

**11.1.1** The use of extended coverage sprinklers shall require prior approval from the San José Fire Department.

Section 16.9.3.1 of NFPA 13—19 is amended to add the following subsections:

**16.9.3.1.4** Where a system includes floor control valves, a hydraulic design information sign containing information for the floor shall be provided at each floor control valve. A hydraulic design information sign shall be provided for each area calculated. The installing contractor shall identify a hydraulically designed sprinkler system with a permanently marked weatherproof metal or rigid plastic sign secured with corrosion resistant wire, chain, or other approved means. Such signs shall be placed at the alarm valve, dry pipe valve, preaction valve, or deluge valve supplying the corresponding hydraulically designed area.

**16.9.3.1.5** Control valves, check valves, drain valves, antifreeze valves shall be readily accessible for inspection, testing, and maintenance. Valves located more than 7 feet above the finished floor shall be provided with a means of opening and closing the valve from the floor level.



Section 16.9 of NFPA 13—19 is amended as follows:

16.9.11 Multistory buildings (exceeding one story in height) shall be provided with a floor control valve, check valve, main drain valve, and flow switch for isolation, control, and annunciation of water flow for each individual floor level.

16.9.11.2 is deleted.

16.9.11.3 is deleted.

16.9.11.4 is deleted.

Section 16.9 of NFPA 13—19 is amended to add the following subsections:

16.9.3.6 Fire sprinkler system risers or other controls shall not be located in electrical rooms.

16.9.13.1 Private fire service main systems shall have sectional control valves at appropriate points in order to permit sectionalizing the system in the event of a break or for the making of repairs or extensions.

16.9.13.1.1 Sectional control valves are not required when the fire service main system serves less than six fire appurtenances.

16.9.13.1.2 Sectional control valves shall be indicating valves in accordance with Section 16.9.3.2.

16.9.13.1.3 Sectional control valves shall be located so that no more than five fire appurtenances are affected by shut-down of any single portion of the fire service main. Each fire hydrant, fire sprinkler system riser, and standpipe riser shall be considered a separate fire appurtenance. In-rack sprinkler systems shall not be considered as a separate appurtenance.

16.9.13.1.4 The number of fire appurtenances between sectional control valves is allowed to be modified by the authority having jurisdiction.

16.9.13.2 A valve shall be provided on each bank where a main crosses a body of water or outside the building foundation(s) where the main or section of main runs under a building.

Section 17.2.2.9.1 of NFPA 13—19 is amended to add the following subsection:

17.2.2.9.1.1 Powder-driven studs used for attaching hangers to the building structure are prohibited in Seismic Design Categories C, D, E and F.

Section 18 of NFPA 13—19 is amended as follows:

**18.5.11.4** Where threaded pipe is used for sway bracing, it shall have a wall thickness of not less than Schedule 40.

**18.5.12.5** Lag screws or powder-driven fasteners shall not be used to attach braces to the building structure.

**18.5.12.6** Fastening methods other than those identified in 18.5.12 shall not apply to other fastening methods, which shall be acceptable for use if certified by a registered professional engineer to support the loads determined in accordance with the criteria in 18.5.9. Calculations shall be submitted to the authority having jurisdiction.

**18.5.12.7.4** Concrete anchors other than those shown in Table 18.5.12.2(a) through Table 18.5.12.2(j) and identified in 18.5.11.11 shall be acceptable for use where designed in accordance with the requirements of the building code and certified by a registered professional engineer.

**18.6.1\*(3)** No. 12, 440 lb (200 Kg) wire installed at least 45 degrees from the vertical plane and anchored on both sides of the pipe. Powder-driven fasteners for attaching restraint is allowed to be used provided that the restraint component does not support the dead load.

Section 19.3.3.2 of NFPA 13—19 is amended as follows:

**19.3.3.2.3 is deleted.**

**19.3.3.2.9** For light hazard areas designated for office use, one-inch plugged, threaded outlets shall be provided at each sprinkler. The minimum flow at each sprinkler shall be 22.5 gpm. The equivalent K-factor for each sprinkler shall be 5.08 (5.6 K-factor sprinkler with 20' of 1" Schedule 40 pipe and fittings). The corresponding equivalent K-factor for a K=8.0 sprinkler is 6.73. Note that this equivalent K-factor involves the shell system sprinkler location and the future finished ceiling sprinkler location.

Only standard spray sprinklers shall be used. Extended coverage sprinkler heads shall not be used.

**19.3.3.2.10** When a fire sprinkler system is required in a building of undetermined use with floor to structure height of fourteen feet (14') or less, it shall be installed for an ordinary hazard occupancy with a minimum design density of not less than 0.20 gpm/square feet, with a minimum design area of three thousand (3,000) square feet. The system demand, including 250 gpm hose stream allowance, shall be designed at a minimum of ten percent below the available water supply. One-inch plugged, threaded outlets shall be provided at each sprinkler. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the owner and/or occupant to upgrade the system.

**19.3.3.2.11** When a fire sprinkler system is required in a building of undetermined use with floor to structure height greater than fourteen feet (14'), a fire sprinkler system shall be installed for an extra hazard occupancy with a minimum design density of 0.33 gpm/square feet with a minimum design area of three thousand (3,000) square feet. The system demand including 500 gpm hose stream allowance shall be designed at a minimum of ten percent below the available water supply. One-inch plugged, threaded outlets shall be provided at each sprinkler. Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the owner and/or occupant to upgrade the system.

Section 20.6.5 of NFPA 13—19 is amended to read as follows:

**20.6.5.2** Early suppression fast-response (ESFR) sprinklers shall not be used in buildings with automatic heat or smoke vents unless the vents use a standard-response operating mechanism with a minimum temperature rating of 360°F (182°C) or 100°F (56°C) above the operating temperature of the sprinklers, whichever is higher.

Section 27.2 of NFPA 13—19 is amended as follows:

**27.2.1.7** The safety margin for hydraulic calculations shall be 10% of the water supply data.

**27.2.4.13** The maximum water velocity in the hydraulic calculations shall be twenty feet per second (20 ft/sec) when designing to the criteria as set forth herein as Sections 19.3.3.2.9, 19.3.3.2.10, and 19.3.3.2.11.

Section 28 of NFPA 13—19 is amended as follows:

**28.1 Approval of Sprinkler Systems and Private Fire Service Mains.** The installing contractor shall do the following:

1. Notify the authority having jurisdiction and the property owner or property owner's authorized representative of the time and date testing will be performed.
2. Perform all required testing (see Section 28.2).
3. Complete and sign the appropriate contractor's material and test certificate(s) (see Figure 28.1).
4. Remove all caps and straps prior to placing the sprinkler system in service.
5. Upon system acceptance by the authority having jurisdiction a label prescribed by Title 19 California Code of Regulations, Chapter 5 shall be affixed to each system riser.

**28.4 Instructions.** The installing contractor shall provide the property owner or the property owner's authorized representative with the following:

1. All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed.
2. NFPA 25, Standard for the Inspection, testing, and maintenance of Water-Based Fire Protection Systems, 2019 California Edition.
3. Title 19, California Code of Regulations, Chapter 5, "Fire Extinguishing Systems."

**28.5.1** The installing contractor shall identify a hydraulically designed sprinkler system with a permanently marked weatherproof metal or rigid plastic sign secured with corrosion resistant wire, chain, or other approved means. Such signs shall be placed at the alarm valve, dry pipe valve, preaction valve, or deluge valve supplying the corresponding hydraulically designed area. Pipe schedule systems shall be provided with a sign indicating that the system was designed and installed as a pipe schedule system and the hazard classification(s) included in the design.

**28.5.3** The sign shall include the following information:

1. Location of the design area or areas
2. Discharge densities over the design area or areas
3. Required flow and pressure of the system at the base of the riser.
4. Occupancy classification or commodity classification and maximum permitted storage height and configuration
5. Hose stream allowance included in addition to the sprinkler demand
6. The name of the installing contractor
7. Required flow and pressure of the system at the water supply source.
8. Required flow and pressure of the system at the discharge side of the fire pump where a fire pump is installed.
9. Type or types and number of sprinklers or nozzles installed including the orifice size, temperature rating, orientation, K-Factor, sprinkler identification number (SIN) for sprinkler heads when applicable, and response type.
10. The minimum discharge flow rate and pressure required from the hydraulically most demanding sprinkler.

11. The required pressure settings for pressure reducing valves.
12. For deluge sprinkler systems, the required flow and pressure at the hydraulically most demanding sprinkler or nozzle.
13. The protection area per sprinkler based on the hydraulic calculations.
14. The edition of NFPA 13 to which the system was designed and installed.

**28.6.1** The installing contractor shall provide a general information sign used to determine system design basis and information relevant to the inspection, testing, and maintenance requirements required by NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2019 California Edition.

**17.12.1050 Amendment of Chapter 80 of the 2016 California Fire Code Standard for the Protection of Semiconductor Fabrication Facilities (NFPA 318-15)**

~~NFPA 318-15 edition, including appendices is hereby added to the list of recognized standards, as contained in Chapter 80 of the 2016 California Fire Code, with the following amendments:~~

~~Section 11.2.1 is amended to add the following:~~

~~**11.2.1.9** Approved inspection ports shall be provided in all internally fire sprinklered ducts for periodic inspection and maintenance.~~

**17.12.1050 Amendment of Chapter 80 of the 2019 California Fire Code NFPA 14—16, Standard for Installation of Standpipe and Hose Systems**

NFPA 14-16, Standard for the Installation of Standpipe and Hose Systems as amended\*, is amended to read as follows:

14—16: Standard for the Installation of Standpipe and Hose Systems, as amended is deleted.

**17.12.1055 Adoption NFPA 14—19, Standard for the Installation of Standpipe and Hose Systems**

Except as otherwise provided for in this Section, NFPA 14—19, including the annexes therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

### **17.12.1060 Amendment of Sections in NFPA 14—19 Relating to Standard for the Installation of Standpipe and Hose Systems**

Section 5.5 of NFPA 14—19 is amended to add the following subsections:

**5.5.1.5** Each hose outlet shall be provided with a gauge configured as depicted in 2019 NFPA 14, Figure 7.11.2.1 for system riser drain connections, regardless of the type of standpipe system installed.

Section 6.3.7.1 of NFPA 14—19 is amended as follows:

**6.3.7.1** System water supply valves, isolation control valves, and other valves in fire mains shall be supervised in an approved manner in the open position by one of the following methods:

1. Where a building has a fire alarm system or a sprinkler monitoring system installed, the valve shall be supervised by:

i. A central station, proprietary, or remote supervising station, or

ii. A local signaling service that initiates an audible signal at a constantly attended location.

2. Where a building does not have a fire alarm system or a sprinkler monitoring system installed, the valve shall be supervised by:

A. Locking the valves in the open position, or

B. Sealing of valves and an approved weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

Section 6.3 of NFPA 14—19 is amended to add the following subsection:

**6.3.9** For Manual Wet Systems, the water supply shall be made prior to the sprinkler system water flow indicator. The connection shall be equipped with a monitored control valve, check valves, flow switch, and include a pipe restriction of three-eighth inch (3/8") orifice or less.

**17.12.1065 Amendment of Chapter 80 of the 2019 California Fire Code NFPA 20—16, Standard for Installation of Stationary Pumps for Fire Protection**

NFPA 20-16, Standard for the Installation of Stationary Pumps for Fire Protection, is amended to read as follows:

20—16: Standard for the Installation of Stationary Pumps for Fire Protection is deleted.

**17.12.1070 Adoption of NFPA 20—19, Standard for the Installation of Stationary Pumps for Fire Protection**

Except as otherwise provided for in this Section, NFPA 20—19, including the annexes therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.1072 Amendment of Sections in NFPA 20—19 Relating to Standard for the Installation of Stationary Pumps for Fire Protection**

Section 4 of NFPA 20—19 is amended as follows:

**4.14.1** All exterior fire pumps shall be installed in a dedicated building (pump house).

**4.17.10.1** Positive supply pressure shall be maintained through alarms that shall be arranged for audio and visual annunciation at the FACU and in the fire pump room if the water supply drops below 5 psi.

**4.22.1** To facilitate flow testing, all fire pumps shall be equipped with both of the following:

- i. Test Header. This device is connected to the discharge side of the pump and has a number of hose outlets per Table 4.28
  - a. When testing the pump, the hose is connected to the outlets with water discharged to a safe location. Flow readings are usually taken from the end of the hose with a Pitot gauge.
- ii. Flow Meter. A special pipe is run from the discharge side of the pump back to the water supply (or to some other acceptable discharge point) with a flowmeter and control valve in the line. When testing the pump, the control valve is opened partially (with the pump already running) to achieve the 100 percent flow condition. The valve is opened more to achieve the 150 percent flow condition.



**17.12.1074 Amendment of Chapter 80 of the 2019 California Fire Code Installation of Private Fire Service Mains and Their Appurtenances: as amended\* (NFPA 24-16)**

NFPA 24-16, Installation of Private Fire Service Mains and Their Appurtenances: as amended\*, is deleted.

**17.12.1076 Adoption of NFPA 20—19, Installation of Private Fire Service Mains and Their Appurtenances**

Except as otherwise provided for in this Section, NFPA 24—19, including the annexes therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.1078- Amendment of Sections in NFPA 24—19 Relating to Installation of Private Fire Service Mains and Their Appurtenances**

Section 7.3 of NFPA 24—19 is amended to add the following new subsection:

**7.3.7** Fire hydrants shall not be subject to pressure supplied by way of a FDC.

**17.12.1080 Amendment of Chapter 80 of the 2019 California Fire Code Relating to NFPA 72—16, National Fire Alarm and Signaling Code**

NFPA 72-16, National Fire Alarm and Signaling Code, as amended\*, is deleted.

**17.12.1082 Adoption of NFPA 72—19, National Fire Alarm and Signaling Code**

Except as otherwise provided for in this Section, NFPA 72—19, including the annexes therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.1084- Amendment of Sections in NFPA 24—19 Relating to Installation of Private Fire Service Mains and Their Appurtenances**

Section 10.3 of NFPA 72—19 is amended as follows:

**10.3.1** Equipment constructed and installed in conformity with this Code shall be listed for the purpose for which it is used. *Fire alarm systems and components shall be California State Fire Marshal approved and listed in accordance with California Code of Regulations, Title 19, Division 1.*

**10.3.3** All devices and appliances that receive their power from the initiating device circuit or signaling line circuit of a control unit shall be *California State Fire Marshal* listed for use with the control unit.

Section 10.6.3 of NFPA 72—19 is amended to add the following subsection:

**10.6.3.5** Where the engine-driven generator is not constantly attended, audible and visible alarms powered by a source other than the engine starting batteries and not exceeding 125 volts shall be provided at a point of constant attendance or to a listed central station. These alarms shall indicate the following:

1. Engine running (separate signal).
2. The controller main switch has been turned to “off” or “manual” position (separate signal).
3. Low fuel and trouble on the controller or engine (separate or common signals).

Section 10.7.1 of NFPA 72—19 is amended as follows:

**10.7.1** Where approved by the authority having jurisdiction, ECS priority signals when evaluated by stakeholders through risk analysis in accordance with 24.3.12 shall be permitted to take precedence over all other signals.

Section 12.3.8.1 of NFPA 72—19 is amended to read as follows:

**12.3.8.1** The outgoing and return (redundant) circuit conductors shall be permitted in the same cable assembly (i.e., multiconductor cable), enclosure, or raceway only under the following conditions:

1. For a distance not to exceed 10 ft (3.0 m) where the outgoing and return conductors enter or exit the initiating device, notification appliance, or control unit enclosures.
2. Single drops installed in the raceway to individual devices or appliances.
3. In a single room not exceeding 1000 ft<sup>2</sup> (93 m<sup>2</sup>) in area, a drop installed in the raceway to multiple devices or appliances that does not include any emergency control function devices.
4. Where the vertically run conductors are contained in a 2-hour rated cable assembly, or enclosed (installed) in a 2-hour rated enclosure or a listed circuit integrity (C.I.) cable, which meets or exceeds a 2-hour fire-resistive rating.

Section 14.4.6.1 of NFPA 72—19 is amended to read as follows:

**14.4.6.1** Testing. Household fire alarm systems shall be tested in accordance with the manufacturer's published instructions according to the methods of Table 14.4.3.2.

Section 17.16 of NFPA 72—19 is amended to read as follows:

**17.16 Fire Extinguisher Electronic Monitoring Device.** A fire extinguisher electronic monitoring device shall indicate those conditions for a specific fire extinguisher required by California Code of Regulations, Title 19, Division 1, Chapter 1, Section 574.2 (c) and California Fire Code to a fire alarm control unit.

Section 21.3.6 of NFPA 72—19 is amended to read as follows:

**21.3.6** Smoke detectors shall not be installed in unsprinklered elevator hoistways unless they are installed to activate the elevator hoistway smoke relief equipment or where required by Chapter 30 of the California Building Code.

Section 23.8.5 of NFPA 72—19 is amended to read as follows:

**23.8.5.1.2** Where connected to a supervising station, fire alarm systems employing automatic fire detectors or waterflow detection devices shall include a manual fire alarm box to initiate a signal to the supervising station.

**Exception:** Fire alarm systems dedicated to elevator recall control, supervisory service and fire sprinkler monitoring as permitted in section 21.3 of NFPA 72.

**23.8.5.4.1** Systems equipped with alarm verification features shall be permitted under the following conditions:

1. The alarm verification feature is not initially enabled unless conditions or occupant activities that are expected to cause nuisance alarms are anticipated in the area that is protected by the smoke detectors. Enabling of the alarm verification feature shall be protected by password or limited access.
2. A smoke detector that is continuously subjected to a smoke concentration above alarm threshold does not delay the system functions of Sections 10.7 through 10.16, 23.8.1.1, or 21.2.1 by more than 30 seconds.
3. Actuation of an alarm-initiating device other than a smoke detector causes the system functions of Sections 10.7 through 10.16, 23.8.1.1, or 21.2.1 without additional delay.
4. The current status of the alarm verification feature is shown on the record of completion (see Figure 7.8.2(a), Item 4.3).
5. Operation of a patient room smoke detector in I-2 and R-2.1 occupancies shall not include an alarm verification feature.

Section 29 of NFPA 72—19 is amended as follows:

29.3.1 All devices, combinations of devices, and equipment to be installed in conformity with this chapter shall be approved and *listed by the California State Fire Marshal* for the purposes for which they are intended.

29.8.2.1\* Smoke and Heat Alarms. Unless exempted by applicable laws, codes, or standards, smoke or heat alarms used to provide a fire-warning function, and when two or more alarms are installed within a dwelling unit, suite of rooms, or similar area, shall be arranged so that the operation of any smoke or heat alarm causes all alarms within these locations to sound.

29.10.2.1 The alarm verification feature shall not be used for household fire warning equipment.

29.10.6.8.1 The alarm verification feature shall not be used for household fire warning equipment.

29.11.3.4 Specific location requirements. The installation of smoke alarms and smoke detectors shall comply with the following requirements:

1. Smoke alarms and smoke detectors shall not be located where ambient conditions, including humidity and temperature, are outside the limits specified by the manufacturer's published instructions.
2. Smoke alarms and smoke detectors shall not be located within unfinished attics or garages or in other spaces where temperatures can fall below 40°F (4°C) or exceed 100°F (38°C).
3. Where the mounting surface could become considerably warmer or cooler than the room, such as a poorly insulated ceiling below an unfinished attic or an exterior wall, smoke alarms and smoke detectors shall be mounted on an inside wall.
4. Smoke alarms or smoke detectors shall be installed a minimum of 20 feet horizontal distance from a permanently installed cooking appliance.

**Exceptions:** Ionization smoke alarms with an alarm silencing switch or photoelectric smoke alarms shall be permitted to be installed 10 feet (3 m) or greater from a permanently installed cooking appliance.

Photoelectric smoke alarms shall be permitted to be installed greater than 6 feet (1.8 m) from a permanently installed cooking appliance where the kitchen or cooking area and adjacent spaces have no clear interior partitions and the 10 ft distances would prohibit the placement of a smoke alarm or smoke detector required by other sections of the code.

Smoke alarms listed for use in close proximity to a permanently installed cooking appliance.

5. Installation near bathrooms. Smoke alarms shall be installed not less than a 3-foot (0.91 m) horizontal distance from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by other sections of the code.
6. Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers.
7. Smoke alarms and smoke detectors shall not be installed within a 36 in. (910 mm) horizontal path from the tip of the blade of a ceiling-suspended (paddle) fan.
8. Where stairs lead to other occupied levels, a smoke alarm or smoke detector shall be located so that smoke rising in the stairway cannot be prevented from reaching the smoke alarm or smoke detector by an intervening door or obstruction.
9. For stairways leading up from a basement, smoke alarms or smoke detectors shall be located on the basement ceiling near the entry to the stairs.
10. For tray-shaped ceilings (coffered ceilings), smoke alarms and smoke detectors shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 in. (300 mm) vertically down from the highest point.
11. Smoke alarms and detectors installed in rooms with joists or beams shall comply with the requirements of 17.7.3.2.4 of NFPA 72.
12. Heat alarms and detectors installed in rooms with joists or beams shall comply with the requirements of 17.6.3 of NFPA 72.

**17.12.1086 Amendment of Chapter 80 of the 2019 California Fire Code Relating to NFPA 1221—16, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems**

NFPA 1221—16, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems, is deleted.

**17.12.1088 Adoption of NFPA 1221—19, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems**

Except as otherwise provided in this Section, NFPA 1221—19, including the annexes therein, is adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.

**17.12.1090- Amendment of Sections in NFPA 1221—19 Relating to Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems**

Section 9.6.2.3 of NFPA 1221—19 is amended to read as follows:

**9.6.2.3** Backbone cables shall be routed through an enclosure that matches the building's fire rating by not less than 1 hour.

Section 9.6.2 of NFPA 1221—19 is amended to add the following subsection:

**9.6.2.5** RF-emitting device and active system components shall be located in a room that matches the building's fire rating by not less than 1 hour.

Section 9.6.13 of NFPA 1221—19 is amended as follows:

**9.6.13.1 (2) (d)** Active and passive system component (distribution antenna loop) failure

**9.6.13.2.1 (7)** Active and passive system component (distribution antenna loop) malfunction.

**17.12.1092 Amendment of Chapter 80 of the 2019 California Fire Code Relating to NFPA 2001—15, Standard on Clean Agent Fire Extinguishing Systems**

Section 1-4 of NFPA 2001-15 edition is amended to add the following:

**1.4.2.5** Clean agent systems shall not be used in lieu of required fire sprinkler systems.

SECTION 19. Part 11 of Chapter 17.12 of Title 17 of the San José Municipal Code is hereby repealed.

**Part 11**

**Marinas and Construction Requirements for Existing Buildings**

**17.12.1100 ~~Adoption of Chapters 36 and 11 of the 2016 California Fire Code~~**

~~Except as otherwise provided in this Chapter, Chapters 36 and 11 of the 2016 California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.~~

SECTION 20. Part 12 of Chapter 17.12 of Title 17 of the San José Municipal Code is hereby repealed.

**Part 12**

**~~Motion Picture And Television Production Studio Sound Stages, Approved  
Production Facilities And Production Locations And Requirements For Wildland-  
Urban Interface Fire Areas~~**

**17.12.1200 — Adoption of Chapters 48 and 49 of the 2016 California Fire Code**

~~Except as otherwise provided for in this Chapter, Chapters 48 and 49 of the 2016 California Fire Code, including the Tables therein, are adopted and incorporated in this Chapter by reference and made a part hereof as if fully set forth herein.~~

SECTION 21. Part 13 of Chapter 17.12 of Title 17 of the San José Municipal Code is amended to read as follows:

**Part 13**

**Adoption of Appendices of the ~~2016~~ 2019 California Fire Code ~~Appendices A  
THROUGH N~~**

**17.12.1300 Adoption of Specified Appendices**

Except as otherwise provided in this Chapter, the following appendices to the ~~2016~~ 2019 California Fire Code are adopted and incorporated by reference and made a part hereof as if fully set forth herein: Appendix BB, Appendix C, Appendix D, ~~and Appendix K, Appendix L, Appendix N, and Appendix O.~~

~~Appendix BB, Section BB101.1 of the 2016 California Fire Code, shall be amended to read as follows:~~

~~BB101.1 The procedures determining fire-flow requirements for any buildings or portions of buildings hereafter shall be in accordance with this appendix. This appendix does not apply to structures other than buildings.~~

~~Appendix B, Section B105.1 of the 2019 California Fire Code is amended to read as follows:~~

~~**B105.1 One- and two-family dwellings, Group R-3 and R-4 buildings and townhouses.** The minimum fire-flow and flow duration requirements for one- and two-family dwellings, Group R-3 and R-4 buildings and townhouses shall be as specified in Table B105.1(3).~~

~~Appendix B, Section B105.2 of the 2019 California Fire Code is amended to read as follows:~~



**B105.2 Buildings other than one- and two-family dwellings, Group R-3 and R-4 buildings and townhouses.** The minimum fire-flow and flow duration for buildings other than one- and two-family dwellings, Group R-3 and R-4 buildings and townhouses shall be as specified in Table B105.1(3).

**Table B105.1(3)**  
**San Jose Fire Flow and Hydrant Policy**

| <u>Building Area (Square Feet)</u> |                             |                          |                             |                      | <u>Fire Flow (gpm) °x</u> |   |  | <u>CFC – Appendix C - Table C105.1</u>   |                           |  |   |
|------------------------------------|-----------------------------|--------------------------|-----------------------------|----------------------|---------------------------|---|--|--|---------------------------|--|---|
| <u>Type IA &amp; IB*</u>           | <u>Type IIA &amp; IIIA*</u> | <u>Type IV &amp; VA*</u> | <u>Type IIB &amp; IIIB*</u> | <u>Type VB*</u>      | <u>Light Hazard Occ.+</u> | <u>Ordinary Groups 1 &amp; 2 Hazard Occ.+</u> | <u>&lt;NS&gt; or Extra Hazard Groups 1 &amp; 2 Occ.+</u> | <u>Flow Duration (hours)<sup>x</sup></u> | <u>Min. # of Hydrants</u> | <u>Average Spacing between Hydrants in feet <sup>1 2 3</sup></u> | <u>Max. distance from any point on Street or Road Frontage to a Hydrant in feet. <sup>a</sup></u> |
| <u>0-22,700</u>                    | <u>0-12,700</u>             | <u>0-8,200</u>           | <u>0-5,900</u>              | <u>0-3,600</u>       | <u>1,500</u>              | <u>1,500</u>                                  | <u>1,500</u>   | <u>2</u>                                 | <u>1</u>                  | <u>500</u>   | <u>250</u>  |
| <u>22,701-30,200</u>               | <u>12,701-17,000</u>        | <u>8,201-10,900</u>      | <u>5,901-7,900</u>          | <u>3,601-4,800</u>   | <u>1,500</u>              | <u>1,500</u>                                  | <u>1,750</u>   | <u>2</u>                                 | <u>1</u>                  | <u>500</u>   | <u>250</u>  |
| <u>30,201-38,700</u>               | <u>17,001-21,800</u>        | <u>10,901-12,900</u>     | <u>7,901-9,800</u>          | <u>4,801-6,200</u>   | <u>1,500</u>              | <u>1,500</u>                                  | <u>2,000</u>   | <u>2</u>                                 | <u>2</u>                  | <u>450</u>   | <u>225</u>  |
| <u>38,701-48,300</u>               | <u>21,801-24,200</u>        | <u>12,901-17,400</u>     | <u>9,801-12,600</u>         | <u>6,201-7,700</u>   | <u>1,500</u>              | <u>1,688</u>                                  | <u>2,250</u>   | <u>2</u>                                 | <u>2</u>                  | <u>450</u>   | <u>225</u>  |
| <u>48,301-59,000</u>               | <u>24,201-33,200</u>        | <u>17,401-21,300</u>     | <u>12,601-15,400</u>        | <u>7,701-9,400</u>   | <u>1,500</u>              | <u>1,875</u>                                  | <u>2,500</u>   | <u>2</u>                                 | <u>3</u>                  | <u>450</u>   | <u>225</u>  |
| <u>59,001-70,900</u>               | <u>33,201-39,700</u>        | <u>21,301-25,500</u>     | <u>15,401-18,400</u>        | <u>9,401-11,300</u>  | <u>1,500</u>              | <u>2,063</u>                                  | <u>2,750</u>   | <u>2</u>                                 | <u>3</u>                  | <u>450</u>   | <u>225</u>  |
| <u>70,901-83,700</u>               | <u>39,701-47,100</u>        | <u>25,501-30,100</u>     | <u>18,401-21,800</u>        | <u>11,301-13,400</u> | <u>1,500</u>              | <u>2,250</u>                                  | <u>3,000</u>   | <u>3</u>                                 | <u>3</u>                  | <u>400</u>   | <u>225</u>  |
| <u>83,701-97,700</u>               | <u>47,101-54,900</u>        | <u>30,101-35,200</u>     | <u>21,801-25,900</u>        | <u>13,401-15,600</u> | <u>1,625</u>              | <u>2,438</u>                                  | <u>3,250</u>   | <u>3</u>                                 | <u>3</u>                  | <u>400</u>   | <u>225</u>  |
| <u>97,701-112,700</u>              | <u>54,901-63,400</u>        | <u>35,201-40,600</u>     | <u>25,901-29,300</u>        | <u>15,601-18,000</u> | <u>1,750</u>              | <u>2,625</u>                                  | <u>3,500</u>   | <u>3</u>                                 | <u>4</u>                  | <u>350</u>   | <u>210</u>  |
| <u>112,701-128,700</u>             | <u>63,401-72,400</u>        | <u>40,601-46,400</u>     | <u>29,301-33,500</u>        | <u>18,001-20,600</u> | <u>1,875</u>              | <u>2,818</u>                                  | <u>3,750</u>   | <u>3</u>                                 | <u>4</u>                  | <u>350</u>   | <u>210</u>  |
| <u>128,701-145,900</u>             | <u>72,401-82,100</u>        | <u>46,401-52,500</u>     | <u>33,501-37,900</u>        | <u>20,601-23,300</u> | <u>2,000</u>              | <u>3,000</u>                                  | <u>4,000</u>   | <u>4</u>                                 | <u>4</u>                  | <u>350</u>   | <u>210</u>  |
| <u>145,901-164,200</u>             | <u>82,101-92,400</u>        | <u>52,501-59,100</u>     | <u>37,901-42,700</u>        | <u>23,301-26,300</u> | <u>2,150</u>              | <u>3,188</u>                                  | <u>4,250</u>   | <u>4</u>                                 | <u>4</u>                  | <u>350</u>   | <u>210</u>  |
| <u>164,201-183,400</u>             | <u>92,401-103,100</u>       | <u>59,101-66,000</u>     | <u>42,701-47,700</u>        | <u>26,301-29,300</u> | <u>2,250</u>              | <u>3,375</u>                                  | <u>4,500</u>   | <u>4</u>                                 | <u>5</u>                  | <u>300</u>   | <u>180</u>  |

|                        |                        |                        |                        |                       |              |              |              |          |          |            |            |
|------------------------|------------------------|------------------------|------------------------|-----------------------|--------------|--------------|--------------|----------|----------|------------|------------|
| <u>183,401-203,700</u> | <u>103,101-114,600</u> | <u>66,001-73,300</u>   | <u>47,701-53,000</u>   | <u>29,301-32,600</u>  | <u>2,375</u> | <u>3,563</u> | <u>4,750</u> | <u>4</u> | <u>5</u> | <u>300</u> | <u>180</u> |
| <u>203,701-225,200</u> | <u>114,601-126,700</u> | <u>73,301-81,100</u>   | <u>53,001-58,600</u>   | <u>32,601-36,000</u>  | <u>2,500</u> | <u>3,750</u> | <u>5,000</u> | <u>4</u> | <u>5</u> | <u>300</u> | <u>180</u> |
| <u>225,201-247,700</u> | <u>126,701-139,400</u> | <u>81,101-89,200</u>   | <u>58,601-65,400</u>   | <u>36,001-39,600</u>  | <u>2,625</u> | <u>3,938</u> | <u>5,250</u> | <u>4</u> | <u>5</u> | <u>300</u> | <u>180</u> |
| <u>247,701-271,200</u> | <u>139,401-152,600</u> | <u>89,201-97,700</u>   | <u>65,401-70,600</u>   | <u>39,601-43,400</u>  | <u>2,750</u> | <u>4,125</u> | <u>5,500</u> | <u>4</u> | <u>6</u> | <u>300</u> | <u>180</u> |
| <u>271,201-295,900</u> | <u>152,601-166,500</u> | <u>97,701-106,500</u>  | <u>70,601-77,000</u>   | <u>43,401-47,400</u>  | <u>2,875</u> | <u>4,313</u> | <u>5,750</u> | <u>4</u> | <u>6</u> | <u>300</u> | <u>180</u> |
| <u>295,901-Greater</u> | <u>166,501-Greater</u> | <u>106,501-115,800</u> | <u>77,001-83,700</u>   | <u>47,401-51,500</u>  | <u>3,000</u> | <u>4,500</u> | <u>6,000</u> | <u>4</u> | <u>6</u> | <u>250</u> | <u>150</u> |
| -                      | -                      | <u>115,801-125,500</u> | <u>83,701-90,600</u>   | <u>51,501-55,700</u>  | <u>3,125</u> | <u>4,688</u> | <u>6,250</u> | <u>4</u> | <u>6</u> | <u>250</u> | <u>150</u> |
| -                      | -                      | <u>125,501-135,500</u> | <u>90,601-97,900</u>   | <u>55,701-60,200</u>  | <u>3,250</u> | <u>4,875</u> | <u>6,500</u> | <u>4</u> | <u>7</u> | <u>250</u> | <u>150</u> |
| -                      | -                      | <u>135,501-145,800</u> | <u>97,901-106,800</u>  | <u>60,201-64,800</u>  | <u>3,375</u> | <u>5,063</u> | <u>6,750</u> | <u>4</u> | <u>7</u> | <u>250</u> | <u>150</u> |
| -                      | -                      | <u>145,801-156,700</u> | <u>106,801-113,200</u> | <u>64,801-69,600</u>  | <u>3,500</u> | <u>5,250</u> | <u>7,000</u> | <u>4</u> | <u>7</u> | <u>250</u> | <u>150</u> |
| -                      | -                      | <u>156,701-167,900</u> | <u>113,201-121,300</u> | <u>69,601-74,600</u>  | <u>3,625</u> | <u>5,438</u> | <u>7,250</u> | <u>4</u> | <u>7</u> | <u>250</u> | <u>150</u> |
| -                      | -                      | <u>167,901-179,400</u> | <u>121,301-129,600</u> | <u>74,601-79,800</u>  | <u>3,750</u> | <u>5,625</u> | <u>7,500</u> | <u>4</u> | <u>8</u> | <u>200</u> | <u>120</u> |
| -                      | -                      | <u>179,401-191,400</u> | <u>129,601-138,300</u> | <u>79,801-85,100</u>  | <u>3,875</u> | <u>5,813</u> | <u>7,750</u> | <u>4</u> | <u>8</u> | <u>200</u> | <u>120</u> |
| -                      | -                      | <u>191,401-Greater</u> | <u>138,301-Greater</u> | <u>85,101-Greater</u> | <u>4,000</u> | <u>6,000</u> | <u>8,000</u> | <u>4</u> | <u>8</u> | <u>200</u> | <u>120</u> |

Occ. = Occupancy <NS> = Non-Sprinklered

\* Types of construction are based upon the California Building Code.

+ Types of Hazard are based upon NFPA 13.

° Measured at 20 psi. See CFC Appendix III-A, Section 2

<sup>1</sup> Reduce by 100 feet for dead-end streets or roads.

<sup>2</sup> Where streets are provided with median dividers which cannot be crossed by firefighters pulling hose lines, or arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis up to a fire-flow requirement of 7,000 gallons per minute and 400 feet for higher fire-flow requirements.

<sup>3</sup> Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

<sup>a</sup> Reduce by 50 feet for dead-end streets or roads.

<sup>x</sup> For one-and two-family dwellings; the minimum fire-flow and flow duration requirements for one-and two-family dwellings having a fire-flow calculation area that does not exceed 3,600 square feet shall be 1,000 gallons per minute for duration of 1 hour.

Appendix C, Table C102.1 of the ~~2016-2019~~ California Fire Code, ~~shall be is~~ amended to delete footnotes e & f.

Appendix D, Section D105.1 of the ~~2016-2019~~ California Fire Code, ~~shall be is~~ amended to read as follows:

**D105.1 Where required.** Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet (9144 mm), approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.

**Exception:** High-rise structures shall not require aerial fire apparatus access roads.

Appendix L, Section L101.1 of the ~~2016-2019~~ California Fire Code, ~~shall be replaced is amended~~ to read as follows:

**L101.1 Scope.** The following buildings shall be equipped with a firefighter breathing air replenishment system, as approved by the Fire Chief or designee. The system shall provide an adequate pressurized air supply through permanent piping system with access stations for replenishment of portable breathing air equipment used by Fire Department personnel:

1. Any building having floors used for human occupancy located more than seventy five feet (75') above the lowest level of the fire department vehicular or personnel access, whichever access is more restrictive, as determined by the Fire Chief;
2. Any building with two (2) or more stories underground;
3. Any tunnel over five hundred feet (500') in length;
4. Any building where the fire apparatus access point is located more than one hundred fifty feet (150') from the nearest entrance to the building.

Appendix L, Section L104.13.1, subparagraphs 1 & 2 of the ~~2016-2019~~ California Fire Code, ~~shall be replaced- is amended~~ to read as follows:

1. Breathing air replenishment access stations shall be located no more than one hundred fifty feet (150') apart, and on at least every third floor in multi-story buildings and structures.
2. In buildings requiring fill stations, one fill station shall be provided adjacent to an exit stair at a location designated by the fire code official. In buildings with three or more exit stairs on a floor, additional fill stations shall be provided at a ratio of one fill station for every three stairs, but in no case exceeding 150 feet apart horizontally or vertically.

Appendix L, Section L104.13.2, subparagraph 5 of the ~~2016-2019~~ California Fire Code, shall be amended to delete the exception.

SECTION 22. Chapter 17.78 of Title 17 of the San José Municipal Code is hereby repealed.

~~**CHAPTER 17.78**~~  
~~**REQUIREMENTS FOR FACILITIES WHERE MATERIALS WHICH ARE OR WHICH**~~  
~~**MAY BECOME TOXIC GASES ARE FOUND**~~

~~**Part 1**~~  
~~**Purpose and Definitions**~~

~~**17.78.010 Applicability**~~

- ~~A. This chapter applies to all new and existing facilities where regulated materials subject to this chapter are present in concentrations which exceed the level of concern as determined in accordance with this chapter.~~
- ~~B. In the event of conflicting or overlapping regulatory provisions within the San José Fire Code, Chapter 11.12 of Title 17; the San José Building Code, Chapter 17.04 of Title 17; the San José Electrical Code, Chapter 17.52 of Title 17; the San José Plumbing Code, Chapter 17.56 of Title 17; the San José Mechanical Code, Chapter 17.60 of Title 17; and this chapter, the most stringent requirement shall be applied.~~
- ~~C. In the event of conflicting or overlapping regulatory provisions with a federal law or state law or regulation, unless the application of this ordinance is expressly preempted by an Act of Congress or enactment of the legislature, the more stringent requirement shall apply.~~
- ~~D. The fire chief may approve any alternate material or method, provided the fire chief finds that the proposed design, use or operation satisfactorily complies with the intent of this chapter and that the material, method of work performed, or operation is, for the purpose intended, at least the equivalent of that prescribed in this chapter.~~

~~**17.78.020 Definitions Generally**~~

~~Unless the context otherwise requires, the words and phrases in this chapter shall have the meanings set forth in this Part 1 and shall govern the construction of this chapter. For words and phrases not defined in this chapter, the definitions set forth in Chapters 17.04, 17.12, 17.52, 17.56, 17.60, and 17.68 of Title 17 of the San José Municipal Code shall control.~~

### **17.78.030 Controls**

~~"Controls" are means to regulate materials to prevent unauthorized discharges.~~

### **17.78.040 Control Area**

~~"Control area" means a space within a building where regulated materials may be stored, handled, dispensed or used. A control area is an area formed by one or more of the following:~~

- ~~A. An occupancy separation with a minimum one-hour fire-resistive rating; or~~
- ~~B. The exterior wall, roof or foundation of the building. A maximum of four control areas shall be permitted within a building except buildings or portions of buildings used for retail sales, which shall have a maximum of two control areas.~~

### **17.78.050 Equilibrium vapor concentration (EVC)**

~~"Equilibrium vapor concentration" ("EVC") means the state of a regulated material at which vapor pressure has stabilized and is no longer rising or falling. The EVC value of a regulated material is determined by multiplying vapor pressure by 10<sup>6</sup> and dividing by atmospheric pressure, as shown in the following equation:~~

|                        |   |
|------------------------|---|
| <del>EVC (ppm) =</del> | <del><math display="block">\frac{\text{Vapor Pressure} \times 10^6}{\text{Atmospheric Pressure}} \\ 7600 \text{ mm Hg}</math></del> |
|------------------------|---|

~~**Note:** Vapor pressure for materials with a boiling point equal to or less than 25°C shall be 760 mm Hg; materials with a boiling point greater than 25°C shall use the actual vapor pressure for that material at 25°C. Atmospheric pressure is assumed to be 760 mm at sea level.~~

### **17.78.060 Facility**

~~"Facility" means any building, structure, installation, equipment, pipe, container, site, area, appurtenant structure, or surrounding land area where regulated materials are stored, used, dispensed, handled, placed or otherwise have come to be located.~~

### **17.78.070 Fire Code**

~~"Fire code" means the San José Fire Code, Chapter 17.12 of Title 17 of this Code.~~

### **17.78.080 Gas**

~~"Gas" means an aeriform fluid which is in a gaseous state at normal temperature and pressure.~~

#### **17.78.090 IDLH (Immediately Dangerous to Life and Health)**

~~"IDLH" (immediately dangerous to life or health) means a concentration of airborne contaminants, normally expressed in parts per million (ppm) or milligrams per cubic meter, which represents the maximum level from which one could escape within thirty minutes without any escape-impairing symptoms or irreversible health effects. This level is established by the National Institute of Occupational Safety and Health (NIOSH). If adequate data do not exist for precise establishment of IDLH data, an independent certified industrial hygienist, industrial toxicologist or appropriate regulatory agency shall make such determination.~~

#### **17.78.100 Inert Construction Materials**

~~"Inert construction materials" means materials which under reasonably foreseeable conditions will not degrade or react upon contact with the regulated material to be contained.~~

#### **17.78.110 Level of Concern (LOC)**

~~"Level of concern" ("LOC") means the maximum concentration of a substance in air that will not cause serious health effects in the majority of the population when exposed to the substance for a relatively short period of time. For purposes of this chapter, the LOC is equal to 0.1 of the IDLH value if the substance has an established IDLH, or if not, an estimated IDLH value based on acute toxicity data of 0.01 LC50, 0.1 LCLo, 0.001 LD50, or 0.01 LDLo.~~

#### **17.78.120 Lethal Concentration (LC50)**

~~"Lethal concentration" ("LC50") means the median lethal concentration level, at which fifty percent of appropriate test animals die when exposed by inhalation for a scientifically appropriate specified time period.~~

#### **17.78.130 Lethal Concentration Low (LCLo)**

~~"Lethal concentration low" ("LCLo") means the lowest concentration of a chemical at which some test animals died following inhalation exposure.~~

#### **17.78.140 Lethal Dose Median (LD50)**

~~"Lethal dose median" ("LD50") means the does at which fifty percent of test animals die following exposure. The lethal dose is given in milligrams per kilogram of body weight of the test animals.~~

**17.78.150 Lethal Dose Low (LDLo)**

~~"Lethal dose low" ("LDLo") means the lowest dose of a chemical at which some test animals died following exposure.~~

**17.78.160 Material Hazard Index (MHI)**

~~"Material hazard index" ("MHI") means a numeric value used for the ranking of chemical materials in order to determine the level of controls necessary for regulated materials. MHI is determined by dividing the equilibrium vapor concentration (EVC) of a material at twenty-five degrees Celsius by the level of concern for the material, as shown in the following equation:~~

|       |   |
|-------|---|
| MHI = | $\frac{\text{EVC (ppm) @ 25° Celsius}}{\text{LOC (ppm)}}$ |
|-------|---|

**17.78.170 Maximum Threshold Quantity (max. T.Q.)**

~~"Maximum threshold quantity" ("max. T.Q.") means the maximum quantity of a Class II or Class III regulated material which may be stored in a single vessel before a stricter category of regulation is required by this chapter. Max. T.Q. is determined by the following equation:~~

|                      |   |
|----------------------|---|
| Max. T.Q. (pounds) = | $\frac{2.5 \times 10^{-8}}{\text{MHI}}$ |
|----------------------|---|

**17.78.180 Minimum Threshold Quantity (min. T.Q.)**

~~"Minimum threshold quantity" ("min. T.Q.") means the aggregate quantity of regulated materials in a control area which, due to the minimal aggregate quantities present, need comply only with specific control requirements established in Part 8 of this chapter, and not with the requirements for Class I, II, or III regulated materials set forth in Part 3 of this chapter. Min. T.Q. for mixtures shall be based on the aggregate weight of the regulated components as follows:~~

~~A. For D.O.T. Poison A: Min. T.Q. = 1 lb. or less B.~~

~~B. For other regulated materials: Min. T.Q. = 2 lbs. or less.~~

~~Minimum threshold quantity controls are set forth in Part 8 of this chapter.~~

**17.78.190 Permissible exposure limit (PEL)**



~~"Permissible exposure limit" ("PEL") means the maximum permitted eight-hour time-weighted average concentration of an airborne contaminant. The maximum permitted time-weighted average exposures are set forth in 29 CFR 1910.1000, as it may be amended from time to time.~~

#### **17.78.200 Person**

~~"Person" means an individual, trust, firm, joint stock company, corporation, partnership, association or other business entity, city, county, district, the state, any department or agency thereof, or the United States, to the extent authorized by law.~~

#### **17.78.210 Regulated Materials**

~~"Regulated Materials" means those materials, including but not limited to gases, which meet the following criteria:~~

- ~~A. The material has an established level of concern (LOC) as defined in this chapter; and~~
- ~~B. The material meets either of the following criteria:~~
  - ~~1. It is shipped in compressed gas cylinders and the material is or becomes or acts as a gas upon release at normal temperature and pressure (70o F and 760 mm Hg.); or~~
  - ~~2. The material is used or handled as a gas whether or not the material meets the definition of a compressed gas in the San José Fire Code, Chapter 17.12 of Title 17 of the San José Municipal Code or 49 CFR Section 173.300(a).~~

#### **17.78.220 Responsible Persons**

~~"Responsible persons" means permittees under this chapter, owners, managers and persons responsible for the day-to-day operation of any facility subject to this chapter.~~

#### **17.78.230 Toxic Material**

~~"Toxic [material]" means a material which produces a lethal dose or a lethal concentration within any of the following categories:~~

- ~~A. A chemical or substance that has a median lethal dose (LD50) of more than fifty milligrams per kilogram but not more than five hundred milligrams per kilogram of body weight when administered orally to albino rats weighing between two hundred and three hundred grams each;~~

~~B. A chemical or substance that has a median lethal dose (LD50) of more than two hundred milligrams per kilogram but not more than one thousand milligrams per kilogram of body weight when administered by continuous contact for twenty-four hours (or less if death occurs within twenty-four hours) with the bare skin of albino rabbits weighing between two and three kilograms each; or~~

~~C. A chemical substance that has a median lethal concentration (LC50) in air more than two hundred parts per million but not more than two thousand parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than twenty milligrams per liter of mist, fume or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between two hundred and three hundred grams each.~~

#### **17.78.240 Unauthorized Discharge**

~~"Unauthorized discharge" means releasing, spilling, leaking, pumping, pouring, emitting, emptying, injecting, escaping, leaching, dumping or disposing a regulated material into the environment, including any sewer, storm drain, ditch, drainage canal, lake, river or tidal waterway, surface water, ground water, land surface, sidewalk, street or highway, subsurface strata, or ambient air. Unauthorized discharges do not include:~~

~~A. A "federally permitted release," as that term is defined in Section 101 of the Comprehensive Environmental Response, Compensation and Liability Act, 42 USC Section 9601 et seq., or pursuant to a permit of the Bay Area Air Quality Management District, or waste discharge requirements of the San Francisco Bay Regional Water Quality Control Board or local wastewater pretreatment requirements for publicly owned treatment works; or~~

~~B. The normal application of materials used in weed abatement, erosion control, soil amendment or similar application when used in accordance with manufacturers instructions or nationally recognized standards.~~

### **Part 2 General Provisions**

#### **17.78.250 General Provisions**

~~This chapter governs the storage, dispensing, use and handling of regulated materials. To the extent that the application of this chapter to the registration and use of pesticides is preempted by an express provision of an Act of Congress or a statute adopted by the state legislature, this chapter does not apply.~~

#### **17.78.260 General Obligation**

- ~~A. No person shall cause, suffer or permit the storage, handling, use or dispensing of materials regulated by this chapter:~~
- ~~1. In a manner which is contrary to a provision of this chapter or any other federal, state, or local statute, code, ordinance, rule, regulation or standard of performance relating to materials subject to this chapter; or~~
  - ~~2. In a manner which causes an unauthorized discharge or which poses a significant risk of such unauthorized discharge.~~
- ~~B. A person responsible for a facility shall, as soon as he or she has knowledge of an unauthorized discharge from or at such facility, immediately notify the fire chief of such discharge.~~

#### **17.78.270 Permits**

- ~~A. No person shall store, handle, use or dispense any regulated material in excess of an exempt amount at a facility unless a compliance plan and a plan review fee have been submitted to the fire chief, and a permit for the facility has been issued pursuant to Part 10 of this chapter.~~
- ~~B. MHI calculations for each regulated material to be stored, handled, used or dispensed at the facility shall be submitted to the fire chief as part of the compliance plan. The fire chief may require the submission of any additional available acute toxicity data to support the MHI value proposed for each material.~~

#### **17.78.280 Compliance**

- ~~A. Persons responsible for any facility lawfully in existence on May 8, 1990, shall submit a compliance plan along with any plan review fee set forth in the schedule of fees established by resolution of the city council to the fire chief not later than May 8, 1991. For purposes of this section, the term "lawfully in existence" includes, but is not limited to, those facilities for which a building permit has been issued and construction has begun.~~
- ~~B. Persons responsible for facilities lawfully in existence on May 8, 1990, shall cause their facilities to be in full compliance with this chapter not later than May 8, 1993.~~
- ~~C. The fire chief may extend this time at the request of a responsible person for a maximum of two years if the fire chief makes a written determination that hardship, unique circumstances, or other good cause exists and the person responsible for the facility has paid a compliance extension review fee as set forth in the schedule of fees established by resolution of the city council.~~

~~D. The fire chief may further extend this time period at the request of a responsible person to December 8, 1995, if the fire chief makes a written determination that hardship, unique circumstances, or other good cause still exists, the responsible person has paid an additional compliance extension review fee as set forth in the schedule of fees established by resolution of the city council on or before June 8, 1995, and has:~~

- ~~1. Filed a closure plan for the facility in compliance with Section 17.78.290, demonstrating that storage, handling, use and dispensing of hazardous materials will cease at the facility on or before December 8, 1995; or~~
- ~~2. Received approval for plans from all city departments required to approve modifications to the facility necessary to achieve compliance with this chapter; has executed a contract for the necessary modifications, with a projected completion date of prior to December 8, 1995; and has commenced construction pursuant to the approved plans.~~

#### **17.78.290 Closure**

- ~~A. It shall be unlawful for any person to abandon, remove, or close a facility or other area regulated by this chapter until a closure plan has been submitted to, and is approved by, the fire chief.~~
- ~~B. A closure plan, and a closure plan review fee as set forth in the schedule of fees established by resolution of the city council shall be submitted by a responsible person to the fire chief at least thirty days prior to facility closure. The closure plan shall demonstrate to the satisfaction of the fire chief that regulated materials which are or have been stored, handled, used, or dispensed in the facility will be transported, disposed of or reused in a manner consistent with public health and safety. The fire chief may waive all or part of the thirty-day period upon a finding of good cause.~~

#### **17.78.300 Seismic Protection**

~~Persons responsible for a facility with one or more stationary tanks and piping systems used for regulated materials shall cause such tanks and piping systems to be seismically braced in accordance with the provisions of the San José Building Code, Chapter 17.04 of Title 17 of the San José Municipal Code.~~

#### **17.78.310 Security**

~~Responsible persons shall cause facilities where materials subject to this chapter are stored, handled, used, or dispensed to be secured against unauthorized entry.~~

#### **17.78.320 Breathing Apparatus**

- ~~A. In order to provide for immediate initial on-scene response in the event of an unauthorized discharge and to provide on-scene assistance to firefighters and other emergency response personnel, persons responsible for any facility where Class I or corrosive regulated materials are present shall provide a minimum of two self-contained breathing apparatus. When self-contained breathing apparatus would be inadequate protection due to the nature of the gases present, other appropriate protective equipment shall be provided.~~
- ~~B. The breathing apparatus or other protective equipment shall be suitable for use with the material present and shall be in a conspicuously marked place immediately near the area where the materials are present and in a location that provides safety for those expected to don the apparatus.~~
- ~~C. A "location that provides safety" is one which is not likely to be immediately affected by the release of a regulated material.~~

#### **17.78.330 Incompatible Materials**

~~Responsible persons shall cause incompatible classes of regulated materials to be separated, and shall cause regulated materials to be separated from other incompatible hazardous materials listed in Table 51-110-A of the San José Fire Code, Chapter 17.12 of Title 17 of the San José Municipal Code. Separation shall be maintained by one-hour fire resistive construction, or by the use of separate gas cabinets. For purposes of this section, the term "incompatible" shall mean those materials listed in the San José Fire Code Table 51-110-A.~~

#### **17.78.340 Leak Testing**

~~Responsible persons shall cause containers of regulated materials to be tested for leaks immediately upon delivery and again immediately prior to departure of such containers from facilities. Testing methods shall be approved by the fire chief in accordance with appropriate nationally recognized industry standards and practices, if any. Appropriate remedial actions shall be immediately undertaken when leaks are detected.~~

#### **17.78.350 Protective Plugs and Caps**

~~Responsible persons shall cause the protective plugs and caps of regulated materials to be in place at all times unless and until the material is properly placed into use.~~

#### **17.78.360 Emergency Response Plans**

- ~~A. 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 chief, a written emergency response plan.~~
- ~~B. If the preparation of an emergency response plan is required by any other law, a responsible person shall file a copy of the plan with the fire chief.~~

#### **17.78.370 Emergency Response Teams**

- ~~A. If not required to do so by another law, a person responsible for a facility subject to this chapter shall designate, or cause to be designated, an on-site emergency response team, which shall be composed of an adequate number of trained responsible persons, and which shall serve as liaison to the fire department.~~
- ~~B. Emergency response team members shall ascertain all on-site locations where regulated materials are stored, handled, used or dispensed, shall become familiar with the emergency response plan, shall become familiar with the chemical nature of each on-site regulated material, shall act as the facility liaison to the fire department, and shall be prepared to respond in an emergency.~~

#### **17.78.380 Emergency Drills**

- ~~A. Responsible persons shall cause emergency drills of each on-site emergency response team to be conducted not less frequently than once every three months.~~
- ~~B. Records of drills conducted shall be maintained at the facility for three years and shall be made available for inspection upon request by the fire chief.~~

#### **17.78.390 Annual Maintenance**

- ~~A. Responsible persons shall cause all safety control systems at a facility to be tested not less frequently than annually and shall cause such systems to be maintained in good working condition.~~
- ~~B. Maintenance and testing shall be performed by persons qualified to perform the maintenance and tests.~~
- ~~C. Maintenance records and certifications shall be made available for inspection upon request by the fire chief.~~

#### **17.78.400 Flow Limiting Orifices and Devices for D.O.T. Poison A**

~~All containers of materials classified as Department of Transportation (D.O.T.) Poison A, regardless of the amount of D.O.T. Poison A, shall be equipped with a flow~~

~~restricting orifice when available from the supplier of the D.O.T. Poison A. If a flow restricting orifice is not available, the container shall be used with a flow-limiting device.~~

#### **17.78.410 Fire Extinguishing Systems**

- ~~A. Except as provided in Subsection 17.78.410C below, responsible persons shall cause all interior and exterior use areas and all indoor storage areas and storage buildings to be protected from fire by automatic sprinkler systems.~~
- ~~B. The design of the sprinkler systems shall be not less than that required under Uniform Building Code Standard No. 38-1 for Ordinary Hazard Group 3 with a minimum design area of three thousand square feet. Where the materials or storage arrangement require a higher level of sprinkler system protection in accordance with nationally recognized standards, the higher level of sprinkler system protection shall be provided.~~
- ~~C. If the chemical properties of the regulated materials are such that the materials will be incompatible with the use of a sprinkler system, the fire chief may require alternative forms of fire protection.~~

### **Part 3 Classification of Materials**

#### **17.78.420 General**

~~Regulated materials shall be classified according to their material hazard index (MHI) values.~~

#### **17.78.430 Class I Regulated Materials**

~~Of the materials regulated by this chapter, Class I materials pose the greatest potential hazard. A regulated material which has an MHI value equal to or greater than five hundred thousand or which is classified as Department of Transportation (D.O.T.) Poison A shall be classified as a Class I regulated material.~~

#### **17.78.440 Class II Regulated Materials**

~~A regulated material which has an MHI equal to or greater than ten thousand but less than five hundred thousand shall be classified as a Class II regulated material.~~

#### **17.78.450 Class III Regulated Materials**

~~A regulated material which has an MHI equal to or greater than four thousand nine hundred but less than ten thousand shall be classified as a Class III regulated material.~~



**17.78.460 Maximum Threshold Quantity**

~~Regulated materials which exceed their maximum threshold quantity as defined in Section 17.78.170 shall be classified one level higher than otherwise determined by the MHI (i.e., Class III to Class II, or Class II to Class I).~~

**17.78.470 Materials Not Exceeding Minimum Threshold Quantity**

~~Regulated materials which do not exceed the minimum threshold quantity as defined in this chapter shall satisfy only the specific requirements established in Part 8, and shall not otherwise be required to meet the requirements applicable to materials classified as Class I, II, or III regulated materials.~~

**17.78.480 Exempt Amounts**

~~A. Except as provided in Section 17.78.480B below, material which would otherwise be regulated is exempt from regulation under this chapter if:~~

- ~~1. The material has an MHI less than four thousand nine hundred; or~~
- ~~2. The aggregate quantity of the material in a control area does not exceed the minimum T.Q. and the quantity of the material in a single vessel does not exceed the amounts specified as follows:~~

|                                      |                    |
|--------------------------------------|--------------------|
| <del>D.O.T. Poison A</del>           | <del>1/4 lb.</del> |
| <del>Other regulated materials</del> | <del>1 lb.</del>   |

~~B. Notwithstanding the exemption in Subsection A above, no amount of Class I regulated materials is exempt from the provisions for flow-limiting devices and fire extinguishing systems found in Part 2 of this chapter.~~

**Part 4  
Hazard Classification and Control Table**

**17.78.490 General**

~~A. The requirements for controls for the use or indoor storage of regulated materials shall be cumulative as the hazard class of regulated material increases in accordance with the following table:~~

**Hazard Classifications and Controls**

| <del>Hazard Classification</del> | <del>Hazard Controls</del> |
|----------------------------------|----------------------------|
|----------------------------------|----------------------------|

|                                       |  |
|---------------------------------------|--|
| <del>Class I</del>                    | <del>Includes Class I, Class II and Class III, minimum threshold quantity and exempt amount controls</del> |
| <del>Class II</del>                   | <del>Includes Class II, Class III, minimum threshold quantity and exempt amount controls</del>             |
| <del>Class III</del>                  | <del>Includes Class III, minimum threshold quantity and exempt amount controls</del>                       |
| <del>Minimum threshold quantity</del> | <del>Includes minimum threshold quantity and exempt amount controls</del>                                  |
| <del>Exempt amounts</del>             | <del>Other applicable statutes, codes, ordinances</del>  |

~~B. Exterior storage of regulated materials is covered by Part 9 of this chapter.~~

~~C. All control equipment for materials regulated by this chapter shall meet appropriate nationally recognized standards, if any, as approved by the fire chief.~~

## **Part 5**

### **Class I Controls**

#### **17.78.500 Class I Controls**

~~Responsible persons shall cause materials which are classified as Class I materials to be provided with the controls specified in Parts 5, 6, 7 and 8 of this chapter.~~

#### **17.78.510 Piping**

~~A. Piping for Class I materials shall be designed and fabricated from materials compatible with the material to be contained. Piping shall be of strength and durability sufficient to withstand the pressure, structural and seismic stress and exposure to which it may be subjected as required by the San José Building Code, Chapter 17.04 of Title 17 of the San José Municipal Code.~~

~~B. Secondary containment shall be provided for piping for Class I materials. The secondary containment shall be capable of directing a sudden release into an approved discharge treatment system and shall be continually monitored with a continuous gas monitoring system approved by the fire chief. Secondary containment includes, but is not limited to, double walled piping.~~

#### **17.78.520 Automatic Shut Off**

~~An automatic shut-off valve which is of a "fail-safe to close" design shall be provided. Each of the following shall activate automatic shut off:~~

~~A. Gas detection.~~

- ~~B. Remote location alarm.~~
- ~~C. Failure of emergency power.~~
- ~~D. Seismic activity.~~
- ~~E. Failure of primary containment.~~
- ~~F. Activation of manual fire alarm.~~

#### **~~17.78.530 Emergency Control Station~~**

~~Signals from emergency equipment shall be transmitted to an emergency control station which is continually staffed by trained personnel.~~

### **Part 6 Class II Controls**

#### **~~17.78.540 Class II Controls~~**

~~Responsible persons shall cause materials which are classified as Class II materials to be provided with the controls specified in Parts 6, 7 and 8 of this chapter.~~

#### **~~17.78.550 Connections~~**

- ~~A. Piping and tubing for Class II materials shall be installed in accordance with appropriate nationally recognized standards, if any, as approved by the fire chief and shall have welded connections compatible with the regulated material throughout unless an exhausted enclosure is provided.~~
- ~~B. Material which is not compatible with ferrous piping may be installed in nonferrous piping approved by the fire chief.~~
- ~~C. Where connections other than welded connections meet appropriate nationally recognized industry standards, if any, a person responsible for a facility may seek an exemption from the fire chief. A request for an exemption, and a fee as set forth in the schedule of fees established by resolution of the city council, shall be filed with the fire chief for approval. The request shall document the standards and reason(s) for the exception.~~

#### **~~17.78.560 Local Gas Shut Off~~**

- ~~A. Manual activation controls shall be provided at locations near the point of use and near the source as approved by the fire chief.~~
- ~~B. The fire chief may require additional controls at other places, including but not limited to, the entry to the building, the area in the building where regulated materials are stored or used, and emergency control stations.~~

~~C. Manually activated shut-off valves shall be of "fail-safe to close" design.~~

#### ~~17.78.570 Emergency Power~~

~~Emergency power shall be provided for:~~

- ~~A. Exhaust ventilation, including the power supply for treatment systems.~~
- ~~B. Gas-detection systems.~~
- ~~C. Emergency alarm systems.~~
- ~~D. Temperature-control systems which comply with the fire code.~~

#### ~~17.78.580 Excess Flow Control~~

~~A. Portable tanks and cylinders containing Class II materials shall be provided with excess flow control.~~

~~B. Valves shall be permanently marked to indicate the maximum design flow rate.~~

#### ~~17.78.590 Gas Detection~~

~~A. A continuous gas-detection system shall be provided to detect the presence of gas at or below the permissible exposure limit. The gas-detection system shall be capable of monitoring the room or area in which the gas is stored at or below the permissible exposure limit or ceiling limit, and the discharge from the treatment system at or below one-half the IDLH limit. The detection system shall initiate a local alarm and transmit a signal to a continually staffed remote location to provide an immediate response to an alarm. The alarm shall be both visual and audible and shall be designed to provide a warning both inside and outside of the interior storage, use, or handling area. The audible alarm shall be distinct from all other on-site alarms.~~

~~B. There are two exceptions to this section:~~

- ~~1. A continuous gas-detection system shall not be required for toxic gases when the physiological warning properties for the gas are at a level below the accepted permissible exposure limit for the gas; and~~
- ~~2. Signal transmission to a constantly attended control station is not required when not more than one cylinder is stored.~~

#### ~~17.78.600 Reduced Flow Valves~~

~~Reduced flow valves may be utilized to reduce the maximum flow rate from cylinders and tanks under full flow conditions. Valve flow rates may be considered in determining the size of treatment systems required for a worst case release.~~

#### **17.78.610 Seismic Shut-Off Valves**

~~A seismically activated valve meeting standards approved by the fire chief shall be provided for automatic shut off of regulated materials.~~

#### **17.78.620 Class II Corrosives**

~~Class II regulated materials which are corrosive shall be stored, used, handled, or dispensed in piping having primary containment constructed of inert construction materials, or in piping having secondary containment.~~

#### **17.78.630 Emergency Alarms**

~~When materials regulated by this chapter are transported through exit corridors or exit enclosures, there shall be an emergency telephone system, a local manual alarm station, or a signaling device approved by the fire chief at not more than one hundred fifty-foot intervals and at each exit doorway throughout the transport route. The signal shall be relayed to an approved central, proprietary, or remote station service, or a continuously attended onsite location, and shall also initiate a local audible alarm.~~

### **Part 7 Class III Controls**

#### **17.78.640 Class III Controls**

~~Responsible persons shall cause materials which are classified as Class III materials to be provided with the controls specified in Parts 7 and 8 of this chapter.~~

#### **17.78.650 Piping, Valves, and Fittings**

- ~~A. Piping, valves, fittings and related components shall be designed and fabricated from materials compatible with the material to be contained. They shall have strength and durability sufficient to withstand the pressure, structural and seismic and any other stress, and exposure to which they may be subjected.~~
- ~~B. Expansion chambers shall be provided between valves whenever appropriate in accordance with nationally recognized standards approved by the fire chief. Chambers shall be sized to provide protection for piping, valves and instrumentation, and to accommodate the expansion of regulated materials.~~

#### **17.78.660 Signage**

- ~~A. Stationary above ground tanks shall be placarded with hazard identification signs as specified in the fire code for the specific material contained.~~

- ~~B. Signs prohibiting smoking shall be posted in indoor storage, use and handling areas and within twenty-five feet of outdoor storage, use and handling areas.~~
- ~~C. Signs shall not be obscured or removed.~~
- ~~D. Signs shall be in English and such other languages, as may be appropriate, as determined by the fire chief.~~
- ~~E. Signs shall be durable.~~
- ~~F. The size, color and lettering shall be in conformance with nationally recognized standards as determined by the fire chief to be applicable to the regulated material.~~

#### **17.78.670 Inert Gas Purge System**

~~Gas systems for regulated materials shall be provided with individually dedicated inert gas purge systems (e.g., nitrogen, helium, argon and neon).~~

### **Part 8 Minimum Threshold Quantity Controls**

#### **17.78.680 Minimum Threshold Quantity Controls**

~~Responsible persons shall cause materials which do not exceed the minimum threshold quantity as defined in Section 17.78.180 to be provided with the controls specified in Parts 8 and 9.~~

#### **17.78.690 Exhaust Ventilation**

- ~~A. Storage of cylinders shall be within ventilated gas cabinets, exhausted enclosures, or within a ventilated separate gas storage room as defined in the fire code.~~
- ~~B. Storage of portable and stationary tanks shall be within a separate ventilated room without other occupancy or use.~~
- ~~C. If gas cabinets are provided, the room or area in which they are located shall have independent exhaust ventilation.~~
- ~~D. Exhaust systems for gas cabinets, exhausted enclosures, and separate gas storage rooms shall be designed to handle the accidental release of gas. Such exhaust systems shall be capable of diluting, absorbing, neutralizing, burning or otherwise processing the entire contents of the single tank or cylinder of gas which presents the highest potential hazard.~~

~~E. Systems utilized for such processing shall be designed as a treatment system, as described in Section 17.78.710 below. If a total containment system is utilized, the system shall be designed to handle the maximum anticipated pressure of release to the system when the system reaches equilibrium.~~

#### ~~17.78.700 Gas Cabinets~~

~~When gas cabinets are provided they shall be:~~

- ~~A. Operated at negative pressure in relation to the surrounding area.~~
- ~~B. Provided with self-closing limited access ports or fire-rated windows to give access to equipment controls. The average velocity of ventilation at the face of access ports or windows shall be not less than two hundred feet per minute (fpm) with a minimum of one hundred fifty fpm at any point of the access port or window.~~
- ~~C. Connected to a treatment system.~~
- ~~D. Provided with self-closing doors.~~
- ~~E. Constructed of steel with a thickness not less than twelve-gauge.~~

#### ~~17.78.710 Treatment Systems~~

- ~~A. Treatment systems shall be utilized to process all exhaust ventilation to be discharged from gas cabinets, exhausted enclosures or separate storage rooms. Treatment systems shall be designed to reduce the maximum allowable discharge concentration of the gas to one-half the IDLH at the point of discharge to the atmosphere as specified below.~~
- ~~B. When more than one gas may be 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 the gases stored or used.~~

#### ~~17.78.720 Treatment System Sizing~~

~~Treatment systems shall be sized to process the worst case release of each gas based on the maximum flow rate of release from the cylinder or tank utilized which presents the highest potential hazard. The entire contents of tanks and cylinders shall be considered.~~

#### ~~17.78.730 Stationary Tanks~~



- ~~A. Stationary tanks shall be labeled with the maximum rate of release for the gas contained based on any valves or fittings that are inserted directly into the tank.~~
- ~~B. If multiple valves or fittings are provided, the maximum flow rate of release for the valve or fitting with the highest flow rate shall be indicated.~~
- ~~C. If liquefied gases are in contact with any valve or fitting, the liquid flow rate shall be utilized for purposes of computation of the maximum flow rate of release. All flow rates indicated on the label shall be converted to cubic feet per minute of gas at normal temperature and pressure.~~

#### ~~17.78.740 Portable Tanks And Cylinders~~

- ~~A. For portable tanks and cylinders, the maximum flow rate of release shall be calculated on the basis of a total release from the cylinder or tank within the time specified in the table below:~~

| Container      | Nonliquefied<br>(Minutes) | Liquefied<br>(Minutes) |
|----------------|---------------------------|------------------------|
| Cylinders      | 5                         | 30                     |
| Portable tanks | 40                        | 240                    |

- ~~B. When portable tanks or cylinders are equipped with approved reduced flow valves, the worst case release will be determined by the maximum achievable flow from the valve as determined by the valve manufacturer or the gas supplier. Reduced flow and excess flow valves shall be permanently marked to indicate the maximum design flow rate. Such markings shall indicate the flow rate for air under standard conditions.~~

#### ~~17.78.750 Gas Detection for D.O.T. Poison A~~

~~A portable or fixed gas detection system capable of monitoring at the permissible exposure limit for each regulated material classified as a D.O.T. Poison A stored or used within the facility shall be provided.~~

### **Part 9 Exterior Storage**

#### ~~17.78.760 General~~

~~Persons responsible for a facility where there is exterior storage of any regulated material shall comply with the provisions of this part and Chapter 17.04 of Title 17 of the San José Municipal Code.~~

#### **17.78.770 Distance Limitation To Exposures**

~~Exterior storage of regulated materials shall not be within seventy-five feet of a building, structure, property line, street, alley, public way or exit to a public way unless the storage is shielded by a structure which has a minimum fire-resistive rating of two hours and which interrupts the line of sight between the storage and the exposure. The shielding structure shall be at least five feet from any exposure. The shielding structure shall have not more than two sides which shall be at approximately ninety-degree directions.~~

#### **17.78.780 Openings in Buildings Subject to Exposure**

~~Notwithstanding Section 17.78.770, when an exterior storage area is located within seventy-five feet of a building, openings into the building other than piping shall not be above the height of the top of the shielding structure referred to in Section 17.78.770 or within fifty feet horizontally from the exterior storage area, whether or not protected by a shielding structure.~~

#### **17.78.790 Air Intakes**

~~No exterior storage area for regulated materials shall be within seventy-five feet of any air intake.~~

#### **17.78.800 Canopies**

~~Portable tanks and cylinders stored outside of buildings shall be stored under a canopy constructed of noncombustible materials. Such exterior storage shall not be considered indoor storage. An automatic fire-sprinkler system, or alternative systems as determined by the fire chief for materials incompatible with water, shall be provided for canopies installed for the storage of regulated materials.~~

#### **17.78.820 Gas Cabinets for Leaking Cylinders**

- ~~A. At least one gas cabinet or exhausted enclosure shall be provided for the handling of leaking cylinders. The cabinet or enclosure shall be within or adjacent to the exterior storage area and connected to a treatment system as specified in Section 17.78.710 of this chapter.~~
- ~~B. A gas cabinet or exhausted enclosure need not be provided for leaking cylinders if all cylinders are stored within gas cabinets or exhausted enclosures.~~

#### **17.78.830 Local Exhaust System for Leaking Portable Tanks**

- ~~A. A means of local exhaust shall be provided to capture regulated material leaking from portable tanks. The local exhaust system may consist of portable ducts or~~

~~collection systems designed to be applied to the site of a leak in a valve or fitting on the tank. The local exhaust system shall be connected to a treatment system as specified in Section 17.78.710 of this chapter.~~

- ~~B. A local exhaust system shall be provided within or immediately adjacent to every exterior storage area; and within separate gas storage rooms used for portable or stationary tanks.~~

#### **17.78.840 Tank Cars and Piping**

- ~~A. The provisions of this chapter shall not apply to tank cars which meet all the requirements of the U. S. Department of Transportation while such tank cars are used for the transportation and unloading of regulated material as such terms are used in the Hazardous Materials Transportation Act, 49 U.S.C. Section 1801 et seq. "Unloading" does not include the use of tank cars to store regulated materials.~~
- ~~B. The provisions of this chapter shall apply to piping and control systems, automatic shut-off valves, emergency control stations, gas detection systems, treatment systems and alarm systems used with piping which connects tank cars to facilities for the unloading and delivery of regulated material, and to tank cars used to store regulated materials.~~

### **Part 10 Permit Process**

#### **17.78.850 General**

~~Responsible persons shall obtain and keep current a hazardous materials storage permit or permits as required by Chapter 17.68 of the San José Municipal Code.~~

PASSED FOR PUBLICATION of title this \_\_\_\_\_ day of \_\_\_\_\_, 2019, by the following vote:

AYES:

NOES:

ABSENT:

DISQUALIFIED:

---

SAM LICCARDO  
Mayor

ATTEST:

---

TONI J. TABER, CMC  
City Clerk