



# CITY OF SAN JOSÉ, CALIFORNIA

Office of the City Clerk  
200 East Santa Clara Street  
San José, California 95113  
Telephone (408) 535-1260  
FAX (408) 292-6207

City Clerk

STATE OF CALIFORNIA)  
COUNTY OF SANTA CLARA)  
CITY OF SAN JOSE)

I, Lee Price, City Clerk & Ex-Officio Clerk of the Council of and for the City of San Jose, in said County of Santa Clara, and State of California, do hereby certify that "**Ordinance No. 28839**", the original copy of which is attached hereto, was passed for publication of title on the **26<sup>th</sup> day of October, 2010**, was published in accordance with the provisions of the Charter of the City of San Jose, and was given final reading and adopted on the **9<sup>th</sup> day of November, 2010**, by the following vote:

AYES: CHIRCO, CHU, CONSTANT, HERRERA, KALRA, LICCARDO,  
NGUYEN, OLIVERIO, PYLE; REED.

NOES: NONE.

ABSENT: CAMPOS.

DISQUALIFIED: NONE.

VACANT: NONE.

Said ordinance is effective as of **10<sup>th</sup> day of December, 2010**.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of the City of San Jose, this **10<sup>th</sup> day of November, 2010**.

(SEAL)

LEE PRICE, MMC  
CITY CLERK & EX-OFFICIO  
CLERK OF THE CITY COUNCIL

/rmk

**ORDINANCE NO. 28839**

**AN ORDINANCE OF THE CITY OF SAN JOSE AMENDING CHAPTER 17.12 OF THE SAN JOSE MUNICIPAL CODE TO ADOPT THE 2010 CALIFORNIA FIRE CODE WITH LOCAL AMENDMENTS RELATING TO FIRE FLOW, SPRINKLER AND FIRE ALARM SYSTEMS AND STANDARDS, ACCESS CONTROL DEVICES, BREATHING AIR REPLENISHMENT AND PUBLIC RADIO COVERAGE, LARGE BATTERY CHARGING SYSTEMS AND CONTINUOUS GAS DETECTION SYSTEMS AND TO MAINTAIN EXISTING OF FIRE PROTECTION AND REGULATORY AUTHORITY**

**WHEREAS**, the Fire Marshal of the State of California has adopted that certain fire code, entitled "2010 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 2010 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 hereby makes the following findings with respect to local geological, topographical and climatic conditions relating to the amendments to the 2010 California Fire Code for which such findings are required:

- A. San Jose'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.
- B. 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.
- C. 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.
- D. The provisions of this Ordinance establishing certain more restrictive standards than the California Fire Code will better serve to prevent or minimize fire damage resulting from local conditions; and

**WHEREAS**, Chapter 17.12 of the San José Municipal Code must be amended to adopt the 2010 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 the San José Municipal Code is amended to read as follows:

**17.12.010      San José Fire Code**

The San José Fire Code shall consist of the 2010 California Fire Code 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 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 2010 California Fire Code as adopted under this Chapter, or any permit issued under this Chapter.

SECTION 3. Section 17.12.050 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**17.12.050      Review of Plans Submitted for Building Permit**

The bureau of fire prevention shall review all building plans for conformity with state and local statutes, ordinances, and regulations relating to the prevention of fire, the storage of hazardous materials, and the protection of life and property against fire, explosion, exposure to hazardous materials and panic. One- and two- family dwelling units and townhouses will be reviewed for fire access, fire flow, fire hydrants and all fire protection systems.

SECTION 4. Section 17.12.090 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**17.12.090     Exemption for Pending Applications**

- A. The provisions of the 2010 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, 2011, 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 2010 California Fire Code, as adopted and amended herein.

SECTION 5. Section 17.12.110 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**17.12.110     Cross - References to 2010 California Fire Code**

The provisions of this Chapter contain cross-references to the provisions of the 2010 California Fire Code in order to facilitate reference and comparison to those provisions.

SECTION 6. Section 17.12.120 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**17.12.120     Local Amendments to 2010 California Fire Code**

The provisions of this Chapter shall constitute local amendments to the cross-referenced provisions of the 2010 California Fire Code and shall be deemed to replace the cross-referenced sections of the 2010 California Fire Code with the respective provisions set forth in this Chapter.

SECTION 7. Part 2 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**Part 2  
Adoption of Administrative Provisions of 2010 California Fire Code**

**17.12.200     Adoption of Chapter I of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapter I of the 2010 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 2010 California Fire Code Which are not Adopted or Incorporated By Reference**

The following provisions, including all subparts thereof, of Chapter 1 of the 2010 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, 101.1, 101.8, 101.9, 101.10, and 101.11.

**17.12.220 Change of Use or Occupancy (2010 CFC Chapter 1 Section 102.3)**

Chapter 1 Section 102.3 of the 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 (2010 CFC Chapter 1 Section 106.1)**

Chapter 1 Section 106.1 of the California Fire Code is amended to read as follows:

**106.1 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 (2010 CFC Chapter 1 Section 105.1.2)**

Chapter 1 Section 105.1.2 of the 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 (2010 CFC , Chapter 1 Section 105.6)**

The following subparts of Chapter 1 Section 105.6 of the 2010 California Fire Code are amended to read as follows:

- 105.6.9 Covered 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.

- 105.6.25 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 19.

- 105.6.39 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.

- 105.6.42 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.

- 105.6.43 Temporary membrane structures, tents and canopies:** An operational permit is required to operate an air-supported temporary membrane structure or a tent having an area in excess of 200 square feet (19 m<sup>2</sup>), or a canopy in excess of 400 square feet (37 m<sup>2</sup>).

**Exceptions:**

1. Tents used exclusively for recreational camping purposes.
2. Deleted.

- 17.12.260 Additional Operational Permit Requirements (2010 CFC Chapter 1 Section 105.6.47)**

Chapter 1 Section 105.6.47 of the 2010 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:

- 105.6.47.4 Battery System:** An operational permit is required to operate stationary lead-acid battery systems having a liquid capacity of more than 50 gallons (189 L).
- 105.6.47.5 Day Care Facility:** An operational permit is required to operate any day care home or facility which provides day care for adults or children.
- 105.6.47.6 High-Rise Buildings:** An operational permit is required to operate any high-rise building.
- 105.6.47.7 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 Regulation Title 24 Part 2.
- 105.6.47.8 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.
- 105.6.47.9 Residential care facility:** An operational permit is required to operate any residential care or service facility, as described in the Building Code, accommodating more than six (6) persons.
- 17.12.270 Failure to Comply with Stop Work Order (2010 CFC , Chapter 1 Section 111.4)**

Section 111.4 of 2010 California Fire Code is amended to read as follows:

- 111.4 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 8. Part 3 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**Part 3  
Definitions**

**17.12.300 Adoption of Chapter 2 of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 2 of the 2010 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 Definitions (2010 CFC Section 202)**

Section 202 of the 2010 California Fire Code is amended to add the following defined terms:

**WORKSTATION** is a defined space or independent principal piece of equipment using hazardous materials 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, electrical devices, and other processing and scientific equipment.

SECTION 9. Part 4 of Chapter 17.12 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 Chapter 3, 4 and 5 and Appendix Chapter 4 of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 3, 4 and 5 and Appendix Chapter 4 of the 2010 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      Provisions of Chapter 3 of 2010 California Fire Code Which are not Adopted or Incorporated By Reference**

The following provisions of Chapter 3 of the 2010 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 311.5.2, 311.5.3, 311.5.4 and 311.5.5.

**17.12.420      Amendment to Section 404.3.1 of 2010 California Fire Code Related to Fire Evacuation Plans**

Section 404.3.1 of the 2010 California Fire Code is amended to read as follows:

**404.3.1 Fire Evacuation Plans.** Fire evacuation plans shall include the following:

1. Emergency egress or escape routes and whether evacuation of the building is to be complete or, where approved, by selected floors or areas only.
2. Procedures for employees who must remain to operate critical equipment before evacuating.
3. Procedures for assisted rescue for persons unable to use the general means of egress unassisted.

4. Procedures for accounting for employees and occupants after evacuation have been completed.
5. Identification and assignment of personnel responsible for rescue or emergency medical aid.
6. The preferred and any alternative means of notifying occupants of a fire or emergency.
7. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.
8. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.
9. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages and visual warning devices, where provided.

**17.12.430 Amendment to Section 404 of the 2010 California Fire Code to Add Provision Related to Emergency Plan and Hazardous Materials Management Plan Cabinets**

Section 404 of the 2010 California Fire Code is amended to add the following new subsection to be numbered and entitled as follows:

**404.6 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.

**17.12.440 Amendment of Sections 503.1.1, 503.1.2, 503.2, 503.2.3, 503.2.7 of 2010 California Fire Code Related to Fire Apparatus Access Road**

Sections 503.1.1, 503.1.2, 503.2, 503.2.3 and 503.2.7 of the 2010 California Fire Code are amended to read as follows:

**503.1.1 Buildings and Facilities, Exception:** The Chief is authorized to increase the dimension of 150 feet (45 720 mm) where:

1. The building is equipped throughout with an approved automatic-sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.3.
2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, non-negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
3. There are not more than two Group R-3 or Group U occupancies.

**503.1.2 Additional Access.** The Chief is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle

congestion, condition of terrain, climatic conditions or other factors that could limit access. A second point of access is required when a fire apparatus access road exceeds 1,000 feet.

**503.2 Specifications.** Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.2.1 through 503.2.8. At the discretion of the Fire Chief, if alternative standards for fire apparatus access roads have been approved by the Fire Chief and the Directors of Planning, Building & Code Enforcements, Transportation and Public Works, such alternative standards may be applied.

**503.2.3 Surface.** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus (75,000 pounds) and shall be surfaced so as to provide all weather driving capabilities.

**503.2.7 Grade.** The grade of the fire apparatus access road shall not exceed fifteen percent (15%).

**17.12.450      Amendment of Section 504 of 2010 California Fire Code to Add Provision Related to Access Control Devices**

Section 504 of the 2010 California Fire Code is amended to add a new subsection to be entitled and read as follows:

**504.4 Access Control Devices.** When access control devices including bars, grates, gates, electric or magnetic locks or similar devices which would inhibit rapid fire department emergency access to the building are installed, such devices shall be approved by the Chief. All access control devices shall be provided with an approved means for deactivation or unlocking by the Fire Department. Access control devices shall also comply with Chapter 10 for exiting.

**17.12.460      Amendment of Section 505.1 of 2010 California Fire Code Related to Address Numbers**

Section 505.1 of the 2010 California Fire Code is amended to be entitled and read as follows:

**505.1 Address Numbers:** 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 Chief.

**17.12.470 Amendment of Section 507.5.1 of 2010 California Fire Code Related to Fire Hydrants**

Section 507.5.1 of the 2010 California Fire Code is amended to be entitled and 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 Chief.

**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 Chief.

**SECTION 10.** Part 5 of Chapter 17.12 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 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 6, 7 and 8 of the 2010 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 2010 California Fire Code Related to Ventilation of Stationary Storage Battery Rooms**

Section 608.6.1 of the 2010 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.

3. Failure of the ventilation system shall initiate a local alarm and transmit a signal to a constantly attended station and automatically disengage the charging system.

**SECTION 11.** Part 6 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**Part 6**  
**Fire Protection, Sprinkler, Alarm Detection and Smoke Control Systems**

**17.12.610      Adoption of Chapter 9 of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 9 of the 2010 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 901.4.3 Relating to Additional Fire Protection System Requirements, Additional Safety Requirements for Multi Story Building and Other Buildings Presenting Unique Firefighting Challenges**

Section 901.4.3 of the 2010 California Fire Code is amended to add the following subparts to be numbered, entitled and read as follows:

**901.4.3.1      Firefighter Breathing Air Replenishment Systems**

**901.4.3.1.1** The following buildings shall be equipped with an air rescue replenishment system, approved by the Fire Chief or designee. The system shall provide an adequate pressurized air supply through a 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;

**Exception:** Where firefighter designated elevator is provided per Section 901.4.3.3.

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.

**901.4.3.1.2** 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.

**901.4.3.1.3** Where a breathing air replenishment system is required, an annual test shall be performed as described in the administrative regulations issued by the Fire Chief, and a copy of such test shall be kept on record by the property owner and available for inspection at any time by Fire Department representatives.

**901.4.3.2 Public Safety Radio Coverage**

**901.4.3.2.1** The following buildings and structures shall be required to meet the radio coverage requirements specified in Section 901.4.3.2.2:

1. Buildings greater than fifty thousand (50,000) square feet or additions and/or modifications which cause a building to be greater than fifty thousand (50,000) square feet (for purposes of this section, area separation walls cannot be used to define separate buildings);
2. Basements over ten thousand (10,000) square feet, regardless of the occupancy;
3. 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;
4. Any building with two (2) or more stories underground; and
5. Any tunnel over five hundred feet (500') in length.

**901.4.3.2.2** Radio coverage requirements are as follows:

**1. Inbound into the building:**

A minimum average in-building field strength of  $8\mu\text{V}$  (-88 dBm) throughout 90% of the area of each floor of the building when transmitted from the nearest police/fire radio site.

If the field strength outside the building where the receiving antenna system for the in-building system is located is less than the -88 dBm, then the minimum required in-building field strength shall equal the field strength being delivered to the receiving antenna of the building.

**2. Outbound from the building:**

Minimum average signal strength of  $4\mu\text{V}$  (-95 dBm) measured at the nearest police/fire receiver site. (Voting receiver or Repeater.) No existing or future wireless communications facilities shall interfere with any public safety radio communications systems. Wireless communications facilities, as referred to herein, include, but are not

limited to, satellite dish, antenna, cellular phone facility and similar wireless communication structure or system.

**901.4.3.2.3** Any building or structure that cannot meet the required level of radio coverage shall be equipped with a Radio Signal Booster System consisting of an exterior antenna, a FCC Type Accepted Bi-Directional amplifier system with a backup power supply mounted in a suitable location in the building and an in-building antenna or radiating cable system. The Signal Booster System shall be designed to operate in the VHF, UHF, 700 and 800 megahertz (MHz) bands and shall be capable of operating on an independent battery and/or generator system for a period of at least twelve (12) hours without external power input. The battery system shall automatically charge in the presence of external power input. There shall be no connectivity between the amplification system and fire alarm system. Where signal booster equipment is located in an equipment room that may become water soaked or sprayed with fire retardants during a fire, the installations will require the use of a watertight case, typically "NEMA-4", which is an industry standard specification for a sealed wall mounted cabinet.

**Exception:** Elevator coverage is exempt.

**901.4.3.2.4** Acceptance testing shall be as follows:

1. When an in-building radio system is required, upon completion of installation, the radio system, and prior to issuance of certificate of occupancy, the property owner shall provide for testing to ensure that two-way coverage on each floor of the building is a minimum of ninety (90%) percent. Each floor of the building shall be divided into a grid of approximately twenty (20) equal areas. A maximum of two (2) of the nonadjacent areas will be allowed to fail the test.
2. In the event that three (3) of the areas fail the test, in order to be more statistically accurate, the floor may be divided into forty (40) equal areas. A maximum of four (4) areas will be allowed to fail the test. After the forty (40) area test, if the system continues to fail, it will be the building owner's responsibility to have the system altered to meet the ninety (90%) percent coverage requirement.
3. The voice test shall be conducted using a portable radio with specifications equivalent to the San José fire/police personnel portable radios, talking through the City public safety communication system.
4. The data system test shall be conducted using a laptop computer communicating with the computer aided dispatch system. A spot approximately in the center of the grid area will be selected for the test, then the radio will be keyed to verify two-way communications to and from the outside of the building through the City public

safety communications system. Once the spot has been selected prospecting for a better spot in the grid area will not be permitted.

5. The gain values of all amplifiers shall be measured and the test measurement results shall be kept on file with the building owner so that the measurements can be verified each year during the annual tests. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values. Copies of all tests shall be forwarded to the attention of the 911 communications supervisor of the City.

**901.4.3.2.5** Where radio retransmission equipment is required, an annual test shall be performed as described in the administrative regulations issued by the Fire Chief to ensure that the building continues to meet the radio coverage requirements of this Section, and a copy of such test shall be kept on record by the property owner and available for inspection at any time by Fire Department representatives.

**901.4.3.2.6** Personnel conducting acceptance and annual radio system tests shall be qualified to perform the work. All tests shall be documented and signed by a person in possession of a current FCC-issued General Radio Operators license, a current technician certification issued by the Associated Public Safety Communications Officials International (APCO), or the Personal Communications Industry Association (PCIA).

**901.4.3.2.7** Public safety personnel shall have the right to enter onto the property to inspect and to conduct field-testing at all reasonable times to be certain that the required level of radio coverage is present.

**901.4.3.3 Elevator for Firefighter Use**

**901.4.3.3.1 General.** Except required elsewhere in this Code, a designated firefighter elevator may be installed in lieu of a firefighter breathing air replenishment system as required in Section 901.4.3.1 of San Jose Fire Code.

Where required, a minimum of one 4500 lb. capacity elevator shall be provided for use as a designated Firefighter Elevator. The Firefighter Elevator shall serve every floor of the building, but is not intended to be for exclusive use of the Fire Department. Except as modified in this section, the Firefighter Elevator shall be installed in accordance with California Fire Code, California Building Code and ASME A17.1/CSA B44.

When a Firefighter Elevator is installed according to this section, the building will be considered to meet the Fire Service Access Elevator requirement of California Building Code.

**901.4.3.3.2 Firefighters' emergency operation.** Firefighter Elevator shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1/CSA B44.

**901.4.3.3.3 Firefighter Elevator hoistway.** The Firefighter Elevator hoistway shall comply with Section 901.4.3.3.3.1 through 901.4.3.3.3.3.

**901.4.3.3.3.1 Hoistway enclosure protection.** The Firefighter Elevator shall be located in a shaft enclosure having a 2-hour fire-resistance rating.

**901.4.3.3.3.2 Hoistway lighting.** When firefighters' emergency operation is active, the entire height of the hoistway shall be illuminated at not less than 1 foot-candle (11 lux) as measured from the top of the car of each Firefighter Elevator.

**901.4.3.3.3.3 Hoistway water protection.** The Firefighter Elevator hoistway shall be designed utilizing an approved method to prevent water from the operation of the automatic sprinkler system from infiltrating into the hoistway enclosure.

**901.4.3.3.4 Firefighter Elevator lobby.** The Firefighter Elevator shall open into a Firefighter Elevator lobby in accordance with Sections 901.4.3.3.4.1 through 901.4.3.3.4.4.

**Exception:** Where a Firefighter Elevator has two entrances onto a floor, the second entrance shall be permitted to open into an elevator lobby.

**901.4.3.3.4.1 Access.** The Firefighter Elevator lobby shall have direct access to an exit enclosure.

**901.4.3.3.4.2 Lobby enclosure.** The Firefighter Elevator lobby shall be enclosed with a smoke barrier having a minimum 1-hour fire-resistance rating.

**Exception:** Enclosed Firefighter Elevator lobby is not required at the street floor.

**901.4.3.3.4.3 Lobby doorways.** Each Firefighter Elevator lobby shall be provided with a doorway that is protected with a  $\frac{3}{4}$ -hour fire door assembly. The fire door assembly shall also comply with the smoke and draft control door assembly requirements of California Building Code with the UL1784 test conducted without the artificial bottom seat.

**901.4.3.3.4.4 Lobby size.** Each enclosed Firefighter Elevator lobby shall be a minimum of 150 square feet in an area with a minimum dimension of 8 feet.

**901.4.3.3.5 Standpipe hose connection.** A Class I standpipe hose connection shall be provided in the exit enclosure having direct access from the Firefighter Elevator lobby.

**901.4.3.3.6 Elevator system monitoring.** The Firefighter Elevator shall be continuously monitored at the fire command center by a standard emergency service interface system meeting the requirements of NFPA 72.

**901.4.3.3.7 Electrical power.** The following features serving each Firefighter Elevator shall be supplied by both normal power and Type 60/Class 2/level 1 standby power:

1. Elevator equipment.
2. Elevator hoistway lighting.
3. Elevator machine room ventilation and cooling equipment.
4. Elevator controller cooling equipment.

**901.4.3.3.7.1 Protection of wiring or cable.** Wires or cables that provide normal and standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to Firefighter Elevators shall be protected by construction having a minimum 1-hour fire-resistance rating or shall be circuit integrity cable having a minimum 1-hour fire-resistance rating.

**901.4.3.3.8 Signage.** An approved sign of "Firefighter Elevator" shall be posted on all floors adjacent to each elevator call station serving Firefighter Elevator. The letters shall be in red color, minimum  $\frac{3}{4}$ -inch high, and contrast to the background. The bottom edge of the sign shall be located more than 48 inches, and less than 72 inches above the floor level at the threshold.

**901.4.3.3.9 Machine rooms and machinery spaces.** Elevator machine rooms and machinery spaces shall be enclosed with 2-hr rated fire barriers and 1 1/2-hr rated fire door. The storage of combustibles in elevator machine rooms and machinery spaces is strictly prohibited.

**Exception:** When machine rooms and machinery spaces do not abut and have no openings to the hoistway enclosure they serve, elevator machine rooms and machinery spaces may be enclosed with 1-hr rated fire barriers and 1-hr rated fire door.

**901.4.3.3.10 Fire sprinkler system.** Automatic fire sprinklers shall not be installed in elevator machine rooms, associated machine spaces or the top of their associated hoistways. Elevator machine rooms and associated machinery spaces shall have a full coverage of smoke and heat detection systems installed and connected to the building fire alarm system.

### **901.4.3.4 Access Requirements for Solar Photovoltaic Systems**

**901.4.3.4.1** Solar photovoltaic systems shall be installed in accordance with the requirements of this section, the California Building Code and the California Electric Code.

**Exception:** One- and two- family residence dwellings, detached Group U non-habitable structures such as parking shade structures, carports, solar trellises, and similar type structures are not subject to the requirements of this section.

**901.4.3.4.2 Access and pathways.** Roof access, pathways, and spacing requirements shall be provided in order to ensure access to the roof; provide pathways to specific areas of the roof; provide for smoke ventilation operations; and to provide emergency egress from the roof.

**Exception:** Requirements relating to ridge, hip, and valleys do not apply to roofs with slopes of two units vertical in twelve units horizontal (2:12) or less.

**901.4.3.4.2.1 Roof access points.** Roof access points shall be defined as an area that does not place ground ladders over openings such as windows or doors, and are located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.

**901.4.3.4.2.2 Access.** There shall be a minimum 6 foot wide clear perimeter around the edges of the roof.

**Exception:** If either axis of the building is 250 feet or less, there shall be a minimum 4 foot wide clear perimeter around the edges of the roof.

**901.4.3.4.2.3 Hips and Valleys.** Panels/modules shall be located no closer than 24 inches to a hip or a valley if panels/modules are to be placed on both sides of a hip or valley. If the panels are to be located on only one side of a hip or valley that is of equal length then the panels shall be permitted to be placed directly adjacent to the hip or valley.

**901.4.3.4.2.4 Ridge Setback.** Panels/modules shall be located no higher than 4 feet below the ridge in order to allow for fire department smoke ventilation operations.

**901.4.3.4.2.5 Pathways.** The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

(1). The pathway shall be over areas capable of supporting the live load of fire fighters accessing the roof.

(2). The center line axis pathways shall be provided in both axis of the roof. Center line axis pathways shall run where the roof structure is capable of supporting the live load of firefighters accessing the roof.

(3). Shall be straight line not less than 4 feet clear to skylights and/or ventilation hatches.

(4). Shall be straight line not less than 4 feet clear to roof standpipes.

(5). Shall provide not less than 4 feet clear around roof access hatch with at least one not less than 4 feet clear pathway to parapet or roof edge.

**901.4.3.4.2.6 Smoke Ventilation.** The solar installation shall be designed to meet the following requirements:

(1). Arrays shall be no greater than 150 feet by 150 feet in distance in either axis in order to create opportunities for smoke ventilation operations.

(2). Smoke ventilation options between array sections shall be one of the following:

(i). A pathway 8 feet or greater in width; or

(ii). A 4 feet or greater in width pathway and bordering roof skylights or smoke and heat vents; or

(iii) A 4 feet or greater in width pathway and bordering 4 foot x 8 foot "venting cutouts" every 20 feet on alternating sides of the pathway.

**901.4.3.4.3 Ground mounted photovoltaic arrays.** Setback requirements do not apply to ground-mounted, free standing photovoltaic arrays. A clear brush area of 10 feet is required around ground mounted photovoltaic arrays.

**901.4.3.5 Administrative Regulations:** The Fire Chief is authorized to, from time to time as necessary, issue, review and revise administrative regulations to implement this Section, including but not limited to the specification of standards for installation and maintenance of firefighter breathing air replenishment systems and operation and maintenance of radio retransmission equipment.

**901.4.3.6 Effect on Pending Applications, Repairs and Alterations:** The provisions of this Section shall apply to any new building or structure for which application for a building permit application is completed on or after March 11, 2005. The provisions of this Section shall further apply to alterations, additions or repairs to existing buildings for which a permit

application is completed on or after March 11, 2005 to the same extent that the building or structure is required to comply with then current requirements or other technical codes as specified in Title 24 of this Code.

**17.12.630 Amendment of Section 903 Relating to Automatic Fire Sprinkler System Requirements**

**Findings**

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

- A. 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.
- B. 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.
- C. This section adopts the latest standards currently listed by the State of California Fire Marshals Office for automatic fire protection systems and includes references to the amendments to the standards made in the California Fire Code.
- D. 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.

**Automatic Sprinkler Systems (2010 CFC 903)**

- A. Subsection 903.2 of CFC Section 903 is amended to read as:

**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.
- 2. Throughout existing buildings that are greater than 10,000 square feet wherein a change of occupancy that is more hazardous per the table below.

**OCCUPANCY HAZARD CATEGORIES**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATIONS
1 (Highest Hazard)	H
2	I-2, I-2.1, I-3, I-4
3	A, E, I-1, M, R-1, R-2, R-2.1, R-4
4	B, F-1, R-3, R-3.1, S-1
5 (Lowest Hazard)	F-2, S-2, U

3. Throughout new one- and two-family dwellings and townhouses.
4. 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 3600 square feet.
5. Throughout buildings and structures that are four or more stories in height, regardless of floor area.
6. Throughout new buildings and structures that exceed 6,200 square feet.
7. Throughout new buildings and structures described in sections 903.2.1 through 903.2.12.

B. Section 903.2.8 is amended by adding the following new subsection:

**903.2.8.1 Balconies and decks.** Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units where the building is of Type V construction, 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.

C. Subsection 903.2.18 of CFC is deleted and replaced with the following:

**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 Jose. 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 of 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.

D. Subsection 903.3.1 of CFC Section 903 is amended to read as follows:

**903.3.1 Standards.** Sprinkler systems shall be designed and installed in accordance with Section 903.3.1.1, unless otherwise permitted by Section 903.3.1.3.

**903.3.1.1 NFPA 13 sprinkler systems.** Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 as amended in the San Jose Fire Code except as provided in Section 903.3.1.1.1.

**903.3.1.1.1 Exempt locations.** In other than Group I-2, I-2.1 and I-3 occupancies, automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp or fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.

2. Deleted.

3. Fire service access elevator machine rooms and machinery spaces.

4. Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, and associated electrical power distribution equipment, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour fire barriers constructed in accordance with Section 707 of the California Building Code or not less than 2-hour horizontal assemblies constructed in accordance with Section 712 of the California Building Code, or both.

**903.3.1.2 NFPA 13R sprinkler systems.** Deleted.

**903.3.1.3 NFPA 13D sprinkler systems.** Where allowed, automatic sprinkler systems in one- and two-family dwellings and townhouses shall be installed throughout in accordance with NFPA 13D as amended in Section 17.12.630 of the San Jose Fire Code.

E. Subsection 903.3.5.1.1 of CFC Section 903 is deleted and replaced with the following:

**903.3.5.1.1 Limited area sprinkler systems.** ~~Limited area sprinkler systems fewer than 20 sprinklers on any single connection are permitted to be connected to the domestic service where a wet automatic standpipe is not available.~~

Limited area sprinkler systems connected to domestic water supplies shall comply with each of the following requirements:

1. Valves shall not be installed between the domestic water riser control valve and the sprinklers.

**Exception:** An approved indicating control valve supervised in the open position in accordance with Section 903.4.

2. The domestic service shall be capable of supplying the simultaneous domestic demand and the sprinkler demand required to be hydraulically calculated by NFPA 13 or NFPA 13D.

**F. Subsection 903.4 of CFC Section 903 is deleted and replaced with the following:**

**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, water-flow switches on all sprinkler systems and 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 system serving fewer than 20 sprinklers.
3. Jockey pumps control valves that are sealed or locked in the open position.
4. Control valves paint spray booths or dip tanks that are sealed or locked in the open position.
5. Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.
6. Trim valves to pressure switches in dry, pre-action and deluge sprinkler systems that are sealed or locked in the open position.
7. Kitchen hood & duct fixed extinguishing systems located in buildings where a sprinkler monitoring system is not required.

**17.12.640 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:

- A. 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.
- B. 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.
- C. If not amended, section 914.2, 914.3, 914.4, 914.6 of the CFC would allow omission of fire sprinkler coverage in certain areas of covered malls, high-rise buildings, building with atriums, stages and platforms.
- D. 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)**

Subsection 914.2.1 of CFC Section 914.2 is amended to read as follows:

**914.2.1 Automatic sprinkler system.** The covered mall building and buildings connected shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.1.1, which shall comply with the following:

- 1. The automatic sprinkler system shall be complete and operative throughout occupied space in the covered 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. Where tenant spaces are supplied by the same system, they shall be independently controlled.

**Exception:** Deleted.

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

Subsection 914.3.1 of CFC 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 903.3.5.2. 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.

**914.3.1.1 Number of sprinkler risers and system design.** Each sprinkler system zone in buildings that are more than 420 feet (128 m) in height shall be supplied by a minimum of two risers. Each riser shall supply sprinklers on alternate floors. If more than two risers are provided for a zone, sprinklers on adjacent floors shall not be supplied from the same riser.

**914.3.1.1.1 Riser location.** Sprinkler risers shall be placed in stair enclosures which are remotely located in accordance with Section 1015.2.

**914.3.1.2 Water supply to required fire pumps.** Required fire pumps shall be supplied by connections to a minimum of two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

**Exception:** Two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through at least one of the connections.

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

Subsection 914.4.1 of CFC 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)**

Subsection 914.6.1 of CFC 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 Chapter 9. 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:**

1. Deleted.
2. Deleted.
3. Sprinklers are not required within portable orchestra enclosures on stages.

SECTION 12. Part 7 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**Part 7  
Means of Egress**

**17.12.700      Adoption of Chapter 10 of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 10 of the 2010 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.

SECTION 13. Part 8 of Chapter 17.12 of the San José Municipal Code is amended to read as follows:

**Part 8  
Special Occupancy Provisions**

**17.12.800      Adoption of Chapters 11 Through 26 of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 11 through 26 of the 2010 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 1401.1 of 2010 California Fire Code Relating to Fire Safety During Construction**

Section 1401.1 of the 2010 California Fire Code is amended to read as follows:

**1401.1 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 Jose Fire Code.

**17.12.820 Amendment of Section 1802 of 2010 California Fire Code Relating to Continuous Gas Detection Systems**

Section 1802 of the 2010 California Fire Code is amended to amend the following definition:

**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.

SECTION 14. Chapter 17.12 of the San José Municipal Code is amended to add a new Part 9, to be entitled, numbered and read as follows:

**Part 9**

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

**17.12.900 Adoption of Chapters 27 through of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 27 through 44 of the 2010 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.

**17.12.910 Amendment of Section 2702 Definitions, Addition of Section 2703.1.5 Secondary Containment Requirements, Amendment of Section 2703.9.8 Separation of Incompatible Materials of the 2010 California Fire Code.**

Section 2702 of the 2010 California Fire Code Definition for Secondary Containment is amended to read as follows:

**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.

Add Section 2703.1.5 to read:

**2703.1.5 Secondary Containment Requirements.** A containment system shall be required for all hazardous materials, which 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. Construction shall be substantial, capable of safely and securely containing a sudden release without discharge. Design criteria shall be performance oriented and constructed of physically and chemically compatible materials to resist degradation and provide structural and functional integrity for a period of time reasonably

necessary to ensure detection, mitigation, and repair of the primary system. Monitoring of the secondary containment shall be in accordance with Section 2704.2.2.5

Section 2703.9.8 of the 2010 California Fire Code is amended to read as follows:

**2703.9.8 Separation of Incompatible Materials.** Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated. When the stored materials are in containers having a capacity of more than 5 pounds (2 kg) or 0.5 gallons (2L), separation shall be accomplished by:

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.
3. Storing liquid and solid materials in hazardous materials storage cabinets.
4. Storing compressed gases in gas cabinets or exhausted enclosures in accordance with Sections 2703.8.5 and 2703.8.6. Materials that are incompatible shall not be stored within the same cabinet or exhausted enclosure.

**17.12.920 Amendment of Section 3301 of 2010 California Fire Code Relating to Explosive Materials**

Section 3301 of the 2010 California Fire Code is amended to add a new subsection 3301.2, to be entitled and read as follows:

**3301.2 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.

**17.12.930 Amendment of Section 3308 of 2010 California Fire Code Relating to Fireworks, including Pyrotechnic Special Effects**

Section 3308 of the 2010 California Fire Code is amended to add a new subsection 3308.2, to be entitled and read as follows:

**3308.2 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.

**17.12.940     Sale and Use of Fireworks**

Except where otherwise expressly provided in this Code, it shall be unlawful for any person to possess, store, offer for sale, expose for sale, sell at retail, or use or explode any fireworks.

**17.12.950     Amendment of Section 3404.2.4 of 2010 California Fire Code Related to Smoking in Hazardous Materials Areas**

Section 3404.2.4 of the 2010 California Fire Code is amended to read as follows:

**3404.2.4 Sources of ignition, Exception.** Areas designated as hot work areas, and areas where hot work permits have been issued in accordance with this Code.

**17.12.960     Amendment of Section 3404.2.7.5.8 of 2010 California Fire Code Related to Overfill Protection for Above Ground Tanks**

Section 3404.2.7.5.8 of the 2010 California Fire Code is amended to read as follows:

**3404.2.7.5.8 Overfill prevention, Exception:** Outside above ground tanks with a capacity of 500 gallons or less.

**17.12.970     Amendment of Section 3404.2.11 of 2010 California Fire Code Related to Installation of Underground Storage Tanks**

Section 3404.2.11 of the 2010 California Fire Code is amended to read as follows:

**3404.2.11 Underground tanks.** Underground storage tanks shall be installed according to manufacturer's recommendations. Underground storage of flammable and combustible liquids in tanks shall comply with Section 3404.2 and Sections 3404.2.11.1 through 3404.2.11.5.2.

**17.12.980     Amendment of Section 3405.3.2 of 2010 California Fire Code Related to Bonding of Vessels**

Section 3405.3.2 of the 2010 California Fire Code is amended to read as follows

**3405.3.2 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 15. Chapter 17.12 of the San José Municipal Code is amended to add a new Part 10, to be entitled, numbered and read as follows:

**Part 10  
Referenced Standards**

**17.12.1000     Adoption of Chapter 47 of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapter 47 of the 2010 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.

**17.12.1010     Provisions of Chapter 47 of 2010 California Fire Code Which are not Adopted or Incorporated By Reference**

The following standards referenced in Chapter 47 of the 2010 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: NFPA 13R.

**17.12. 1020     Amendment to Chapter 47 to Add Reference to Standards for Hood and Duct Systems and Fire Protection in Clean Rooms**

The following standards are added to those referenced in Chapter 47 of the California Fire Code: NFPA 96-08 "Standard for Ventilation Control and Fire Protection of Commercial Cooking Operation" and NFPA 318-09 "Standard for the Protection of Semiconductor Fabrication Facilities."

**17.12.1030     Amendment of Chapter 47 Sprinkler System Standard for One and Two Family Dwellings (NFPA 13D-2010)**

The following sections of NFPA 13D-2010 edition, Sprinkler Standards for one and two family dwellings are amended to read as follows:

**Section 4.2.1** The system shall be hydrostatically tested for leakage at 200 psi for a duration of 2 hours.

**Section 4.2.2** Deleted.

**Section 6.2.3.1** Deleted.

**Section 6.2.3.2** Deleted.

**Section 6.3** Deleted

**Section 7.1.1** No valve shall be allowed which shuts off the automatic sprinkler system without turning off the domestic water supply.

**Section 7.1.2** Deleted.

Section 7.5 is amended by adding the following new subsection:

**7.5.9** Spare sprinklers shall be provided as required by NFPA 13-2010 Section 6.2.9.

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

**Section 8.4.10** Deleted.

**Section 8.6.4** Deleted

**Section 8.6.5** Deleted

**Section 8.6.6** Deleted

Section 8.6 is further amended by adding a new subsection to read as follows:

**Section 8.6.8** 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.

**17.12.1040** **Amendment of Chapter 47 Sprinkler System Installation Standards (NFPA 13-2010).**

The following sections of NFPA 13-2010 edition, Sprinkler System Installation Standards, are amended to read as follows:

Section 7.3.2 is amended to add the following subsection:

**7.3.2.7** Where steel pipe is used in preaction and dry pipe systems, piping shall be limited to internally galvanized steel.

**Exception:** Non-galvanized fittings shall be permitted.

Section 8.4.3: Amend to delete exceptions (1) through (5) and to add the following:

Extended coverage heads shall not be used. Only ½-inch standard spray sprinklers shall be used.

Section 8.15.10 is amended to add the following subsection:

- 8.15.10.4** Fire sprinkler system risers or other controls shall not be located in electrical rooms.

Section 8.16.1.1.1.1 is amended to add the following:

Each floor and basement level of a building shall be provided with a floor control valve in an approved location.

Section 11.2.3.2 is amended to add the following:

- 11.2.3.2.8** For light hazard areas designated for office use, one-inch plugged, threaded outlets shall be provided at each head. The minimum flow shall be 22.5 gpm. The outlet K-factor shall be 5.07 (one-5.6 K-factor head with 10 feet of one-inch pipe, two 90 degree elbows connected to a common branch line outlet by one foot of one inch pipe).

Extended coverage sprinkler heads shall not be used. Only standard one-half-inch standard spray sprinklers shall be used.

- 11.2.3.2.9** When a fire sprinkler system is required in buildings of undetermined use with floor to structure height of fourteen feet or less, they shall be installed for an ordinary hazard occupancy with a minimum design density of not less than 0.2 gpm/square feet, with a minimum design area of 3,000 square feet. The system demand, including 250 gpm for hoses, shall be designed at a minimum of ten percent below the available water supply. One-inch plugged, threaded outlets shall be provided at each head. 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.

- 11.2.3.2.12** Buildings 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 for hoses shall be designed at a minimum of ten percent below the available water supply. One-inch plugged, threaded outlets shall be provided at each head. In addition, a four-inch grooved capped outlet shall be provided on the riser prior to any system control valve. 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 11.2.3.2.3** Deleted.

Section 22.4.1 is amended to add the following subsection:

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

Section 22.4.4 is amended to add the following new subsection:

**22.4.4.12** The maximum water velocity in the hydraulic calculations shall be twenty feet per second (20ft/sec)

Section 24.5.2 is amended to add the following new subsections:

(7) A key plan indicating the location of each area controlled by each control valve, inspector's test valves, all auxiliary control valves and all auxiliary drain valves.

(8) Any special design criteria used to determine the system design, i.e., rack storage limitations, high-piled storage limitations, etc. These criteria shall be shown on the key plan.

**17.12.1050 Amendment of Chapter 47 Standard for Installation of Standpipe and Hose Systems (NFPA 14-2007)**

The following sections of NFPA 14-2007 edition, Standard for Installation of standpipe and hose system are amended as follows:

Section 5.2.5 is amended to add the following:

The water supply shall be made prior to the sprinkler system water flow indicator. The connection shall be equipped with a monitored valve, flow switch, check valve, and shall be restricted to a three-eighth inch (3/8") orifice.

Section 5.5.3 is amended to read as follows:

Each hose outlet shall be provided with a gauge configured as depicted in 2007 NFPA 14, Figure 7.11.3 for system riser drain connections, regardless of the type of standpipe system installed.

**17.12.1060 Amendment of Chapter 47 Standard for Installation of Centrifugal Fire Pumps (NFPA 20-2007)**

The following sections of NFPA 20-2007 edition are amended as follows:

Section 5.12.1 is amended to add the following:

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

Section 5.14.4 is amended to add the following:

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

Section 5.16 is amended to read as follows:

Where provided, the suction valve, discharge valve, jockey pump valves controller valves, and isolation valves on the backflow prevention device or assembly shall be supervised open by the following methods:

- (1) Central station, proprietary or remote station signaling services through the FACP.
- (2) Locking valves open.

**Exception:** The test outlet control valves shall be supervised closed.

Section 5.19.1.1 is amended to add the following:

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 (equal to the number required at 15 percent capacity ÷ 250 gpm). When testing the pump, the hose is connected to the outlets with water discharged in a safe location. Flow readings are usually taken from the end of the hose with a Pitot gauge.
2. Flowmeter. 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, control valve and check 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.

Section 10.2.4 is amended to add the following:

Provide sufficient space in pump room so that there is adequate workspace on all sides of the pump and associated equipment.

**17.12.1070 Amendment of Chapter 47 Standard for private fire service mains (NFPA 24-2010)**

Section 7.3 of NFPA 24-2010 edition is amended to add the following subsections:

**7.3.9** Fire hydrants shall not be under the control of valves controlling fire sprinkler and/or standpipe systems.

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

**17.12.1080** **Amendment of Chapter 47 Standard for fire alarm systems (NFPA 72-2010)**

Section 1.5.2.10.5 of NFPA 72-2010 to add the following:

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. 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).

**17.12.1090** **Amendment of Chapter 47 Installation Standard for Clean Agent Extinguishing Systems (NFPA 2001-2008)**

Section 1-4 of NFPA 2001-2008 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.

**17.12.1100** **Amendment of Chapter 47 Installation Standard for Fire Protection Systems in Clean Rooms (NFPA 318-2009)**

NFPA 318-2009 edition, including appendices is hereby added to the list of recognized standards, as contained in Chapter 47 of the 2010 California Fire Code, with the following amendments:

Section 4.1.2.1 is amended to add the following:

The extent of the calculated area shall be 3,000 square feet or the entire clean zone encompassed by a minimum of one-hour rated construction, whichever is less.

Section 4.1.2.6.10 is amended to add the following:

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

Section 4.1.2.7 is amended to add the following:

Corridor fire sprinkler protection shall be designed in accordance with the Building Code as required for ordinary hazard Group 2. (See NFPA 13.) When the design area of the sprinkler system consists of one row of sprinklers in the corridor, the maximum number of sprinklers to be calculated need not exceed 13.

SECTION 16. Chapter 17.12 of the San José Municipal Code is amended to add a new Part 11 to be entitled, numbered and read as follows:

**Part 11**  
**Marinas and Construction Requirements for Existing Buildings**

**17.12.1110 Adoption of Chapters 45 and 46 of 2010 California Fire Code**

Except as otherwise provided in the Chapter, Chapters 45 and 46 of the 2010 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 17. Chapter 17.12 of the San José Municipal Code is amended to add a new Part 12 to be entitled, numbered and read as follows:

**Part 12**  
**Media Production Facilities and Locations and Wildland - Urban Interface Fire Areas**

**17.12.1200 Adoption of Chapters 48 and 49 of 2010 California Fire Code**

Except as otherwise provided for in this Chapter, Chapters 48 and 49 of the 2010 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 18. Chapter 17.12 of the San José Municipal Code is amended to add a new Part 13 to be entitled, numbered and read as follows:

**Part 13**  
**Adoption of Appendices 2010 California Fire Code Appendices A Through H**

**17.12.1300 Adoption of Specified Appendices**

Except as otherwise provided in this Chapter, the following appendices to the 2010 California Fire Code are adopted and incorporated by reference and made a part hereof as if fully set forth herein: Appendix C and Appendix H.

**17.12.1310 Appendices to 2010 California Fire Code Which Are Not Adopted or Incorporated By Reference**

The following Appendices to the 2010 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: Appendices A, D, E, F and G.

**17.12.1320 Adoption of Appendix B to 2010 California Fire Code as Amended**

Appendix B is adopted with the following amendments to the exceptions in Section B105.1 and B105.2 to read as follows:

**B105.1 One- and two-family dwellings, Exception:** A reduction in fire flow of 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system. The resulting fire flow shall not be less than 1,000 gallons per minute.

**B105.2 Buildings other than one- and two-family dwellings, Exception:** A reduction in required fire-flow of up to 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1. The resulting fire-flow shall not be less than 1,500 gallons per minute (5678 L/min) for the prescribed duration as specified in Table B105.1.

PASSED FOR PUBLICATION of title this 26<sup>th</sup> day of October, 2010, by the following vote:

AYES: CAMPOS, CHIRCO, CHU, CONSTANT, HERRERA,  
KALRA, LICCARDO, NGUYEN, OLIVERIO, PYLE; REED.

NOES: NONE.

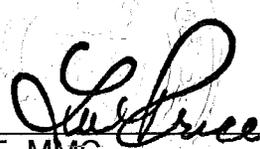
ABSENT: NONE.

DISQUALIFIED: NONE.



CHUCK REED  
Mayor

ATTEST:



LEE PRICE, MMC  
City Clerk