

## CITY COUNCIL

For City Clerk's Use:

☐

**APPROVED**

☐

**DENIED**

Reso No. \_\_\_\_\_

File No. \_\_\_\_\_

Ord No. \_\_\_\_\_

**Agenda Item No.: 15.**  
**Date: February 16, 2011**

**TO:** Honorable Mayor and Members of the City Council  
**FROM:** Mari J Hill, Deputy Fire Marshal  
**SUBJECT:** Adoption of the 2010 California Fire Code (CFC) and Local Amendments

**RECOMMENDATION:**

It is requested that Council conduct a public hearing and adopt Ordinance No. 2011-03(RR).

**FISCAL ANALYSIS:**

No fiscal impact.

**CORRELATION TO THE CITY COUNCIL ACTION PLAN:**

This item relates to the Council's Action Plan regarding Public Safety and the desire to create a disaster-resistant community.

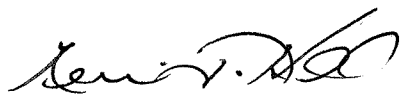
**PREVIOUS ACTION:**

On January 26, 2011, Council Introduced Ordinance No. 2011-03(R) and set February 16, 2011, as a public hearing date.

**BACKGROUND:**

The staff report from the City Council meeting held on January 26, 2011, is provided as background. The new Fire Codes, 2010 California Fire Code (see attachment), and the Escondido City Fire Code amendments, will become effective after the adoption of Ordinance No. 2011-03(RR) by Council.

Respectfully submitted,



Mari J. Hill  
Deputy Fire Marshal

## CITY COUNCIL

For City Clerk's Use:

☒ **APPROVED**

☐ **DENIED**

Reso No. \_\_\_\_\_

File No. 0680-52

Ord No. 2011-03R-Ltr

**Agenda Item No.:** 4

**Date:** January 26, 2011

**TO:** Honorable Mayor and Members of the City Council

**FROM:** Mari Hill, Deputy Fire Marshal

**SUBJECT:** Adoption of the 2010 California Fire Code and Local Amendments

### RECOMMENDATION:

It is requested that Council adopt Ordinance No. 2011-03, which modifies the City of Escondido Municipal Code to reflect the 2010 California Fire Code and proposed local amendments that increase consistency with the San Diego County Fire Code. It is also requested that Council set February 16, 2011, for the Public Hearing date to review and approve the findings for the local amendments and proposed adoption of Ordinance No. 2011-03.

### FISCAL ANALYSIS:

No Impact.

### CORRELATION TO THE CITY COUNCIL ACTION PLAN:

These items relate to the Council's Action Plan regarding Public Safety and the desire to create a disaster resistant community.

### PREVIOUS ACTION:

Approximately every three years the City of Escondido adopts new state and local Fire Codes. The last Fire Code adoption was in January 2007.

### BACKGROUND:

In January 2010 the California Building Standards Commission (CBSC) adopted the model codes from the International Code Council as the basis for the California Building Standards Code. As part of the adoption process various State agencies proposed amendments that were incorporated into the code. Once the CBSC adopts the codes with approved amendments they become effective as the State Codes. For this code cycle the effective date for local enforcement will be January 1, 2011. The International Code is the base document from which the California Fire Code is derived. Many of the local fire marshals worked together to develop a comprehensive but similar list of local amendments.

Adoption of the 2010 California Fire Code and Local Amendments  
January 26, 2011  
Page 2

The attached ordinance modifies the City of Escondido Municipal Code (EMC) to reflect the proposed California Fire Code and proposed local amendments to the code. The new 2010 California Fire Code is based on the 2009 International Fire Code.

2010 California Fire Code

The adopting Ordinance No. 2011-03 modifies the City of Escondido Municipal Code to reflect the 2010 California Fire Code and proposed local amendments that increase consistency with the San Diego County Fire Code. The amendments to the 2010 CFC are minimal and noted below:

- California State guidelines become standards for photovoltaic solar system installation.
- California State code changes to the fire sprinkler requirements for one and two family dwellings.
- Adopts Chapter 49 of the CFC to replace the 2007 Wildland Urban Interface Code.

State of California Health and Safety Code Section 17958.7 allows local amendments to the California Codes when findings can be made for unique climatic, geological or topographical conditions. Those required findings are attached to Ordinance No. 2011-03.

Respectfully submitted,



Mari J. Hill  
Deputy Fire Marshal

# CALIFORNIA 2010 FIRE CODE

## California Code of Regulations Title 24, Part 9

California Building Standards Commission  
Based on the 2009 International Fire Code®

DUE TO THE NUMBER OF PAGES OF EXHIBIT (a) A COMPLETE SET IS  
AVAILABLE IN THE OFFICE OF THE CITY CLERK OR CITY ATTORNEY.  
For Councilmembers, a set is available in the Council reading file.



Effective Date: January 1, 2011  
(For Errata and Supplements, see History Note Appendix)

## ORDINANCE NO 2011-03(RR)

AN ORDINANCE OF THE CITY COUNCIL OF  
THE CITY OF ESCONDIDO, CALIFORNIA,  
AMENDING CHAPTER 11 OF THE  
ESCONDIDO MUNICIPAL CODE,  
PERTAINING TO THE ADOPTION AND  
AMENDMENT OF THE CALIFORNIA FIRE  
CODE, FOUND AT CALIFORNIA CODE OF  
REGULATIONS TITLE 24, PART 9

WHEREAS, the State of California Building Standards Commission ("CBSC") is charged with the development of uniform codes and regulations for application to the construction of buildings within the state; and

WHEREAS, the CBSC periodically adopts updated uniform codes for application throughout the state, which are applicable even if not adopted by Cities and Counties; and

WHEREAS, Health & Safety Code Section 17958 mandates that the City of Escondido shall adopt ordinances or regulations imposing the same requirements as are contained in the regulations adopted by the State pursuant to Health & Safety Code, Section 17922; and

WHEREAS, the State of California is mandated by Health & Safety Code Section 17922 to impose the same requirements as are contained in the 2010 California Fire Code, hereinafter referred to collectively as the Fire Code; and

WHEREAS, code amendments adopted by the State of California shall take precedence over the 2010 California Fire Code language. The 2010 California Fire Code language shall be used for those code sections not adopted by the State; and

WHEREAS, local amendments adopted by the City of Escondido shall take precedence over the 2010 California Fire Code; and

WHEREAS, California Health and Safety Code Section 17958.7 allows local amendments to the California Building Standards Codes, when such codes are amended and adopted at the local level, and when findings are made for unique climatic, geological or topographical conditions; and

WHEREAS, this Ordinance sets forth those local amendments to the CBSC's uniform codes; and the required Findings, accompanied by a matrix applying each finding to each amendment attached to this Ordinance as Attachment "A" and incorporated by this reference. Also attached to this Ordinance as Attachment "B", and incorporated by this reference, is the City of Escondido Fire Severity Zone map.

NOW, THEREFORE, the City Council of the City of Escondido, California, DOES HEREBY ORDAIN as follows:

#### **Division I**

**That Section 11-15 of the Escondido Municipal Code is amended to read as follows:**

#### **Section 11-15: California Fire Code Adopted; copies on file:**

That a certain document, three (3) copies of which are on file in the office of the City Clerk for the City of Escondido, being marked and designated as the 2010 California Fire Code, including the Appendix to Chapter 4, Appendix B, BB, H & I as published by the International Code Council, and the National Fire Protection Association Standards 13, 13-R & 13-D, 2010 Editions, be and is hereby adopted as the Fire Code of the City of Escondido, in the State of California regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises, erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, equipment use, and maintenance of buildings and structures, and applies to all Fire & Life Safety recommendations regarding all ministerial and discretionary planning applications, including that providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said Fire Code on file in the office of the City Clerk of the City of Escondido are hereby referred to, adopted, and made a part

hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in Division 2 of this ordinance.

1. The City adopts the Fire Code Portion of the California Building Standards Code, found at California Code of Regulations, Title 24, Part 9, (known as the 2010 California Fire Code), which adopts by reference or amends a large portion of the 2009 International Fire Code, published by the International Code Council. The 2010 California Fire Code together with the City of Escondido amendments shall be the City's Fire Code for the purpose of prescribing regulations for the construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment use, height, area, and maintenance of buildings and structures.
2. Where there is an applicable California Fire Code section, it must prevail over similar 2009 International Fire Code language. Where there is a 2009 International Fire Code section which has not been adopted and made mandatory by the State of California, but for which the state allows cities to adopt such sections, such sections are adopted. In addition, the City adopts amendments to applicable California Fire Code and International Fire Code Sections, which are noted in this chapter. The City adopts these amendments, with appropriate findings as required by California Health and Safety Code Section 17958.7, and they shall take precedence over both the 2009 International Fire Code and 2010 California Fire Code provisions.

### **Division II**

**That Section 11-16 of the Escondido Municipal code is amended to read as follows:**

**Chapter 1 - Administration:** is hereby added **(A)**, revised **(R)** or deleted **(D)** to the Building / Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 101.5 - Validity:** The City Council of the City of Escondido hereby declares that should any Section, paragraph, sentence or word of this ordinance or of the code hereby adopted be declared for any reason to be invalid, it is the intent of the City Council of the City of Escondido that it would have passed all other portions of this ordinance independently of the elimination here from of any such portion as may be declared invalid.

**(A) Section 102.13 - Repeal of Conflicting Ordinances, Resolutions or Motions:** All former ordinances, resolutions or motions, or parts thereof, conflicting or inconsistent with the provisions of this Ordinance or of the Code or standards hereby adopted are hereby repealed.

**(A) Section 104.12 - Cost Recovery**

**(A) Section 104.12.1 - Purpose:** The purpose of this Section is to establish authority to obtain reimbursement from responsible individuals for the expenses of any emergency response and/or enforcement action by the City of Escondido to protect the public from fire or hazardous substances and situations.

**(A) Section 104.12.2 - Reimbursement**

(a) In accordance with the Health and Safety Code Section 13000 et seq., an individual who acts negligently or in violation of the law and thereby requires the jurisdiction to provide an emergency response to a danger posed by a fire or hazardous substance shall be liable for reimbursement to the agency for the costs incurred.

(b) In accordance with Government Code Sections 53150 through 53158, any individual who is under the influence of an alcoholic beverage or any drug or the combined influence of an alcoholic beverage or any drug, and whose negligent operation of a motor vehicle, boat or vessel or civil aircraft caused by that influence proximately causes any incident and thereby requires the agency to provide an emergency response shall reimburse the agency for the cost incurred.

**(A) Section 105.3.9 - Expense Recovery:** The fire code official may impose a fee for recovery of expenses incurred to enforce the fire prevention provisions of this code.

**(R) Section 105.6 - Required Operational Permits:** The fire code official is authorized to issue operational permits for the operations set forth in Section 105.6.1 through 105.5.49

**(A) Section 105.6.48 - Christmas Tree Lots:** To operate a Christmas tree lot with or without flame proofing services.

**(A) Section 105.6.49 - Greenwaste Recycling, Mulching, Composting Operations and Storage:** Permit is required per Section 1901.2 of Chapter 19

**(R) Section 108.1 - Appeals procedure for the City of Escondido:** This Section establishes appeal procedures from a fire code official's order, decision or determination.

**(A) Section 108.1.1 - Appeals:** Appeals shall follow Section 11-19 of the Escondido Municipal Code



**(R) Section 109.3 - Violation Penalties:** Any person who shall violate any of the provisions of this code, or standards hereby adopted, or fail to comply therewith, or who shall violate or fail to comply with any order made there under, or who shall build in violation of any detailed statement or specification or plans submitted and approved there under, or any certificate or permit issued there under, and from which no appeal has been taken, or who shall fail to comply with such an order as affirmed or modified by the attorney for the City of Escondido or by a court of competent jurisdiction within the time fixed herein, shall severally for each and every violation and noncompliance respectively, be guilty of an infraction or misdemeanor, punishable by a fine not exceeding \$1000.00 dollars or by imprisonment in County Jail not exceeding six (6) months, or both. The imposition of one penalty of any violation shall not excuse the violation or permit it to continue; and all such persons shall be required to correct or remedy such violations or defects within a reasonable time; and when not otherwise specified, each ten day period that prohibited conditions are maintained shall constitute a separate offense.

The application of the above penalty shall not be held to prevent the enforced removal of prohibited conditions.

**(R) Section 111.4 - Failure to Comply:** Any person, who shall continue any work having been served with a stop work order, except such work as that the person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than \$250.00 dollars or more than \$1,000.00 dollars.

**Chapter 2 - Definitions:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 202 - General Definitions:**

**(A) Accessory Structure:** A building or structure used to shelter or support any material, equipment, chattel, or occupancy other than a habitable building. (See Structure)

**(A) All-Weather Paved Surface:** is considered as paving, concrete, or as approved by the fire code official.

**(A) Board of Appeals:** Shall mean the Building Advisory & Appeals Board of the City of Escondido.

**(A) Combustible Vegetation:** Is material that in its natural state will readily ignite, burn and transmit fire from the vegetative growth to any structure, this includes ground fuels which are any native or landscape vegetation not considered a tree and generally in contact with the ground.

**(A) Discretionary Project:** A project, which requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity, as distinguished from

situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.

**(A) Fire Authority Having Jurisdiction (FAHJ):** The designated entity providing enforcement of fire regulations as they relate to planning, construction and development. This entity may also provide fire suppression and other emergency services.

**(A) Fire Department:** Is any regularly organized fire department, fire protection district, a legally formed volunteer fire department recorded with the County of San Diego, or Fire Company regularly charged with the responsibility of providing fire protection to the jurisdiction.

**(A) "Fire District":** When used, it shall also mean Water District providing fire protection.

**(A) Fire Hazard:** Is any thing that increases or could create an increase of the hazard or menace of fire to a greater degree than customarily recognized as normal by persons in the public service regularly engaged in preventing, suppressing or extinguishing fire or any thing or act which could obstruct, delay, hinder or interfere with the operations of the fire department or egress of occupants in the event of fire.

**(A) Fuel Modification Zone:** Is a strip of land where combustible vegetation has been thinned, modified or both and partially or totally replaced with approved drought-tolerant, fire-resistant, and/or irrigated plants to provide an acceptable level of risk from vegetation fires. Fuel modification reduces radiant and convective heat; thereby reducing the amount of heat exposure on the roadway or structure and providing fire suppression forces a safer area in which to take action.

**(A) Hazardous Fire Area:** Is any geographic area mapped by the State or local jurisdiction as a high or very high fire hazard area, or as set forth by the FAHJ that contains the type and condition of vegetation, topography, weather, and structure density to potentially increase the possibility of vegetation conflagration fires shall be considered a hazardous fire area.

**(A) Heavy Timber Construction:** As described in the California Building Code.

**(A) Ignition-Resistant Material:** Is any product which, when tested in accordance with ASTM E84 for a period of 30 minutes, shall have a flame spread of not over 25 and show no evidence of progressive combustion. In addition, the flame front shall not progress more than 10½ feet (3200 mm) beyond the centerline of the burner at any time during the test.

Materials shall pass the accelerated weathering test and be identified as Exterior type, in accordance with ASTM D 2898 and ASTM D 3201. All materials shall bear identification showing the fire performance rating thereof. That identification shall be issued by ICC--ES or a testing facility recognized by the State Fire Marshal having a service for inspection of materials at the factory.

Fire-Retardant-Treated Wood or noncombustible materials as defined in Section 202 shall satisfy the intent of this Section.

The enforcing agency may use other definitions of ignition-resistant material that reflect wildfire exposure to building materials and/or their materials performance in resisting ignition.

**(A) Mid-Rise Building:** Is any building having four stories or more in height, while being 75 feet (22.860 m) or less in height and not defined as a high-rise by Section 202 of the California Building Code. Measurement will be from the underside of the roof or floor above the topmost space that can be occupied to the lowest fire apparatus access road level.

A Mid-Rise Building shall meet the requirements of a High-Rise Building except for the following: Secondary Water Supply Sec. 903.3.5.2, Stand-by Power System 604.2.15.

**(A) Non-Combustible Roof Covering:** One of the following must meet the Class "A" roof covering as noted above:

1. Cement shingles or sheets
2. Exposed concrete slab roof
3. Ferrous or copper shingles or sheets
4. Slate shingles
5. Clay or concrete roofing tile
6. Approved roof covering of non-combustible material

**(A) Off-Site Roadway:** A road, street, public highway, or private road used for fire apparatus access from a publicly maintained road to the boundary of the subject property.

**(A) On-site Roadway:** A road, street, public highway, private road or driveway used for fire apparatus access within the boundaries of the subject property or land division.

**(A) Planning Authority Having Jurisdiction (PAHJ):** The identified authority regulating and enforcing planning and/or construction standards.

**(A) "Response Time":** Is the elapsed time from the fire department's receipt of the first alarm to when the first fire unit arrives at the scene.

**(A) Roof Coverings:** Roofs shall comply with the Building Code and have a minimum Class A roof covering. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire stopped to preclude entry of flames or embers.

**Exception:** On qualified historical buildings, wood roof covering may be repaired or reconstructed as allowed by the State Historical Building Code.

**(A) Structure:** That which is built or constructed; an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some manner.

**(A) Travel Time:** The estimated time it would take for a responding agency to travel from the fire station to the furthest structure in a proposed development project, determined by measuring the safest, most direct, appropriate, and reliable route with consideration given to safe operating speeds for heavy fire apparatus.

**(A) Vegetation Conflagration:** Is an uncontrolled fire spreading through vegetative fuels, and exposing and consuming structures in the advancing path of fire.

**(D) Wildland-Urban Interface Code:** Code regulating and governing the mitigation of hazard to life and property from the intrusion of fire from wildland exposures, fire from adjacent structures and prevention of structure fires from spreading to wildland fuels as adopted by the local FAHJ.

**Chapter 3 - General Precautions Against Fire:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(A) Section 304.1.4 - Outdoor Carnivals and Fairs:** Grounds consisting of a vacant field shall be free of combustible vegetation or mowed to the satisfaction of the FAHJ.

**(Reference) Section 307.5 - Attendance:** Open burning, bonfires, recreational fires, and the use of portable outdoor fireplaces shall be constantly attended by an adult until the fire is extinguished. A minimum of one portable fire extinguisher complying with Section 906 with a minimum 4-A rating or other approved on-site fire-extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be available for immediate utilization.

**(D) Section 316.3 - Pitfalls of the California Fire Code:** Is deleted.

**(A) Section 318 – Storage of Firewood:**

**(A) Section 318.1 - General Storage of Firewood:** Firewood shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs. When required by the code official, storage of firewood material stored in the defensible space shall be located a minimum of 30 feet from structures and separated from the crown of trees by a minimum of 15 feet (4 572 mm), measured horizontally. Firewood and combustible materials not for consumption on the premises shall be stored so as to not pose a hazard.

**(A) Section 319 - Mid-Rise Buildings:**

**(A) Section 319.1 - General:** All newly constructed mid-rise buildings or any mid-rise building which undergoes a complete renovation that requires the complete vacancy of the building to complete the renovation shall comply with this Section.

**Exceptions:**

1. Buildings use exclusively as an open parking garage.
2. Buildings where all floors above the fourth floor level are used exclusively as an open parking garage.
3. Buildings such as a power plant, lookout tower, steeple, grain house, and other similar structures with non-continuous human occupancy.

**(A) Section 319.1.1 - Automatic Fire Sprinkler Systems and Standpipes:** Mid-rise buildings shall be protected throughout by an automatic fire sprinkler system designed and installed in conformance with the latest edition of NFPA 13 and in accordance with the following:

1. A shut-off valve and a water flow alarm shall be provided for each floor. Each shut-off valve and water flow alarm shall be electronically supervised.
2. Mid-rise buildings shall be provided with a class I standpipe system that is interconnected with the automatic fire sprinkler system. The system shall consist of 2 ½ inch hose valves located in each stair enclosure on every floor level. Two hose outlets shall be located on the roof outside of each stair enclosure which penetrates the roof. The standpipe system shall be designed, installed and tested in accordance with the latest edition of NFPA 14.
3. Fire department standpipe connections and valves serving the floor shall be within the vestibule and located

in a manner so as not to obstruct egress when hose lines are connected and charged.

4. Buildings 3 stories or more shall meet the requirements of a mid-rise building with regard to sprinkler systems. Standpipe systems, vertical or horizontal may be required with regard to access or project design. Variations to the system design will need the approval of the fire code official.

**(A) Section 319.1.2 - Smoke Detection:** Smoke detectors shall be provided in accordance with this Section. Smoke detectors shall be connected to an automatic fire alarm system installed in accordance with the latest edition of NFPA 72. The actuation of any device required by this Section shall operate the emergency voice alarm signaling system and shall place into operation all equipment necessary to prevent the circulation of smoke through air return and exhaust ductwork. Smoke detectors shall be located as follows:

1. In every mechanical equipment, electrical, transformer, telephone equipment, unmanned computer equipment, elevator machinery or similar room and in all elevator lobbies. Elevator lobby detectors shall be connected to an alarm verification zone or be listed as a releasing device.
2. In the main return air and exhaust air plenum of each air conditioning system. Such device shall be located in a serviceable area downstream of the last duct inlet.
3. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air conditioning system. In Group R, Division 1 and 2 occupancies, an approved smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cubic feet per minute and not serving more than 10 air inlet openings.
4. For Group R, Division 1 and 2 occupancies, in all corridors serving as a means of egress for an occupant load of 10 or more.

**(A) Section 319.1.3 - Fire Alarm System:** An approved and listed, automatic and manual, fully addressable and electronically-supervised fire alarm system shall be provided in conformance with this code and the California Building Code.

**(A) Section 319.1.3.1 - Emergency Voice Alarm Signaling System:** The operation of any automatic fire detector or water flow device shall automatically sound an alert tone

followed by a pre-recorded voice instruction giving appropriate information and direction on a general or selective basis to the following terminal areas:

1. Elevators
2. Elevator lobbies
3. Corridors
4. Exit stairways
5. Rooms and tenant spaces
6. Dwelling units
7. Hotel guest rooms
8. Areas designated as safe refuge within the building

**(A) Section 319.1.4 - Central Control Station:** A central control station room for fire and life safety department operations shall be provided. The location and accessibility of the central control station room shall be approved by the fire department. The room shall be separated from the remainder of the building by not less than a one-hour, fire-resistive occupancy separation. The room shall be a minimum of 96 square feet with a minimum dimension of 8 feet. It shall contain the following as a minimum:

1. Voice alarm and public address panels
2. Fire department communications panel
3. Fire alarm enunciator panel
4. Elevator enunciator panel (when building exceeds 55 feet in height)
5. Status indicators and controls for air-handling systems (stairwell pressurization)
6. Controls for unlocking stairwell doors
7. Fire pump status indicators (if required)
8. Complete building plans set
9. Elevator control switches for switching of emergency power
10. Work table

**(A) Section 319.1.5 - Annunciation Identification:** Control panels in the central control station shall be permanently identified as to their function. Water flow, automatic fire detection and manually-activated fire alarms, supervisory and trouble signals shall be monitored by an approved UL-listed central monitoring station and annunciated in the central control station by means of an audible and visual indicator. For the purposes of annunciation, zoning shall be in accordance with the following:

1. When the system serves more than one building, each building shall be considered a separate zone.
2. Each floor in a building shall be considered a separate zone.
3. When one or more risers serve the same floor, each riser shall be considered a separate zone.

**(A) Section 319.1.6 - Elevators:** Elevators and elevator lobbies shall comply with Chapter 30 of the California Building Code. At least one elevator cab shall be assigned for fire department use, which shall serve all floors of the building. This cab shall be provided with dimensions adequate to accommodate an ambulance-type stretcher in accordance with Section 3002.4 of the California Building Code.

**(A) Section 319.1.7 - Fire Department Communication System:** An approved two-way fire department communication system designed and installed in accordance with the latest edition of NFPA 72 shall be provided for fire department use per Section 907.2.12.3.

**(A) Section 319.1.8 - Means of Egress:** In addition to the requirements of Chapter 10, egress components of mid-rise buildings shall comply with Sections 319.1.8.1 through 319.1.8.5.

**(A) Section 319.1.8.1 - Extent of Enclosure:** Stairway enclosures shall be continuous and shall fully enclose all portions of the stairway. Exit enclosure shall exit directly to the exterior of the building or include an exit passageway on the ground floor leading to the exterior of the building. Each exit enclosure shall extend completely through the roof and be provided with a door that leads onto the roof.

**(A) Section 319.1.8.2 - Pressurized Enclosures and Stairways:** All required stairways and enclosures in a mid-rise building shall be pressurized as specified in Section 909. Pressurized stairways shall be designed to exhaust smoke manually when needed.

**(A) Section 319.1.8.3 - Vestibules:** Pressurized stairway enclosures serving a mid-rise building shall be provided with a pressurized entrance vestibule on each floor that complies with Section 909.



**(A) Section 319.1.8.4 - Pressure Differences:** The minimum pressure difference within a vestibule shall be in accordance with Section 909.

**(A) Section 319.1.8.5 - Locking of Stairway Doors:** All stairway doors that are locked to prohibit access from the interior of the stairway shall have the capability of being unlocked simultaneously, without unlatching, upon a signal from the fire control room. Upon failure of normal electrical service or activation of any fire alarm, the locking mechanism shall automatically retract to the unlocked position.

A telephone or other two-way communication system connected to an approved emergency service which operates continuously shall be provided at not less than every third floor in each required exit stairway vestibule.

Approved signage shall be provided in each stairwell vestibule stating doors are locked, on each floor in which entry may be made and on each floor in which a telephone is located. Hardware for locking stairway vestibule doors shall be State Fire Marshal listed and approved by the fire code official by permit before installation. Stairway doors located between the vestibules and the stairway shaft shall not be locked.

**Chapter 4 - Emergency Planning and Preparedness:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 405.2 - Fire and Evacuation Drill Frequency and Participation:**  
Footnote 'a' to Table 405.2:

- a. The frequency in all school levels shall be allowed to be modified in accordance with Section 408.3.2. Secondary level schools need only conduct evacuation drills twice each school year.

**Chapter 5 - Fire Service Features:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(A) Section 501.3.1 - Fire Apparatus Access Modifications:** Plans for the modification of fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction or modification of any fire apparatus road.

**(R) Section 502 - Definitions:**

**(A) Dead-End Road:** A road that has only one point of vehicular ingress/egress including cul-de-sacs and looped roads.

**(R) Fire Apparatus Access Road:** A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term that includes but is not limited to a fire lane, public street, private street, driveway, and parking lot lane and access roadway.

**(R) Section 503.1 - General:** Fire apparatus access roads, including private residential driveways, shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from the closest point of fire department vehicle access. Fire apparatus access roads, including private residential driveways more than 150 feet in length, shall be provided and maintained in accordance with the provisions of this Section and the most recent Edition, and any amendments thereto, of public and private road standards as adopted by the City of Escondido design standards and standard drawings. When determined by the fire code official, more or less stringent requirements may be required than those provisions set forth in this Section or those stipulated in County standards in order to provide equivalent access.

**(R) Section 503.1.1 - Buildings and Facilities:** Approved fire apparatus access roads shall be provided for every facility, building or portion of building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this Section and shall extend within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

**Exception:** The fire code official is authorized to increase the dimension of 150 feet where:

- (D) 1.** The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
- 2.** Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
- 3.** There are no more than two Group R-3 or Group U occupancies.

See Section 1410.1 for required access during the construction, alteration or demolition of a building.

**(R) Section 503.1.2 - Additional Access / Secondary Access:** The fire code official 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) Section 503.1.2.1 - Dead-End Roads:** The maximum length of a dead-end road, including all dead-end roads accessed from that dead-end road shall not exceed the following cumulative lengths, regardless of the number of parcels served:

<b>Zoning for Parcels Serviced by Dead-End Road(s)</b>	<b>Cumulative Length of Dead-End Road(s)</b>
Parcels zoned for less than 1 acre	800 feet
Parcels zoned for 1 acre to 4.99 acres	1,320 feet
Parcels zoned for 5 acres to 19.99 acres	2,640 feet
Parcels zoned for 20 acres or larger	5,280 feet

These requirements may be modified when in the opinion of the Chief the condition warrants.

All lengths shall be measured from the edge of the roadway surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes, requiring different length limits, the shortest allowable length shall apply. Where parcels are zoned 5 acres or larger, turnarounds shall be provided at a maximum of 1320 foot intervals. Each dead-end road shall have an approved turnaround constructed at its terminus.

The fire code official may allow a dead-end road to exceed the maximum allowable length pursuant to Section 104.8, provided the fire code official makes expressed findings in writing.

Additional access must be remote from the primary access, and must meet all provisions of this Section.

**(A) Section 503.1.4 - High-Piled Storage:** Fire department vehicle access to buildings used for high-piled combustible storage shall comply with the applicable provisions of Chapter 23.

**(R) Section 503.2 - Specifications:** Fire apparatus access roads shall be installed and arranged in compliance with Sections 503.2.1 through 503.2.7.

**(R) Section 503.2.1 - Dimensions:** Fire apparatus access roads shall have an unobstructed improved width of not less than 24 feet, except for single-family residential driveways. Fire access roads serving no more than two single-family dwellings, shall have a minimum of 20 feet of unobstructed improved width. Any of the following, which have separated lanes of one-way traffic: gated entrances with card readers, guard stations

or center medians, are allowed, provided that each lane is not less than 14 feet wide.

All fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches. Vertical clearances or road widths shall be increased when, in the opinion of the fire code official, vertical clearances or road widths are not adequate to provide fire apparatus access.

**Exception:** Upon approval by the Fire code official, vertical clearances or width may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

**(A) Section 503.2.1.1 - Road Phasing Policy For Single Family Dwellings on Existing Legal Parcels:** The fire access roadway requirement for widening existing improved fire apparatus roadway shall be per TABLE 503.2.1.1A "Phasing Policy - Fire Apparatus Access" and will extend from the property out to the nearest public road.

**TABLE 503.2.1.1A - PHASING POLICY: Fire Apparatus Access – Single Family Dwellings**

Number of Parcels	Unobstructed Road Width	Roadways Over 600ft Long	Extend to Nearest Public Road
1	16-foot, paved	Turnouts every 400- feet	Yes
2	20-foot, paved	Turn-outs every 400- feet	Yes
3-8	24-foot, paved	Turn-outs every 400- feet	Yes
9 or more	24-foot, paved	Not required	Yes

Auxiliary structures (non-habitable) and residential additions/remodels less than 500 square feet: The access roadway will not be required to be improved if the access roadway has already been improved to a minimum width of 20 feet. If the roadway is not 20 feet, then the roadway shall be widened per TABLE 503.2.1.1A – PHASING POLICY – "Fire Apparatus Access", but not greater than 20 feet. The preceding addition/remodel exception is limited to one permit (addition or remodel) per three-year period from the date of the last permit approval.

**(R) Section 503.2.2 - Authority to Increase Minimums:** The fire code official shall have the authority to require an increase in the minimum access road widths where the fire code official determines the minimum is inadequate for fire or rescue operations.

**(R) Section 503.2.3 - Surface:** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus not less than 75,000 lbs. (unless authorized by the FAHJ) and shall be provided with an approved paved surface so as to provide all-weather driving capabilities, (A/C) or better.

**(R) Section 503.2.4 - Turning Radius:** The turning radius of a fire apparatus access road shall be a minimum of 28 feet as measured to the inside edge of the improvement width or as approved by the fire code official.

**(R) Section 503.2.5 - Dead Ends:** All dead-end fire access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of emergency apparatus. When deemed necessary, the fire code official may require turn outs on access roads greater than 150 feet. Unless otherwise approved by the fire code official, a cul-de-sac shall be provided in residential areas where the access roadway serves more than (2) structures. The minimum unobstructed paved radius width for a cul-de-sac shall be 36 feet in residential areas with no parking.

**(Reference) Section 503.2.6 - Bridges and Elevated Surfaces:** Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the fire code official.

**(A) Section 503.2.6.1 - Bridges With One Traffic Lane:** When allowed by the fire code official, private bridges providing access to not more than two residential dwellings may be allowed with one 12 foot wide travel lane; However, it shall provide for unobstructed visibility from one end to the other and turnouts shall be provided at both ends.

**(R) Section 503.2.7 - Grade:** The gradient for a fire apparatus access roadway shall not exceed 20.0%. Grades exceeding 15.0% (incline or decline) shall not be permitted without mitigation. Minimal mitigation shall be a surface of Portland Cement Concrete (PCC), with a deep broom finish perpendicular to the direction of travel, or equivalent, to enhance traction. The fire code official may require additional mitigation measures where he deems appropriate. The angle of departure and angle of approach of a fire access roadway shall not exceed 7 degrees (12

percent) or as approved by the fire code official. Pavers and "grasscrete" are not allowed unless approved by the fire code official.

**(A) Sec. 503.2.9 - Roadway Turnouts:** Shall be a minimum of 10 feet wide and 30 feet long with a minimum 25 foot taper on each end.

**(R) Section 503.3 - Marking:** When required by the fire code official, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both. Signs or notices shall be maintained in a clean and legible condition at all times and must be replaced or repaired when necessary to provide adequate visibility. The fire code official may require the posting of a fire access roadway where parking has obstructed or could obstruct the required width.

All new public roads, all private roads within major subdivisions, and all private road easements serving two or more parcels shall be named.

**(A) Section 503.3.1 - Fire Lane Designation:** The fire code official may designate existing roadways as fire access roadways consistent with California Vehicle Code Section 22500.1, where he/she determines that such designation is necessary to ensure adequate fire access.

**(Reference) Section 503.4 - Obstruction of Fire Apparatus Access Roads:** Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum road widths and clearances established in Section 503.2.1 shall be maintained at all times.

**(A) Section 503.4.1 - Roadway Design Features:** Roadway design features (speed bumps, speed humps, speed control dips, etc.) which may interfere with emergency apparatus responses shall not be installed on fire access roadways, unless they meet design criteria approved by the fire code official.

**(Reference) Section 503.5 - Required Gates or Barricades:** The fire code official is authorized to require the installation and maintenance of gates or other approved barricades across fire apparatus access roads, trails, or other access-ways, not including public streets, alleys, or highways. Electric gate openers, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F2200.

**(R) Section 503.5.1 - Secured Gates and Barricades:** When required, gates and barricades shall be secured as approved by the fire code official. Roads, trails, and other access-ways that have been closed and obstructed in the manner prescribed by section 503.5 shall not be

trespassed on or used unless authorized by the owner and the fire code official.

**(Reference) Section 503.5.2 - Fences and Gates:** School grounds may be fenced and gates therein may be equipped with locks, provided that safe dispersal areas based on 3 square feet (0.28 m<sup>2</sup>) per occupant are located between the school and the fence. Such required safe dispersal areas shall not be located less than 50 feet (15,240 mm) from school buildings.

Every public and private school shall conform with Section 32020 of the Education Code, which states:

The governing board of every public school district, and the governing authority of every private school, which maintains any building used for the instruction or housing of pupils on land entirely enclosed (except for building walls) by fences or walls, shall, through cooperation with the local law enforcement and fire-protection agencies having jurisdiction of the area, make provision for the erection of gates in such fences or walls. The gates shall be of sufficient size to permit the entrance of the ambulances, police equipment and fire-fighting apparatus used by the law enforcement and fire-protection agencies. There shall be no less than one such access gate and there shall be as many such access gates as needed to assure access to all major buildings and ground areas. If such gates are to be equipped with locks, the locking devices shall be designed to permit ready entrance by the use of the chain or bolt cutting devices with which the local law enforcement and fire-protection agencies may be equipped.

**(A) Section 503.6.1 - Security Gates:** No person shall install a security gate or security device across a fire access roadway without the fire code official's approval. All gates providing access from a road to a driveway shall be located a minimum of 30 feet from the nearest edge of the roadway and the driveway width shall be 30 feet wide at the entrance on roadways of 24 feet or less of the traffic lane(s) serving the gate. An automatic gate across a fire access roadway or driveway shall be equipped with an approved emergency key-operated switch overriding all command functions and opening the gate. A gate accessing more than four residences or residential lots or a gate accessing hazardous institutional, educational, or assembly occupancy group structure, shall also be equipped with an approved emergency traffic control activating strobe light sensor or other device approved by the fire code official, which will activate the gate on the approach of emergency apparatus with a battery backup or manual mechanical disconnect in case of power failure. An automatic gate shall meet fire department policies deemed necessary by the fire code official for rapid, reliable access. An automatic gate serving more than one dwelling or residential lot in existence at the time of adoption of this chapter is required to install an approved emergency key operated switch or other mechanism approved by the fire code official, at an approved location, which overrides all command functions and opens the gate. A property owner shall comply with this requirement within 90

days of receiving written notice to comply. Where this section requires an approved key operated switch, it may be dual keyed or equipped with dual switches provided to facilitate access by law enforcement personnel. Electric gate openers, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F2200.

**(R) Section 505.1 - Address Numbers:** Approved numbers and/or addresses shall be placed on all new and existing buildings and at appropriate additional locations as to be plainly visible and legible from the street or roadway fronting the property from either direction of approach. Said numbers shall contrast with their background, and shall meet the following minimum standards as to size: 4" high with a 1/2" stroke for residential buildings, 6" high with a 1/2" stroke for commercial and multi-residential buildings, 12" high with a 1" stroke for industrial buildings. Additional numbers shall be required where deemed necessary by the fire code official, such as rear access doors, building corners, and entrances to commercial centers. The Fire code official may establish different minimum sizes for numbers for various categories of projects.

**(Reference) Section 505.2 - Street or Road Signs:** Streets and roads shall be identified with approved signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an approved size, weather resistant and be maintained until replaced by permanent signs.

**(A) Section 505.3 - Easement Address Signs:** All easements which are not named differently from the roadway, from which they originate, shall have an address sign installed and maintained, listing all street numbers occurring on that easement, located where the easement intersects the named roadway. Minimum size of numbers on that sign shall be four inches in height with a minimum stroke of 3/8", and shall contrast with the background.

**(A) Section 505.4 - Map/Directory:** A lighted directory map, meeting current fire department standards, shall be installed at each driveway entrance to multiple unit residential projects and mobile home parks, where the numbers of units in such projects exceed 15.

**(A) Section 505.5 - Response Map Updates:** Any new development, which necessitates updating of emergency response maps by virtue of new structures, hydrants, roadways or similar features, shall be required to provide map updates in a format (PDF and/or CAD format as approved by the FAHJ) or compatible with current department mapping services, and shall be charged a reasonable fee for updating all response maps.

**(R) Section 506.1 - Key Boxes:** When access to or within a structure or an area is unduly difficult because of secured openings or where immediate access is



necessary for life saving or firefighting purposes, the fire code official is authorized to require a key box to be installed in an accessible location. The key box shall be a type approved by the fire code official and shall contain keys to gain necessary access as required by the fire code official.

**(A) Section 506.1.2 - Emergency Key Access:** All central station-monitored fire detection systems and fire sprinkler systems shall have an approved emergency key access box on site in an approved location. The owner or occupant shall provide and maintain current keys for the structure(s) for fire department placement in the box and shall notify the fire department in writing when the building is re-keyed. In addition, a key access box shall be located outside the elevator control room and shall contain keys to the elevator control room and firefighter control panel.

**(R) Section 507.2 - Type of Water Supply:** Water supply may consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems, as approved by the fire code official, capable of providing the required fire flow in a reliable manner. In setting the requirements for fire flow, the fire code official may be guided by Section 507.3 and by Appendix B of this Code, or by the standard published by the Insurance Services Office, "Guide for Determination of Required Fire Flow".

**(R) Section 507.2.1 - Private Fire Service Mains:** Private fire service mains and appurtenances shall be installed in accordance with NFPA 24.

**(R) Section 507.2.2 - Water Tanks:** Water tanks for private fire protection, when permitted by the fire code official, shall comply with Table 507.2.2.

**TABLE NO. 507.2.2 - WATER STORAGE TANKS**

Building Square Feet	Gallons Per Minute Water Flow	Capacity Gallons	Duration Minutes
Up to 1,500	250	5,000	20
Over 1,500	250	10,000	40

When exposure distance is one hundred feet (100') or less from adjacent property, or where additional hazards or higher fire flow exists, the required water storage may be modified by the fire code official.

1. Tank bottom elevation shall be equal to or higher than the fire department connection on the premises. Regardless of domestic use, all tanks shall be equipped with a device that will ensure that the tank contains the designated amount of water for fire flow duration as determined by the fire department. Tank size may be increased to serve multiple structures on a single parcel.

2. Supply outlet shall be at least 4 inches in diameter from the base of the tank to the point of outlet at the fire department connection. The fire department connection shall be provided with an approved means of controlling water flow. The fire department connection shall be at least one 4-inch National Standard Thread (male), reduce to one 2 ½ inch National Standard Thread (Male). Additional outlets may be required.
3. Location of fire department outlet to be determined on the plot plan when submitted to the fire department. Consideration will be given to topography, elevations, and distance from structures, driveway access, prevailing winds, etc.
4. The outlet shall be located along an access roadway and shall not be closer than 50 feet or further than 150 feet from the structure.
5. All exposed tank supply pipes shall be of an alloy or other material listed for above ground use. Adequate support shall be provided.
6. Water storage tanks shall be constructed from materials approved by the fire code official and installed per manufacturer recommendations.
7. The fire code official may require any necessary information be submitted on a plot plan for approval.
8. Vessels previously used for products other than water shall not be permitted.
9. The bottom of the water storage tank shall be level with or above the building pad.
10. Maintenance and inspection of water storage tanks shall be done by the property owner to ensure that the vessel and valves are in proper working order at all times.

**(R) Section 507.3 - Fire Flow Requirements:** Fire flows shall be based on Appendix B or the standard published by the Insurance Services Office, "Guide for Determination of Required Fire Flow". Consideration should be given to increasing the gallons per minute to protect structures of extremely large square footage and for such reasons as: poor access roads; grade and canyon rims; hazardous brush; and response times greater than five minutes by a recognized fire department or fire suppression company.

In hazardous fire areas as defined in the 2010 California Fire Code as amended, the main capacity for new subdivisions shall not be less than 2,500 gallons per minute, unless otherwise approved by the fire code official.

If fire flow increases are not feasible, the fire code official may require alternative design standards such as: alternative types of construction providing a higher level of fire resistance; fuelbreak requirements which could include required irrigation; modified access road requirements; specified setback distances for building sites addressing canyon rim developments and hazardous

brush areas; and other requirements authorized by this Code and as specified by the fire code official.

**(R) Section 507.5.1 - Required Installations:** The location, type and number of fire hydrants connected to a water supply capable of delivering the required fire flow shall be provided on the public or private street, or on the site of the premises to be protected, or both, as required and approved by the fire code official. Fire hydrants shall be accessible to the fire department apparatus by roads meeting the requirements of Section 503. For fire safety during the construction, alteration or demolition of a building, see Section 1412.1.

**(R) Section 507.5.1.1 - Locations of Fire Hydrants:** Fire hydrants shall be installed as required by the fire code official, using the following criteria and taking into consideration departmental operational needs. Hydrants shall be located at intersections, at the beginning radius of cul-de-sacs and at intervals identified in the following tables and criteria. Hydrants located across heavily traveled roadways shall be not considered as serving the subject property.

**(R) Section 507.5.1.1.1 - Requirements for Single-Family Dwellings:** In projects zoned for single-family dwellings, fire hydrants shall be installed every 500 feet in accordance with City of Escondido design standards and standard drawings.

**(R) Section 507.5.1.1.2 - Requirements for Multi-Family Dwellings:** In multi-family zones and in commercial and industrial zones, fire hydrants shall be installed at intersections, at the beginning radius of cul-de-sacs, and every 300 feet of fire access roadways.

**Exception:** When improved methods of fire protection are provided, beyond those required by the Code, and accepted by the fire code official, adjusted spacing of fire hydrants from those set forth above may be considered.

**(R) Section 507.5.1.1.3 - Type of Fire Hydrant:** All fire hydrants shall be of bronze construction, including all internal parts except seats. Alternate materials may be used if approved by the fire code official and the local water district having jurisdiction. The stems shall be designed and installed in a manner that will ensure that they will not be projected outward from the main body by internal water pressure due to disassembly. The number and size of fire hydrant outlets shall be as follows:

1. One 4 inch and one 2 ½ inch NST outlet. (4", 2 ½")
2. Two 4 inch and one 2 ½ inch NST outlets. (4", 4", 2 ½")

In some instances the fire code official may require the fire hydrant(s) to have any other combination of 4 inch and 2 ½ inch outlets.

**(R) Section 507.5.1.2 - Waterline Extensions:** The fire code official may require a waterline extension for the purpose of installing a fire hydrant if the water main is 1,500 feet or less from the property line.

**Chapter 6 - Building Services and Systems:** is hereby added **(A)**, revised **(R)**, or deleted **(D)**, to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(A) Section 603.6.6 - Spark Arresters:** All structures having a chimney, flue or stovepipe attached to a fireplace, stove, barbecue or other solid or liquid fuel burning equipment or device shall have the chimney, flue or stovepipe equipped with an approved spark arrester. An approved spark arrester is a device intended to prevent sparks from escaping into the atmosphere, constructed of welded or woven wire mesh, 12 gauge thickness or larger, with openings no greater than ½ inch or other alternative material the FAHJ determines provides equal or better protection.

**(R) Section 603.8.1 - Residential Incinerators:** shall be prohibited.

**(A) Section 605.11 - Solar Photovoltaic Power Systems:** Solar photovoltaic power systems shall be installed in accordance with this code, and Solar Photovoltaic Installation Guideline from the California State Fire Marshal.

**Exception:** 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 code.

**(A) Section 605.11.1 - Marking:** Marking is required on all interior and exterior conduit, enclosures, raceways, cable assemblies, junction boxes, combiner boxes and disconnects.

**(A) Section 605.11.1.1 - Materials:** The materials used for marking shall be reflective, weather resistant, and suitable for the environment. Marking as required in Sections 605.11.1.2 through 605.11.1.4 shall have all letters capitalized with a minimum height of 3/8 inch white on red background.

**(A) Section 605.11.1.2 - Marking Content:** The marking shall contain the words: "WARNING: PHOTOVOLTAIC POWER SOURCE".

**(A) Section 605.11.1.3 - Main Service Disconnect:** The marking shall be placed adjacent the main service disconnect in a location clearly visible from the location where the disconnect is operated.

**(A) Section 605.11.1.4 - Location of Marking:** Marking shall be placed on all interior and exterior DC conduit, raceways, enclosures and cable assemblies every 10 feet, within 1 foot of all turns or bends, and within 1 foot above and below all penetrations of roof/ceiling assemblies and all walls and barriers.

**(A) Section 605.11.2 - Locations of DC Conductors:** Conduit, wiring systems, and raceways for photovoltaic circuits shall be located as close as possible to the ridge, hip or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize ventilation opportunities. Conduit runs between sub arrays and to DC combiner boxes shall be installed in a manner that minimizes the total amount of conduit on the roof by taking the shortest path from array to the DC combiner box. The DC combiner boxes shall be located such that conduit runs are minimized in the pathways between arrays. DC wiring shall be installed in metallic conduit or raceways when located within enclosed spaces within a building. Conduit shall run along the bottom of load bearing members.

**(A) Section 605.11.3 - 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.

**Exceptions:**

1. Requirements to ridge, hips, and valleys do not apply to roof slopes of two units vertical in twelve units horizontal (2:12) or less.
2. Residential structures shall be designed so that each array is no greater than 150 feet by 150 feet in either axis.

The fire code official may allow modules to be located up to the ridge when an alternative ventilation method acceptable to the fire code official has been provided or where the fire code official has determined vertical ventilation techniques will not be employed.

**(A) Section 605.11.3.1 - 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.

**(A) Section 605.11.3.2 - Residential Systems for One and Two Family Residential Dwellings:** Access shall be provided in accordance with Sections 605.11.3.2.1 through 605.11.3.2.4

**(A) Section 605.11.3.2.1 - Residential Buildings with Hip Roof Layouts:** Modules shall be located in a manner that provides a 3 foot wide clear access pathway from the eave to the ridge on each roof slope where modules are located. The access pathway shall be located at a structurally strong location on the building capable of supporting the live load of fire fighters accessing the roof.

**(A) Section 605.11.3.2.2 - Residential Buildings with a Single Ridge:** Modules shall be located in a manner that provides two 3 foot wide access pathways from the eave to the ridge on each roof slope where the modules are located.

**(A) Section 605.11.3.2.3 - Hips and Valleys:** Modules shall be located no closer than 18 inches to a hip or a valley if modules are to be placed on both sides of a hip or valley. If the modules are to be located on only one side of a hip or valley that is of equal length, then the modules shall be permitted to be placed directly adjacent to the hip or valley.

**(A) Section 605.11.3.2.4 - Smoke Ventilation:** Modules shall be located no higher than 3 feet below the ridge in order to allow for fire department smoke ventilation operations.

**(A) Section 605.11.3.3 - All Other Occupancies:** Access shall be provided in accordance with Sections 605.11.3.3.1 through 605.11.3.3.3

**Exception:** Where it is determined by the fire code official that the roof configuration is similar to a one and two family dwelling, the fire code official may approve the residential access and ventilation requirements provided in Sections 605.11.3.2.1 through 605.11.3.2.4.

**(A) Section 605.11.3.3.1 - 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.

**(A) Section 605.11.3.3.2 - Pathways:** The solar photovoltaic installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

1. Pathways shall be over areas capable of supporting the live load of the firefighters accessing the roof.
2. 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. Pathways shall be a straight line not less than 4 feet clear to skylight and/or ventilation hatches.
4. Pathways shall be a straight line not less than 4 feet clear to roof standpipes.
5. Pathways shall provide not less than 4 feet clear around the roof access hatch, with at least one not less than 4 feet clear pathway to a parapet or roof edge.

**(A) Section 605.11.3.3.3 - Smoke Ventilation:** The solar photovoltaic installation shall be designed to meet the following requirements:

1. Arrays shall be no greater than 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.
  - ii. A 4 foot or greater in width pathway and bordering roof skylights or smoke and heat vents.
  - iii. A 4 foot or greater in width pathway and bordering 4 foot by 8 foot venting cutouts every 20 feet on alternating sides of the pathway.

The fire code official may require additional means of ventilating a building including the installation of a manually operated ventilation system.

**(A) Section 605.11.4 - Ground Mounted Photovoltaic Arrays:** Ground mounted photovoltaic array installations shall meet the requirements of Sections 605.11.4.1 through 605.11.4.4

**(A) Section 605.11.4.1 - Fire Apparatus Access Roads:** Fire apparatus access roads to ground mounted photovoltaic arrays, associated equipment structures, and operations/maintenance buildings shall be per Section 503.

**Exception:** Private residential systems where the energy generated is primarily for on site use.

**(A) Section 605.11.4.1.1 - Perimeter Fire Apparatus Access Roadway:** Ground mounted photovoltaic arrays 10 acres and larger in size shall be provided with a fire apparatus access roadway around the perimeter of the project. The perimeter fire apparatus access roadway shall be installed per Section 503.

**(A) Section 605.11.4.2 - Fuel Modification:** Combustible vegetation within the array and to a distance of 30 feet from the array and associated equipment shall be reduced to a height of no more than 6 inches.

**Exception:** Private residential systems where the energy generated is primarily for on site use, the required fuel modification zone may be reduced to 10 feet.

Operation/maintenance buildings shall be provided with a fuel modification zone per Section 4907.2.

**(A) Section 605.11.4.3 - Water Supply:** Water supply for fire protection and suppression shall be provided for equipment, structures, and operations/maintenance buildings per Section 507.

**Exception:** Equipment shelters used solely for the equipment associated with the array when the exterior walls and roof assemblies are constructed with non-combustible materials.

**(A) Section 605.11.4.4 - Identification:** Ground mounted photovoltaic arrays with multiple equipment structures shall be



provided with means of readily identifying each equipment structure. The fire code official may require a lighted directory map of the project to be installed on site near the entrance to the facility for projects 10 or more acres in size.

**Chapter 9 - Fire Sprinklers Systems:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(A) Section 903.1.2 - Life Safety Sprinkler Systems:** Life safety sprinkler systems shall meet National Fire Protection Association Standards 13, 13-D or 13-R, and City of Escondido installation policies as appropriate.

**(R) Section 903.2 - Where required:** Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Section 903.2.1 through 903.2.12 and may be required in additions and remodels of existing structures as described in Section 903.2.1.1 and 903.2.1.12. For the purpose of fire sprinkler systems, buildings separated by less than 10 feet from adjacent buildings shall be considered as one building. Fire barriers, partitions and walls, regardless of rating, shall not be considered as creating separate buildings for purposes of determining fire sprinkler requirements. Mezzanines shall be included in the total square footage calculation.

**(A) Section 903.2.8 - Group R:** An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

**(A) Section 903.2.8.1 - Additions:** An automatic sprinkler system installed in accordance with Section 903.3 may be required to be installed throughout structures when the addition is more than 50% of the existing building or when the altered buildings will exceed a fire flow of 1,500 gallons per minute as calculated per section 507.3. The fire code official may require an automatic sprinkler system be installed in buildings where no water main exists to provide the required fire flow or where a special hazard exists such as: poor access roads, grade and canyon rims, hazardous brush, and response times greater than 5 minutes by fire departments.

**(A) Section 903.2.8.2 - Remodels or Reconstructions:** An automatic sprinkler system installed in accordance with Section 903.3 may be required if the scope of work includes significant modification to the interior or roof of the building, and the cost of installation of an automatic sprinkler system does not exceed 15% of the construction costs of the remodel or require vacancy of the building.

**(A) Section 903.2.19 - Commercial and Group U:** An automatic sprinkler system installed in accordance with section 903.3 shall be required in buildings and structures where the required fire flow exceeds 1,500 gallons per minute as calculated per section 507.3. The fire code official may require an automatic sprinkler system be installed in buildings where no water main exists to provide the required fire flow or where a special hazard exists such as: poor access roads, grade and canyon rims, hazardous brush and response times greater than 5 minutes by a fire department.

**Exception:** Agricultural buildings constructed of wood or metal frames, over which fabric or similar material is stretched, which are specifically used as green houses are exempt from the automatic sprinkler requirements unless physically connected to other structures.

**(R) Section 903.4 Sprinkler System Monitoring and Alarms:** All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressure and water-flow switches on all sprinkler systems shall be electronically supervised by a listed fire alarm control unit.

**Exceptions:**

1. Automatic sprinkler systems with less than 100 fire sprinklers protecting one and two family dwellings.
2. Limited area systems serving fewer than 20 sprinklers.
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 pump control valves are sealed or locked in the open position.
5. Control valves to commercial kitchen hoods, 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, pre-action and deluge sprinkler systems that are sealed or locked in the open position.

**(R) Section 907.2.11.4 - Power source:** In new construction and in newly classified Group R-3.1 occupancies, required smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and

without a disconnecting switch other than those required for overcurrent protection. Smoke alarms may be solely battery operated when installed in existing buildings; or in buildings without commercial power; or in buildings, which undergo alterations, repairs or additions regulated by Section 907.2.11.5.

**(A) Section 907.2.11.5 - Additions, Alterations or Repairs to Group R Occupancies:** When the valuation of an addition, alteration or repair to a Group R occupancy exceeds \$1,000.00 dollars and a permit is required, or when one or more sleeping rooms are added or created in existing Group R occupancies, smoke alarms shall be installed in accordance with Section 907.2.11.

**Chapter 14 - Fire Safety During Construction and Demolition:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(A) Section 1410.1.1 - Construction Standards:** Emergency access roads shall be constructed as nearly as practical to the standards of fire apparatus access roads. However, those requirements may be modified, provided, in the opinion of the fire code official, fire-fighting or rescue operations would not be unduly impaired.

**(A) Section 1418 - Fuel Modification Zone during Construction:**

**(A) Section 1418.1 - Fuel Modification Zone during Construction:** Any person doing construction of any kind which requires a permit under this code or the California Building Code shall install a fuel modification zone prior to allowing any combustible material to arrive on the site and shall maintain the zone during the duration of the project.

**Chapter 19 - Lumber Yards and Woodworking Facilities:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 1908 - Storage and Processing of Wood Chips, Hogged Materials, Fines, Compost and Raw Product in Association with Yard Waste and Recycling Facilities:**

**(R) 1908.1 - General:** The storage and processing (mulching, composting) of wood chips, hogged materials, fines, compost and raw product produced from yard waste, debris and recycling facilities shall be in accordance with Section 1908.

**(A) Section. 1908.1.1 - Definitions:** For the purpose of Section 1908, certain words and phrases are defined and certain provisions shall be construed as set forth herein, unless it is apparent from the context that a different meaning is intended.

**(A) Aerated Static Pile:** means a composting process that uses an air distribution system to either blow or draw air through the pile. Little or no pile agitation or turning is performed.

**(A) Chipping and Grinding:** means an activity that mechanically reduces the size of organic matter.

**(A) Composting Operations:** means an operation that is conducted for the purpose of producing compost. Shall be by means of one or a combination of the following processes used to produce a compost product: static pile, windrow pile, or aerated static pile.

**(A) Greenwaste:** includes but is not limited to such organic material as yard trimmings, plant waste, manure, untreated wood wastes, paper products, and natural fiber products.

**(A) Hogged Materials:** means mill waste consisting mainly of hogged bark but may include a mixture of bark, chips, dust, or other by-product from trees and vegetation.

**(A) Mulching:** is the process by which mixed greenwaste is mechanically reduced in size for the purpose of making compost.

**(A) Static Pile:** means a composting process that is similar to the aerated static pile except that the air source may or may not be controlled.

**(A) Windrow Composting Process:** means the process in which compostable material is placed in elongated piles. The piles or windrows are aerated and/or mechanically turned on a periodic basis.

**(A) Wood Chips:** means chips of various species produced or used in chipping and grinding operations.

**(A) Section 1908.1.2 - Permit Required:** A permit shall be obtained from the fire department prior to engaging in the operation and storing of processed wood chips, hogged material, fines, compost and raw product in association with yard waste and similar materials in recycling facilities. (See Division II Chapter 1 Section 105.6.49.1) The permit shall be renewed on an annual basis, or shall be limited to such period of time as designated by the fire code official. Permits shall not be transferable and any change in

use, location, occupancy, operation or ownership shall require a new permit.

**(A) Section 1908.1.3 - Security Bond/Financial Commitment for Cost Recovery:** A security bond or other approved form of financial commitment may be required by the fire code official to be posted, in an amount determined by the fire code official, of not less than \$25,000.00 dollars, nor more than \$100,000.00 dollars, depending on the size of operation. The security bond or financial commitment shall reimburse the fire department for expenses incurred in any emergency response and/or enforcement action by the fire department to protect the public from fire or hazardous substances related to the operation. The security bond/financial commitment shall be returned to the operator in a timely fashion upon satisfactory closure of the operation as determined by the fire code official.

**(A) Section 1908.1.4 - Notification of Fire:** All fires shall be reported to the fire department immediately upon discovery.

**(A) Section 1908.1.5 - Equipment Operator Emergency Callback:** The operator shall implement and maintain a plan for rapid equipment operator response to the site. The maximum response time to the site shall be within one hour of a fire department notification. The following equipment shall be on site and staffed with skilled operators: bulldozer, loaders and heavy duty equipment necessary to mitigate a fire. Notification procedure shall be maintained operational 24 hours a day, seven days a week. Notification may be by pager activation or telephone answering service or other approved means.

**(A) Section 1908.1.6 - Incoming Waste Diversion Plan:** The operator shall develop a diversion plan for incoming greenwaste for implementation in the event of equipment failure or other inability to process and distribute greenwaste. The plan shall prevent stockpiling of waste on the site and unauthorized depositing of waste on or near the site. The operator shall initiate the diversion based on criteria in the Operational and Emergency Plan without further direction from the fire department.

**(A) Section 1908.1.7 - Unprocessable or Non-Greenwaste Material:** All greenwaste that cannot be processed on-site, such as stumps and fibrous plants, shall be immediately removed from the feedstock, stored in roll-off containers or bins and be removed from the facility on a weekly basis. All plastic bags shall be removed prior to shredding material.

**(A) Section. 1908.1.8 - Fire Access Roadway:** A fire access roadway shall be provided to the site and on-site as approved by the fire code official. It shall have a minimum width based upon site material handling equipment and an approved driving surface as approved by the fire code official. In no case shall the fire access roadway be less than 20 feet wide.

**(A) Section 1908.1.9 - Firefighting Water Supplies and Storage:**

**(A) Section 1908.1.9.1 - Public Water Supply:** The operator shall provide and maintain approved fire hydrants and waterline mains as required by the fire code official. Water lines may be approved aboveground lines supplied from a reliable water supply with adequate protection against impact and fire flow reaction. Hydrant spacing shall be at 400-foot intervals along primary fire access roadways. Fire flow at the hydrant(s) shall be least 1000 gallons per minute at 20psi. Duration of the required fireflow shall be as determined by the fire code official.

**(A) Section 1908.1.9.2 - Private Water Supply:** Above ground water storage tanks may be installed when authorized by the fire code official where public water supply is not adequate to meet fire flow requirements. Volume and duration of the required fireflow shall be as determined by the fire code official.

**(A) Section 1908.1.10 - Site Equipment Maintenance & General Safety Rules:** Welding or cutting torch operations shall be conducted a minimum of 30 feet from combustible materials. A fire watch shall be provided to detect fire, and to operate fire-extinguishing equipment throughout the welding or cutting operation and thirty (30) minutes thereafter. Refueling and on-site maintenance shall meet California Fire Code Chapter 22 & 34 - Flammable and Combustible Liquids, and all other applicable fire code requirements.

**(A) Section 1908.1.11 - Site Security:** Pile storage areas shall be surrounded with approved fencing. Fences shall be a minimum of 6 feet in height.

**(A) Section 1908.1.12 - Smoking and Open Burning Prohibited:** The operator shall prohibit smoking and open flame on the operational site, including smoking within vehicles. Approved signs shall be clearly and prominently posted, and shall be enforced by the site operators. No open burning will be allowed on site.

**(R) Section 1908.3 - Size of Piles:** Pile height, width, and length shall be limited to criteria approved by the fire code official, based in part on the site material handling equipment. In no case shall the piles exceed 12 feet in height, 100 feet in width and 200 feet in length.

**(R) Section 1908.5 - Combustible Vegetation Control:** The operator shall clear any combustible material, weeds, brush, trees or other vegetation (including mulch) that is, or could become, dry and could be capable of transmitting fire, from within fifty (50) feet of raw greenwaste and mulch piles. Clearance shall be to bare earth or approved pavement. Individual growing trees within that distance may remain with approval of the fire code official.

**(R) Section 1908.6 - Static Pile Protection:** Interior pile temperatures shall be monitored and recorded on a regular basis per the Operational Plan. Internal pile temperatures must be taken at 2/3 the pile height, 12 to 24 inches from the surface with a probe-type thermometer. Readings shall be made at not greater than 50-foot intervals along the length of the pile.

Temperatures above 158 degrees F are known to adversely affect microbial decomposition and are considered excessive. Infrared thermometers may be used to monitor for hot spots at the surface, but are not a substitute for internal probe measurement and documentation.

Once windrows exceed 170 degrees F, the windrows must be reduced in size, be rotated and be monitored daily until temperatures drop below 158 degrees F. All greenwaste stockpiles shall be re-mixed as necessary to alleviate any fire due to spontaneous combustion or temperatures above 170 degrees.

Wind rows shall be visually inspected on a regular basis. Once fires have been detected in any windrows at a site, this visual inspection shall be a minimum daily requirement. Daily inspections shall continue until the threads of fire no longer exist, and the fire code official approves suspension.

All temperature and pile-handling records shall be kept on file at the site and be made available for inspection by fire department personnel. Data shall include date, time, temperature, specific location and person conducting measurement.

**(R) Section 1908.9 - Material Handling Equipment:** Equipment used on all piles should be of a type that minimizes compaction. All vehicles operating on or around the piles shall have a Class A fire extinguisher of a minimum 2-A rating, in addition to the Class B rating appropriate for the vehicles. Approved material-handling equipment shall be available during fire fighting operations for moving wood chips, hogged material, compost and raw product produced from yard waste and wood fines.

**(R) Section 1908.10.1 - Operational and Emergency Plans:** The following operational and emergency action plans shall be submitted to and be approved by the fire code official prior to initiating operation:

1. Operational Plan at a minimum the Operational Plan must include:
  - a. Site layout, pile dimensions, fire access, water supply, site security.
  - b. Site operations: temperature monitoring, rotation, diversion plan.
2. Emergency Plan at minimum the Emergency Plan must include:
  - a. Operator fire response actions, fire dispersal area, emergency equipment operator callback, initiation of incoming diversion plan.
  - b. All plans shall define the equipment necessary to process and handle the materials.

**(A) Section 1908.11 - General Safety Rules for Site Equipment Maintenance:** Welding or cutting torch operations shall be conducted a minimum of 30 feet from combustible materials. A fire watch shall be provided to detect fire, and to operate fire extinguishing equipment throughout the welding or cutting operation and 30 minutes thereafter. Refueling and on-site maintenance shall meet California Fire Code requirements in Chapters 22 & 34 and all other applicable fire code requirements.

**Chapter 22 - Motor Fuel Dispensing Facilities and Repair Garages:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 2201.1 - Scope:** Automotive motor-fuel dispensing facilities, marine motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities and repair garages shall be in accordance with this chapter and the California Building Code, California Plumbing Code and the California Mechanical Code. These operations shall include both operations that are accessible to the public and private operations. Whenever this chapter imposes a requirement that applies to Class IIIA liquids that same requirement shall also apply to Class III liquids.

**Chapter 23 - High-Piled Combustible Storage:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:



**(D) Table 2306.2 - General Fire Protection and Life Safety Requirement:**  
**Exception J** - is deleted from General Fire Protection and Life Safety Requirements.

**Chapter 27 - Hazardous Materials / General Provisions:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(A) Section 2703.4.1 - Material Safety Data Sheets:** Material Safety Data Sheets (MSDS) shall be kept in an approved Knox Box and location, outside of the building which is accessible to fire department personnel in the event of an emergency.

**Chapter 33 - Explosives and Fireworks:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(A) Section 3301.2 - Applicability:** This Section shall apply to the manufacture, possession, storage, sale, transportation and use of explosives and blasting agents, and to any blasting operation unless the blast is determined to be a minor blast, in which case the inspection requirements of this amended article shall not apply. The fire code official shall determine if the blast is minor. Persons conducting major blasting shall comply with all the requirements of this article as amended.

**(A) Section 3301.2.1 - Definitions:** The following words and terms shall, for the purposes of this Section and as used elsewhere in this code, have the meanings shown herein.

**(A) Blaster:** A blaster who has been approved by the fire code official to conduct blasting operations in the City of Escondido and who has been placed on the list of approved blasters. Such listing shall be valid for a period of one (1) year unless revoked by the authority having jurisdiction.

**(A) Blasting Agent:** A material or mixture consisting of a fuel and oxidizer intended for blasting. The finished product as mixed and packaged for use or shipment cannot be detonated by means of a No. 8 test blasting cap when unconfined.

**(A) Blasting Operation:** The uses of an explosive device or explosive material to destroy, modify, obliterate, or remove any obstruction of any kind.

**(A) Blasting Permit:** A permit issued by the fire code official of the fire department serving the jurisdiction, pursuant to Section

105.6.14 of the California Fire Code, and shall apply to a specific site. This permit shall be valid for a period not to exceed one (1) year.

**(A) Blasting Site:** A geographically defined area where blasting may occur. It shall be shown on a project map or plot plan. Major blasting operations shall be conducted only within such defined areas. Distances for inspection and notification purposes shall be measured from all specific blast locations on a project site.

**(A) Explosives Permit:** A permit issued by the Sheriff pursuant to Section 12000, et seq. of the California Health and Safety Code and Chapter 33 of the California Fire Code. An explosives permit shall be valid for a period not to exceed one (1) year, as designated by the Sheriff and may impose conditions on the permittee and his operations up to the point of actual use. In addition to this permit, a blasting permit is also required for the actual act of blasting.

**(A) Inspector:** Means a state certified building inspector, a civil engineer, an architect, or other qualified individual who has been approved by the Fire Chief to conduct pre and post blast inspections in conjunction with blasting operations in the City of Escondido.

**(A) Major Blasting:** A blasting operation not qualifying as minor blasting.

**(A) Minor Blasting:** A blasting operation that meets all of the following criteria:

1. Quantity of rock to be blasted does not exceed one hundred (100) cubic yards per shot
2. Bore hole diameter does not exceed two inches (2")
3. Hole depth does not exceed twelve feet (12')
4. Maximum charge weight does not exceed eight (8) pounds of explosives per delay
5. The initiation of each charge will be separated by at least 10 milliseconds.

The maximum charge weight shall not exceed the Scaled Distance as shown below:

Distance from Blast Site (In Feet)	Scale-Distance (Factor)
0 – 300	Mandatory Seismic Monitoring
301 - 5,000	55
5,000+	65

**(A) Sheriff's Authorized Representative:** The fire code official serving the jurisdiction.

**(A) Section 3301.2.2 - Blasting Permits:**

1. All blasting operations within the City of Escondido are prohibited unless a Certificate of Authorization is first obtained from the Escondido Fire Department.
2. No Blasting Permit shall be granted or obtained unless the following conditions listed below are met to the satisfaction of the Fire Department:
  - a. The blaster shall obtain an explosive permit from the San Diego County Sheriff's Department and copy thereof shall be placed on file with the Escondido Fire Department.
  - b. The blaster shall obtain a business license from and issued by the Business License Division of the City of Escondido and a copy thereof placed on file with the Escondido Fire Department.
  - c. The property owner/developer or general contractor shall obtain liability insurance covering the blaster's activities in the minimum amount of \$1 million for property damage and \$1 million for bodily injury. The property owner/developer or general contractor's insurance company shall file a copy of insurance policy with the Escondido Fire Department. In addition, the blaster shall have liability insurance, for property damage, and bodily injury in the minimum amount of \$1 million each for each blasting operation. A copy of the insurance policy of the blaster shall be filed with the Escondido Fire Department. The City of Escondido shall be named as an additional insured party.
  - d. The blaster's qualifications shall be reviewed by the fire code official. Approval shall be based upon a review of the blaster's qualifications, past safety record, and his or her history of complaints of job performance. Failure on the part of the blaster to comply with the terms and conditions under which approval is granted may result in revocation of the Blasting Permit and penalties pursuant to Section 77.508.
  - e. The blaster shall provide authorization from the property owner for all blasting operations.
  - f. In order to ensure public safety, it is the blaster's responsibility to ensure compliance with United States

Bureau of Mines and the California Department of Health and Safety (CALOSHA) standards.

3. It shall be unlawful and a violation of this code for any person, firm, corporation, blaster, contractor to provide false or misleading information or documentation to the City of Escondido or any of its departments or the public during any phase of the permit process or blasting operations.
4. Additional fire department conditions are as follows:
  - a. For any blasting operations outside the Escondido City limits that are conducted in conjunction with projects within the City of Escondido, blasters are required to comply with blasting regulations of neighboring jurisdictions.
  - b. The Escondido Fire Department may impose such additional conditions and procedures as it deems are necessary to protect the public health, safety and welfare based upon the peculiar and individual facts and circumstances of a particular blasting operation. The Fire Department shall provide the blaster with the additional conditions or procedures in writing and the blaster shall comply with those requirements until such time as the Fire Department is satisfied that the conditions are no longer required and cancel the additional requirements.
5. Blasting Permit Repository and Renewal:
  - a. The Blasting Permit shall be kept on file with the Escondido Fire Department's Fire Prevention Bureau. A copy of the Blasting Permit shall be retained by the general contractor or property owner/developer and by the blaster and shall be available at the job site for public or official inspection at all times during blasting operations.
  - b. Blasting Permits shall be cancelled with the Fire Department when a blaster completes or discontinues, for thirty (30) consecutive days, blasting operations at a construction site. Said permit must be renewed before any blasting operations are continued or resumed.
  - c. Blasting Permit(s) for different blasters at the same site will require pre and post blast inspections as required for each blaster.

**(A) Section 3301.2.3 - Blasting Operation Procedures:**

**(A) Section 3301.2.3.1 - Major Blasts:**

1. Notification: It is the City's intent to provide notification of the likelihood for blasting as early as possible. Whenever possible, based on information received, for projects requiring a public notice (Public Hearing, Environmental Review and/or Intended Decision Notice), said notices shall indicate whether blasting may occur in conjunction with the proposed development. In the event blasting does occur, additional notice shall be required as follows:
  - a. Prior to the issuance of a Blasting Permit, the general contractor or property owner/developer or blaster shall give a reasonable notice in writing, but not less than one week prior to the blasting occurrence, to owners, tenants and/or occupants of all residences (including mobile homes), businesses and structures within 600 feet of any potential blast site. The notice shall be in a form approved by the Fire Chief, and shall include, but not limited to, the following:
    - i. A statement indicating that the notice is given as part of the permitting/development process.
    - ii. The location, address, and type of development.
    - iii. The anticipated date and duration of blasting operations.
    - iv. The name, address and telephone number of the blaster and/or developer as well as the Fire Department contact person's name, address and telephone number.
    - v. A radius map which shows the project location, the anticipated location of potential blasting operations, and the properties located within 300 feet and 600 feet from the Blast Site as defined under Sec. 7705.2.
    - vi. A disclosure statement outlining pre-blast and post-blast inspection procedures, timing and the time frame during which requests for pre-blast advanced notice and post-blast inspection and damage assessment complaints must be filed with the Fire Department.

The general contractor or property owner/developer shall be responsible for the preparation of the notice and the notification list, and shall provide the Fire Department with proof of notification prior to issuance of a Blasting Permit.

Any resident or business receiving such notice may request of the Fire Department that the blaster give a 24 hour advance notice of impending blast on a given day. The advanced notice shall specify the dates and estimated times of scheduled blasting operations. A subsequent advance notice shall be provided if blasting operations discontinue for a period exceeding 48 hours. The general contractor or property owner/developer shall obtain the advanced notification list of residents or businesses from the Fire Department, and shall make every reasonable effort to contact any and all parties requesting the 24 hour advance notice.

## **2. General Requirements:**

- a.** The blaster shall provide the Fire Department with a minimum 24 hour notice prior to the commencement of any blasting operation.
- b.** Blasting shall only be permitted between the hours of 9:00 a.m. and 4:00 p.m. during any weekday, Monday through Thursday, unless special circumstances warrant another time or day and special approval is granted by the Fire Chief based on consideration of the blasting operations potential impact on the surrounding properties and demonstrated compliance with the Noise Ordinance (Article XII. Noise Abatement Control).
- c.** If a Fire Department witness is desired, arrangement shall be made at least 12 hours prior to the blast. Confirmation shall be made to the Fire Department no less than one hour prior to the blast. The Fire Department may then assign a Department member to be present and observe the blast at their discretion. A representative of the Fire Department may also be present during the blasting operation without any prior notice to the blaster.
- d.** All blasting operations shall be monitored by an approved seismograph located at the nearest man-made structure. All daily seismograph reports

shall be forwarded to the Fire Department by the end of the business week.

**Exception:** Public Utility Companies are not required to seismographically monitor minor blasting operations.

**3. Pre-blast Inspections:**

- a. Inspections of all man-made structures (including mobile homes) within 300 feet of a major blast site shall be made before blasting operations. The inspection shall be for the purpose of determining the existence of any visible or recognizable preexisting defect or damages in any structure. The inspection shall also identify all existing operating wells on site for documentation purposes only. Waiver of such inspection shall be in writing by owner(s), and persons who have vested interest, control, custody, lease or rental responsibility of said property or their legally recognized agent.
- b. The person(s) inspecting shall obtain the permission of the building owner prior to conducting the inspection.
- c. The inspections shall be performed by an approved blast inspector per Section 7705.2.
- d. The inspector shall file with the Fire Department, a summary report identifying address, occupant and/or owner's name, time and date of inspections. The summary report shall also include inspection waiver signed by property owner or owner's agent, with an explanation as to why an inspection of a specific structure was not made. This summary and waiver report shall be signed by the inspector and filed with the Fire Department prior to blasting operation.
- e. The blaster shall permit the Fire Department personnel to inspect the site and blast materials or explosives at any reasonable time.

**4. Post-blast Inspections:**

- a. Post-blast inspections shall be required upon receipt of a written complaint to the Fire Department by the person in charge of the

property alleging property damage due to blasting operations. For complaint received within one year of completion of blasting operations, the Fire Department shall forward a copy of the written complaint to the contractor and/or blaster. In no way does this relieve the blaster and/or the developer of their legal obligations toward the complainant.

- b. Said inspection shall be conducted and reports filed with the Fire Department and the complainant within 30 days of receipt of complaints.

**(A) Section 3301.2.3.2 - Minor Blasts:**

1. Notification: Prior to issuance of a Blasting Permit, the general contractor or property owner/developer or blaster shall give a reasonable notice in writing, but not less than 12 hours prior to the blasting occurrence, to all residences (including mobile homes), businesses or structures on contiguous properties or at the discretion of the Fire Department. The notice shall be in a form approved by the Fire Chief, and shall include, but not be limited to, the following:
  - a. A statement indicating that the notice is given as part of the permitting/development process.
  - b. The location, address, and type of development.
  - c. The anticipated date and the estimated duration of blasting operations.
  - d. The name, address and telephone number of the blaster and/or developer as well as the Fire Department's contact person's name, address and telephone number.
2. General Requirements: All blasting operations shall be monitored by an approved seismograph located at the nearest man-made structure. All daily seismograph reports shall be forwarded to the Fire Department by the end of the business week.

**Exception:** Public Utility Companies are not required to seismographically monitor blasting operations for minor blasts.

**(A) Section 3301.2.4 - Blasting Hours:** Blasting shall only be permitted between the hours of 9:00 a.m. and 4:00 p.m. Monday through Thursday,



unless special circumstances warrant another time or day and special approval is granted by the fire code official.

**(A) Section 3301.2.5 - Violations and Penalties:** The fire code official, issuing authority, or peace officer may seize, take, remove or cause to be removed at the expense of the owner all explosives, ammunition or blasting agents offered or exposed for sale, stored, possessed or transported in violation of this article. In addition:

1. Any person violating or causing the violation of any of the provisions of this ordinance shall be guilty of a misdemeanor and upon conviction shall be punished by a fine of not more than \$1,000.00 or by imprisonment in the County jail for six (6) months, or by both fine and imprisonment.
2. It shall be unlawful and a violation of this ordinance for any person to provide false or misleading information or documentation to the County of San Diego or any of its officers or employees or to any jurisdiction having authority during any phase of the explosives or blasting permit process or blasting operations.
3. In addition to the penalties provided in Paragraph 1 of this Section, any conditions caused or permitted to exist in violation of the provisions of this ordinance or in violation of the conditions of an explosives or blasting permit shall be deemed a public nuisance, and may be abated by the County as such or remedied in court in any manner provided by law.
4. The general contractor or owner/developer shall be responsible for compliance with all provisions of this ordinance.

**(A) Section 3301.2.6 - Fee Structure:** A blaster and inspector shall pay a fee to the Sheriff upon being designated an approved blaster or inspector. Fees shall also be charged for issuance of a blasting permit to conduct blasting operations within the City of Escondido. The amount of said fees shall be determined by the fire protection district on the basis of the full costs involved in processing said permits.

**Chapter 34 - Flammable and Combustible Liquids:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 3405.2.4 - Class I, II and III Liquids:** Class I or II liquids or Class III liquids that are heated up to or above their flash points shall be transferred by one of the following methods:

**Exception:** Liquids in containers not exceeding a 5.3-gallon (20 L) capacity.

1. From safety cans complying with UL 30.
2. Through an approved closed piping system.
3. From containers or tanks by an approved pump taking suction through an opening in the top of the container or tank.
- (D) 4. Approved engineered liquid transfer system.

**(A) Section 3406.2.5.2.1 - Limitations on Tanks for Gravity Discharge:**

Gravity dispensing of Class I or II liquids or Class III liquids that are heated up to or above their flash points is prohibited. Dispensing devices for flammable and combustible liquids shall be of an approved type. Approved pumps taking suction from the top of the tank shall be used. Flammable or combustible liquids shall not be dispensed by a device that operates through pressure within a storage tank. Air or oxygen shall not be used to pressurize an aboveground tank.

**(A) Section 3406.2.8.2 - Tank Vehicle as a Substitute for Permanent Tank Prohibited:** The use of tank vehicles in a stationary manner as a substitute for approved above- or below-ground fuel tanks is prohibited.

**Chapter 38 - Liquefied Petroleum Gases:** is hereby added (A), revised (R), or deleted (D) to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(A) Section 3807.5 - Securing Tanks to Ground (LPG):** Tanks shall be secured to prevent the tank from rolling or moving when required by the FAHJ.

**Chapter 49 - Requirements for the Wildland-Urban Interface Areas:** is hereby added (A), revised (R), or deleted (D) to the Building/Fire Code portion of the California Buildings Standards Code to read as follows:

**(R) Section 4902.1 - General:** For the purposes of this chapter, certain terms are defined as follows:

**(A) Building Official:** The officer or other designated authority charged with the administration and enforcement of the locally adopted California Building Code, or the building official's duly authorized representative.

**(A) Combustible Vegetation:** means material that in its natural state will readily ignite, burn, and transmit fire from native or landscape plants to any structure or other vegetation. Combustible vegetation includes dry grass, brush, weeds, litter or other flammable vegetation that creates a fire hazard.

**(A) Defaceable Space:** is an area either natural or man-made, where material capable of allowing a fire to spread unchecked has been treated, cleared or modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur.

**(R) Fire Protection Plan (FPP):** is a document prepared for a specific project or development proposed for the wildland-urban interface fire area that describes ways to minimize and mitigate potential loss from wildfire exposure, with the purpose of reducing impact on the community's fire protection delivery system.

**(Reference) Fire Hazard Severity Zones:** are geographical areas designated pursuant to California Public Resources Code Sections 4201 through 4204 and classified as Very High, High and Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code Sections 51175 through 51189.

The California Code of Regulations, Section 1280 entitles maps of these geographical areas as "Maps of the Fire Hazard Severity Zones in the State Responsibility Area of California."

**(A) Fuel Break:** is an area, strategically located for fighting anticipated fires, where the native vegetation has been permanently modified or replaced so that fires burning into it can be more easily controlled. Fuel breaks divide fire-prone areas into smaller areas for easier fire control and to provide access for fire fighting.

**(Reference) Local Agency Very High Fire Hazard Severity Zone:** means an area designated by a local agency upon the recommendation of the CDF Director pursuant to Government Code Sections 51177(c), 51178 and 51189 that is not a State Responsibility Area and where a local agency, city, county, city and county, or district is responsible for fire protection.

**(A) Open Space Easement:** means any right or interest in perpetuity or for a term of years in open-space land, as that term is defined in Government Code Sections 51065(a), acquired by the County, a city or a nonprofit organization where the instrument granting the right or interest imposes restriction on use of the land, to preserve the land for public use or enjoyment of the natural or scenic character of the land.

**(A) Open Space Preserve:** means open-space land, as that term is defined in Government Code Section 65560(b), for the preservation of natural resources, managed production of resources, outdoor recreation, public health and safety, buffer for a military installation or the protection of cultural resources.

**(A) Slope:** is the variation of terrain from the horizontal; the number of feet, rise or fall per 100 feet, measured horizontally, expressed as a percentage.

**(Reference) State Responsibility Area:** means lands that are classified by the Board of Forestry pursuant to Public Resources Code Section 4125 where the financial responsibility of preventing and suppressing forest fires is primarily the responsibility of the State.

**(A) Tree Crown:** means the primary and secondary branches growing out from the main stem, together with twigs and foliage.

**(Reference) Wildfire:** is any uncontrolled fire spreading through vegetative fuels that threaten to destroy life, property, or resources as defined in Public Resources Code Sections 4103 and 4104.

**(Reference) Wildfire Exposure:** is one or a combination of radiant heat, convective heat, direct flame contact and burning embers being projected by vegetation fire to a structure and its immediate environment.

**(Reference) Wildland-Urban Interface Fire Area:** is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires.

**(A) Section 4902.2 - Declaration:** The legislative body shall declare the Wildland Interface Areas within the jurisdiction. The Wildland Urban Interface Areas shall be based on the findings of fact. The Wildland Urban Interface Area boundary shall be any geographic area mapped or otherwise identified by the State or local jurisdiction as a High Hazard, or Very High Fire Severity Zone, or as set forth by the City of Escondido Fire Department response area. (See Attachment B for map) When the type and condition of vegetation, topography, weather, and structure density, which potentially increases the probability of vegetation conflagration exists, such area shall be considered a Very High Fire Severity Zone.

**(A) Section 4903 - Fire Protection Plans:**

**(A) Section 4903.1 - When Required:** The Fire Authority Having Jurisdiction may require an applicant for a parcel map, subdivision map, specific plan or major use permit for any property located in a wildland-urban interface fire area to submit a Fire Protection Plan (FPP) as part of the approval process.

**(A) Section 4903.2 - Content:** The FPP shall consider location, topography, geology, aspect, combustible vegetation (fuel types), climatic conditions and fire history. The plan shall address the following in terms of compliance with applicable codes and regulations including but not limited to: water supply, vehicular and emergency apparatus access, travel time to nearest serving fire station, structural ignitability, structure set back,

ignition-resistive building features, fire protection systems and equipment, impacts to existing emergency services, defensible space and vegetation management.

The FPP shall be prepared as prescribed in the County of San Diego Land Use and Environment Group "Guidelines for Determining Significance and Report Format and Content Requirements for Wildland Fire and Fire Protection" document.

**(A) Section 4905.4 - Wildland Urban Interface Special Building Construction Regulations:** are located in the 2010 California Building Code:

1. Standards of Quality
  - a. SFM Standard 12-7A-1 Exterior Wall Siding and Sheathing
  - b. SFM Standard 12-7A-2 Exterior Windows
  - c. SFM Standard 12-7A-3 Horizontal Projections
  - d. SFM Standard 12-7A-4 Decking
  - e. SFM Standard 12-7A-5 Ignition-resistant Materials
2. Roofing Covering & Valleys - Class "A" Very High Fire Hazard Areas
  - a. Roof gutters – Prevent debris accumulation
  - b. Replacement – more than 50% or more 2,500 square feet roof area
3. Skylights – One pane tempered Glass
4. Attic Ventilations – prevent intrusion of flame and embers into the attic
5. Eave or Cornice Vents – not allowed in exterior overhang areas
  - a. Eave protection – shall be protected by ignition resistant materials
6. Exterior Walls- shall be noncombustible, ignition-resistant materials
  - a. Exterior wall covering – shall extend from the top the foundation and terminate at roof
  - b. Repair/Replacement of exterior wall – less than 30 feet from property line
  - c. Exterior wall Vents - prevent intrusion of flame and embers into the structure
7. Exterior Glazing and Window Walls – one pane tempered on dual pane windows
8. Exterior Door Assemblies – approved noncombustible construction or 20 minute rated
9. Decking and Other Appendages – structural supports and framing members shall be non-combustible
  - a. Decking surface – non-combustible, fire treated wood, one-hour fire-resistant
  - b. Testing of alternative decking materials
  - c. Deck remodel or repair -50% or 1,00 square feet
10. Underfloor and Appendages and Floor Projections – maintain same ignition-resistant integrity of exterior walls
  - a. Unenclosed Under Floor Protection – under floor areas enclosed to the grade

11. Insulation – Paper-faced insulation prohibited in attics or ventilated spaces
12. Fences and other structures less than five feet from a building – non-combustible.

**(A) Section 4906.4 - Hazard Reduction and Vegetation Abatement/Clearance Standards:** The Fire Chief of the fire authority having jurisdiction shall establish standards for the abatement of the various kinds of weeds and rubbish, to include, but not be limited to, the level to which weeds will be cut, the clearance around structures, roadways, and between properties.

**(R) Section 4907 - Defensible Space:**

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

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

**(A) Section 4907.1.1 - Structure Setbacks from Property Lines:** The building official shall establish the minimum setbacks for locating a structure on a lot in a wildland-urban interface fire area. The setbacks may be greater than the minimum setbacks provided in the City of Escondido Zoning Ordinance, when necessary to protect a structure from an unreasonable hazard from a wildfire.

**(A) Section 4907.1.2 - Structure Setbacks from Top of Slope:** A single story structure shall be setback a minimum 15 feet (4,572 mm) horizontally from top of slope to the farthest projection from a roof. A single story structure shall be less than 12 feet above grade. A two story structure shall be setback a minimum of 30 feet (9,144 mm) measured horizontally from top of slope to the farthest projection from a roof. Structures greater than two stories may require greater setback, which is based upon a 2 to 1 slope.

**(A) Section 4907.1.3 - General Fire Setbacks:** Buildings and structures shall be setback a minimum of 30 feet from property lines and open space easements unless the City of Escondido Zoning Ordinance requires a greater minimum. When the property line abuts a roadway, the setback shall be measured from the centerline of the roadway.

**Exception:** When both the building official and the FAHJ determine that the hazard from a wildland fire is not significant, or when the terrain, parcel size or other constraints on the parcel make the required setback infeasible, the building official may allow the setback to be less than 30 feet from the property line when allowed by the Zoning Ordinance.

**(A) Section 4907.1.4 - Fire Setbacks Adjacent Protected Areas:**

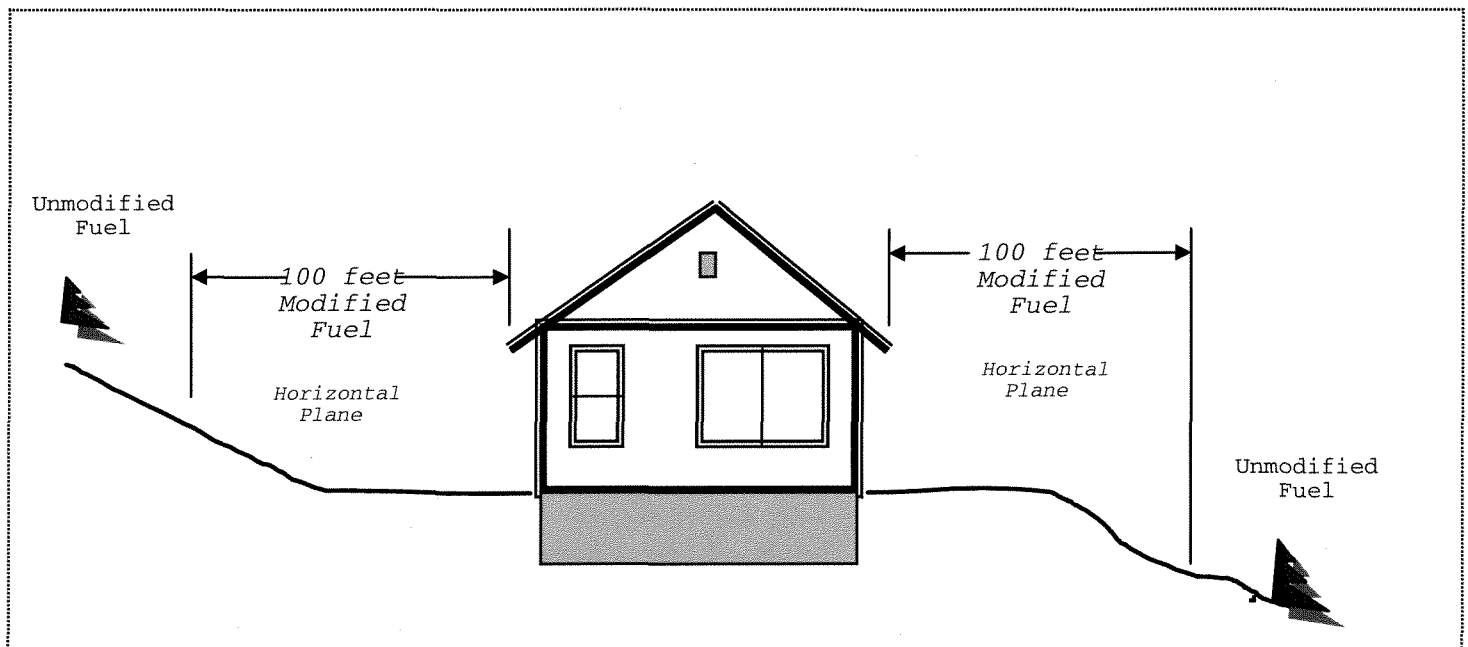
Buildings and structures shall be setback a minimum of 100 feet from any property line adjacent a national forest, state park, open space preserve or other protected biological resources. This setback may be reduced when additional mitigation measures are employed that are satisfactory to both the FAHJ and the building official.

**(A) Section 4907.2 - Fuel Modification:** A fuel modification zone shall be required around every building that is designed primarily for human habitation or use or a building designed specifically to house farm animals. Decks, sheds, gazebos, freestanding open-sided shade covers and similar accessory structures less than 250 square feet and 30 feet or more from a dwelling, and fences more than 5 feet from a dwelling, are not considered structures for the establishment of a fuel modification zone. A fuel modification zone shall comply with the following:

1. When a building or structure in a hazardous fire area is located 100 feet or more from the property line the person owning or occupying the building or structure shall maintain a fuel modification zone within 100 feet of the building or structure. The area within 50 feet of a building or structure shall be cleared of vegetation that is not fire resistant and re-planted with fire-resistant plants. In the area between 50 to 100 feet from a building all dead and dying vegetation shall be removed. Native vegetation may remain in this area provided that the vegetation is modified so that combustible vegetation does not occupy more than 50% of the square footage of this area. Weeds and annual grasses are to be mowed to a height of 4" to 6". Any chipping that is done on site should be spread not to exceed 6" in height. Trees may remain in both areas provided that the horizontal distance between crowns of adjacent trees and crowns of trees and structures is not less than 10 feet. See Figure 4907.2.
2. When a building or structure in a hazardous fire area is setback less than 100 feet from the property line, the person owning or occupying the building or structure shall meet the requirements

- in subsection (1) above, to the extent possible, in the area between the building or structure and the property line.
3. The building official and the FAHJ may provide lists of prohibited and recommended plants.
  4. The fuel modification zone shall be located entirely on the subject property unless approved by the FAHJ. This required fuel modification zone may be reduced as allowed in subsection (2) above or increased as required by a fire protection plan.
  5. When the subject property contains an area designated to protect biological or other sensitive habitat or resource, no building or other structure requiring a fuel modification zone shall be located so as to extend the fuel modification zone into a protected area.

**FIGURE 4907.2 MEASUREMENTS OF FUEL MODIFICATION DISTANCE**



**(A) Section 4907.2.1 - Fuel Modification of Combustible Vegetation from Sides of Roadways:** The FAHJ may require a property owner to modify combustible vegetation in the area within 20 feet from each side of the driveway or a public or private road adjacent to their property to establish a fuel modification zone. The FAHJ has the right to enter private property to insure the fuel modification zone requirements are met.

**Exception:** The FAJH may reduce the width of the fuel modification zone if it will not impair access.



**(A) Section 4907.2.2 Community Fuel Modification:** The FAHJ may require a developer, as a condition of issuing a certificate of occupancy, to establish one or more fuel modification zones to protect a new community by reducing the fuel loads adjacent to a community and structures within it. The developer shall assign the land on which any fuel modification zone is established under this Section to the association or other common owner group that succeeds the developer as the person responsible for common areas within the community.

**(A) Section 4907.2.2.1 - Land Ownership:** Once a fuel modification zone has been established under Section 4907.2.2, the land on which the zone is located shall be under the control of an association or other common ownership established in perpetuity, for the benefit of the community to be protected.

**(A) Sections 4907.2.2.4 - Plans Shall Be Approved Prior to Fuel Modification Work:** When required by the fire code official, plans shall be placed on a grading site plan shown in plan view. An elevation plan shall also be provided to indicate the length of the fuel modification zone on the slope. Plans shall include but not limited to:

1. Plan showing existing vegetation
2. Photographs showing natural condition prior to work being performed
3. Grading plans showing location of proposed structures and set back from top of slope to all structures.

**(A) Section 4907.3 - Maintenance of Defensible Space:** Any person owning, leasing, controlling, operating or maintaining a building or structure required to establish a fuel modification zone pursuant to Section 4907.2 shall maintain the defensible space. The FAHJ may enter the property to determine if the person responsible is complying with this Section. The FAHJ may issue an order to the person responsible for maintaining the defensible space directing the person to modify or remove non-fire resistant vegetation from defensible space areas, remove leaves, needles and other dead vegetative material from the roof of a building or structure, maintain trees as required by Section 4907.3.1 or to take other action the FAHJ determines is necessary to comply with the intent of Sections 4903 et seq.

**(A) Section 4907.3.1 - Modified Area:** Non fire-resistive vegetation or growth shall be kept clear of buildings or structures, in

accordance with Section 4907.2, in such a manner as to provide a clear area for fire suppression operations.

**(A) Section 4907.3.2 - Responsibility:** Persons owning, leasing, controlling, operating or maintaining buildings or structures are responsible for maintenance of defensible spaces. Maintenance of the defensible space shall be annually or as determined by the FAHJ and may include but not be limited to the modification or removal of non-fire resistive vegetation and keeping leaves, needles and other dead vegetative material regularly removed from roofs of buildings and structures.

**(A) Section 4907.3.3 - Trees:** Crowns of trees located within defensible space shall maintain a minimum horizontal clearance of 10 feet for fire resistant trees and 30 feet for non-fire resistive trees. Mature trees shall be pruned to remove limbs 1/3 the height or 6 feet, whichever is less, above the ground surface adjacent to the trees. Dead wood and litter shall be regularly removed from trees. Ornamental trees shall be limited to groupings of 2-3 trees with canopies for each grouping separated horizontally as described in Table 4907.3.1.

**TABLE 4907.3.1 DISTANCE BETWEEN TREE CANOPIES BY PERCENT SLOPE**

Percent of Slope	Required Distances Between Edge of Mature Tree Canopies (1)
0 to 20	10 feet
21 to 40	20 feet
41+	30 feet

1. Determined from canopy dimensions as described in Sunset Western Garden Book (Current Edition)

**(A) Section 4907.4 - Landscape Requirements Objective:** Provisions of this Section are intended to modify fuel load in areas adjacent to structures to create defensible space.

**(A) Section 4907.4.1 - Landscape Submittals:** When required by the fire code official, landscape plans are required for all residential custom homes, production tract homes, multi-family residential homes, and commercial buildings. Landscape plans shall be submitted and approved by the Fire District prior to the framing inspection. Landscape plan submittals shall include, at a minimum, a readable scale, the delineation of 100-foot fuel modification zone, the existing vegetation, and all irrigated areas, a plant legend with both botanical and common names and identifying all plant material symbols.

**(A) Section 4907.4.2 - Landscaping Requirements:** All plant materials used shall be from the Wildland/Urban Interface Development Standards plant palette. The addition of plant material to the approved list will be at the discretion of the Fire District. Landscape plans shall be in accordance with the following criteria:

1. All non-fire resistive trees, including conifers, pepper trees, eucalyptus, and acacia species, shall be planted and maintained so that the tree's drip line at maturity is a minimum 30 feet from any combustible structure. All fire resistive tree species shall be planted and maintained at a minimum of 10 feet from the tree's drip line to any combustible structure.
2. For streetscape plantings, all non-fire resistive trees shall be planted so that the center of the tree trunk is 20 feet from edge of curb. Fire resistive trees can be planted 10 feet from edge of curb to center of tree trunk. Care should be given to the type of tree selected, that it will not encroach into the roadway, or produce a closed canopy effect.
3. Limit planting of large unbroken masses especially trees and large shrubs. Groups should be two to three trees maximum, with mature foliage of any group separated horizontally by at least 10 feet, if planted on less than 20 percent slope, and 20 feet, if planted on greater than 20 percent slope.
4. If shrubs are located underneath a tree's drip line, the lowest branch should be at least three times as high as the understory shrubs or 10 feet, whichever is greater.
5. Existing trees can be pruned 10 feet away from roof, eave, or exterior siding, depending on the tree's physical or flammable characteristics and the building construction features.
6. All tree branches and palm fronds shall be removed within 10 feet of a fireplace chimney or outdoor barbecue.

**(A) Section 4907.4.3 - Orchards, Groves or Vineyards:** All orchards, groves, and vineyards shall be kept in a healthy state and maintained as described below. A 10-foot firebreak shall be cleared between the perimeter, orchard trees or row of grape vines and native vegetation or ornamental landscaping. Orchards shall be kept cleaned of dead and or downed trees. Orchards and vineyards shall be free of combustible debris, dead branches and dead foliage. All dead grasses between rows of trees or vines shall be mowed or disked to bare soil.

**(A) Section 4907.4.4 - Eucalyptus Forests and Oak Woodlands:**

All forests and woodlands shall be kept in a healthy state and maintained as described below. The forest or woodlands shall be free of all dead, dying, or diseased trees (excluding tree stumps no higher than six inches above the ground). Dead, dying, or diseased trees shall include insect infested trees, no longer living, in the last stages of growth or infected by a pathogen of any type. If combustible vegetation is located underneath a tree's drip line, the lowest branch shall be at least three times as high as the understory brush or grasses, or ten feet, whichever is greater. This will reduce the build-up of "ladder" fuels. Firewood shall be neatly stacked and shall have a minimum of 30 feet of clearance (no vegetation) around the entire firewood storage area. Debris and trimmings produced by the removal process shall be removed from the site, or if left, shall be converted into mulch by a chipping machine and evenly dispersed to maximum depth of six inches.

**(A) Section 4907.4.5 - Landscape Installation:** All landscaping shall be installed prior to the final inspection for issuance of certificate of occupancy.

**(A) Section 4908 - Construction Methods for Exterior Wildfire Exposure:**

**(A) Section 4908.1 - Construction Methods for Exterior Wildfire Exposure:** The construction methods for exterior wildfire exposure in a wildland-urban interface fire area shall be as provided in Chapter 7A of the 2010 California Building Code or Section R327 of the 2010 California Residential Code. (See Section 4905.4 for special regulation regarding the Wildland-Urban-Interface Fire Areas)

**Appendix "B" - Fire-Flow Requirements for Buildings:** Is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section B102.1 - Definitions:**

**(A) Hazardous Fire Area:** Any geographic area mapped by the State or local jurisdiction as a High, or Very High fire hazard area, or as set forth by the FAHJ that contains the type and condition of vegetation, topography, weather, and structure density to potentially increase the possibility of vegetation conflagration fires shall be considered a hazardous fire area.

**(R) Section B103.3 - Areas Without Water Supply Systems:** For information regarding water supplies for fire fighting purposes in rural areas and suburban

areas in which adequate and reliable water supplies do not exist, the fire code official is authorized to utilize provisions in Appendix B of this code or the standard published by the Insurance Services Office document entitled "Guide for Determination of Required Fire Flow".

### **Division III**

That the geographic limits referred to in certain Sections of the 2010 California Fire Code is hereby established as follows:

**Chapter 32 - Cryogenic Fluids:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 3204.3.1.1 - Stationary Containers:** The geographic limits in which the storage of flammable cryogenic fluids in stationary containers is prohibited is hereby established for the City of Escondido except for areas zoned for mixed, general or high impact industrial uses.

**Chapter 34 - Flammable and Combustible Liquids:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 3404.2.9.6.1 Locations Where Aboveground Tanks Are Prohibited:** The City of Escondido in which the storage of Class I and Class II liquids in aboveground tanks outside of buildings is prohibited: The limits referred to in Section 3404.2.9.6.1 and 3406.2.4.4 of the 2010 California Fire Code and the 2009 International Fire Code in which storage of flammable or combustible liquids in outside above ground tanks is prohibited are hereby established as the jurisdictional limits of the City of Escondido.

#### **Exceptions:**

1. 2000 gallons maximum temporary aboveground tanks meeting UL 2085 for private use on farms, agricultural and rural property, remote construction sites, earth moving projects, gravel pits or borrow pits.
2. Crankcase draining may be stored in specially constructed aboveground storage tanks, approved by the fire code official, with a maximum capacity of 550 gallons. Such tanks may be located within a building when the fire code official deems appropriate, and the container meets the following: specially designed, approved and listed containers which have features incorporated into their design which mitigates concerns for exposure to heat, ignition sources and mechanical damage. Containers must be installed and used in accordance with their listing and provisions must be made for leak and spill

containment. In no case shall such storage be permitted in residential or institutional property.

3. With the fire code official's approval, Class I and II liquids may be stored aboveground outside of buildings in specially designed, approved and listed containers which have features incorporated into their design which mitigate concerns for exposure to heat, ignition sources and mechanical damage. Containers must be installed and used in accordance with their listing, and provisions must be made for leak and spill containment. The fire code official may disapprove the installation of such containers when in his opinion their use presents a risk to life or property.
4. With the fire code official's approval, temporary storage of a maximum of 10,000 gallons Class II liquids may be permitted for a period not to exceed ninety (90) days at remote construction sites, earth moving projects, gravel pits or borrow pits, consistent with Sections 3404 and 3406.

**(R) Section 3406.2.4.4 - Locations Where Aboveground Tanks Are Prohibited:** The geographic limits in which the storage of Class I and Class II liquids in aboveground tanks is prohibited in residential areas within the City of Escondido.

**Chapter 35 - Flammable Gases and Flammable Cryogenic Fluids:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 3506.2 - Limitations:** The geographic limits in which the storage of flammable cryogenic fluids in stationary containers is prohibited is hereby established for the City of Escondido Fire Protection District except for areas zoned for mixed, general or high impact industrial uses.

**Chapter 38 - Liquefied Petroleum Gas:** is hereby added **(A)**, revised **(R)**, or deleted **(D)** to the Building/Fire Code portion of the California Building Standards Code to read as follows:

**(R) Section 3804.2 - Maximum Capacity Within Established Limits:** The geographic limits in which the bulk storage of liquefied petroleum gas is prohibited for the protection of heavily populated and congested areas is hereby established as jurisdiction limits of the City of Escondido.

#### **Division IV**

That Ordinance 2007-30 An Ordinance Of The City of Escondido, Which Adopts The California Fire Code, 2007 Edition, With Certain Amendments, the 2006 International Fire Code And National Fire Protection Association Standards 13, 2002

Edition, 13-D, 2010 Edition, And 13-R, 2002 Edition and all other ordinances or parts of ordinances in conflict herewith are hereby repealed.

That Ordinance 2007-31, an Ordinance of the City of Escondido, which Adopts the International Wildland–Urban Interface Code, 2006 Edition with certain Amendments has been included into the 2010 California Fire Code Chapter 49, Requirements for Wildland-Urban Interface Areas with certain Amendments and all other ordinances or parts of ordinances in conflict herewith are hereby repealed.

#### **Division V**

That if any Section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance, and each Section, subsection, clause or phrase thereof, irrespective of the fact that any one or more Sections, subsections, sentences, clauses and phrases be declared unconstitutional.

#### **Division VI**

That nothing in this ordinance or in the Fire Code hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Division 4 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

#### **Division VII**

Upon passage, the City Clerk shall transmit a copy of this Ordinance to the California Building Standards Commission pursuant to Health and Safety Code Section 17958.7 and the California Department of Housing and Community Development.

#### **Division VIII**

That this ordinance and the rules, regulations, provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full force and effect 30 days from and after the date of its final passage and adoption.

## **ATTACHMENT "A"**

### **FINDINGS**

#### **FOR REVISION OF THE CITY OF ESCONDIDO FIRE PROTECTION DISTRICT AMENDMENTS TO THE 2010 CALIFORNIA FIRE CODE OF THE CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 9**

As required by Health and Safety Code section 17958, the City of Escondido Fire Protection District does herewith make express findings that amendments to the 2010 California Fire Code are necessary for the protection of the public health, safety, and welfare due certain climatic, topographic, or geological features existing in the County of San Diego.

The following matrix lists the City of Escondido Fire Protection District amendments and the corresponding express findings. Minor editorial changes or typographical corrections to the Fire Code are not shown in these findings. The full texts of the proposed City of Escondido Fire Protection District amendments are shown in the City of Escondido Fire Protection District Fire Code.

#### **Additional Findings for Chapter 49 - Requirements for Wildland-Urban Interface Fire Areas:**

As required by Health and Safety Code section 17958, the City Council for the City of Escondido does herewith make express findings that amendments to the California Building Standards Code are necessary for the protection of the public health, safety, and welfare due certain climatic, topographic or geological features existing in the County of San Diego.

#### **Definitions:**

**Climate:** The average course or condition of the weather at a particular place over a period of many years, as exhibited in absolute extremes, means and frequencies of given departures from these means (i.e., of temperature, wind velocity, precipitation and other weather elements).

**Topography:** The configuration of landmass surface, including its relief (elevation) and the position of its natural and man-made features that affect the ability to cross or transit a terrain.

**Geography:** A science that deals with the earth and its life, especially the description of land, sea, air, and the distribution of plant and animal life including man and his industries with reference to the mutual relations of these diverse elements (Webster's Third New California Dictionary).



### **Climatic Considerations:**

There are two types of climates: macro and micro. A macro climate affects an entire region and gives the area a general environmental context. A micro climate is a specific variation that could be related to the other two factors, topography and geography. A micro climate may cover a relatively small area or be able to encompass an entire community, as opposed to another community in the same county.

Climatic consideration should be given to the extremes, means, and anomalies of the following weather elements:

1. Temperatures
2. Relative humidifies
3. Precipitation and flooding conditions
4. Wind speed and duration of periods of high velocity
5. Wind direction
6. Fog and other atmospheric conditions
7. Topographic Considerations

### **Topographic Considerations:**

Topographic considerations should be given to the presence of the following topographical elements:

1. Elevation and ranges of elevation
2. Location of ridges, drainages and escarpments
3. Percent of grade (slope)
4. Location of roads, bridges and railroads
5. Other topographical features, such as aspect exposure

This information becomes an important part of creating an analysis of urban-wildland areas because topography and slope are key elements (along with fuel type) that create the need for specific ignition-resistance requirements in this code.

### **Geographic Considerations:**

Geography should be evaluated to determine the relationship between man-made improvements (creating an exposure) and factors such as the following:

1. Fuel types, concentration in a mosaic and distribution of fuel types
2. Earthquake fault zone
3. Hazardous material routes
4. Artificial boundaries created by jurisdictional boundaries
5. Vulnerability of infrastructure to damage by climate and topographical concerns
6. Fuel types are the final component of the findings that suggest the need for identifying urban-wildland areas in a jurisdiction.

## MATRIX OF FINDINGS: 2010 California Fire Code Amendments

Chapters or Sections	Finding Number(s)
<b>Chapter 1 - Administration</b>	
Section 101.5 - Validity	All
Section 102.13 - Repeal Conflicting Ordinance	All
Section 104.12 - Cost Recovery	All
Section 104.12.1 - Purpose	All
Section 104.12.2 - Reimbursement	All
Section 105.3.9 - Expense Recovery	All
Section 105.6 - Required Operational Permits	All
Section 105.6.48 - Christmas Tree Lots	All
Section 105.6.49 - Greenwaste Recycling, Mulching, Composting Operations and Storage	All
Section 108.1 - Appeals Procedure for the City of Escondido	All
Section 108.1.1 - Appeals of Decisions Regarding Building Permits	All
Section 109.3 - Violation Penalties	All
Section 111.4 - Failure to Comply	All
<b>Chapter 2 - Definitions</b>	
Section 202 - General Definitions	All
<b>Chapter 3 - General Precautions Against Fire</b>	
Section 304.1.4 - Outdoor Carnivals and Fairs	All
<b>Section 307.5 - Attendance</b>	(CFC)
<b>Section 316.3 - Pitfalls of the California Fire Code</b>	(Deleted)
Section 318 - Storage of Firewood	9
Section 318.1 - General Storage of Firewood	9
Section 319 - Mid-Rise Buildings	1-10
Section 319.1 - General	1-10
Section 319.1.1 - Automatic Fire Sprinkler Systems and Standpipes	1-10
Section 319.1.2 - Smoke Detectors	1-10
Section 319.1.3 - Fire Alarm System	1-10
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## **FINDINGS FOR THE FIRE CODE**

### **Finding 1**

The City of Escondido Fire Protection District is situated on the slopes of and at the base of the Coastal Mountains, with drainage from the eastern portion of the district, including the San Dieguito River and Escondido Creek, which when flooded, could result in conditions rendering fire departments vehicular traffic access unduly burdensome or impossible.

Further, the flood conditions described above carries the potential for overcoming the ability of the fire department to aid or assist in fire control, evacuations, rescues and the emergency tasks demands inherent in such situations. The potential for the aforementioned flooding conditions to result in limiting fire department emergency vehicular traffic, with resulting overtaking fire department personnel, may further cause a substantial or total lack of protection against fire for the buildings and structures located within the jurisdiction.

### **Finding 2**

The City of Escondido Fire Protection District is situated near several known major faults, each capable of generating earthquakes of significant magnitude. These include the Rose Canyon Fault, the Coronado Banks, and the Silver Strand Faults, located generally west of the District and the Elsinore Fault, the Agua Caliente Fault, located east of the District. These faults are subject to becoming active at any time; the City of Escondido Fire Protection District is particularly vulnerable to devastation should such an earthquake occur.

The potential effects of earthquake activity include isolating the City of Escondido Fire Protection District from the surrounding area and restricting or eliminating internal circulation due to the potential for collapsing of highway overpasses and underpasses, along with other bridges in the district, or an earth slide, and the potential for vertical movement rendering surface travel unduly burdensome or impossible.

### **Finding 3**

San Diego County Highway S6 bisects the City of Escondido Fire Protection District. Transportation vehicles carrying known toxic, flammable, explosive, and hazardous materials heavily travel this highway.

The potential for release or threatened release of a hazardous material along this route and others within the district is likely given the volume transported daily. Incidents of this nature will normally require all available emergency response personnel to prevent injury and loss of life and to prevent, as far as practicable, property loss. Emergency personnel responding to such aforementioned incidents may be unduly impeded and delayed in accomplishing an emergency response as a result of this



situation. With the potential result of undue and unnecessary risk to the protection of life and public safety and, in particular, endangering residents and occupants in buildings or structures without the protection of automatic fire sprinklers.

#### **Finding 4**

The City of Escondido Fire Protection District and Southern California are semi-arid regions and experience water shortages from time to time. Those shortages can have a severely adverse effect on water availability for fire fighting. Fires starting in sprinkled buildings are typically controlled by one or two sprinkler heads, flowing as little as 13 gallons per minute.

Hose streams used by engine companies on well-established structure fires operate at about 250 gallons per minute each, and the estimated water need for a typical residential fire is 1,250 to 1,500 gallons per minute, according to the Insurance Service Office and the International Fire Code.

Under circumstances such as, lack of water infrastructure, earthquakes, multiple fires and wildland fires within a community, the limited water demands needs of residential fire sprinklers would control and extinguish many fires before they spread from building to wildland. In such a disaster, water demands needed for conflagration firefighting probably would not be available.

#### **Finding 5**

The topography of the City of Escondido Fire Protection District presents problems in delivery of emergency services, including fire protection. Hilly terrain has narrow, winding roads, with little circulation, and much of these hills are covered with natural vegetation preventing rapid access and orderly evacuation. Much of these hills are covered with highly non-fire-resistive natural vegetation. In addition to access and evacuation problems, the terrain makes delivery of water extremely difficult. Some hill areas are served by water pump systems subject to failure in fire, high winds, earthquake, and other power failure situations. This would only allow domestic gravity feed water from tanks and not enough water for fire fighting.

#### **Finding 6**

Due to the topography in much of the City of Escondido Fire Protection District, it is very important that roadways be named and identified in order to facilitate emergency response.

#### **Finding 7**

Due to the topography in much of the City of Escondido Fire Protection District, steep, narrow and winding roads and areas of heavy brush are common. These features make it difficult for emergency response personnel to easily, and quickly find the location of the site that requires assistance. It is therefore essential that street

numbers and signs be easily readable to ensure the quickest response times for a given location.

#### **Finding 8**

Due to the topography in much of the City of Escondido Fire Protection District, roadway condition, gates, angle of approach or departure, steeply sloping roadways and grades are common. In addition, combining potentially severe rainstorms and ground water retention of many areas of the District where there is expansive soil. This produces a condition wherein the moisture content of the soil is sufficient that roadways become damaged due to soil expansion and shrinkage. All weather, paved surfaces capable of supporting the imposed loads of fire apparatus are necessary to ensure access of emergency response personnel. These roadways, gates, approach angles, steep slopes, and grades can also make it difficult for fire apparatus and other emergency vehicles to access a site. It is therefore essential that these roadway accesses be provided with proper all weather, paved surfaces, angle of approach, grades and gate access.

#### **Finding 9**

Areas in the City of Escondido Fire Protection District can have special fire prevention needs not fully covered by the provisions of the Fire Code itself. This is due to the unique topographic features, demographics, infrastructure, and local economics of the Fire District

#### **Finding 10**

Due to the steeply sloping topography in the City of Escondido Fire Protection District, the potential exists that new and future development will result in taller buildings on smaller parcels. Defining mid-rise buildings as four stories or more in height and less than from 75 feet in height modifies the application of special provisions for these buildings to all occupancies. Because of the need to mitigate the potential danger of mid-rise buildings this change is necessary. In addition, the limitations of available fire-fighting equipment, limited availability of human resources in local fire departments, and the necessity to climb vertically up flights of stairs greatly impacting the response time to reach an incident scene, it necessary to define the height of mid-rise buildings. The reduced height and built in protection will mitigate extended fire department response time and keep incidents manageable.

#### **Finding 11**

The topography of the City of Escondido Fire Protection District presents problems in delivery of emergency services, including fire protection. Hilly terrain has narrow, winding roads with little circulation, preventing rapid access and orderly evacuation. Much of these hills are covered with highly non-fire resistive natural vegetation. In addition to access and evacuation problems, the terrain makes delivery of

water extremely difficult. Some hill areas are served by water tank and pump systems are subject to failure in fire, high winds, earthquake and other power failure situations.

The aforementioned problems are set forth in the 2010 California Building Code and amendments.

### **Finding 12**

The seasonal climatic conditions during the late summer and fall create numerous serious difficulties regarding the control of and protection against fires in the City of Escondido Fire Protection District. The hot, dry weather typical of this area in summer and fall, coupled with Santa Anna winds and low humidity frequently results in wildfires that threaten or could threaten the City of Escondido Fire Protection District.

Although some code requirements, such as fire-resistive roof classification, have a direct bearing on building survival in a wildland fire situation, others, such as residential fire sprinklers, may also have a positive effect. In dry climate on low humidity days, many materials are much more easily ignited. More fires are likely to occur and any fire, once started, can expand extremely rapidly. Residential fire sprinklers can arrest a fire starting within a structure before the fire is able to spread to adjacent brush and structures.

A seasonal wind also have the potential for interfering with emergency vehicle access, delaying or making impossible fire responses, because of toppling of extensive plantings of dense chaparral, eucalyptus and confers trees. The trees are subject to uprooting in strong winds due to relatively small root bases compared to the tree itself. The aforementioned problems support the imposition of fire-protection requirements greater than those set forth in the Building Code or Fire Code.

ATTACHMENT "B"

