ORDINANCE NO. 2534


THE CITY COUNCIL OF THE CITY OF WESTMINSTER DOES HEREBY ORDAIN AS FOLLOWS:

Section 1 Title 15 BUILDINGS AND CONSTRUCTION

Chapters 15.08, 15.10, 15.12, 15.16, 15.20, 15.22, 15.26, 15.30 and 15.32 of Title 15 of the Westminster Municipal Code are hereby deleted in their entirety and replaced with the following:

Chapter 15.04 Administrative Code remains unchanged;

Chapter 15.06 Small Residential Solar Energy System remains unchanged;

Chapter 15.08 Building Code amendments to 2016 California Building Code;

Chapter 15.10 Residential Code amendments to 2016 California Residential Code;

Chapter 15.12 Electrical Code amendments to 2016 California Electrical Code;

Chapter 15.14 Mechanical Code amendments to 2016 California Mechanical Code;

Chapter 15.16 Plumbing Code amendments to 2016 California Plumbing Code;

Chapter 15.20 Green Building Code amendments to 2016 California Green Building Standards Code (known as the "CALGreen");

Chapter 15.22 Fire Code amendments to 2016 California Fire Code;

Chapter 15.24 Housing Code remains unchanged;

Chapter 15.28 Code for Abatement of Dangerous Buildings remains unchanged;
Section 2  Chapter 15.08 BUILDING CODE

15.08.010 Adoption of the 2016 California Building Code.

Except as provided in this chapter, those certain building codes known and designated as the California Building Code, 2016 Edition, including all Appendix Chapters based on the 2015 International Building Code as published by the International Code Council, shall become the building code of the city for regulating the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, use, height, area and maintenance of all buildings and/or structures in the city. The California Building Code and its appendices will be on file for public examination in the office of the building official.

15.08.020 Chapter 2 Definitions.

Chapter 2 Definitions is adopted in its entirety with the following amendments:

Sections 202 General Definitions is hereby revised by adding "Spark Arrester" as follows:

202 General Definitions

SPARK ARRESTER. A listed device constructed of noncombustible material specifically for the purpose of meeting one of the following conditions:

1. Removing and retaining carbon and other flammable particles/debris from the exhaust flow of an internal combustion engine in accordance with California Vehicle Code Section 38366.
2. Fireplaces that burn solid fuel in accordance with California Building Code Chapter 28.

15.08.030 Amendments to Chapter 9 Fire Protection Systems.

Chapter 9 Fire Protection Systems is adopted in its entirety with the following amendments:

Section 903.2 Where required is hereby revised to read as follows:

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided when one of the following conditions exists:

1. New buildings: Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2.19, an automatic fire-extinguishing system shall also be installed in all occupancies when the total building area exceeds 5,000 square feet as defined in Section 202, regardless of fire areas or allowable area, or is more than two stories in height.
Exception: Subject to approval by the Fire Code Official, open parking garages in accordance with Section 406.5 of the California Building Code.

2. Existing Buildings: Notwithstanding any applicable provisions of this code, an automatic sprinkler system shall be provided in an existing building when an addition occurs and one of the following conditions exists:
   a. When an addition is 33% or more of the existing building area, and the resulting building area exceeds 5,000 square feet.
   b. When an addition exceeds 2,000 square feet and the resulting building area exceeds 5,000 square feet.
   c. An additional story is added above the second floor regardless of fire areas or allowable area.

Exception: Additions to Group R-3 occupancies shall comply with Section 903.2.8 (2).

Section 903.2.8 Group R is hereby revised to read as follows:

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 as follows:

1. New Buildings: An automatic sprinkler system shall be installed throughout all new buildings.

2. Existing R-3 Buildings: An automatic sprinkler system shall be installed throughout when one of the following conditions exists:

   a. When an addition is 50% or more of the existing building area as defined in Section 202, and greater than 1000 square feet within a two year period; or,
   b. An addition when the existing building is already provided with automatic sprinklers; or,
   c. When an existing Group R Occupancy is being substantially renovated, and where the scope of the renovation is such that the Building Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.

Exceptions:

1. Existing Group R-3 occupancies converted to Group R-3.1 occupancies and not housing bedridden clients, not housing nonambulatory clients above the first floor, and not housing clients above the second floor.

2. Existing Group R-3 occupancies converted to Group R-3.1 occupancies housing only one bedridden client and complying with Section 435.8.3.3 of the California Building Code.
3. Pursuant to Health and Safety Code, Section 13113, occupancies housing ambulatory children only, none of whom are mentally ill children or children with intellectual disabilities, and the buildings or portions thereof in which such children are housed are not more than two stories in height, and building or portions thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.

4. Pursuant to Health and Safety Code, Section 13143.6, occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

When not used in accordance with Section 504.2 or 506.3 of the California Building Code, an automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be allowed in Group R-2.1 occupancies.

An automatic sprinkler system designed in accordance with Section 903.3.1.3 shall not be utilized in Group R-2.1 or R-4 occupancies.

Section 903.3.5.3 Hydraulically calculated systems is hereby added as follows:

903.3.5.3 Hydraulically calculated systems. The design of hydraulically calculated fire sprinkler systems shall not exceed 90% of the water supply capacity.

Exception: When static pressure exceeds 100 psi, and when required by the fire code official, the fire sprinkler system shall not exceed the water supply capacity specified by Table 903.3.5.3.

<table>
<thead>
<tr>
<th>PSI</th>
<th>Design %</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>110</td>
<td>80</td>
</tr>
<tr>
<td>120</td>
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<tr>
<td>140</td>
<td>95</td>
</tr>
<tr>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>

15.08.040 Amendments to roof assemblies.

a) Table 1505.1 is amended, by the deletion of Table 1505.1 and the addition of a new Table 1505.1 thereto, to read as follows:
TABLE 1505.1a
MINIMUM ROOF COVERING CLASSIFICATIONS
TYPES OF CONSTRUCTION

<table>
<thead>
<tr>
<th>IA</th>
<th>IB</th>
<th>IIA</th>
<th>IIB</th>
<th>IIIA</th>
<th>IIIB</th>
<th>IV</th>
<th>VA</th>
<th>VB</th>
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</thead>
<tbody>
<tr>
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<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m².

a) Unless otherwise required in accordance with Chapter 7A.

b) Section 1505.1.3 is amended, by the deletion of the entire section and the addition of a new section thereto, to read as follows:

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

d) Section 1505.5 is amended, by the deletion of the entire section.

e) Section 1505.7 is amended, by the deletion of the entire section.

15.08.050 Amendments to swimming pool enclosures.

Section 3109.4.4 Private swimming pools is amended to clarify that pool barriers which are already in the Code are scoped so as to apply on all private swimming pools and is to read as follows:

Section 3109.4.4.1 Definitions is amended by adding the following definition:

PRIVATE POOL, is any constructed pool, permanent or portable, and over 18 inches deep which is intended for non-commercial use as swimming pool by not more than three owner families and their guests.

15.08.060 Amendments to referenced standards.

Chapter 35 Referenced Standards is adopted in its entirety with the following amendments:

NFPA 13, 2016 Edition, Standard for the Installation of Sprinkler Systems is hereby amended as follows:

Section 6.7.3 is hereby revised to read as follows:
6.7.3 Fire department connections (FDC) shall be of an approved type. The location shall be approved and be no more than 150 feet from a public hydrant. The FDC may be located within 150 feet of a private fire hydrant when approved by the fire code official. The size of piping and the number of 2½" inlets shall be approved by the fire code official. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red or as approved. When the fire sprinkler density design requires more than 500 gpm (including inside hose stream demand), or a standpipe system is included, four 2½" inlets shall be provided.

Section 8.3.3.1 is hereby revised to read as follows:

8.3.3.1 When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the fire sprinkler plan is submitted. Sprinklers in light hazard occupancies shall be one of the following:

1) Quick-response type as defined in 3.6.4.8
2) Residential sprinklers in accordance with the requirements of 8.4.5
3) Quick response CMSA sprinklers
4) ESFR sprinklers
5) Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
6) Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 11.1.1.1 is hereby added as follows:

11.1.1.1 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction(s) in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve "G". Use is considered undetermined if a specific tenant/occupant is not identified at the time the sprinkler plan is submitted. Where a subsequent use or occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new use or occupancy.

Section 11.2.3.1.1.1 is hereby added as follows:

11.2.3.1.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the fire code official:

1) Subtract the project site elevation from the low water level for the appropriate pressure zone and multiply the result by 0.433;
2) Use a maximum of 40 psi, if available;
3) Utilize the OCFA water-flow test form/directions to document a flow test conducted by the local water agency or an approved third party licensed in the State of California.

NFPA 13D 2016 Edition, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 7.1.2 is hereby revised to read as follows:

7.1.2 The sprinkler system piping shall not have separate control valves installed unless supervised by a central station, proprietary, or remote station alarm service.

NFPA 14, 2013 Edition, Installation of Standpipe and Hose Systems is hereby amended as follows:

Section 7.3.1.1 is hereby revised to read as follows:

7.3.1.1 Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet or more than 5 feet above the finished floor.

NFPA 24, 2016 Edition, Standard for the Installation of Private Fire Service Mains and Their Appurtenances is hereby amended as follows:

Section 6.2.8.1 is hereby added as follows:

6.2.8.1 All indicating valves controlling fire suppression water supplies shall be painted OSHA red.

Exceptions:
1. Brass or bronze valves on sprinkler risers mounted to the exterior of the building may be left unpainted.
2. Where OS&Y valves on the detector check assembly are the only control valves, at least one OS&Y valve shall be painted red.

Section 6.2.9 is hereby revised to read as follows:

All connections to private fire service mains for fire protection systems shall be arranged in accordance with one of the following so that they can be isolated:

(1) A post indicator valve installed not less than 40 ft (12 m) from the building

(a) For buildings less than 40 ft (12 m) in height, a post indicator valve shall be permitted to be installed closer than 40 ft (12 m) but at least
as far from the building as the height of the wall facing the post indicator valve.

(2) A wall post indicator valve

(3) An indicating valve in a pit, installed in accordance with Section 6.4

(4) A backflow preventer with at least one indicating valve not less than 40 ft (12 m) from the building
   (a) For buildings less than 40 ft (12 m) in height, a backflow preventer with at least one indicating valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the backflow preventer.

(5) Control valves installed in a fire-rated room accessible from the exterior

(6) Control valves in a fire-rated stair enclosure accessible from the exterior

Section 10.1.5 is hereby added as follows:

10.1.5 All ferrous pipe and joints shall be polyethylene encased per AWWA C150, Method A, B, or C. All fittings shall be protected with a loose 8-mil polyethylene tube or sheet. The ends of the tube or sheet shall extend past the joint by a minimum of 12 inches and be sealed with 2 inch wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

Exception: 304 or 316 Stainless Steel pipe and fittings

Section 10.4.1.1 is hereby revised to read as follows:

10.4.1.1 All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material after installation.

Exception: Bolted joint accessories made from 304 or 316 stainless steel.

Section 10.4.1.1.1 is hereby added as follows:

10.4.1.1.1 All bolts used in pipe-joint assembly shall be 316 stainless steel.

Section 10.4.3.2 is hereby revised to read as follows:

10.4.3.2 Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 24 inches, as measured from the interior face of the exterior wall to the center of the vertical pipe. The pipe under the building or building foundation shall be 304 or 316 stainless steel and shall not contain mechanical joints or it shall comply with 10.4.3.2.1 through 10.4.3.2.4.
15.08.070 Amendments to Patio Covers.

Appendix I Patio Covers is hereby adopted and revised as follows:

I 103.1 Enclosure walls. Enclosure walls shall be permitted to be of any configuration, provided the open or glazed area of the longer wall and one additional wall is equal to at least 65 percent of the area below a minimum of 6 feet 8 inches (2032 mm) of each wall, measured from the floor. Openings shall be permitted to be enclosed with insect screening. Listed and approved prefabricated patio enclosures and greenhouses can be installed with approved translucent or transparent plastic not more than 0.125 inch (3.2 mm) in thickness, glass conforming to the provisions of Chapter 24 or any combination of the foregoing.

Section 3  Chapter 15.10 RESIDENTIAL CODE

15.10.010 Adoption of the 2016 California Residential Code.

Except as provided in this chapter, those certain building codes known and designated as the California Residential Code, 2016 Edition, including all Appendix Chapters based on the 2015 International Residential Code as published by the International Code Council, shall become the Residential Code of the city for regulating the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, use, height, area and maintenance of residential buildings and/or structures in the city. The California Residential Code and its appendices will be on file for public examination in the office of the building official.

15.10.020 Amendments to Chapter 2 Definitions.

Chapter 2 Definitions is adopted in its entirety with the following amendment:

Section 202 Definitions is hereby revised by adding “Spark Arrester” as follows:

SPARK ARRESTER. A listed device constructed of noncombustible material specifically for the purpose of meeting one of the following conditions:

1. Removing and retaining carbon and other flammable particles/debris from the exhaust flow of an internal combustion engine in accordance with California Vehicle Code Section 38366.
2. Fireplaces that burn solid fuel in accordance with California Building Code Chapter 28.

15.10.030 Amendments to Building Planning.

Table R301.2(1) climatic and geographic design criteria is revised to read:
TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

<table>
<thead>
<tr>
<th>GROUND SNOW LOAD</th>
<th>WIND DESIGN Speed +Topographic effects</th>
<th>SEISMIC DESIGN CATEGORY</th>
<th>SUBJECT TO DAMAGE FROM</th>
<th>FLOOD HAZARDS</th>
<th>AIR FREEZING INDEX</th>
<th>MEAN ANNUAL TEMP</th>
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<td>12-24&quot;</td>
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</tr>
</tbody>
</table>

The Table footnotes to remain unchanged.

Section R301.9 Fuel Modification Requirements for New Construction is hereby added as follows:

R301.9 Fuel Modification Requirements for New Construction. All new structures and facilities adjoining land containing hazardous combustible vegetation shall be approved and in accordance with the requirements of OCFA Guideline C-05 “Vegetation Management Guideline – Technical Design for new Construction Fuel Modification Plans and Maintenance Program.”

Section R309.6 Fire sprinkler attached garages, and carports with habitable space above is hereby amended by modifying the exception to read as follows:

Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing carports and/or garages that do not have an automatic fire sprinkler system installed unless a sprinkler system is required in accordance with California Fire Code Section 903.2.8.

Section R313.1 Townhouse automatic fire sprinkler systems is hereby amended by modifying the exception to read as follows:

Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic fire sprinkler system installed unless a sprinkler system is required in accordance with California Fire Code Section 903.2.8.

Section R313.2 One- and two-family dwellings automatic fire sprinkler systems is hereby amended by modifying the exception to read as follows:

Exception: An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system unless a sprinkler system is required in accordance with California Fire Code Section 903.2.8.
Section R313.3.6.2.2 Calculation procedure is hereby revised to read as follows:

Section R313.3.6.2.2 Calculation procedure. Determination of the required size for water distribution piping shall be in accordance with the following procedure and California Fire Code Section 903.3.5.3.

(The remainder of the section is unchanged)

Section R319.1 Address identification is hereby revised to read as follows:

R319 Site Address. New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches in height with a stroke width of not less than 0.5 inch. Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

15.10.040 Amendments to masonry stem walls.

Section R403.1.3 Seismic reinforcing is modified by deleting the exception for masonry stem walls:

In Seismic Design Categories D0, D1 and D2 masonry stem walls without solid grout and vertical reinforcing are not permitted.

Exception: In detached one- and two-family dwellings which are three stories or less in height and constructed with stud-bearing walls, plain concrete footings without longitudinal reinforcement supporting walls and isolated plain concrete footings supporting columns or pedestals are permitted. (Ord. 2465 § 3, 2010)

15.10.050 Amendments to foundation drainage.

Section R405.1 Foundation Drainage is modified by deleting the exception to read as follows:

...at least one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches of the same material.

Exception: A drainage system is not required with the foundation is installed on well-drained ground or sand-gravel mixture soils according to the Unified Soil Classification System, Group 1 Soils, as detailed in Table R405.1. (Ord. 2465 § 3, 2010)
15.10.060 Amendments to roof assemblies.

Section R902.1 is amended by revising it to allow only class A or B roofs as follows:

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. A minimum Class A or B roofing shall be installed in areas designated by this section. Classes A or B roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

Exceptions:

1. Class A roof assemblies include those with coverings of brick, masonry and exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.

Section R902.1.3 is amended by revising it to require a minimum Class B roof as follows:

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

Section R902.2, first paragraph is amended by revising it to allow only Class A or B treated wood roofs as follows:

R902.2 Fire-retardant-treated shingles and shakes. Fire-retardant-treated wood shakes and shingles are wood shakes and shingles complying with UBC Standard 15-3 or 15-4 which are impregnated by the full-cell vacuum-pressure process with fire-retardant chemicals, and which have been qualified by UBC Standard 15-2 for use on Class A or B roofs.

15.10.070 Amendments to Chimneys and Fireplaces.

Chimneys and Fireplaces is adopted in its entirety with the following amendments:

Section R1001.13 Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices is hereby added as follows:

R1001.14 Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices. Outdoor fireplaces, fire pits, fire rings, or similar exterior devices shall comply with this section.
Exception: Barbeques, grills, and other portable devices intended solely for cooking

Section R1001.13 Gas-fueled devices is hereby added as follows:

R1001.13.1 Gas-fueled devices. Outdoor fireplaces, fire pits and similar devices fueled by natural gas or liquefied-petroleum gas are allowed when approved by the Building Department and the device is designed to only burn a gas flame and not wood or other solid fuel. At R-3 occupancies, combustible construction shall not be located within three feet of an atmospheric column that extends vertically from the perimeter of the device. Where a permanent Building Department approved hood and vent is installed, combustible construction may encroach upon this column between the bottom of the hood and the vent opening. Where chimneys or vents are installed, they shall have a spark arrester in accordance with Section R1003.9.2.

Section R1001.13.2 Devices using wood or fuels other than natural gas or liquefied-petroleum gas is hereby added as follows:

R1001.13.2 Devices using wood or fuels other than natural gas or liquefied-petroleum gas. Fireplaces burning wood or other solid fuel shall be constructed in accordance with Section R1001. Fires in a fireplace shall be contained within a firebox with an attached chimney. The opening in the face of the firebox shall have an installed and maintained method of arresting sparks. The burning of wood or other solid fuel in a device is not allowed within 15 feet of combustible structures, unless within a permanent or portable fireplace.

Section R1001.13.3 Devices using wood or fuels other than natural gas or liquefied-petroleum gas is hereby added as follows:

R1001.13.3 Where prohibited. The burning of wood and other solid fuels shall not be conducted within a fuel modification zone. Wood and other solid fuel burning fires in devices other than permanent fireplaces are not allowed within Wildfire Risk Areas (WRA) and adopted Fire Hazard Severity Zones (FHSZ) or in locations where conditions could cause the spread of fire to the WRA or FHSZ, unless determined by the Fire Code Official that the location or design of the device should reasonably prevent the start of a wildfire.

15.10.080 Amendments to referenced standards.

Chapter 44 Referenced Standards is adopted in its entirety with the following amendments:
NFPA 13, 2016 Edition, Standard for the Installation of Sprinkler Systems is hereby amended as follows:

Section 6.7.3 is hereby revised to read as follows:

6.7.3 Fire department connections (FDC) shall be of an approved type. The location shall be approved and be no more than 150 feet from a public hydrant. The FDC may be located within 150 feet of a private fire hydrant when approved by the fire code official. The size of piping and the number of 2½" inlets shall be approved by the fire code official. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red or as approved. When the fire sprinkler density design requires more than 500 gpm (including inside hose stream demand), or a standpipe system is included, four 2½" inlets shall be provided.

Section 8.3.3.1 is hereby revised to read as follows:

8.3.3.1 When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the fire sprinkler plan is submitted. Sprinklers in light hazard occupancies shall be one of the following:

(1) Quick-response type as defined in 3.6.4.8
(2) Residential sprinklers in accordance with the requirements of 8.4.5
(3) Quick response CMSA sprinklers
(4) ESFR sprinklers
(5) Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
(6) Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 11.1.1.1 is hereby added as follows:

11.1.1.1 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction(s) in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve “G”. Use is considered undetermined if a specific tenant/occupant is not identified at the time the sprinkler plan is submitted. Where a subsequent use or occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new use or occupancy.
Section 11.2.3.1.1.1 is hereby added as follows:

11.2.3.1.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the fire code official:
1) Subtract the project site elevation from the low water level for the appropriate pressure zone and multiply the result by 0.433;
2) Use a maximum of 40 psi, if available;
3) Utilize the OCFA water-flow test form/directions to document a flow test conducted by the local water agency or an approved third party licensed in the State of California.

NFPA 13D 2016 Edition, Standard for the Installation of Sprinkler Systems in One-and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 7.1.2 is hereby revised to read as follows:

7.1.2 The sprinkler system piping shall not have separate control valves installed unless supervised by a central station, proprietary, or remote station alarm service.

Appendix O

Vehicular Gates

Appendix O Vehicular Gates is adopted with only the section indicated below:

SECTION AO103.3 Vehicular gates or other barriers across required fire apparatus access roads is hereby added as follows:

AO103.3 Vehicular gates or other barriers across required fire apparatus access roads. The installation of gates or other barriers across a required fire apparatus access road shall be approved by the fire code official. Gates or barriers shall be in accordance with Orange County Fire Authority Guideline B-09 “Fire Master Plans for Commercial and Residential Development”.

Section 4 Chapter 15.12 ELECTRICAL CODE


Except as provided in this chapter, the 2016 Edition of California Electrical Code, based on the 2014 National Electrical Code as published by the National Fire Protection Association, shall be the electrical code of the city, regulating all installation, arrangement, alteration, repair, use and other operation of electrical wiring, connections, fixtures and other electrical appliances on premises within the city. The California Electrical Code is on file for public examination in the office of the building official.
15.12.020 Amendments to the California Electrical Code.

SECTION 110.5 is amended, by addition of a new section 110.5.1, to read as follows:

110.5.1 Continuous inspection of aluminum wiring. Consideration for use of aluminum wiring shall be approved by the Building Official where adequate safety measures can be ensured. Aluminum conductors of No. six (6) or smaller used for branch circuits shall require continuous inspection by an independent testing agency approved by the Building Official for proper torquing of connections at their termination point.

Section 5  Chapter 15.14 MECHANICAL CODE


Except as provided in this chapter, the California Mechanical Code, 2016 Edition, based on the 2015 Uniform Mechanical Code as published by the IAMPO, shall be and become the mechanical code of the city, regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance of heating, ventilating, cooling, refrigeration systems, incinerators and other miscellaneous heat producing appliances. The California Mechanical Code is on file for public examination in the office of the building official.


The 2016 Edition of the California Mechanical Code is hereby adopted with no amendments.

Section 6  Chapter 15.16 PLUMBING CODE


Except as provided in this chapter, the California Plumbing Code, 2016 Edition, based on the 2015 Uniform Plumbing Code as published by the International Association of Plumbing and Mechanical Officials, shall be and become the plumbing code of the city, regulating erection, installation, alteration, repair, relocation, replacement, maintenance or use of plumbing systems within the city. The California Plumbing Code will be on file for public examination in the office of the building official.

15.16.020 Amendments to the water piping material.

Section 604, Materials for water piping, is amended by adding Section 604.14 to read as follows:
604.14 Underground piping material. Metal piping shall not be permitted under floor slab within a building. All metallic pipe, fittings and parts of fixtures buried in the ground shall be protected by at least 40 mils plastic sleeve or equivalent wrapping.

15.16.030 Amendments to the fuel piping material.

Section 1208.5 Acceptable Piping Materials and joining Methods for gas piping, is amended by adding Section 1208.5.4.3 to read as follows:

1208.5.4.3 Exterior buried piping systems. Approved Polyethylene or other pipe material approved for underground installation shall be used in exterior buried piping systems.

Section 7 Chapter 15.20 GREEN BUILDING STANDARDS CODE


Except as provided in this chapter, the California Green Building Standards Code, 2013 Edition, as published by the California Building Standards Commission, shall be and become the Green Building Code of the city, regulating erection, installation, alteration, repair, relocation, replacement, maintenance or use of green building systems within the city. The California Green Building Standards Code will be on file for public examination in the office of the building official.

15.20.020 Amendments to the Green Building Standards Code.

A. Section 202 DEFINITIONS is amended to add the following definition:

Sustainability. Consideration of present development and construction impacts on the community, the economy, and the environment without compromising the needs of the future.

Section 8 Chapter 15.22 FIRE CODE


Except as provided in this chapter, the California Fire Code, 2016 Edition, as published by the California Building Standards Commission, shall be and become the Fire Code of the city. The California Fire Code will be on file for public examination in the office of the building official.

15.22.020 Amendments to Fire Code. Chapter 1, Scope and Administration

Chapter 1 Scope and Administration is adopted in its entirety with the following amendments:
Section 109.4 Violation penalties is hereby revised to read as follows:

109.4 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or shall fail to comply with any issued orders or notices or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall result in penalties assessed as prescribed in the OCFA Prevention Field Services adopted fee schedule. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

Section 109.4.2 Infraction and misdemeanor is hereby added as follows:

109.4.2 Infraction and misdemeanor. Persons operating or maintaining any occupancy, premises or vehicle subject to this code that shall permit any fire or life safety hazard to exist on premises under their control shall be guilty of an infraction. Persons who fail to take immediate action to abate a fire or life safety hazard when ordered or notified to do so by the chief or a duly authorized representative are guilty of a misdemeanor.

15.22.030 Chapter 2, Definitions.

Chapter 2 Definitions is adopted in its entirety with the following amendments:

Sections 202 General Definitions is hereby revised by adding "OCFA," "Sky Lantern," and "Spark Arrester" as follows:

202 General Definitions

OCFA: Orange County Fire Authority, fire authority having jurisdiction.

SKY LANTERN. An airborne lantern typically made of paper, Mylar, or other lightweight material with a wood, plastic, or metal frame containing a candle, fuel cell, or other heat source that provides buoyancy.

SPARK ARRESTER. A listed device constructed of noncombustible material specifically for the purpose of meeting one of the following conditions:
1. Removing and retaining carbon and other flammable particles/debris from the exhaust flow of an internal combustion engine in accordance with California Vehicle Code Section 38366.
2. Fireplaces that burn solid fuel in accordance with California Building Code Chapter 28.

15.22.040 Chapter 3, General Requirements.

Chapter 3 General Requirements is adopted in its entirety with the following amendments:
Section 304.1.2 Vegetation is hereby revised to read as follows:

304.1.2 Vegetation. Type, amount, or arrangement of weeds, grass, vines or other growth that is capable of being ignited and endangering property—needing to comply with OCFA Guidelines, shall be cut, thinned, and removed by the owner or occupant of the premises in accordance with OCFA Guideline C-05 "Vegetation Management Guideline—Technical Design for New Construction, Fuel Modification Plans, and Maintenance Program. Vegetation clearance requirement in urban-wildland interface areas shall be in accordance with Chapter 49.

Section 305.6 Hazardous Conditions is hereby added as follows:

305.6 Hazardous conditions. Outdoor fires are not allowed when predicted sustained winds exceed 8 MPH during periods when relative humidity is less than 25%, or a red flag condition has been declared or public announcement is made, when an official sign was caused to be posted by the fire code official, or when such fires present a hazard as determined by the fire code official.

Section 305.7 Disposal of rubbish is hereby added as follows:

305.7 Disposal of rubbish. Rubbish, trash or combustible waste material shall be burned only within an approved incinerator and in accordance with Section 307.2.1.

Section 307 OPEN BURNING, RECREATIONAL FIRES AND PORTABLE OUTDOOR FIREPLACES is hereby revised to read as follows:

SECTION 307 OPEN BURNING, RECREATIONAL FIRES, FIRE PITS, FIRE RINGS, AND PORTABLE OUTDOOR FIREPLACES

Sections 307.6 Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices used at Group R Occupancies is hereby added as follows:

307.6 Outdoor Fireplaces, Fire Pits, Fire Rings, or similar devices used at Group R Occupancies. Outdoor fireplaces, fire pits, fire rings, or similar exterior devices used at Group R shall comply with this section.

Exception: Barbeques, grills, and other portable devices intended solely for cooking.

Section 307.6.1 Gas-fueled devices is hereby added as follows:

307.6.1 Gas-fueled devices. Outdoor fireplaces, fire pits and similar devices fueled by natural gas or liquefied-petroleum gas are allowed when approved by the Building Department and the device is designed to only burn a gas flame and
not wood or other solid fuel. At R-3 occupancies, combustible construction shall not be located within three feet of an atmospheric column that extends vertically from the perimeter of the device. At other R occupancies, the minimum distance shall be ten feet. Where a permanent Building Department approved hood and vent is installed, combustible construction may encroach upon this column between the bottom of the hood and the vent opening. Where chimneys or vents are installed, they shall have a spark arrester as defined in Section 202.

Section 307.6.2 Devices using wood or fuels other than natural gas or liquefied-petroleum gas is hereby added as follows:

307.6.2 Devices using wood or fuels other than natural gas or liquefied-petroleum gas. Fireplaces burning wood or other solid fuel shall be constructed in accordance with the California Building Code. Fires in a fireplace shall be contained within a firebox with an attached chimney. The opening in the face of the firebox shall have an installed and maintained method of arresting sparks. The burning of wood or other solid fuel in a device is not allowed within 15 feet of combustible structures, unless within a permanent or portable fireplace. Conditions which could cause a fire to spread within 25 feet of a structure or to vegetation shall be eliminated prior to ignition. Fires in devices burning wood or solid fuel shall be in accordance with Sections 305, 307, and 308.

Section 307.6.2.1 Where prohibited is hereby added as follows:

307.6.2.1 Where prohibited. The burning of wood and other solid fuels shall not be conducted within a fuel modification zone. Wood and other solid fuel burning fires in devices other than permanent fireplaces are not allowed within Wildfire Risk Areas (WRA) and Wildland-Urban Interface Areas (WUI) or in locations where conditions could cause the spread of fire to the WRA or WUI unless determined by the Fire Code Official that the location or design of the device should reasonably prevent the start of a wildfire.

Section 309.2.1 Indoor charging of electric carts/cars is hereby added as follows:

309.2.1 Indoor charging of electric carts/cars. Indoor charging of electric carts/cars where the combined volume of all battery electrolyte exceeds 50 gallons shall comply with following:
1. Spill control and neutralization shall be provided and comply with Section 608.5.
2. Room ventilation shall be provided and comply with Section 608.6.1
3. Signage shall be provided and comply with Section 608.7.1
4. Smoke detection shall be provided and comply with Section 608.9.

Section 320 Fuel Modification Requirements for New Construction is hereby added as follows:
320 Fuel Modification Requirements for New Construction. All new structures and facilities adjoining land containing hazardous combustible vegetation shall be approved and in accordance with the requirements of OCFA Guideline C-05 "Vegetation Management Guideline – Technical Design for New Construction Fuel Modification Plans and Maintenance Program."

Section 321 Clearance of brush or vegetation growth from roadways is hereby added as follows:

321 Clearance of brush or vegetation growth from roadways. The fire code official is authorized to cause areas within 10 feet (3048 mm) on each side of portions of highways and private streets which are improved, designed or ordinarily used for vehicular traffic, to be cleared of flammable vegetation and other combustible growth. Measurement shall be from the flow-line or the end of the improved edge of the roadway surfaces.

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

Section 322 Unusual Circumstances is hereby added as follows:

322 Unusual circumstances. The fire code official may suspend enforcement of the vegetation management requirements and require reasonable alternative measures designed to advance the purpose of this code if determined that in any specific case that any of the following conditions exist:
1. Difficult terrain.
2. Danger of erosion.
3. Presence of plants included in any state and federal resources agencies, California Native Plant Society and county-approved list of wildlife, plants, rare, endangered and/or threatened species.
4. Stands or groves of trees or heritage trees.
5. Other unusual circumstances that make strict compliance with the clearance of vegetation provisions undesirable or impractical.

Section 323 Use of Equipment is hereby added as follows:

323 Use of equipment. Except as otherwise provided in this section, no person shall use, operate, or cause to be operated in, upon or adjoining any hazardous fire area any internal combustion engine which uses hydrocarbon fuels, unless the engine is equipped with a spark arrester as defined in Section 202 maintained in effective working order, or the engine is constructed, equipped and maintained for the prevention of fire.
Exceptions:

1. Engines used to provide motor power for trucks, truck tractors, buses, and passenger vehicles, except motorcycles, are not subject to this section if the exhaust system is equipped with a muffler as defined in the Vehicle Code of the State of California.

2. Turbocharged engines are not subject to this section if all exhausted gases pass through the rotating turbine wheel, there is no exhaust bypass to the atmosphere, and the turbocharger is in good mechanical condition.

Section 323.1 Spark Arresters is hereby added as follows:

323.1 Spark arresters. Spark arresters shall comply with Section 202, and when affixed to the exhaust system of engines or vehicles subject to Section 323 shall not be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite any flammable material.

Section 324 Sky Lanterns or similar devices is hereby added as follows:

324 Sky Lanterns or similar devices. The ignition and/or launching of a Sky Lantern or similar device is prohibited.

15.22.050 Chapter 4, Emergency planning and preparedness.

Chapter 4: Emergency Planning and Preparedness Adopt only the Sections subsections, and amendment listed below:

401
401.3.4
401.9
402
403.2
404.5 – 404.6.6
407

Section 407.5 is revised to read as follows:

407.5 Hazardous Materials Inventory Statement. Where required by the fire code official, each application for a permit shall include OCFA’s Chemical Classification Packet in accordance with Section 5001.5.2.

15.22.060 Chapter 5, Fire service features.

Chapter 5 Fire Service Features is adopted in its entirety with the following amendments:
SECTION 501.1 Scope is revised to read as follows:

501.1 Scope. Fire service features for buildings, structures and premises shall comply with this chapter and, where required by the fire code official, with OCFA Guideline B-09, "Fire Master Plan for Commercial & Residential Development." Fire service features for buildings, structures and premises located in State Responsibility Areas shall also comply with OCFA Guideline B-09a, "Fire Safe Development in State Responsibility Areas."

Section 510.1 Emergency responder radio coverage is revised to read as follows:

510.1 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems. The Emergency Responder Radio Coverage System shall comply with the local authority having jurisdiction's ordinance and this code.

Exceptions:
1. Where it is determined by the fire code official that the radio coverage system is not needed.
2. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the fire code official shall have the authority to accept an automatically activated emergency radio coverage system.

This section shall not apply to the following:
1. Existing buildings or structures, unless required by the Building Official and OCFA for buildings and structures undergoing extensive remodel and/or expansion.
2. Elevators.
3. Structures that are three stories or less without subterranean storage or parking and that do not exceed 50,000 square feet on any single story.
4. Wood-constructed residential structures four stories or less without subterranean storage or parking that are not built integral to an above ground multi-story parking structure.
5. Should construction that is three stories or less that does not exceed 50,000 square feet on any single story include subterranean storage or parking, then this ordinance shall apply only to the subterranean areas.

Section 510.2 Emergency responder radio coverage in existing buildings is deleted without replacement:

Section 510.4.2.2 Technical Criteria is revised to read as follows:
510.4.2.2 Technical criteria. The fire code official shall maintain a document providing the specific technical information and requirements for the emergency responder radio coverage system. This document shall contain, but not be limited to, the various frequencies required, the location of radio sites, effective radiated power of radio sites, and other supporting technical information.

1. The frequency range supported from the 800 MHz Countywide Communications System shall be 851-869 MHz (base transmitter frequencies).
2. The frequency range supported to the 800 MHz Countywide Communications System shall be 806-824 MHz (radio field transmit frequencies).
3. A public safety radio amplification system shall include filters to reject frequencies below 851 MHz and frequencies above 869 MHz by a minimum of 35dB.
4. All system components must be 100 percent compatible with analog and digital modulations after installation without adjustments or modifications. The systems must be capable of encompassing the frequencies stated herein and capable of future modifications to a frequency range subsequently established by the jurisdiction.
5. Active devices shall have a minimum of -50 dB 3rd order intermodulation protection.
6. All active in-building coverage devices shall be FCC Part 90 Type Certified

Section 510.5.1 Approval prior to installation is revised to read as follows:

510.5.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC shall not be installed without prior plan submittal, coordination and approval from Orange County Communications and a copy of the approved plan provided to of the fire and building code officials.

Section 510.5.2 Minimum qualification of personnel is revised to read as follows:

510.5.2 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include both of the following:

1. A valid FCC-issued general radio operator's license.
2. Certification of in-building system training issued by a nationally recognized organization, school or a certificate issued by the manufacturer of the equipment being installed.

Section 510.5.3 Acceptance test procedure item 7 is revised to read as follows:

510.5.3 Acceptance test procedure. When an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to ensure that two-way coverage on each
floor of the building is not less than 90 percent. The test procedure shall be conducted as follows: ...

7. As part of the installation a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at the time of installation and subsequent annual inspections by the FCC licensed technician hired by the property owner and an OCSD/Communications Division FCC-certified technician.

Section 510.6.1 Testing and proof of compliance is revised to read as follows:

510.6.1 Testing and proof of compliance.
The owner of the building or their representative shall have the emergency responder radio coverage system shall be inspected and tested annually or where structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following:

1. In-building system components shall be tested to determine general functional operability.
2. Signal boosters shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.
3. Backup batteries and power supplies shall be tested under load of a period of one hour to verify that they will properly operate during an actual power outage. If within the 1-hour test period the battery exhibits symptoms of failure, the test shall be extended for additional 1-hour periods until the integrity of the battery can be determined.
4. Other active components shall be checked to verify operation within the manufacturer's specifications.
5. If noncompliance is found, the FCC licensed technician will assess improvements necessary and provide such information to OCSD Communications and the fire and building code officials.
6. At the conclusion of the testing, a certification report, which shall verify compliance with Section 510.5.3, shall be submitted to OCSD Communications and the fire and building code officials.

15.22.070 Chapter 9, Fire protection systems.

Adopt Chapter 9 Fire Protection Systems is adopted in its entirety with the following amendments:

Section 903.2 Where required is hereby revised to read as follows:

903.2 Where required. Approved automatic sprinkler systems in buildings and structures shall be provided when one of the following conditions exists:
1. **New buildings**: Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2.19, an automatic fire-extinguishing system shall also be installed in all occupancies when the total building area exceeds 5,000 square feet as defined in Section 202, regardless of fire areas or allowable area, or is more than two stories in height.

   **Exception**: Subject to approval by the Fire Code Official, open parking garages in accordance with Section 406.5 of the California Building Code.

2. **Existing Buildings**: Notwithstanding any applicable provisions of this code, an automatic sprinkler system shall be provided in an existing building when an addition occurs and one of the following conditions exists:

   a. When an addition is 33% or more of the existing building area, and the resulting building area exceeds 5000 square feet
   b. When an addition exceeds 2000 square feet and the resulting building area exceeds 5000 square feet.
   c. An additional story is added above the second floor regardless of fire areas or allowable area.

   **Exception**: Additions to Group R-3 occupancies shall comply with Section 903.2.8 (2).

**Section 903.2.8 Group R** is hereby revised to read as follows:

**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 as follows:

1. **New Buildings**: An automatic sprinkler system shall be installed throughout all new buildings.

2. **Existing R-3 Buildings**: An automatic sprinkler system shall be installed throughout when one of the following conditions exists:

   a. When an addition is 50% or more of the existing building area as defined in Section 202, and greater than 1000 square feet within a two year period; or,
   b. An addition when the existing building is already provided with automatic sprinklers; or,
   c. When an existing Group R Occupancy is being substantially renovated, and where the scope of the renovation is such that the Building Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.
Exceptions:

1. Existing Group R-3 occupancies converted to Group R-3.1 occupancies and not housing bedridden clients, not housing nonambulatory clients above the first floor, and not housing clients above the second floor.
2. Existing Group R-3 occupancies converted to Group R-3.1 occupancies housing only one bedridden client and complying with Section 435.8.3.3 of the California Building Code.
3. Pursuant to Health and Safety Code, Section 13113, occupancies housing ambulatory children only, none of whom are mentally ill children or children with intellectual disabilities, and the buildings or portions thereof in which such children are housed are not more than two stories in height, and building or portions thereof housing such children have an automatic fire alarm system activated by approved smoke detectors.
4. Pursuant to Health and Safety Code, Section 13143.6, occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under age of 18 years), or who is elderly (65 years of age or over).

When not used in accordance with Section 504.2 or 506.3 of the California Building Code, an automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be allowed in Group R-2.1 occupancies.

An automatic sprinkler system designed in accordance with Section 903.3.1.3 shall not be utilized in Group R-2.1 or R-4 occupancies.

Section 903.3.5.3 Hydraulically calculated systems is hereby added as follows:

903.3.5.3 Hydraulically calculated systems. The design of hydraulically calculated fire sprinkler systems shall not exceed 90% of the water supply capacity.

Exception: When static pressure exceeds 100 psi, and when required by the fire code official, the fire sprinkler system shall not exceed the water supply capacity specified by Table 903.3.5.3.

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2534-27
15.22.080 Chapter 11, Construction Requirements for Existing Buildings

Chapter 11 Construction Requirements for Existing Buildings. Adopt only those Sections and Subsections listed below:

1103.7
1103.7.3
1103.7.3.1
1103.7.8 – 1103.7.8.2
1103.7.9 – 1103.7.9.10
1103.8 – 1103.8.5.3
1107
1113
1114
1115
1116

15.22.090 Chapter 25, Fruit and Crop Ripening.

Chapter 25 Fruit and Crop Ripening is deleted in its entirety.

15.22.100 Chapter 26, Fumigation and Insecticidal Fogging.

Chapter 26 Fumigation and Insecticidal Fogging is deleted in its entirety.

15.22.110 Chapter 28, Lumber yards and woodworking facilities.

Chapter 28 Lumber Yards and Woodworking Facilities is adopted in its entirety with the following amendments:

Section 2801.2 Permit is hereby revised to read as follows:

2801.2 Permit. Permits shall be required as set forth in Section 105.6 and 105.6.29.

Section 2808.2 Storage site is hereby revised to read as follows:

2808.2 Storage site. Storage sites shall be level and on solid ground, elevated soil lifts or other all-weather surface. Sites shall be thoroughly cleaned and approval obtained from the fire code official before transferring products to the site.

Section 2808.3 Size of piles is hereby revised to read as follows:

2808.3 Size of piles. Piles shall not exceed 15 feet in height, 50 feet in width and 100 feet in length.
Exception: The fire code official is authorized to allow the pile size to be increased where a fire protection plan is provided for approval that includes, but is not limited to, the following:

1. Storage yard areas and materials-handling equipment selection, design and arrangement shall be based upon sound fire prevention and protection principles.
2. Factor that lead to spontaneous heating shall be identified in the plan, and control of the various factors shall be identified and implemented, including provisions for monitoring the internal condition of the pile.
3. The plan shall include means for early fire detection and reporting to the public fire department; and facilities needed by the fire department for fire extinguishment including a water supply and fire hydrants.
4. Fire apparatus access roads around the piles and access roads to the top of the piles shall be established, identified and maintained.
5. Regular yard inspections by trained personnel shall be included as part of an effective fire prevention maintenance program.

Additional fire protection called for in the plan shall be provided and shall be installed in accordance with this code. The increase of the pile size shall be based upon the capabilities of the installed fire protection system and features.

Section 2808.4 Pile Separation is hereby revised to read as follows:

2808.4. Pile separation. Piles shall be separated from adjacent piles by a minimum distance of 20 feet. Additionally, piles shall have a minimum separation of 100 feet from combustible vegetation.

Section 2808.7 Pile fire protection is hereby revised to read as follows:

2808.7 Pile fire protection. Automatic sprinkler protection shall be provided in conveyor tunnels and combustible enclosures that pass under a pile. Combustible conveyor systems and enclosed conveyor systems shall be equipped with an approved automatic sprinkler system. Oscillating sprinklers with a sufficient projectile reach are required to maintain a 40% to 60% moisture content and wet down burning/smoldering areas.

Section 2808.9 Material-handling equipment is hereby revised to read as follows:

2808.9 Material-handling equipment. All material-handling equipment operated by an internal combustion engine shall be provided and maintained with an approved spark arrester. Approved material-handling equipment shall be available for moving wood chips, hogged material, wood fines and raw product during fire-fighting operations.
Section 2808.11 Temperature control is hereby added as follows:

2808.11 Temperature control. The temperature shall be monitored and maintained as specified in Sections 2808.11.1 and 2808.11.2.

Section 2808.11.1 Pile temperature control is hereby added as follows:

2808.11.1 Pile temperature control. Piles shall be rotated when internal temperature readings are in excess of 165 degrees Fahrenheit.

Section 2808.11.2 New material temperature control is hereby added as follows:

2808.11.2 New material temperature control. New loads delivered to the facility shall be inspected and tested at the facility entry prior to taking delivery. Material with temperature exceeding 165 degrees Fahrenheit shall not be accepted on the site. New loads shall comply with the requirements of this chapter and be monitored to verify that the temperature remains stable.

Section 2808.12 Water availability is hereby added as follows:

2808.12 Water Availability. Facilities with over 2500 cubic feet shall provide a water supply. The minimum fire flow shall be no less than 500 GPM @ 20 psi for a minimum of 1 hour duration for pile heights up to 6 feet and 2 hour duration for pile heights over 6 feet. If there is no water purveyor, an alternate water supply with storage tank(s) shall be provided for fire suppression. The water supply tank(s) shall provide a minimum capacity of 2500 gallons per pile (maximum 30,000 gallons) for piles not exceeding 6 feet in height and 5000 gallons per pile (maximum 60,000) for piles exceeding 6 feet in height. Water tank(s) shall not be used for any other purpose unless the required fire flow is left in reserve within the tank at all times. An approved method shall be provided to maintain the required amount of water within the tank(s).

Section 2808.13 Tipping area is hereby added as follows:

2808.13 Tipping areas shall comply with the following:

1. Tipping areas shall not exceed a maximum area of 50 feet by 50 feet.
2. Material within a tipping area shall not exceed 5 feet in height at any time.
3. Tipping areas shall be separated from all piles by a 20 foot wide fire access lane.
4. A fire hydrant or approved fire water supply outlet shall be located within 150 feet of all points along the perimeter of the tipping area.
5. All material within a tipping area shall be processed within 5 days of receipt.
Section 2808.14 Emergency Contact is hereby added as follows:

2808.14 Emergency Contact. The contact information of a responsible person or persons shall be provided to the Fire Department and shall be posted at the entrance to the facility for responding units. The responsible party should be available to respond to the business in emergency situation.

15.22.120 Chapter 49, Requirements for Wildland-Urban Interface Fire Areas

Chapter 49 Requirements for Wildland-Urban Interface Fire Areas is adopted in its entirety with the following amendments:

Section 4906.3 Requirements is hereby revised to read as follows:

4906.3 Requirements. Hazardous vegetation and fuels around all applicable buildings and structure shall be maintained in accordance with the following laws and regulations:
1. Public Resources Code, Section 4291.
2. California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299 (see guidance for implementation "General Guideline to Create Defensible Space").
4. California Code of Regulations, Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07.

Section 4908 Fuel Modification Requirements for New Construction is hereby added as follows:

4908 Fuel Modification Requirements for New Construction. All new buildings to be built or installed in a Wildfire Risk Area shall comply with the following:

1. Preliminary fuel modification plans shall be submitted to and approved by the fire code official prior to or concurrently with the approval of any tentative map.
2. Final fuel modification plans shall be submitted to and approved by the fire code official prior to the issuance of a grading permit.
3.1 The fuel modification plan shall include provisions for the maintenance of the fuel modification in perpetuity.

4. The fuel modification plan may be altered if conditions change. Any alterations to the fuel modification areas shall have prior approval from the fire code official.

5. All elements of the fuel modification plan shall be maintained in accordance with the approved plan and are subject to the enforcement process outlined in the Fire Code.


Chapter 50 Hazardous Materials – General Provisions is adopted in its entirety with the following amendments.

Section 5001.5.2 Hazardous Materials Inventory Statement (HMIS) is hereby revised to read as follows:

5001.5.2 Hazardous Materials Inventory Statement (HMIS). Where required by the fire code official, an application for a permit shall include Orange County Fire Authority’s Chemical Classification Packet, which shall be completed and approved prior to approval of plans, and/or the storage, use or handling of chemicals on the premises. The Chemical Classification Packet shall include the following information:
1. Product Name.
2. Component.
3. Chemical Abstract Service (CAS) number.
4. Location where stored or used.
5. Container size.
7. Amount in storage.
8. Amount in use-closed systems.
9. Amount in use-open systems.

Section 5003.1.1.1 Extremely Hazardous Substances is hereby added as follows:

5003.1.1.1 Extremely Hazardous Substances. No person shall use or store any amount of extremely hazardous substances (EHS) in excess of the disclosable amounts (see Health and Safety Code Section 25500 et al) in a residential zoned or any residentially developed property.

15.22.140 Chapter 56 Explosives and Fireworks

Chapter 56 Explosives and Fireworks is adopted in its entirety with the following amendments:
Section 5608.2 Firing is hereby added as follows:

5608.2 Firing. All fireworks displays, regardless of mortar, device, or shell size, shall be electrically fired.

Section 5608.3 Application for Permit is hereby added as follows:

Section 5608.3 Application for Permit. A diagram of the grounds on which the display is to be held showing the point at which the fireworks are to be discharged, the fallout area based on 100 feet per inch of shell size, the location of all buildings, roads, and other means of transportation, the lines behind which the audience will be restrained, the location of all nearby trees, telegraph or telephone line, or other overhead obstructions shall be provided to OCFA.

15.22.150 Chapter 80, Referenced Standards

Chapter 80 Referenced Standards is adopted in its entirety with the following amendments:

NFPA 13, 2016 Edition, Standard for the Installation of Sprinkler Systems is hereby amended as follows:

Section 6.7.3 is hereby revised to read as follows:

6.7.3 Fire department connections (FDC) shall be of an approved type. The location shall be approved and be no more than 150 feet from a public hydrant. The FDC may be located within 150 feet of a private fire hydrant when approved by the fire code official. The size of piping and the number of 2½" inlets shall be approved by the fire code official. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red or as approved. When the fire sprinkler density design requires more than 500 gpm (including inside hose stream demand), or a standpipe system is included, four 2½" inlets shall be provided.

Section 8.3.3.1 is hereby revised to read as follows:

8.3.3.1 When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used. Use is considered undetermined if a specific tenant/occupant is not identified at the time the fire sprinkler plan is submitted. Sprinklers in light hazard occupancies shall be one of the following:

1. Quick-response type as defined in 3.6.4.8
2. Residential sprinklers in accordance with the requirements of 8.4.5
3. Quick response CMSA sprinklers
4. ESFR sprinklers
5. Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
6. Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems

Section 11.1.1.1 is hereby added as follows:

11.1.1.1 When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction(s) in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve “G”. Use is considered undetermined if a specific tenant/occupant is not identified at the time the sprinkler plan is submitted. Where a subsequent use or occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new use or occupancy.

Section 11.2.3.1.1 is hereby added as follows:

11.2.3.1.1 The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the fire code official:
1) Subtract the project site elevation from the low water level for the appropriate pressure zone and multiply the result by 0.433;
2) Use a maximum of 40 psi, if available;
3) Utilize the OCFA water-flow test form/directions to document a flow test conducted by the local water agency or an approved third party licensed in the State of California.

NFPA 13D 2016 Edition, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes is hereby amended as follows:

Section 7.1.2 is hereby revised to read as follows:

7.1.2 The sprinkler system piping shall not have separate control valves installed unless supervised by a central station, proprietary, or remote station alarm service.

NFPA 14, 2013 Edition, Installation of Standpipe and Hose Systems is hereby amended as follows:

Section 7.3.1.1 is hereby revised to read as follows:

7.3.1.1 Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet or more than 5 feet above the finished floor.
NFPA 24, 2016 Edition, Standard for the Installation of Private Fire Service Mains and Their Appurtenances is hereby amended as follows:

Section 6.2.8.1 is hereby added as follows:

6.2.8.1 All indicating valves controlling fire suppression water supplies shall be painted OSHA red.

Exceptions:
1. Brass or bronze valves on sprinkler risers mounted to the exterior of the building may be left unpainted.
2. Where OS&Y valves on the detector check assembly are the only control valves, at least one OS&Y valve shall be painted red.

Section 6.2.9 is hereby revised to read as follows:

All connections to private fire service mains for fire protection systems shall be arranged in accordance with one of the following so that they can be isolated:

1) A post indicator valve installed not less than 40 ft (12 m) from the building
   (a) For buildings less than 40 ft (12 m) in height, a post indicator valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the post indicator valve.

2) A wall post indicator valve

3) An indicating valve in a pit, installed in accordance with Section 6.4

4) A backflow preventer with at least one indicating valve not less than 40 ft (12 m) from the building
   (a) For buildings less than 40 ft (12 m) in height, a backflow preventer with at least one indicating valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the backflow preventer.

5) Control valves installed in a fire-rated room accessible from the exterior

6) Control valves in a fire-rated stair enclosure accessible from the exterior

Section 10.1.5 is hereby added as follows:

10.1.5 All ferrous pipe and joints shall be polyethylene encased per AWWA C150, Method A, B, or C. All fittings shall be protected with a loose 8-mil polyethylene tube
or sheet. The ends of the tube or sheet shall extend past the joint by a minimum of 12 inches and be sealed with 2 inch wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

**Exception**: 304 or 316 Stainless Steel pipe and fittings

**Section 10.4.1.1** is hereby revised to read as follows:

**10.4.1.1** All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material after installation.

**Exception**: Bolted joint accessories made from 304 or 316 stainless steel.

**Section 10.4.1.1.1** is hereby added as follows:

**10.4.1.1.1** All bolts used in pipe-joint assembly shall be 316 stainless steel.

**Section 10.4.3.2** is hereby revised to read as follows:

**10.4.3.2** Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 24 inches, as measured from the interior face of the exterior wall to the center of the vertical pipe. The pipe under the building or building foundation shall be 304 or 316 stainless steel and shall not contain mechanical joints or it shall comply with 10.4.3.2.1 through 10.4.3.2.4.

**Appendices**

**Appendix A** is deleted in its entirety without amendments.

**Appendix B** is adopted in its entirety without amendments.

**Appendix BB** is adopted in its entirety without amendments.

**Appendix C** is adopted in its entirety without amendments.

**Appendix CC** is adopted in its entirety without amendments.

**Appendix D** is deleted in its entirety without amendments.

**Appendix E** is deleted in its entirety without amendments.

**Appendix F** is deleted in its entirety without amendments.

**Appendix G** is deleted in its entirety without amendments.

**Appendix H** is adopted in its entirety without amendments.
Appendix I is deleted in its entirety without amendments.

Appendix J is deleted in its entirety without amendments.

Appendix K is deleted in its entirety without amendments.

Appendix L is deleted in its entirety without amendments.

Appendix M is deleted in its entirety without amendments.

Appendix N is deleted in its entirety without amendments.

The City Clerk shall certify to the passage and adoption of this ordinance and shall cause the same to be published in the manner required by law. This ordinance shall become effective thirty (30) days from and after its passage.

Approved for introduction at a regular meeting on the 26th day of October 2016 by the following vote:

AYES: COUNCIL MEMBERS: TA, CONTRERAS, CAREY, RICE
NOES: COUNCIL MEMBERS: NONE
ABSENT: COUNCIL MEMBERS: DIEP

PASSED, APPROVED AND ADOPTED this 14th day of December 2016 by the following vote:

AYES: COUNCIL MEMBERS: TA, DIEP, CONTRERAS, HO, RICE
NOES: COUNCIL MEMBERS: NONE
ABSENT: COUNCIL MEMBERS: NONE

ATTEST:

AMANDA JENSEN, CMC,
CITY CLERK

TRI TA, MAYOR

2534-37
I, AMANDA JENSEN, City Clerk of Westminster, do hereby certify that the foregoing ordinance was introduced on the 26th day of October 2016 and was regularly adopted as a meeting thereof on the 14th day of December 2016.

Amanda Jensen, CMC, City Clerk