ORDINANCE NO. 19-08


WHEREAS, the 2019 Edition of the California Building Standards Code (California Code of Regulations, Title 24) was published July 1, 2019, with an effective date of January 1, 2020; and

WHEREAS, state law requires the City to enforce the California Building Standards Code irrespective of whether the same is locally adopted; and

WHEREAS, California Government Code Section 50022.1 et seq. allows the City Council to adopt by reference the 2019 Edition of the California Building Standards Code; and

WHEREAS, California Health & Safety Code Section 17958.5 et seq. and 18941.5 authorize cities to modify the California Building Standards Code by adopting more restrictive standards and modifications provided that such standards and modifications are accompanied by express findings that they are reasonably necessary because of local climatic, geological, or topographical conditions; and

WHEREAS, the Orange County Fire Authority provides fire services for the entirety of the city of Laguna Woods; and

WHEREAS, the Building Official recommends that the City Council (1) adopt the 2019 California Fire Code (a part of the 2019 California Building Standards Code) by reference to confirm the City’s compliance with the provisions of California Code of Regulations, Title 24 and (2) adopt local amendments to the 2019 California Fire Code recommended by the Orange County Fire Authority to decrease the potential incidence of property damage, injury, and death due to fires and earthquakes, in a manner that is reasonable and necessary to mitigate local climatic, geological, or topographical conditions; and
WHEREAS, on October 16, 2019 and November 20, 2019, the City Council held duly noticed public hearings on this Ordinance at which it considered all of the information, evidence, and testimony presented, both written and oral.

THE CITY COUNCIL OF THE CITY OF LAGUNA WOODS, CALIFORNIA, DOES ORDAIN AS FOLLOWS:

SECTION 1. The City Council hereby finds and determines that (i) each of the recitals to this Ordinance are true and correct, and are adopted herein as findings; (ii) the Code Amendments comply with all applicable requirements of State law; (iii) the Code Amendments will not adversely affect the health, safety, or welfare of the residents within the community; (iv) the Code Amendments are in the public interest of the City of Laguna Woods; and, (v) the Code Amendments are consistent with the Laguna Woods General Plan and its various elements.

SECTION 2. After reviewing the entire project record, the City Council hereby determines and certifies that this Ordinance is exempt from the provisions of the California Environmental Quality Act ("CEQA") pursuant to sections 15378(b)(4) and 15061(b)(3) of Title 14 of the California Code of Regulations, in that it is consistent with California law, specifically California Code of Regulations Title 24. It can be seen with certainty that this project has no possibility of having a significant effect on the environment.

SECTION 3. The City Council hereby finds that the amendments to the 2019 California Fire Code are reasonably necessary because of local climatic, geological, or topographical conditions, and adopts the findings provided below to support the amendments to the 2019 California Fire Code.

I. Climatic Conditions

A. Orange County is located in a semi-arid Mediterranean type climate. It annually experiences extended periods of high temperatures with little or no precipitation. Hot, dry (Santa Ana) winds, which may reach speeds of 70 miles per hour or greater, are also common to the area. These climatic conditions cause extreme drying of vegetation and common building materials. Frequent periods of drought and low humidity add to the fire danger. This predisposes the area to large destructive fires (conflagration). In addition to directly damaging or destroying buildings, these fires are also prone to disrupt utility services throughout the County. Obstacles generated
by a strong wind, such as fallen trees, street lights and utility poles will greatly impact the response time to reach an incident scene.

B. The climate alternates between extended periods of drought and brief flooding conditions. Flood conditions may affect the Orange County Fire Authority’s ability to respond to a fire or emergency condition. Floods also disrupt utility services to buildings and facilities within the County.

C. Water demand in this densely populated area far exceeds the quantity supplied by natural precipitation; and although the population continues to grow, the already-taxied water supply does not. California is projected to increase in population by nearly 10 million over the next quarter of a century with 50 percent of that growth centered in Southern California. Due to storage capacities and consumption, and a limited amount of rainfall future water allocation is not fully dependable. This necessitates the need for additional and on-site fire protection features.

D. These dry climatic conditions and winds contribute to the rapid spread of even small fires originating in high-density housing or vegetation. These fires spread very quickly and create a need for increased levels of fire protection. The added protection of fire sprinkler systems and other fire protection features will supplement normal fire department response by providing immediate protection for the building occupants and by containing and controlling the fire spread to the area of origin. Fire sprinkler systems will also reduce the use of water for firefighting by as much as 50 to 75 percent.

II. Topographical Conditions

A. Natural; slopes of 15 percent or greater generally occur throughout the foothills of Orange County. The elevation change caused by the hills creates the geological foundation on which communities with Orange County is built and will continue to build. With much of the populated flatlands already built upon, future growth will occur on steeper slopes and with greater constraints in terrain.

B. Traffic and circulation congestion is an artificially created, obstructive topographical condition, which is common throughout Orange County.
C. These topographical conditions combine to create a situation that places fire department response time to fire occurrences at risk and makes it necessary to provide automatic on-site fire-extinguishing systems and other protection measures to protect occupants and property.

III. Geological Conditions

The Orange County region is a densely populated area that has buildings constructed over and near a vast and complex network of faults that are believed to be capable of producing future earthquakes similar or greater in size than the 1994 Northridge and the 1971 Sylmar earthquakes. Earthquake faults run along the northeast and southwest boundaries of Orange County. The Newport-Inglewood Fault, located within Orange County was the source of the destructive 1933 Long Beach earthquake (6.3 magnitude) which took 120 lives and damaged buildings in an area from Laguna Beach to Marina Del Rey to Whittier. In December 1989, another earthquake occurred in the jurisdiction of Irvine at an unknown fault line. Regional planning for reoccurrence of earthquakes is recommended by the State of California, Department of Conservation.

A. Previous earthquakes have been accompanied by disruption of traffic flow and fires. A severe seismic event has the potential to negatively impact any rescue or fire suppression activities because it is likely to create obstacles similar to those indicated under the high wind section above. The October 17, 1989, Santa Cruz earthquake resulted in one major fire in the Marina District (San Francisco). When combined with the 34 other fires locally and over 500 responses, the department was taxed to its fullest capabilities. The Marina fire was difficult to contain because mains supplying water to the district burst during the earthquake. This situation creates the need for both additional fire protection and automatic on-site fire protection for building occupants. State Department of Conservation noted in their 1988 report (Planning Scenario on a Major Earthquake on the Newport-Inglewood Fault Zone, page 59), "unfortunately, barely meeting the minimum earthquake standards of building codes places a building on the verge of being legally unsafe."

B. Road circulation features located throughout the County also make amendments reasonably necessary. Located through the County are major roadways, highways and flood control channels that create barriers and slow response times. Hills, slopes, street and storm drain design, accompanied by
occasional heavy rainfall, causes roadway flooding and landslides and at times may make an emergency access route impassable. There are areas in Orange County that naturally have extended emergency response times that exceed the 5-minute goal.

C. Soils throughout the County possess corrosive properties that reduce the expected usable life of water services when metallic pipes are in contact with soils.

Due to the topographical conditions of sprawling development separated by waterways and narrow and congested streets and the expected infrastructure damage inherent in seismic zones described above, it is prudent to rely on automatic fire sprinkler systems to mitigate extended fire department response time and keep fires manageable with reduced fire flow (water) resources available for a given structure. Additional fire protection is also justified to match the current resources of firefighting equipment and personnel within the Orange County Fire Authority.

### 2019 California Fire Code Amendment Findings Legend

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SECTION 4. Chapter 10.12 of the Laguna Woods Municipal Code is hereby amended and restated in its entirety to read as set forth in Exhibit A, attached to this Ordinance and incorporated herein by this reference.

SECTION 5. This Ordinance shall take effect and be in full force and operation on January 1, 2020.

SECTION 6. If any section, subsection, subdivision, paragraph, sentence, clause, or phrase added by this Ordinance, or any part thereof, is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity of effectiveness of the remaining portions of this Ordinance or any part thereof. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause, or phrase thereof irrespective of the fact that any one or more subsections, subdivisions, paragraphs, sentences, clauses, or phrases are declared unconstitutional, invalid, or ineffective.

SECTION 7. The City Clerk shall certify to the passage of this Ordinance and shall cause this Ordinance to be published or posted as required by law.

SECTION 8. All of the above-referenced documents and information have been and are on file with the City Clerk of the City.

PASSED, APPROVED AND ADOPTED this 20th day of November 2019.

CYNTHIA CONNERS, Mayor

ATTEST:

YOLIE TRIPPY, CMC, City Clerk
APPROVED AS TO FORM:

DAVID B. COSGROVE, City Attorney

STATE OF CALIFORNIA  
COUNTY OF ORANGE  
CITY OF LAGUNA WOODS  

I, YOLIE TRIPPY, City Clerk of the City of Laguna Woods, do HEREBY CERTIFY that the foregoing Ordinance No. 19-08 was duly introduced and placed upon its first reading at a regular meeting of the City Council on the 16th day of October 2019, and that thereafter, said Ordinance was duly adopted and passed at a regular meeting of the City Council on the 20th day of November 2019 by the following vote to wit:

AYES:  COUNCILMEMBERS: Conners, Hatch, Horne, Moore, Rainey
NOES:  COUNCILMEMBERS: -
ABSENT: COUNCILMEMBERS: -

YOLIE TRIPPY, CMC, City Clerk
EXHIBIT A
CODE AMENDMENTS

Chapter 10.12 (“California Fire Code”) of Title 10 (“Buildings and Construction”) of the Laguna Woods Municipal Code is amended and restated in its entirety to read as follows:

CHAPTER 10.12. - CALIFORNIA FIRE CODE

Sec. 10.12.010. - Adoption of the California Fire Code.

The 2019 California Fire Code, 2019 Edition (California Code of Regulations, Title 24, Part 9), including Appendices B, BB, C, CC, and H, is hereby adopted and incorporated by reference, as if set forth herein, together with the amendments provided in this chapter, as the Fire Code of the City of Laguna Woods, regulating the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection. Should there be a conflict between the California Fire Code as adopted and other Laguna Woods Municipal Code requirements, the more restrictive shall govern.

Sec. 10.12.020. - Amendments to the California Fire Code.

Chapter 1
Scope and Administration

Chapter 1 General Requirements. Adopt Chapter 1 in its entirety, with the exception of Section 109, and with the following amendments:

Section 110.4 Violation penalties is hereby revised as follows:

110.4 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 be subject to 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 110.4.2 Infraction and misdemeanor is hereby added as follows:

110.4.2 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.

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,” and “Spark Arrester” as follows:

202 General Definitions

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

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.

Chapter 3
General Requirements

Chapter 3 General Requirements. Adopt Chapter 3 in its entirety, with the exception of Sections 308.1.4, 311.5 through 311.5.5, 318, and 319, and with the following amendments:

Section 304.1.2 Vegetation is hereby revised as follows:

304.1.2 Vegetation. Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises. Vegetation clearance requirement in urban-wildland interface areas shall be in accordance with Chapter 49. Type, amount, arrangement, and maintenance of vegetation in a fuel modification area, interior slope, or similarly hazardous area shall be in accordance with OCFA Guideline C-05 “Vegetation Management Guideline—Technical Design for New Construction, Fuel Modification Plans, and Maintenance Program.”

Section 305.6 Hazardous Conditions is hereby added as follows:

305.6 Hazardous conditions. Outdoor fires burning wood or other solid fuel are not allowed when any of the following conditions applies:

1. when predicted sustained winds exceed 8 MPH and relative humidity is less than 25%, or a red flag condition has been declared
2. when an official sign was caused to be posted by the fire code official, or a public announcement is made

No outdoor fires using any fuel type are permitted when predicted sustained winds exceed 20 MPH 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 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 occupancies 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 and vegetation 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. Permanent outdoor fireplaces burning wood or other solid fuel shall be constructed in accordance with the California Building Code with clearance from combustible construction and building openings as required therein. 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 25 feet of combustible structures unless within an approved permanent 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.

Exceptions:

1. Portable fireplaces and fire rings/pits equipped with a device to arrest sparks shall be located at least 3’ from combustible construction at R-3 occupancies,
2. Portable fireplaces, and fire pits/rings equipped with a device to arrest sparks, shall be located at least 15 feet from combustible structures at other R occupancies.

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, Wildfire Risk Area (WRA), Wildland-Urban Interface Area (WUI), or in locations where conditions could cause the spread of fire to the WRA or WUI.

Exceptions:

1. Permanent fireplaces that are not located in a fuel modification zone
2. Where determined by the Fire Code Official that the location or design of the device should reasonably prevent the start of a wildfire.

Section 308.1.6.3 Sky lanterns is hereby revised as follows:

308.1.6.3 Sky lanterns. A person shall not ignite, release, or cause to be released a sky lantern.

Section 321 Fuel Modification Requirements for New Construction is hereby added as follows:

321 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 322 Clearance of brush or vegetation growth from roadways is hereby added as follows:

322 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 323 Unusual Circumstances is hereby added as follows:

323 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 324 Use of Equipment is hereby added as follows:

324 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 324.1 Use of Equipment and Devices Generating Heat, Sparks or Open Flames is hereby added as follows:
324.1 Equipment and devices generating heat, sparks or open flames. During any time of the year within Wildfire Risk Areas, within or immediately adjacent to any forest- or brush-covered land or non-irrigated grass-covered land, no person shall use or operate any welding equipment, cutting torches, tar pots, grinding devices, or other tools or equipment that may produce a spark, fire, or flame that could result in a wildfire without doing the following:

1. First clearing away all flammable material, including snags, from the area around such operation for a distance of 30 feet or other approved method to reduce fire spread into the wildlands. If 30-foot clearing cannot be achieved, then an alternate method shall be approved by the AHJ prior to work starting.
2. Maintain one serviceable round point shovel with an overall length of not less than forty-six (46) inches and one backpack pump water-type fire extinguisher fully equipped and ready for use at the immediate area during the operation.
3. Stop work when winds are 8 MPH or greater 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.
4. Keep a cell phone nearby and call 911 immediate in case of fire.

Section 324.2 Spark Arresters is hereby added as follows:

324.2 Spark arresters. Spark arresters shall comply with Section 202, and when affixed to the exhaust system of engines or vehicles subject to Section 324 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.
Chapter 4: Emergency Planning and Preparedness. Adopt only the sections, subsections, and amendment listed below:

401 – 401.9
402
403.2
403.5 – 403.5.4
403.10.2.1.1
403.13 – 403.13.3
404.5 – 404.6.6
407

Section 407.5 is revised as follows:

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

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 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, and Local Responsibility Areas designated as Very High Hazard Fire Severity Zone shall also comply with OCFA Guideline B-09a, “Fire Safe Development in State Responsibility Areas, and Local Responsibility Areas designated as Very High Hazard Fire Severity Zone”.

Section 510.1 Emergency responder radio coverage in new buildings is revised 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 utilized by the jurisdiction, measured 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 Orange County Sheriff’s Department, Communications and Technology Division guidelines and specifications and, where the functionality or performance requirements in the California Fire Code are more stringent, this code.

Exceptions:
1. In buildings or structures where it is determined by the fire code official that the radio coverage system is not needed, including but not limited to the following:
   a. Existing buildings or structures, unless required by the Building Official and OCFA for buildings and structures undergoing extensive remodel and/or expansion.
   b. Elevators.
   c. Structures that meet all of the following:
      i. Three stories or less, and
      ii. Do not have subterranean storage or parking, and
      iii. Do not exceed 50,000 square feet on any single story.
   d. Structures that meet all of the following:
      i. Residential structures four stories or less, and
      ii. Constructed of wood, and
      iii. Do not have subterranean storage or parking, and
      iv. Are not built integral to an above ground multi-story parking structure.

Should a structure that is three stories or less and 50,000 square feet or smaller on any single story include subterranean storage or parking, then this ordinance shall apply only to the subterranean areas.
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 the facility, the fire code official shall have the authority to accept an automatically activated emergency radio coverage system.

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

Section 510.3 Permit required is deleted without replacement.

Chapter 6
Building Services and Systems

Chapter 6 Building Services and Systems is adopted in its entirety without amendments.

Chapter 7
Fire and Smoke Protection Features

Chapter 7 Fire and Smoke Protection Features is adopted in its entirety without amendments.

Chapter 8
Interior Finish, Decorative Materials and Furnishings

Chapter 8 Interior Finish, Decorative Materials and Furnishings is adopted in its entirety without amendments.

Chapter 9
Fire Protection and Life Safety Systems

Adopt Chapter 9 Fire Protection and Life Safety Systems is adopted in its entirety with the following amendments:
**Section 903.2 Where required** is hereby revised as follows:

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

**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.

1. **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 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 Buildings:** An automatic sprinkler system shall be installed throughout when one of the following conditions exists:

   a. When an addition is 33% 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 non-ambulatory 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 903.3.5.3**

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**Chapter 10**

Means of Egress

**Chapter 10 Means of Egress** is adopted in its entirety without amendments.

**Chapter 11**

Construction Requirements for Existing Buildings

**Chapter 11 Construction Requirements for Existing Buildings.** Adopt only those sections and subsections listed below:
Chapter 12
Energy Systems

Chapter 12 Energy Systems is adopted in its entirety with the following amendment added:

1201.1.1 Other Systems Where required by the fire code official, other systems and operations including but not limited to battery systems assembly, battery reconditioning and storage, research and development of battery storage systems, electric vehicle manufacturing and testing, and battery charging systems for cars and carts inside of buildings or structures, shall comply with this chapter.

Exception: When approved by the fire code official, charging stations for electric vehicles located in open parking garages of Type I or II construction.

Chapter 20
Aviation Facilities

Chapter 20 Aviation Facilities is adopted in its entirety without amendments.

Chapter 21
Dry Cleaning
Chapter 21 Dry Cleaning is adopted in its entirety without amendments.

Chapter 22
Combustible Dust-Producing Operations

Chapter 22 Combustible Dust-Producing Operations is adopted in its entirety without amendments.

Chapter 23
Motor Fuel-Dispensing Facilities and Repair Garages

Chapter 23 Motor Fuel-Dispensing Facilities and Repair Garages is adopted in its entirety without amendments.

Chapter 24
Flammable Finishes

Chapter 24 Flammable Finishes is adopted in its entirety without amendments.

Chapter 25
Fruit and Crop Ripening

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

Chapter 26
Fumigation and Insecticidal Fogging

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

Chapter 27
Semiconductor Fabrication Facilities
Chapter 27 Semiconductor Fabrication Facilities is adopted in its entirety without amendments.

Chapter 28
Lumber Yards and Agro-Industrial, Solid Biomass and Woodworking Facilities

Chapter 28 Lumber Yards and Agro-Industrial, Solid Biomass and Woodworking Facilities is adopted in its entirety with the following amendments:

Section 2801.2 Permit is hereby revised 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 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 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 as follows:

2808.4. Pile separation. Piles shall be separated from adjacent piles by 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 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 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.

Chapter 29
Manufacture of Organic Coatings

Chapter 29 Manufacture of Organic Coatings is adopted in its entirety without amendments.

Chapter 30
Industrial Ovens

Chapter 30 Industrial Ovens is adopted in its entirety without amendments.

Chapter 31
Tents, Temporary Special Event Structures and Other Membrane Structures

Chapter 31 Temporary Special Event Structures and Other Membrane Structures is adopted in its entirety without amendments.
Chapter 32
High-Piled Combustible Storage

Chapter 32 High-Piled Combustible Storage is adopted in its entirety without amendments.

Chapter 33
Fire Safety During Construction and Demolition

Chapter 33 Fire Safety During Construction and Demolition is adopted in its entirety without amendments.

Chapter 34
Tire Rebuilding and Tire Storage

Chapter 34 Tire Rebuilding and Tire Storage is adopted in its entirety without amendments.

Chapter 35
Welding and Other Hot Work

Chapter 35 Welding and Other Hot Work is adopted in its entirety without amendments.

Chapter 36
Marinas

Chapter 36 Marinas is adopted in its entirety without amendments.

Chapter 37
Combustible Fibers
Chapter 37 Combustible Fibers is adopted in its entirety without amendments.

Chapter 39
Processing and Extraction Facilities

Chapter 39 Processing and Extraction Facilities is adopted in its entirety without amendments.

Chapter 48
Motion Picture and Television Production Studio Sound Stages, Approved Production Facilities and Production Locations

Chapter 48 Motion Picture and Television Production Studio Sound Stages, Approved Production Facilities and Production Locations is adopted in its entirety without amendments.

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 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.


1.1 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 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.

Chapter 51
Aerosols

Chapter 51 Aerosols is adopted in its entirety without amendments.

Chapter 53
Compressed Gases
Chapter 53 Compressed Gases is adopted in its entirety without amendments.

Chapter 54 Corrosive Materials

Chapter 54 Corrosive materials is adopted in its entirety without amendments.

Chapter 55 Cryogenic Fluids

Chapter 55 Cryogenic Fluids is adopted in its entirety without amendments.

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.
Chapter 57
Flammable and Combustible Liquids

Chapter 57 Flammable and Combustible Liquids. Adopt Chapter 57, with the exception of Section 5707, in its entirety and with the following amendment:

Section 5701.1.1 On-Demand Mobile fueling is added as follows:

Section 5701.1.1 Mobile fueling. On-demand mobile fueling of Class I, II, and III liquids into the fuel tanks of vehicles is prohibited.

Chapter 58
Flammable Gases and Flammable Cryogenic Fluids

Chapter 58 Flammable Gases and Flammable Cryogenic Fluids. Adopt Chapter 58, with the exception of Section 5809, in its entirety and with the following amendment:

Section 5801.1 Scope is revised as follows:

Section 5801.1 Scope. The storage and use of flammable gases and flammable cryogenic fluids shall be in accordance with this chapter, NFPA 2 and NFPA 55. Compressed gases shall also comply with Chapter 53 and cryogenic fluids shall also comply with Chapter 55. Flammable cryogenic fluids shall comply with Section 5806. Hydrogen motor fuel-dispensing stations and repair garages and their associated above-ground hydrogen storage systems shall also be designed, constructed and maintained in accordance with Chapter 23. Mobile fueling of gaseous and liquid hydrogen, compressed natural gas (CNG), and liquefied natural gas (LNG) into the fuel tanks of vehicles is prohibited.

Exceptions:
1. Gases used as refrigerants in refrigeration systems (see Section 605).
2. Liquefied petroleum gases and natural gases regulated by Chapter 61.
4. Pyrophoric gases in accordance with Chapter 64.

Chapter 59
Flammable Solids

Chapter 59 Flammable Solids is adopted in its entirety without amendments.

Chapter 60
Highly Toxic and Toxic Materials

Chapter 60 Highly Toxic and Toxic Materials is adopted in its entirety without amendments.

Chapter 61
Liquefied Petroleum Gases

Chapter 61 Liquefied Petroleum Gases is adopted in its entirety without amendments.

Chapter 62
Organic Peroxides

Chapter 62 Organic Peroxides is adopted in its entirety without amendments.

Chapter 63
Oxidizers, Oxidizing Gases, and Oxidizing Cryogenic Fluids

Chapter 63 Oxidizers, Oxidizing Gases, and Oxidizing Cryogenic Fluids is adopted in its entirety without amendments.
Chapter 64  
Pyrophoric Materials

Chapter 64 Pyrophoric Materials is adopted in its entirety without amendments.

Chapter 65  
Pyroxylin (Cellulose Nitrate) Plastics

Chapter 65 Pyroxylin (Cellulose Nitrate) Plastics is adopted in its entirety without amendments.

Chapter 66  
Unstable (Reactive) Materials

Chapter 66 Unstable (Reactive) Materials is adopted in its entirety without amendments.

Chapter 67  
Water-Reactive Solids and Liquids

Chapter 67 Water-Reactive Solids and Liquids is adopted in its entirety without amendments.

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 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 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 8.15.1.2.7 is hereby revised as follows:

8.15.1.2.7 Concealed spaces filled with noncombustible insulation shall not require sprinkler protection when approved by the fire code official.

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 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 is deleted in its entirety and replaced 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 amended 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 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 deleted and replaced as follows:

10.4.3. 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 with amendments outlined in Guideline B-09.

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.

Appendix O is deleted in its entirety without amendments.