

RESOLUTION NO. 11638

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ORANGE SETTING FORTH FINDINGS WITH RESPECT TO LOCAL CONDITIONS WITHIN THE CITY OF ORANGE JUSTIFYING MODIFICATIONS AND CHANGES TO THE 2025 CALIFORNIA WILDLAND-URBAN INTERFACE CODE AND THE 2025 CALIFORNIA FIRE CODE.

WHEREAS, the Health & Safety Code provides that the City of Orange shall be governed by the same requirements as those found in the California Wildland-Urban Interface Code and California Fire Code unless the City Council acts to change the requirements; and

WHEREAS, the Health & Safety Code permits the City Council to make such changes or modifications to the California Wildland-Urban Interface Code and California Fire Code as are reasonably necessary because of local conditions; and

WHEREAS, the Health & Safety Code requires that the City Council, before making any changes or modifications to the California Wildland-Urban Interface Code and California Fire Code, shall make express findings that such changes or modifications to the Codes are reasonable necessary because of local climatic, geographic, or topographic conditions; and

WHEREAS, the Fire Chief has recommended amendments to the 2025 California Wildland-Urban Interface and the 2025 California Fire Code as set forth in Ordinance 17-25 as a result of local climatic, geographical and topographical conditions set forth herein.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Orange as follows:

1. The foregoing recitals are true and correct.
2. The City Council finds the following local climatic, geographical and topographical conditions exist in the City of Orange:
 - I. Climatic Conditions
 - A. The jurisdiction of Orange 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 M.P.H. 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 City. Obstacles generated by

a strong wind, such as fallen trees, street lights and utility poles, and the requirement to climb 75 feet vertically up flights of stairs will greatly impact the response time to reach an incident scene. Additionally, there is a significant increase in the amount of wind force at 60 feet above the ground. Use of aerial type fire fighting apparatus above this height would place rescue personnel at increased risk of injury.

- B. The climate alternates between extended periods of drought and brief flooding conditions. Flood conditions may affect the Orange City Fire Department's ability to respond to a fire or emergency condition. Floods also disrupt utility services to buildings and facilities within the City.
- 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-taxed 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. It would also leave tall buildings vulnerable to uncontrolled fires due to a lack of available water and an inability to pump sufficient quantities of available water to floors in a fire.
- 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 the City of Orange. The community of Orange has built and continues to build upon hills located within the city. The topography of the hills increases the time it takes to reach buildings, facilities and premises by creating the need for responding emergency vehicles to climb varying grades, some of which are steep. Additionally, topography determines the configuration of the access roads in the hills, sometimes creating circuitous routes which are difficult for large, heavy vehicles to navigate. With much of the populated flatlands already built upon, future growth will occur on steeper slopes and greater constraints in terrain.
- B. Traffic and circulation congestion is an artificially created, obstructive topographical condition, which is common throughout Orange.

- C. These topographical conditions combine to create a situation which extends fire department response times to fires and other emergencies involving the built environment, 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 City of Orange, in 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 northern, eastern and central areas of the City. 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 Orange 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. With the probability of strong aftershocks there exists a need to provide increased protection for anyone on upper floors of buildings. 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 its 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 Orange can be compromised during seismic and meteorological events. Located within the City are major roadways, highways and flood control channels that create barriers and slow response times. Hills, slopes, street and storm drain design accompanied with occasional heavy rainfall, cause roadway flooding and landslides and at times may make an emergency access route impassable. There are areas in Orange that naturally have extended emergency response times that exceed the 5-minute goal.
- C. Soils throughout the City possess corrosive properties that reduce the expected usable life of water services when metallic pipes in contact with soil are utilized.

- D. Portions of the City contain active or former flammable gas and/or liquid production fields, as well as methane-producing closed landfills. These areas contain a variety of naturally occurring gases, liquids and vapors. These compounds present toxicity or flammability hazards to building occupants. Evaluation of these hazards and the risks they pose to development is necessary implement appropriate mitigation.

IV. Summary

Due to the topographical conditions of sprawling development separated by waterways and narrow and congested streets, and the expected infrastructure damage inherent in seismic zone described above, it is prudent to amend building standards adopted by the City of Orange to address these hazards and their respective risks. Part of the strategy to reduce risks includes the installation of automatic fire sprinkler systems, with the goals of mitigating extended fire department response time and keeping fires manageable with reduced fire flow (water) requirements for a given structures. Additional fire protection is also justified to match the current resources of firefighting equipment and personnel within the Orange City Fire Department.

ADOPTED this ____ day of _____, 2025

Daniel R. Slater, Mayor, City of Orange

ATTEST:

Pamela Coleman, City Clerk, City of Orange

APPROVED AS TO FORM:

Nathalie Adourian, City Attorney, City of Orange

I, PAMELA COLEMAN, City Clerk of the City of Orange, California, do hereby certify that the foregoing Resolution was duly and regularly adopted by the City Council of the City of Orange at a regular meeting thereof held on the ____ day of _____, 2025, by the following vote:

AYES:	COUNCILMEMBERS:
NOES:	COUNCILMEMBERS:
ABSENT:	COUNCILMEMBERS:
ABSTAIN:	COUNCILMEMBERS:

Pamela Coleman, City Clerk, City of Orange