RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDWOOD
CITY ADOPTING FINDINGS OF NECESSITY AND NEED FOR
AMENDMENTS, DELETIONS, AND ADDITIONS TO THE 2019 FIRE AND
BUILDING STANDARDS CODES

WHEREAS, concurrent with this resolution, the City Council of the City of Redwood City will adopt the 2019 California Fire Code, 2019 California Building, Residential, Electrical, Mechanical, Plumbing, Energy, Historical Building, Existing Building, and Green Building Standards Codes, (collectively herein “the Fire and Building Standards Codes”); and

WHEREAS, California Health and Safety Code seeks to have uniform building standards in substantially the same format throughout the state; and

WHEREAS, the City of Redwood City (“City”) is authorized by Health and Safety Code Sections 13869.7, 17922, 17958, 17958.5, 17958.7, and 18941.5 to impose modifications on the California Fire and Building Standards, providing such modifications that are more stringent than state standards provided the modifications are reasonably necessary” to protect the health, welfare and safety of the residents of the City “because of local climatic, geological or topographical conditions”; and

WHEREAS, the City Council of Redwood City has determined and finds that the attached changes and modifications are needed and reasonably necessary because of local climactic, geological or topographical conditions the City.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDWOOD CITY AS FOLLOWS:

FINDINGS:

1. Necessity: These local amendments to the 2019 California Fire and Building Standards Codes have been recognized by the City as tools for addressing the fire and life safety hazard problem, concerns, and future direction by which the City can establish and maintain an environment, which will afford a level of fire and life safety to all who live and work within the Redwood City Fire Department jurisdictional boundaries.

2. Local Conditions generally: Local conditions have an adverse effect on the prevention of (1) major loss fires, (2) major earthquake damage, and (3) the potential for life and property loss, making necessary changes or modifications to the state building standards in order to provide a reasonable and appropriate degree of proper security and fire and life safety in this jurisdiction. Below are listed adverse local climactic, geological, and topographical conditions largely articulated in the City’s General Plan and associated environmental impact report. Modifications which are necessitated by particular local conditions are delineated below.
3. **Climatic:** The areas served by the City, on average, experience an annual rainfall between 8 to 18 inches. This rainfall can be expected between October and April of each year and is based on the 100-year weather almanac. However, during the summer and early fall months there is little, if any, measurable precipitation. During this dry period, the temperatures are usually between 70°-90° with light to gusty westerly winds. These drying winds, mixed with the natural vegetation, which is dominant throughout the area, create a hazardous fuel condition, which further creates extensive grass and brush land fire risk. With residential developments, encroaching into these wooded and grass, or brush-covered areas, wind and terrain-driven fires could have severe consequences to improved properties at risk. This has been demonstrated on several occasions in other areas of our State Fire/Rescue Aid Regions.

4. **Geological:**

   A. **Geographic Location.** The area served by the City is located in San Mateo County. This area identified as being in the southern region of the county.
   
   B. **Seismic Location.** The relatively young geological processes that have created the San Francisco bay region are still active today. Seismically, the City sits along the active San Andreas Fault, and is rated as a Seismic Zone E.
   
   C. **Size and population.** Areas served by the Fire Department encompass approximately 19 square miles and 80,000 people.
   
   D. **Roads and Streets.** The number of vehicle miles driven is steadily increasing despite limited growth. Many older streets are narrow and steep. The impact of additional planned developments and increased traffic flow will continue to create an effect on the delivery of fire protection services.
   
   E. **Soil Conditions.** The City lays in the southern end of San Mateo County. The areas closest to the Bay are overlain by unconsolidated fine silty clay, known as Bay Mud, which varies in thickness from a few feet to as much as thirty (30) feet. Bedrock lies beneath the area at depths generally three hundred (300) feet or more. The topography is essentially flat, dropping from an elevation of eight hundred (800) feet to sea level. The slope of the City extends upwards on the western side. Slopes range from (0) degrees to more than (20) degrees on some streets.
   
   F. **Vegetation.** The hilly portion of the City contains trees, dense brush vegetation and a heavy growth of natural grasses. The City and surrounding areas suffer several wildland fires each year.
   
   G. **Bay Mud.** Within the City, specifically along the San Francisco Bay, is underlain with Bay Mud, which does not allow for infrastructure subject to corrosion.

5. **Topographical:** The topographical element, as would be expected, is closely associated with the geological element. With elevation changes in the City, development is of a geological concern. With these changes development is, of course, following the path of least resistance; thereby creating a meandering pattern. This does not lend itself to a good systematic street and road layout, which would promote easy traffic flow. It has, in fact, resulted in few major cross-town thoroughfares, which tend to be heavily congested, primarily during commute hours and seasonal periods of the year. "Pass-through" vehicular traffic in the cities, such as
the areas of the Alameda de Las Pulgas, Woodside Road, Edgewood Road, and El Camino Real. This increased commute time increases traffic for eastbound and westbound vehicular movement to US 101 and Interstate 280. This creates barriers, which increases the response time of fire apparatus and other emergency vehicles. The topography of the city is also being burdened by major structures. Employment areas are throughout the city, and the people who work in these complexes have added to the traffic congestion throughout the cities, thereby increasing fire apparatus response times.

Inherent delays caused by the traffic patterns to many of these types of projects make it necessary to mitigate this problem by requiring additional built-in automatic fire protection and detection systems that provide early detection and initial control of fires until the arrival of the fire department.

As a result of above identified climatic, geological and topographical elements, additional requirements as specified in the amendments to the adopting ordinance for the 2019 California Fire Code by the City are considered reasonable and necessary modifications. The experiences of several disastrous urban-wildland interface fires within Alameda, Santa Clara, San Mateo, Monterey and Contra Costa Counties have demonstrated the need for other fire protection features/regulations. While it is clearly understood that the adoption of such regulations may not prevent the incidence of fire, the implementation of the amendments reduces the severity and potential loss of life and property of these fires, which do occur.

6. **Conclusion:** Local climactic, geological and topographical conditions impact fire prevention efforts relating to the spread, acceleration, intensity, and size of fire involving buildings and vegetative areas in this City. Further, they impact potential damage to all structures, from earthquake and subsequent fire. The City Council finds it is needed and necessary to modify the building standards set forth in the state codes in order to mitigate the effects of the above conditions.
The following table provides code sections that have been modified along with the associated local condition that necessitates the modification:

<table>
<thead>
<tr>
<th>Section Number</th>
<th>Local condition</th>
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</thead>
<tbody>
<tr>
<td>Fire Code Sections added: 102.13, 102.14, 104.9.3, 321, 507.1.1, 903.2.13, 903.4.4, 903.4.5, 903.4.6, 907.2.12.3.1, 907.8.6, 913.2.3, 5601.1.3.1, 5706.2.4.4.1 and 6104.2.1</td>
<td>3, 4, and 5</td>
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<tr>
<td>Fire Code Sections amended: 101.1, 109.1, 110.4, 202, 507.5.1.1, 510.4.2.3, 510.6.1, 903.2, 903.4.2, 907.1, 5704.2.9.6.1, 5706.2.4.4, 5806.2</td>
<td>3, 4, and 5</td>
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<tr>
<td>Building Code Sections added: 104.1.1, 105.1.3, 109.4.1, 110.1.2, 115.3.1, 116.1.1, 501.2.1, J102.1, J103.3</td>
<td>3, 4, and 5</td>
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<tr>
<td>Residential Code Sections added: R905.1.3</td>
<td>3, 4, and 5</td>
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<tr>
<td>Plumbing Code Sections amended: 715.1</td>
<td>3, 4, and 5</td>
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<tr>
<td>Plumbing Code Sections added: 604.14, 701.8, 903.1.4, 1101.4.1, 1208.6.3.4</td>
<td>3, 4, and 5</td>
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<tr>
<td>Electrical Code Sections added: 300.6(A)(4)</td>
<td>3, 4, and 5</td>
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