RESOLUTION NO. _____

A SUPPLEMENTAL RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA, TO ADOPT ADDITIONAL FINDINGS AND DETERMINE THE NEED FOR ADOPTION AND MODIFICATIONS TO SEVERAL CALIFORNIA FIRE CODE, 2022 EDITION APPENDICES

BE IT RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

WHEREAS, the State of California recently adopted and amended the 2021 International Fire Code, establishing the 2022 California Fire Code;

WHEREAS, in November 2022, the City Council adopted Ordinance 2054, approving amendments to the California Fire Code;

WHEREAS, the 2022 California Fire Code went into effect on January 1, 2023;

WHEREAS, the City of Santa Clara Fire Department was notified by the California Building Standards Commission that adoption of the 2022 California Fire Code Appendices and associated local amendments required additional climatic, geological, and/or topographaical findings;

WHEREAS, the 2022 California Fire Code is contained within, and is a subset of, the California Building Standards Code, which may be amended by a local jurisdiction to establish more restrictive standards, pursuant to California Health and Safety Code, §18941.5 and §17958, et seq.;

WHEREAS, restrictive standards established by a local jurisdiction pursuant to this authority must be reasonably necessary because of local climatic, geological, or topographical conditions;

WHEREAS, restrictive standards established by a local jurisdiction must be supported by the findings required by Health and Safety Code §17958, et seq.; and,

WHEREAS, the City of Santa Clara ("City") finds it necessary to amend the 2022 California Fire Code, as adopted and amended by the State of California, in order to maintain a reasonable degree of fire and life safety within the City because of local climatic, geological, and/or topographical conditions, and in accordance with direction from the California Building

Standards Division.

NOW THEREFORE, BE IT FURTHER RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

1. Legislative Findings. Modifications and changes contained in the Santa Clara Municipal and Environmental Code, 2022, with amendments set forth in Exhibit 1, are required in order to provide specific and greater protections to the public health, safety and welfare than are afforded by the California Fire Code due to geological, climatic, and topographic conditions.

A. This amendment is necessary for administrative clarification and does not modify a California Building Standard pursuant to California Health and Safety Code Sections 17958, 17958.5 and 17958.7. This amendment established administrative standards for the effective enforcement of the Fire Code within the City of Santa Clara.

B. This amendment is justified on the basis of a local geological condition. The City is subject to earthquake hazards caused by its location between San Francisco Bay and the San Andreas Fault zone and being situated on alluvial soils. The City's location makes its taller and older structures particularly vulnerable to damage caused by significant seismic events. The relatively young geological processes that have created the San Francisco Bay Area are still active today. Seismically, the City sits between two active earthquake faults (San Andreas and the Hayward/Calaveras) and other potentially active faults. According to the Association of Bay Area Governments the City of Santa Clara is located in a very high-risk seismic zone. This includes the industrial area, which contains the largest concentration of hazardous materials. Fire following an earthquake has the potential of causing greater loss of life and damage than the earthquake itself. A large number of residential dwellings in the City of Santa Clara have combustible roofs which add significantly to the risk of structural fires after an earthquake. Should a significant seismic event occur, hazardous materials, particularly toxic gases could pose the greatest threat to the largest number of people. In the event of a widespread catastrophic event, public safety resources would be seriously

impacted and may be unavailable to effectively respond to all emergencies. Other variables may tend to increase the risk from fire and hazardous material releases after a major earthquake:

1. The extent of damage to the water system;
2. The extent of isolation due to bridge and/or freeway overpass collapse;
3. The extent of roadway damage and/or amount of debris blocking the roadways;
4. Climatic conditions (hot, dry weather with high winds);
5. Time of day will influence the amount of traffic on roadways and could intensify the risk to life during normal business hours;
6. The availability of timely mutual aid or military assistance;
7. The concentration of combustible structures (wood frame) in the residential, mercantile and light industry zones.

C. This amendment is justified on the basis of a local climatic condition. The seasonal climatic conditions during the late summer and fall create severe fire hazards to the public health and welfare in the city. The city and region continue to experience extended periods of drought. This cyclical pattern of extreme weather is expected to continue, increasing the fire and flood risk as the impacts of global warming intensify. Each of these cycles has the potential of adversely impacting the fire department's capabilities, from staffing to response times. The average relative humidity ranges from 50% during daytime to 70% at night. It drops to approximately 40% during the summer months and occasionally exceeds 80% in the winter months. Temperatures have been recorded as high as 109° F. and as low as 19°F. Average summer highs are in the 78°–82° F. range and winter lows average 28°–35° F. Wind velocities are generally in the 5-mph to 15-mph range, with a mean speed of 5.8 mph, and gusts ranging from 7.4 mph to 30 mph, particularly during the summer months. Extreme winds, up to 60 mph, have been recorded. The winds experienced in Santa Clara can have a tremendous impact upon structure fires where buildings are in close proximity to

one another, which is commonly found in the City. During structure fires, winds can carry embers and burning brands to other structures, spreading the fire and posing the risk of conflagration. In building fires, winds can force fires back into the building and can create a "blowtorch effect," increasing the fire's intensity and speed of spread throughout the building.

These local climatic conditions affect the acceleration, intensity, and size of fires in a community. Times of little or no rainfall, low humidity, and high temperatures create extremely hazardous fire conditions, particularly as they relate to vegetation and combustible construction. These impacts are only expected to grow as the region's population increases and the effects of global warming intensify.

D. This amendment is justified on the basis of a local topographic condition. While Santa Clara topography is relatively flat its location to the San Francisco Bay, and being bisected by a major highway (101) poses unique hazards. Traffic and circulation congestion is an artificially created, obstructive topographical condition, which is common throughout Santa Clara. These topographical conditions create a situation, which places emergency response times at risk and makes it necessary to provide enhanced fire protection and life safety systems and measures to protect the property, people, environment, and community.

The legislative finding for each modification and changes for each modification, as set forth in Exhibit 1, are made pursuant to Sections 17958.5 and 17958.7 of the California Health and Safety Code as set forth in the staff report dated August 22, 2023, and attached hereto, as Exhibit "1" and by this reference incorporated herein.

2. Effective date. This Resolution shall become effective on the same date as Ordinance No._____, which adopts and amends the California Building Standards Code, as the Santa Clara Municipal Fire & Environmental Code, 2022.

3. Transmission. The City Clerk is hereby authorized and directed to transmit a certified copy of this Resolution to the California Building Standards Commission of the State of California.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY OF SANTA CLARA, CALIFORNIA, AT A REGULAR MEETING THEREOF HELD ON THE ___ DAY OF _____, 2023, BY THE FOLLOWING VOTE:

AYES: COUNCILORS:

NOES: COUNCILORS:

ABSENT: COUNCILORS:

ABSTAINED: COUNCILORS:

ATTEST: _____
NORA PIMENTEL, MMC
ASSISTANT CITY CLERK
CITY OF SANTA CLARA

Attachment: Exhibit 1 List of Supplemental Amendments to the California Fire Code and the Santa Clara Municipal Fire & Environmental Code, 2022

EXHIBIT 1

Amendment 1
Appendix B - Fire-Flow Requirements for Building in its entirety as amended.

Amendment 2
B105.2 Buildings other than one- and two two-family dwellings, Group R-3 and R-4 buildings other than one- and two-family dwelling, Group R-3 and R-4 buildings and townhouses shall be as specified in Tables B105.1(2) and B105.2.

> Exceptions: [SFM] Group B, S-2 and U occupancies having a floor areas not exceeding 1,000 square feet, primarily constructed of noncombustible exterior walls with wood or steel roof framing, having a Class A roof assembly, with uses limited to the following or similar uses.
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> 1. California State Parks buildings of an accessory nature (restrooms).
> 2. Safety roadside rest areas (SRRA, public restrooms.
> 3. Truck inspection facilities (TIF), CHP office space and vehicle inspection bays.
> 4. Sand/salt storage buildings, storage of sand and salt.

The maximum fire flow reduction for all commercial buildings shall not exceed 25 percent of the fire flow specified in Table B105.1(2). The maximum fire flow reduction for all other buildings shall not exceed 50 percent of the fire flow specified Table B105.1(2). The maximum fire flow reduction for all other buildings shall not exceed 50 percent of the fire flow specified in Table B105.1(2).

Amendment 3
Appendix C – Fire Hydrant Location and Distribution in its entirety as amended.

Amendment 4
C102.1 Minimum number of fire hydrants for buildings. The number of fire hydrants available to a building shall be not less than the minimum specific in Table C102.1, utilizing the base fire flow without fire sprinkler reduction.

Amendment 5
C103.1 Hydrant spacing. Fire apparatus access roads and public streets providing required access to buildings in accordance with Section 503 of the California Fire Code shall be provided with one or more fire hydrants, as determined by Section C102.1. Where more than one fire hydrant is required, the distance between required fire hydrants shall be in accordance with

Section 103.2 and C103.3, but in no case shall the average spacing be more than 300 feet on center

Amendment 6
Appendix D – Fire Apparatus Access Roads in its entirety as amended.

Amendment 7
D103.2 Grade. The maximum grade of a fire department apparatus access road shall not exceed 15-percent, unless approved by the fire code official.

Amendment 8
D103.3 Turning radius. The required turning radium of a fire apparatus access roads shall be a minimum of 30 feet inside, and a minimum 50 feet outside.

Amendment 9
D103.4 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45750mm) shall be provided with width and turnaround provisions in accordance with Table D103.4, as approved by the fire code official.

Amendment 10
Table D103.4
REQUIREMENTS FOR DEAD-END
FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0 - 150	26	Not required, unless determined necessary by the fire code official
151 - 500	26	120-foot Hammerhead, 60-foot "Y" or 96-foot-diameter cul-de-sac in accordance with Figure D103.1
500 - 750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot-diameter cul-de-sac in accordance with Figure D103.1
Over 750	Special approval required	

Amendment 11
D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. Where a single gate is provided, the gate width shall be not lets than 20 feet (6096 mm). Where a fire apparatus road consists of a divided roadway, the gate width shall be not less than 20 feet (6096 mm),
2. Gates shall be automatic horizontal swing, horizontal side, vertical life or vertical pivot type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.

5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening device shall be approved by the fire code official.
6. Methods of locking shall be submitted for approval by the fire code official.
7. Electric gate operators, where provided, shall be listed in accordance with UL 325.
8. Gate intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F2200.

Amendment 12
Appendix E – Hazard Categories in its entirety.

Amendment 13
Appendix N – Indoor Trade Shows and Exhibitions in its entirety.

Local Amendments Justification Matrix – California Fire Code					
Amendment No.	CFC Section or Table	Title	Added to CFC	Amended from CFC	Justification (As referenced in the Legislative Findings)
1.	Appendix B Fire-Flow Requirements for Buildings	Fire-flow requirements for buildings	X		B, C, & D
2.	B105.2	Buildings other than one- and two-family dwellings, group R-3, and R-4 buildings and townhouses		X	B, C, & D
3.	Appendix C Fire Hydrants Locations and Distribution	Fire hydrants locations and Distribution	X		B, C, & D
4.	C102.1	Minimum number of fire hydrants for buildings		X	B, C, & D
5.	C103.1	Hydrant spacing		X	B, C, & D

6.	Appendix D Fire Apparatus Access Roads	Fire apparatus access Roads	X		B, C, & D
7.	D103.2	Grade		X	B, C, & D
8.	D103.3	Turning radius		X	B, C, & D
9.	D103.4	Dead ends		X	B, C, & D
10.	Table D103.4	Requirements for dead-end fire apparatus access roads		X	B, C, & D
11.	D103.5	Fire apparatus access road gates		X	B, C, & D
12.	Appendix E Hazard Categories	Hazard Categories	X		B, C, & D
13.	Appendix N Indoor trade shows and exhibitions	Indoor trade shows and exhibitions	X		B, C, & D