

## INFORMATION BULLETIN

# TENTS, CANOPIES AND TEMPORARY MEMBRANE STRUCTURES

### **Code Reference:**

Title 19 California Code of Regulations  
California Fire Code (CFC), 2001 Edition, Article 32  
California Building Code (CBC), 1998 Edition, 31E  
Uniform Mechanical Code (UMC)

**NOTE:** All tents shall be made from non-flammable or flame resistant fabrics or material approved by the State Fire Marshal (CFC T-19, Chapter 2, Article 4, Section 332). Tents not made of flame resistant material will be limited to 200 square feet, and 400 square feet or less for canopies.

### **DEFINITIONS:**

A tent is defined as a shelter, structure or enclosure made of fabric or similar pliable material. All tents and temporary air-supported structures greater than 200 square feet and canopies greater than 400 square feet shall have the following:

### **PLANS AND PERMIT:**

1. An approved fire department permit shall be obtained from the Redding Fire Department.
2. Provide a site plan showing the tent size, interior layout of tables and chairs, exits and fire extinguisher locations.
3. Provide Certificate of Flame Retardant for tent fabric, if not labeled on tent or canopy.
4. Show location in relation to existing buildings, roadways, parking, outdoor barbecues and other tents or canopies.
5. The site plan must be approved by the City of Redding Building and Planning Departments prior to Fire Department approvals.

6. Provide a contact person's name and telephone number on the site plan, who would be contacted, should a problem arise.

**USE PERIOD:**

Tents, canopies and temporary membrane structures shall not be used for a period of more than 180 days within a 12-month period on a single premises.

**LOCATIONS, ACCESS AND PARKING (CBC 31E):**

- Tent(s) 1,500 square feet or less 10 feet from property lines
- Tent(s) 1,500 - 15,000 square feet 30 feet from property lines
- Tent(s) 15,000 square feet or greater 50 feet from property lines

Tents shall not be located within 20 feet (6,096 mm) of temporary membrane structures, other tents and canopies, parked vehicles or internal combustion engines, (refer to diagram on last page). For the purpose of determining required distances, support ropes and guywires shall be considered as part of the temporary membrane structure, tent or canopy.

**EXCEPTION:** Separation distance between temporary membrane structures, tents and canopies, not used for cooking, is not required when the aggregate floor area does not exceed 15,000 square feet

**STRUCTURAL STABILITY (CBC 31E):**

Tents, canopies and temporary membrane structures and their appurtenances shall be adequately roped, braced and anchored to withstand the elements of weather against collapsing (10 lbs. per square feet). Evidence of structural stability shall be furnished to the Fire Chief upon request.

**FLAME-RETARDANT TREATMENT AND STANDARDS (CFC, Article 32):**

The sidewalls, drops and tops of all tents, canopies and temporary membrane structures shall be of flame-retardant material or shall be made fire retardant in an approved manner. Floor coverings, bunting, flammable decorations or effects, including sawdust when used on floors or passageways, shall be made fire retardant in an approved manner.

**An approved California State Fire Marshal certification shall be retained on the premises indicating the following:**

1. Identification of tent, canopy or temporary membrane structure, size and fabric type.
2. Date that tent, canopy or temporary membrane structure and other flammable materials were last treated with flame-retardant solution.
3. Trade name and type of solution utilized in flame-retardant treatment.
- 4.
5. Names of persons and firm treating materials.
6. Name and address of tent, canopy or temporary membrane structure.

**SOURCES OF IGNITION (CFC, Article 32):**

1. **Smoking** — Smoking shall not be permitted in tents, canopies and temporary membrane structures or in adjacent areas where hay, straw, sawdust or any other combustible materials are stored or used unless approved by the Fire Chief. When required, approved “**NO SMOKING**” signs shall be conspicuously posted.
2. **Fireworks, Open Flames and Hot Objects** — Fireworks, open flames, and devices emitting flames or fire or creating a glow capable of igniting combustible materials shall not be used in or adjacent to a tent, canopy or temporary membrane structure, unless approved by the Fire Chief.

**PORTABLE FIRE EXTINGUISHERS AND OTHER FIRE-PROTECTION APPLIANCES:**

Fire extinguishers and other fire-protection appliances shall be provided in every tent, canopy and temporary membrane structure. Minimum fire-extinguisher coverage shall be provided in every tent, canopy and temporary membrane structure as follows:

1. 500 - 1,000 square feet (47 - 93 m<sup>2</sup>) of floor area: One **2-A:10-B:C**.
2. Each additional 2,000 square feet (186 m<sup>2</sup>) of floor area or fraction thereof: One **2-A:10-B:C**.

At least one **40-B:C** rated fire extinguisher shall be provided for each kitchen, mess hall, power generator or transformer and at locations where flammable or combustible liquids are used, stored or dispensed. A **40-B:C** or **K** type fire extinguisher is required where deep fat or flambé type cooking is done.

**EXITS (CFC, Article 32):**

1. **Distribution** — Exits shall be spaced at approximately equal intervals around the perimeter of the tent, canopy or temporary membrane structure and shall be located such that all points are 100 feet (30,480 mm) or less from an exit.
2. **Number** — Exits shall be provided in accordance with CFC Table 3211-A, (see Page 8). There shall be a minimum of one exit per structure.
3. **Openings** — Exit openings from tents shall remain open unless covered by a flame retardant curtain, provided:
  - a. Curtains shall be free sliding on a metal support. The support shall be a minimum of 8 feet (2,438 mm) above the floor level at the exit. The curtains shall be so arranged that, when open, no part of the curtains obstructs the exit.
  - b. Curtains shall be of color, or colors, contrasting with the color of the tent.
4. **Doors** — Exit doors from air-supported structures shall swing in the direction of exit travel. To avoid hazardous pressure loss, such doors shall be automatic closing against operating pressures. Opening force at the door edge shall not exceed 15 pounds (66.8 N).
5. **Aisles** — Aisles having minimum width of not less than 44 inches (1,118 mm) shall be provided from all seating areas, and their width shall be progressively increased to provide at all points not less than 1 foot (305 mm) of aisle width for each 50 persons serviced by such aisle at that point. The arrangement of aisles shall be approved by the Fire Marshal.

**EXIT ILLUMINATION:**

Exits shall be illuminated with light having an intensity of not less than one foot candle (10.76 lx) at floor level while the structure is occupied. Fixtures required for exit illumination shall be supplied from a separate circuit or sources of power when these are required for exit signs. (Required when occupant load is 100 or more.)

**EXIT SIGNS:**

1. **Requirements** — Exit signs shall be installed at required exit doorways and where otherwise necessary to clearly indicate the direction of egress when the exit serves an occupant load of 50 or more.

2. **Illumination** — Exit signs in tents, canopies and temporary membrane structures with occupant loads of more than 100 persons shall be of an approved self-luminous type or shall be internally or externally illuminated by fixtures supplied in the following manner:
  - a. Two separate circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less.
  - b. Two separate sources of power, one of which shall be an approved emergency system, shall be provided when the occupant load exceeds 300. Emergency systems shall be supplied from storage batteries or on-site generator set, and the system shall be installed in accordance with the Electrical Code.

#### **ELECTRICAL:**

Electrical cords, equipment and systems shall be isolated from the public by elevation or guarding, and all fuses and switches shall be in approved enclosures. Electrical cables and cords on the ground shall be in trenches or protected by approved covers.

#### **SEATING ARRANGEMENTS AND AISLE SPACING:**

1. Seating arrangements and aisle spacing shall be in accordance with Article 25 of the California Fire Code and meet the approval of the Fire Marshal.
2. For situations without fixed seats, the minimum clear aisle width shall be 36 inches where seats, tables, counters, furnishings, displays, and similar fixtures or equipment are placed on one side of the aisle only, and 44 inches when such fixtures or equipment are placed on both sides of the aisle.
3. Aisles shall terminate at a cross aisle, foyer, doorway, or vomitory. Aisles shall not have a dead-end greater than 20 feet in length.
4. When seating rows have 14 or fewer seats, the minimum clear width between rows shall not be less than 12 inches measured from the back of one seat to the nearest projection of the seat behind. The clear width shall be increased as follows:
  - a. For rows of seating served by aisles or doorways at both ends, there shall be no more than 100 seats per row. A minimum clear width of 12 inches between rows shall be increased by 0.03 inch for every additional seat beyond 14, but the minimum clear width need not exceed 22 inches.
  - b. For rows of seating served by an aisle or a doorway at one end only, the minimum clear width of 12 inches between rows shall be increased by 0.06 inch

for every additional seat beyond 7, but the minimum clear width need not exceed 22 inches. In addition, the distance to the point where the occupant has a choice of two directions of travel to an exit shall not exceed 30 feet from the point where the occupant is seated.

5. When there are more than 300 seats, loose seats, folding chairs, or similar seating facilities that are not fixed to the floor, they shall be bonded together in groups of three or more. Bonding of chairs is not required when tables are provided for dining or similar purposes.

#### **HEATING AND COOKING EQUIPMENT:**

1. **General** — Heating and cooking equipment shall be in accordance with the Mechanical Code or shall be as approved by the Fire Chief.
2. **Vents** — Gas, solid, and liquid fuel burning equipment shall be vented to the outside air by means of a flue or vent approved for use with the type of equipment used and in such a manner that all portions of the tent, canopy or temporary membrane structure are 12 inches (305 mm) or more from the flue or vent. Vents for solid fuel burning equipment shall be equipped with spark arresters having openings not exceeding 1/4-inch (6.4 mm) wire mesh.
3. **Locations** –
  - a. Gas, solid and liquid fuel-burning cooking equipment located outside of a tent that produces sparks or grease vapors shall not be located within 20 feet of such structures (CFC 3216.3.3).
  - b. Tents, when cooking is being performed, shall be separated from other temporary membrane structures, tents, or canopies by 20 feet.
  - c. Heating and cooking equipment shall not be located within 10 feet (3,048 mm) of exits, aisles, passageways or combustible materials.
4. **Cooking Equipment** –
  - a. All cooking equipment shall be of an approved type.
    1. No white gas or kerosene fuel stoves will be allowed.
  - b. Butane or propane equipment shall conform to the following:
    1. The maximum size for liquid petroleum gas (LPG) tanks used inside of booths is 12 pounds at one time. The tank must be far enough away from the stove to be safely shut off in case of fire; not under the table,

with the stove on top (CFC 8203.2.1.6).

2. Each inside cooking appliance may have a maximum of 12 pounds of LPG fuel stored outside of the booth, separated at least 20 feet from the other LPG tank.
  3. Cooking equipment used outside of the booth may have larger quantities only when approved by the Fire Marshal.
  4. Manifolding of LPG tanks shall be approved by the Fire Marshal.
  5. Tanks shall have a shut-off valve.
  6. Stove must have an ON/OFF valve.
  7. Hoses must be of a type approved for use with the fuel and the equipment.
  8. The LPG tank shall be 10 feet from any ignition sources, such as appliances. Ensure both the tank and hose are protected from physical damage.
  9. Tank must be protected from damage and secured in an upright position.
  10. No storage of extra of propane tanks will be allowed in the booths.
  11. Turn off the tank when not in use.
- c. Each vendor shall test the hose connections with a soap and water solution to ensure no leaks are present.
- d. A minimum of 16 inches shall be provided between deep frying appliances/woks and other open flame devices (NFPA 96).

**STORAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS AND LP GAS:**

Flammable or combustible liquids and LP gas shall not be stored in a tent or temporary membrane structure or less than 50 feet (15,240 mm) from such structures.

The storage and use of flammable or combustible liquids shall be in accordance with Articles 79 and 82.

**GENERATORS:**

Generators and other internal combustion power sources shall be separated from tent membranes by a minimum of 20 feet and be isolated from public contact by fencing, enclosure, or other approved means.

**HOUSEKEEPING:**

**3221.1 CFC**

**Vegetation Removal** — Weeds and flammable vegetation shall be removed from the area occupied by a tent, canopy or temporary membrane structure and from areas adjacent to or within 30 feet (9,144 mm) of such structures.

**3221.2 CFC**

**Flammable Material Storage** — Hay, straw, trash and other flammable material shall be stored not less than 30 feet (9,144 mm) outside of tents, canopies and temporary membrane structures.

**3221.3 CFC**

**Floor Surfaces** — The floor surface inside, and the grounds adjacent to or within 30 feet (9,144 mm) outside of tents, canopies and temporary membrane structures, shall be kept free and clear of combustible waste. Such waste shall be stored in approved containers until removed from the premises.

**TABLE 3211-A — MINIMUM NUMBER OF MEANS OF EGRESS  
AND MEANS OF EGRESS WIDTHS FROM TEMPORARY MEMBRANE STRUCTURES, TENTS AND CANOPIES<sup>1</sup>**

OCCUPANT LOAD	MINIMUM NUMBER OF MEANS OF EGRESS	MINIMUM OF EACH MEANS OF EGRESS X 25.4 for mm	
		TENT OR CANOPY	MEMBRANE STRUCTURE
10 to 199	2	72	36
200 to 499	3	72	72
500 to 999	4	96	72
1,000 to 1,999	5	120	96
2,000 to 2,999	6	120	96
Over 3,000	7	120	96

<sup>1</sup>The total width of means of egress in inches (mm) shall not be less than the total occupant load served by a means of egress multiplied by 0.2 (5.08). Such widths of means of egress shall be divided approximately equally among the separate means of egress.