



ONTARIO FIRE DEPARTMENT FIRE PROTECTION STANDARD

General Requirements For Tents/Canopies
STANDARD #F-005 EFFECTIVE 01-01-2011 PAGES 7

PURPOSE:

To provide minimum requirements when dealing with tents and other membrane structures.

AUTHORITY:

Tents and temporary membrane structures in an area in excess of 400 square feet and canopies in excess of 700 square feet shall be in accordance to California Fire Code (CFC).

DEFINITIONS:

Tent- is a temporary structure, enclosure or shelter constructed of fabric or pliable material supported by any manner except by air or the contents it protects.

Canopy- is a temporary structure, enclosure or shelter constructed of fabric or pliable materials supported by any manner, except by air or the contents it protects, and is open without sidewalls or drops on 75 percent or more of the perimeter.

Awning- is a shelter supported entirely from the exterior wall of a building.

Temporary Membrane Structure- is an air-inflated, air-supported, cable, or frame-covered structure as defined by the Building Code, which is erected for less than 180 days and not otherwise defined as a tent, canopy or awning.

REQUIREMENTS:

1. Is a permit needed?

CFC 105.6.43

- An Operational Permit is required to operate an air-supported temporary membrane structure or a tent having an area in excess of 400 square feet. Except for tents used exclusively for recreational camping.
- Tents open on all sides (canopies) require an Operational Permit when the area is in excess of 700 square feet, or when the aggregate area of multiple tents are placed side by side without a fire break clearance of not less than 12 feet, shall not exceed 700 square feet.

2. What kind of Fire Department access is required?

- Fire apparatus access roads shall have an unobstructed width of not less than 26 feet and an unobstructed vertical clearance of not less than 13 feet 6 inches.
- Roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all weathered driving capabilities.
- Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

3. Where should the tent/canopy be located?

- Tents shall not be located within 20 feet of property lines, buildings, temporary membrane structures, other tents and canopies, parked vehicles or internal combustion engines. For the purpose of determining required distances, support ropes and guywires shall be considered as a part of the temporary membrane structure, tent, or canopy.
Exception: Separation distance between temporary membrane structures, tents, canopies, not used for cooking, is not required when the aggregate floor area does not exceed 15,000 sq. ft.; tents not exceeding 10,000 sq. ft. need not be separated from buildings.

4. What about the stability of the structure?

- Temporary membrane structures, tents and canopies and their appurtenances shall be adequately braced and anchored to prevent weather related collapse. Documentation of structural stability shall be furnished to the chief on request.
- The design and construction of the fabric envelope, the method of anchoring, and inflation systems for air-supported and air-inflated structures shall be in accordance with the Building Code.

5. Does the structure need to be flame resistant?

- The sidewalls, drops and tops of temporary membrane structures, tents and canopies shall be composed of flame resistant material or shall be treated with flame retardant in an approved manner. Floor coverings, bunting, combustible decorative materials and effects, including sawdust when used on floors or passageways, shall be composed of flame resistant material or shall be treated with flame retardant in an approved manner.

- Temporary membrane structures, tents or canopies shall have a permanently affixed label bearing the following information:
 - ✓ Identification of temporary membrane structure, tent or canopy, size and fabric or material type.
 - ✓ For flame resistant materials, the necessary information to determine compliance with this article or Section 1103 as applicable.
 - ✓ For flame retardant treated materials, the date that the temporary membrane structure, tent or canopy and other combustible materials were last treated with an approved flame retardant.
 - ✓ The trade name and type of flame retardant utilized in the flame retardant treatment.
 - ✓ The name of the person and firm that applied the flame retardant.

6. Are fire extinguishers needed?

- Portable fire extinguishers shall be provided as required by CCR, Title 19, Division 1, Chapter 2, Article 3, Section 319.
- One 2A10BC shall be provided for every tent 500 to 1000 sq. ft. in area and one additional extinguisher is required for each additional 2000 sq. ft. or fraction thereof.

7. What requirements are needed for occupant loads?

- Occupant load requirements shall be in accordance with assembly structures in CFC Chapter 10.

8. What requirements are needed for seating arrangements?

- Seating in temporary membrane structures, tents or canopies shall be in accordance with CFC Chapter 10.

9. What are the exit requirements?

- Exits shall be spaced at approximately equal intervals around the perimeter of the temporary membrane structure, tent or canopy and shall be located such that all points are 100 feet or less from an exit.
- Every tent and temporary membrane structure or usable portion thereof shall have at least one exit and not less than the number of exits required by Table 2403.12.2 (table listed below).

Occupant Load	Minimum Number of Means of Egress	Minimum Width of Each Means of Egress (inches)	
		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

- Exit openings from tents shall remain open unless covered by a flame resistant curtain, provided:
 - ✓ Curtains shall be free sliding on a metal support. The support shall be a minimum of 8 feet above the floor level at the exit. The curtains shall be so arranged that, when open, no part of the curtains obstructs the exit.
 - ✓ Curtains shall be of a color, or colors which contrasts with the color of the tent.
- Exit doors shall swing in the direction of exit travel. To avoid hazardous pressure loss from air supported structures, such doors shall be automatic closing against operating pressures. Opening force at the door edge shall be in accordance with the Building Code.
- Aisles shall be in accordance with CFC Chapter 24, Section 2403.12.5.
- Required width of exits, aisles and passageway shall be maintained at all times to public way.
- Guywires, guyropes and other support members shall not cross a means of egress at a height of less than 8 feet.
- 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.
- Exit signs in temporary membrane structures, tents and canopies with an occupant load of more than 50 persons shall be of an approved self-luminous type, or shall be internally or externally illuminated by fixtures supplied in the following manner:
 - ✓ Two circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less.

- ✓ Or, two separate sources of power, one of which shall be 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.

10. Can there be smoking, open flame devices or fireworks in the area?

- Smoking shall not be permitted in temporary membrane structures, tents and canopies or in adjacent areas where hay, straw, sawdust or other combustible materials are stored or used. NO SMOKING signs shall be conspicuously posted.
- Open flames and devices capable of igniting combustible materials shall not be used in or located within 20 feet to a temporary membrane structure, tent or canopy, unless otherwise approved.
- Fireworks shall not be used within 100 feet of tents or membrane structures.

11. Can flammable and/or combustible liquids be used or stored?

- Flammable liquid fueled equipment shall not be used in temporary membrane structures, tents or canopies.
- Flammable and combustible liquids shall be stored outside in an approved manner not less than 50 feet from temporary membrane structures, tents or canopies. Storage shall be in accordance with CFC Chapter 34.
- Refueling shall be performed in an approved location not less than 20 feet from temporary membrane structures, tents and canopies.
- Liquid and gas fueled vehicles and equipment used for display, competition or demonstration within assembly occupancies shall be in accordance with CFC, Chapter 24, Sections 2404.18.

12. Can cooking and heating be done inside?

- Cooking and heating equipment shall be vented to the outside air by approved means. Where vents or flues are used, all portions of the temporary membrane structure, tent or canopy shall be no less than 12 inches from the flue or vent. Solid fuel burning equipment shall be equipped with spark arrestors having openings not exceeding ¼ inch wire mesh.
- Cooking and heating equipment shall not be located within 10 feet of exits or combustible materials.

- Tents where cooking is performed shall be separated from temporary membrane structures, other tents and canopies by a minimum of 20 feet.
- Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet from a temporary membrane structure, tent or canopy.
- Tanks, valves, tubing and other related components shall be approved and in accordance with the California Mechanical Code and approved by the fire code official.
- LP-gas containers shall be located outside. Safety release valves shall be pointed away from the temporary membrane structure, tent or canopy. Containers with a capacity of 500 gallons or less shall be located no closer than 10 ft. Containers with a capacity of greater than 500 gallons shall be located no closer than 25 ft.
- Portable LP-gas containers, piping, valves and fittings which are located outside and are being used to fuel equipment inside a temporary membrane structure, tent or canopy shall be adequately protected to prevent tampering, damage by vehicles or other hazards and shall be located in an approved location. Containers shall be securely fastened in place to prevent unauthorized movement.
- Electrical cooking and heating equipment shall be in accordance with the California Electrical Code.

13. Where should generators be located?

- Generators and other internal combustion power sources shall be separated from temporary membrane structures, tents and canopies by a minimum of 20 feet and be isolated from contact with the public by fencing, enclosure or other approved means.

14. What kind of housekeeping is necessary?

- Combustible vegetation shall be removed from the area occupied by a temporary membrane structure, tent or canopy and from areas within 30 feet of such structures.
- Hay, straw and similar combustible materials shall not be stored inside or within 30 feet of a temporary membrane structure, tent or canopy being used for cooking or public assembly.
Exception: Hay, straw and similar combustible materials treated with a flame retardant in an approved manner.

- The floor surface inside a temporary membrane structure, tent or canopy and the grounds outside and within a 30 foot perimeter shall be kept clear of combustible waste. Such waste shall be stored in approved containers until removed from the premises.