



**Lake Havasu City Fire Department
Fire Prevention Bureau**

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FD Specification #11 **2018 IFC, Ch. 5, 10, 31**
Tents, Special Event Structures & Other Membrane Structures

Rev. 9/01/2021
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PURPOSE

To provide information regarding requirements for obtaining a permit, for erecting, and occupying tents and other membrane structures.

SCOPE

This specification contains the minimum requirements to erect tents, canopies, large groupings of portable shelters and other membrane structures. The Fire Marshal (FM) may determine the need for additional requirements, or may approve alternate methods of compliance with this standard.

All tents and membrane structures must comply with **IFC Ch. 31 *Tents and Other Membrane Structures***. Where tents are used for public assembly, see also **IFC Ch. 10, *Means of Egress***. The provisions of IFC [§3103](#) are applicable only to temporary tents and membrane structures. The provisions of IFC [§3104](#) are applicable to both temporary and permanent tents and membrane structures.

DEFINITIONS

AIR-INFLATED STRUCTURE - A structure that uses air-pressurized membrane beams, arches or other elements to enclose space. Occupants of such a structure do not occupy the pressurized areas used to support the structure.

AIR-SUPPORTED STRUCTURE - A structure wherein the shape of the structure is attained by air pressure and occupants of the structure are within the elevated pressure area. Air supported structures are of two basic types; double skin and single skin.

CANOPY - A structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration, and may be structurally independent or supported by attachment to a building on one end and by not less than one stanchion on the outer end.

MEMBRANE STRUCTURE - An air-inflated, air-supported, cable or frame-covered structure as defined by the *International Building Code (IBC)* and not otherwise defined as a tent. See Chapter 31 of the *IBC*.

PORTABLE SHELTER - (herein referred to as a shelter) – Includes tents not exceeding 400 square feet, and other enclosures or temporary membrane structures which are not subject to compliance with IFC Ch. 31.

TEMPORARY STRUCTURE – Any enclosure or shelter constructed of materials as described in IFC Chapter 31 and erected for a period of less than 180 days.

TEMPORARY SPECIAL EVENT STRUCTURE – Any temporary ground-supported structure, platform, stage, stage scaffolding or rigging, canopy, tower supporting audio or visual effects equipment or similar structures not regulated within the scope of the IBC.

TENT - A structure, enclosure, or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported by any manner except by air or the contents that it protects.

UMBRELLA STRUCTURE - A structure, enclosure or shelter with or without sidewalls or drops, constructed of fabric or pliable material supported by a central pole or poles.

PERMITS & DOCUMENTS

1. A fire department construction permit is required to erect an air-supported temporary membrane structure or a tent having an area in excess of 400 square feet. Some exceptions exist. See below. A fee will be charged for this inspection.

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Tents open on all sides, which comply with all of the following:
 - 2.1. Individual tents having a maximum size of 700 square feet.
 - 2.2. The aggregate area of multiple tents placed side by side without a firebreak clearance of 12 feet, not exceeding 700 square feet total.
 - 2.3. A minimum clearance of 12 feet to all structures and other tents.
2. Permanent structures require a permit from the **LHC Community Services Department**.
 1. **Permit Process and Time Frame:** In order to process your application or request for service within 72 hours from the date of submittal, the FM requests that all information and any necessary attachments be included. Call Fire Prevention Administration with any questions at (928) 855-1141 or visit <https://www.lhcaz.gov/fire-department>. To view a Lake Havasu City Fire Department (LHCFD) Tent Permit Application, open the hyperlink below: <https://www.lhcaz.gov/docs/default-source/department-documents/tentpermitapplication.pdf?sfvrsn=5>
3. At this time, an operational permit is not required but may be required in the future.
4. The following information is required to erect a tent having an area in excess of 400 square feet, unless excepted, or an air-supported temporary membrane structure:
 - a. An inspection report must be provided and consist of maintenance, anchors and fabric inspections when required by the FM.
 - b. Provide an accurate scaled and dimensioned site diagram indicating distances of tents or temporary membrane structures to buildings; access drives, parking areas, other tents or canopies, equipment, property lines, and roadways.
 - c. A detailed site and floor plan for tents or membrane structures with an occupant load of 50 or more must be provided with each application for approval. The tent or membrane structure floor plan shall indicate details of the *means of egress* facilities, seating capacity, arrangement of the seating and location and type of heating and electrical equipment.
 - d. A floor plan showing the following:

1. Proposed seating arrangements.
 2. Locations and dimensions of tables.
 3. Locations and types of all other interior obstacles.
 4. Exit locations; dimensions required.
 5. Locations of all emergency exit pathways to be maintained.
 6. Locations of NO SMOKING signs.
 7. Locations and type of emergency lighting, including proposed power source(s).
 8. Locations and types of EXIT signs.
- e. Dimensions for all tents, canopies, and membrane structures.
 - f. A statement, which identifies the intended use of all structures, and the dates for which the permit is required.
 - g. Specific areas for parking of vehicles shall be detailed on the site plan.
 - h. Flame retardant certificate(s) for the tent/canopy material.
 - i. Location of portable fire extinguishers.
 - j. Type of floor surface proposed inside tent or canopy.
 - k. Location and width of all-weather fire access roadways.
 - l. Locations of any additional emergency equipment such as hose-lines or emergency power supplies.
 - m. A statement, which indicates the proposed use of any heating and/or cooking equipment, or open flame devices, in conjunction with the event.

A statement that discloses the proposed maximum occupant load. Maximum occupant load signs must be posted when the design occupancy load exceeds 49 occupants.

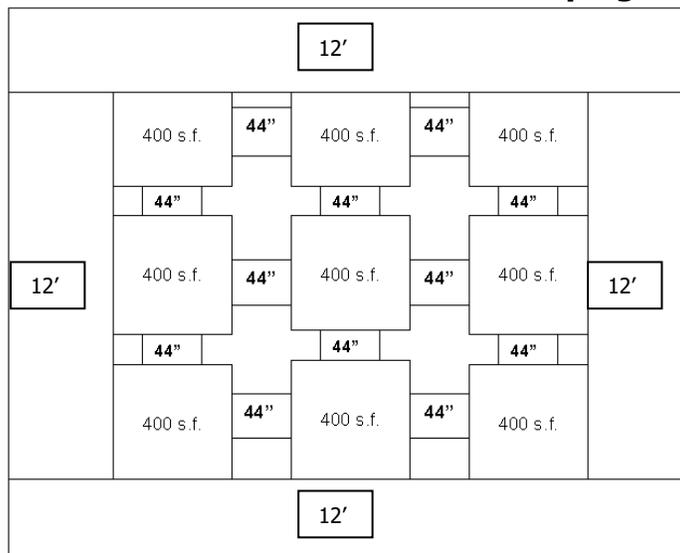
PORTABLE SHELTERS

Generally, shelters do not require a Fire Department permit. However, each shelter or grouping of shelters must maintain a safe and reasonable minimum separation distance from buildings, fences, walls, property lines, and other shelters by not less than 44 inches when the area of the shelters exceeds the regulated tent size (400 square feet).

In situations where clearances between shelters are less than 44 inches, the sum of the total area of shelters shall be considered as one contiguous shelter. Combined shelters without the required minimum separation distances are considered to be tents or canopies, subject to permits, and must meet permit conditions in compliance with this specification.

Where combined shelters are erected, the total shelter area may not exceed 5,000 square feet without including a minimum perimeter separation distance of at least 12 feet around the perimeter of the area served. Complex, combined shelter installations are subject to review and approval of the FM on a case-by-case basis (See EXHIBIT 1).

EXHIBIT 1
Maximum Area Density For
Combined Portable Shelter Groupings



Example of a Combined Portable Shelter Grouping

Shelters are **not** required to possess flame retardant certificates for the tent material indicating approved flame retardant certification. However, where regulated, combined portable shelters must be of an approved construction type and approved by the FM.

CODE REQUIREMENTS:

All regulated tents and other membrane structures must meet the requirements contained within the **2018 IFC Ch. 31**. Where conflicts occur within the fire code, the most stringent requirements shall prevail.

All temporary tents and membrane structures must comply with the provisions of **IFC §3103**.

All tents and membrane structures must comply with the provisions of **IFC §3104**.

All temporary special event structures must comply with the provisions of **IFC §3105**.

All outdoor assembly events must comply with the provisions of **IFC §3106**.

All operational requirements must comply with the provisions of **IFC §3107**.

All regulated tents and other membrane structures used for a place of assembly, must also meet the requirements contained within the **2012 IFC Ch. 10 Means of Egress**.

Fire apparatus access roads must be provided in accordance with **IFC §503 Fire Apparatus Access Roads**.

REFERENCES

2018 IFC Ch. 31 *Tents, Temporary Special Event Structures and Other Membrane Structures*

2018 IFC Ch. 10 *Means of Egress*

2018 IFC Ch. 5, §503 *Fire Apparatus Access Roads*

