

FIRE & LIFE SAFETY CODE REQUIREMENTS FOR OUTDOOR TEMPORARY STRUCTURES

The following requirements shall be complied with for outdoor temporary structures that are **400 square feet or larger**. Temporary structures that are **less than 400 square feet** shall not be required to submit a temporary structure permit.

1) Structures:

- For any individual **tents, canopies or stages over four hundred (400) square feet**, a floor plan is required that shows the following:
 - The intended use (i.e., dining, sales, display, etc.).
 - The number, size, and locations of egress points from the tent.
 - Indicate exits that are required to have exit lights and emergency lighting.
 - The number, type and locations of portable fire extinguishers.
 - A copy of the flame certificate is to be provided.
 - Anchoring details are to be provided, which must meet the manufacturer's requirements.
- Any **overhead truss assembly** will require a Texas registered structural engineer to certify the truss assembly before use. Any expense incurred for the engineer survey will be the responsibility of the group having the truss assembly constructed.
- Tents, stages, truss assemblies and membrane structures requiring anchors to be driven into the ground must first have the area surveyed and marked for underground utilities. You must contact Texas811, UTA Office of Information Technology (OIT) and UTA Office of Facilities Management (OFM).
- Tents, canopies, stages, truss assemblies and membrane structures shall not be located within 20 feet of buildings, other tents, canopies, stages, truss assemblies or membrane structures, parked vehicles or internal combustion engines, unless approved by the UTA Fire Safety Coordinator.
- For the purpose of determining required distance, support ropes and guide wires shall be considered as part of the tent, canopy, stage, truss assembly or membrane structure.
- A safety rail is required along the sides and back of stages located more than 30" above the adjacent grade or floor.
- Occupant load shall not exceed the load limit set by the engineer or manufacturer.
- Stages shall be ADA compliant for access from ground grade to the stage deck.
- ADA compliant ramps will be considered part of the stage structure and be subject to the same ANSI and NFPA codes and inspection.

2) All the following requirements and/or restrictions are set forth in the American National Standards Institute (ANSI), Standard E1.21, Temporary Structures Used for Technical Production of Outdoor Entertainment Events (2020 version) and National Fire Protection Association (NFPA 101), Life Safety Code (2018 Edition).

3) Exits and Aisles (Means of Egress):

- Exits shall be spaced at approximately equal intervals around the perimeter of the tent or membrane structure and shall be located such that all points are 100 feet or less from an exit.
- Exit openings from tents: Exit openings from tents shall remain open unless covered by a flame-resistant curtain. Curtains shall be permitted across means of egress openings in tent walls, if all the criteria are met:
 - They are distinctly marked in contrast to the tent wall to be recognized as a means of egress.
 - They are installed across an opening that is at least 6 ft. in width.
 - They are hung from slide rings or equivalent hardware to be readily moved to the side to create an unobstructed opening in the tent wall that is of the minimum width required for door openings.
- Glass doors may be used for egress doors in place of curtains and shall provide a minimum opening of 72" per each egress opening.

- Doors shall swing in the direction of egress and have an opening force not exceeding 30 pounds.
 - The width of aisles without fixed seating shall be in accordance with the following:
 - In areas serving employees only, the minimum aisle width shall be 24 inches but not less than the width required by the number of employees served.
 - In public areas, smooth-surfaced unobstructed aisles having a minimum width of not less than 44 inches shall be provided from seating areas, and aisles shall be progressively increased in width to provide, at all points, not less than 1 foot of aisle width for each 50 persons served by such aisle at that point.
- Arrangement and maintenance. The arrangement of aisles shall be subject to approval by the fire code official and shall always be maintained clear during occupancy.
- Maintenance of means of egress. The required width of exits, aisles and passageways shall always be maintained to a public way. Guide wires, guide ropes and other support members shall not cross a means of egress at a height of less than 8 feet. The surface of means of egress shall be maintained in an approved manner.
- Tents or membrane structures, or a usable portion thereof, shall have at least one exit and not less than the number of exits required by ICC Chapter 24, Section 2403, Table 2403.12.2. 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 inches (5 mm) per person.

**TABLE 2403.12.2 MINIMUM NUMBER OF MEANS OF EGRESS AND
MEANS OF EGRESS WIDTHS FROM TEMPORARY MEMBRANE STRUCTURES AND TENTS
(International Code Council Chapter 24, Section 2403)**

OCCUPANT LOAD	MINIMUM NUMBER OF MEANS OF EGRESS	MINIMUM WIDTH OF EACH MEANS OF EGRESS (inches)	MINIMUM WIDTH OF EACH MEANS OF EGRESS (inches)
		Tent	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

* When the occupant load exceeds 3,000, the total width of means of egress (in inches) shall not be less than the total occupant load multiplied by 0.2 inches per person.

4) Exit signs and exit illumination:

- Exits shall be clearly marked. 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 shall be either listed and labeled in accordance with [UL 924](#) as the internally illuminated type and used in accordance with the listing or shall be externally illuminated by luminaries supplied in the following manner:
 - Two separate 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 an approved emergency system, shall be provided when the occupant load exceeds 300. Emergency systems shall be supplied from the on-site generator set, and the system shall be installed in accordance with [NFPA 70](#). The emergency system provided shall have a minimum duration of 90 minutes when operated at full design demand.
- Means of egress shall be illuminated with light having an intensity of not less than 1 foot-candle (11 lux) at floor level while the structure is occupied. Fixtures required for means of egress illumination shall be supplied from a separate circuit or source of power.

5) Fire Safety:

- Before a permit is granted, the owner or agent shall file with the fire code official a certificate executed by an approved testing laboratory certifying that the tents and membrane structures and their appurtenances; sidewalls, drops and tarpaulins; floor coverings, bunting and combustible decorative materials and effects, including sawdust when used on floors or passageways, are composed of material meeting the flame propagation performance criteria of [NFPA 701](#) or shall be treated with a flame retardant in an approved manner and meet the flame propagation performance criteria of [NFPA 701](#), and that such flame propagation performance criteria are effective for the period specified by the permit.
- All membrane structures and tents shall have a permanently affixed label bearing the identification of size and fabric or material type.
- Hay, straw, shavings or similar combustible materials shall not be located within any tent or membrane structure containing assembly occupancy, except the materials necessary for the daily feeding and care of animals. Sawdust and shavings utilized for a public performance or exhibit shall not be prohibited provided the sawdust and shavings are kept damp. Combustible materials shall not be permitted under the stands or seats at any time.
- Open flame or other devices emitting flame, fire or heat or any flammable or combustible liquids, gas, charcoal or other cooking device or any other unapproved devices, shall not be permitted inside or located within 20 feet of the tent or membrane structures while open to the public unless approved by the fire code official.
- Spot or effect lighting shall only be by electricity, and all combustible construction located within 6 feet of such equipment shall be protected with approved noncombustible insulation not less than 9¹/₄ inches thick.
- Motion pictures shall not be displayed in tents or membrane structures unless the motion picture film is safety film.

6) Cooking:

- Cooking and heating equipment shall not be located within 10 feet of exits or combustible materials.
- Cooking Operations - Operations such as warming of foods, cooking demonstrations and similar operations that use solid flammables, butane or other similar devices which do not pose an ignition hazard, shall be approved.
- Cooking tents - Tents with sidewalls or drops where cooking is performed shall be separated from other tents or membrane structures by a minimum of 20 feet.
- Outdoor cooking - Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet of a tent or membrane structure.
- Electrical heating and cooking equipment - Electrical cooking and heating equipment shall comply with [NFPA 70](#).

7) Liquid Propane and other flammable liquids:

- LP-gas containers shall be located outside. Safety release valves shall be pointed away from the tent or membrane structure.
- Portable LP-gas containers with a capacity of 500 gallons (1893 L) or less shall have a minimum separation between the container and structure not less than 10 feet.
- Portable LP-gas containers with a capacity of more than 500 gallons (1893 L) shall have a minimum separation between the container and structures not less than 25 feet.
- Portable LP-gas containers, piping, valves and fittings, which are located outside and are being used to fuel equipment inside a tent or membrane structure, shall be adequately protected to prevent tampering, damage by vehicles or other hazards and shall be in an approved location. Portable LP-gas containers shall be securely fastened in place to prevent unauthorized movement.

8) Generators and other internal combustion power sources:

- Flammable-liquid-fueled equipment shall not be used in tents or membrane structures.
- Flammable and combustible liquids shall be stored outside in an approved manner not less than 50 feet from tents or membrane structures.

- Equipment must be separated from tents or membrane structures by a minimum of 20 feet and must be isolated from contact with the public by fencing, enclosure or other approved means.
 - Refueling shall be performed in an approved location not less than 20 feet from tents or membrane structures.
- 9) The applicant must ensure a copy of the permit and approved load limit is available and posted at a clearly visible location on the stage or at the site for the duration of the use of the equipment. All paperwork from the engineer certifying the tent, stage and/or truss assemblies must be available for review by the UTA Fire Safety Coordinator.

NOTE: Motor vehicles shall not be displayed in tents without the approval of the UTA Fire Safety Coordinator.

Additional requirements may be deemed necessary by the UTA Fire Safety Coordinator on a case-by-case basis.

Definitions: (NFPA 101, Life Safety Code 2018 Edition)

3.2.2 * Authority Having Jurisdiction (AHJ).

An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.3.178 * Means of Egress.

A continuous and unobstructed way of travel from any point in a building or structure to a public way consisting of three separate and distinct parts: (1) the exit access, (2) the exit, and (3) the exit discharge. (SAF-MEA)

3.3.274 Stage.

A space within a building used for entertainment and utilizing drops or scenery or other stage effects. (SAF-AXM)

3.3.274.1 Legitimate Stage.

A stage with a height greater than 50 ft. (15 m) measured from the lowest point on the stage floor to the highest point of the roof or floor deck above. (SAF-AXM)

3.3.274.2 Regular Stage.

A stage with a height of 50 ft. (15 m) or less measured from the lowest point on the stage floor to the highest point of the roof or floor deck above. (SAF-AXM)

3.3.289 * Tent.

A temporary structure, the covering of which is made of pliable material that achieves its support by mechanical means such as beams, columns, poles, or arches, or by rope or cables, or both. (SAF-IND)

3.3.170.2 Occupant Load.

The total number of persons that might occupy a building or portion thereof at any one time. (SAF-MEA)

3.3.282.5 Membrane Structure.

A building or portion of a building incorporating an air-inflated, air-supported, tensioned-membrane structure; a membrane roof; or a membrane-covered rigid frame to protect habitable or usable space. (SAF-IND)

3.3.86 * Exit.

That portion of a means of egress that is separated from all other spaces of the building or structure by construction, location, or equipment as required to provide a protected way of travel to the exit discharge. (SAF-MEA)