



TEMPORARY TENT OR CANOPY APPLICATION - FEE \$147.00

Dates and times of permitted use: Date of tent removal:

Tent/canopy provider company:

Tent/canopy applicant name: Phone Number:

Tent/canopy applicant e-mail:

Tent/canopy provider address:

Event name: Type/Nature of event:

Location of event:

How many people are expected at this event?

Emergency contact name: 24-Hour emergency contact phone:

TYPE OF TEMPORARY STRUCTURE (check if tent or canopy)

Table with 5 columns: Tent, Canopy, Other, Size, Quantity. It contains four rows for data entry.

TEMPORARY STRUCTURE WILL BE USED FOR: CHECK ANY THAT APPLY

Table with 5 columns: Sales of Merchandise*, Public Assembly**, Vendor/Employees only, Other, Quantity. It contains three rows for data entry.

SPECIAL REQUIREMENTS APPLY WHEN USING SOLID, LIQUID OR GAS FUEL

*If the temporary structure is erected to house merchandise for sale, an additional "outdoor sales" permit is required and can be obtained by contacting Stanislaus County Tax Collectors office at 209-525-6388

**Occupant load and seating arrangement to be included with application

All aspects of the California Fire Code Chapter 31, California Code of Regulations Title 19 Division 1 Chapter 3 relating to tents shall be complied with. Including regulations listed in the "Tent-Canopy requirements" for Stanislaus County.

APPLICATION status:

APPROVED pending field inspection: Tent(s) may be set up. Call 552-3700 for inspection. Permit will be issued after inspection has been completed and fire permit is granted.

DENIED (reason for denial)

Fire Inspector: printed name

Signature

Date of permit issuance:

Date permit EXPIRES



Requirements for Tents, Canopies or Other Temporary Membrane Structures

*Listed below are the basic information requirements to complete a Stanislaus County Fire Prevention Bureau plan review.
Not all items may pertain to your project.*

1. The permit application shall be received by the Stanislaus County Fire Prevention Bureau at least seven calendar days prior to the expected erection of the structure.
2. A site plan/diagram showing all structures at location, parking lots, fire access, to scale or fully dimensioned, to include the site address and the application fee.
3. Plans showing occupant load of each canopy or tent with seating arrangements and exiting plan
4. The tent **shall not** be erected until the application has been approved.
5. A twenty (20) foot fire access roadway must be maintained around the tent. This roadway must be outside of the support wires (ropes) and guy wires to the tent.
6. All vehicle parking and other internal combustion engines must be at least twenty (20) feet from the tent.
7. All property lines, buildings, other tents, canopies or temporary membrane structures must be at least twenty (20) feet from the tent support wires (ropes) and guide wires.
8. An approved twenty (20) foot fire lane must be provided around the venue. This fire lane must connect with the fire lane required around the tent. Provide a proposed fire lane layout to the fire department for approval **prior** to setup.
9. All exits to the tent must remain open when any members of the public are inside the tent.
10. Illuminated exit signs are required at each exit while the tent is occupied. These exit signs must be powered by two (2) separate sources of power.
11. Provide a diagram indicating the proposed occupant load for each seating section in the tent. Identify those areas with fixed seating (i.e. benches) and those areas with portable seating (i.e. chairs).
12. Fire extinguishers of a 2A:10BC rating shall be provided every seventy-five (75) feet of travel distance.
13. Heating and cooking equipment shall not be located within ten (10) feet of exits, aisles, or passageways or combustible materials.
14. All weeds and vegetation shall be removed from under the tent and within fifty (50) feet from the outside of the tent.
15. Hay, straw, trash and other flammable material cannot be stored closer than fifty (50) feet from the outside of the tent.
16. All other provisions of the current California Fire Code and local ordinances will apply to the project.
17. A representative from the company or person erecting the tent **must** be present at the time of inspection.
18. Tent must be Fire Marshal approved and listed by California State.
19. Project to abide by "Selected Tent Regulations" following this page.

SELECTED TENT REGULATIONS

General

All aspects of the California Fire Code relating to tents shall be complied with. The regulations included on this handout are only a sample of the regulations affecting tents. See the California Fire Code (especially Chapter 31) for the complete list.

All aspects of the California Fire Code relating to liquefied petroleum gas (LPG) shall be complied with. The regulations included on this handout are only a sample of the regulations affecting LPG. See the California Fire Code (especially Chapter 61) for the complete list.

Note: Canopies are now called tents. They are tents with no sidewalls or drops.

These regulations apply to any tent in which 10 or more people may gather. (See CFC 3101.1 for several exceptions.)

A tent shall not be erected until a Tent Permit application has been approved by the Fire Prevention Bureau.

Food Vending Events

Food vendors at public events desiring to use cooking equipment fueled by LPG (e.g. propane, butane) must obtain a Food Vendor Permit from the Fire Prevention Bureau. (This does not apply to self-propelled motor vehicles containing cooking equipment fueled by LPG.)

Food vendors at public events using charcoal fueled or electrically powered cooking equipment do not need a Food Vendor Permit from the Fire Prevention Bureau. However, they may need a Tent Permit.

The event organizer will submit a list of food vendors and a copy of their current Food Vendor Permit to the Fire Prevention Bureau.

Food vendors wishing to use LPG who do not have a current Food Vendor Permit must submit a Food Vendor Permit application to the Fire Prevention Bureau at least seven full calendar days before the day of the event. Food vendors who do not have a current Food Vendor Permit issued BEFORE the day of the event will not be allowed to use LPG during the event.

Tent Permits

Tents and membrane structures having an area in excess of 400 square feet shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official. For exceptions refer to CFC 3103.2

The Tent Permit application fee shall be paid at time of submittal.

The Tent Permit application shall be received by the Fire Prevention Division at least fourteen (14) calendar days before the expected erection date of the tent. It shall include a site diagram, drawn to scale or fully dimensioned, showing all lot lines, streets, alleys, buildings, fire-fighting equipment (such as fire sprinkler risers, fire hydrants, FDC's, and PIV's), and other fixed objects on the site. It shall also show all aisles, doors, tables, displays, and other fixtures inside the tent.

In addition to the above, if there will be persons seated in the tent provide a diagram stating the proposed occupant load for any seating areas in the tent. Show all fixed seating (e.g. benches) and portable seating (e.g. chairs). If there will be dancing show the dance floor area drawn to scale on the diagram and include the expected maximum number of persons dancing.

A representative from the company or person erecting the tent must be present at time of tent

inspection.

Fire Apparatus Access Roads

An unobstructed fire engine access roadway must be maintained around and/or through all tent areas. It shall be a minimum of twenty (20) feet wide and unobstructed vertical clearance of not less than 13 feet and 6 inches. This width is measured outside the support wires (ropes) supporting the tent. More than one access road may be needed. CFC 503.2.1, 503, CFC Appendix D

Fire apparatus access roads shall be provided in accordance with Section 503.

Tent Distances (general requirements)

Tents or membrane structures shall not be located within 20 feet (6096 mm) of lot lines, buildings, other tents or membrane structures, parked vehicles or internal combustion engines. For the purpose of determining required distances, support ropes and guy wires shall be considered as part of the temporary membrane structure or tent.

Exceptions:

1. Separation distance between membrane structures and tents not used for cooking is not required where the aggregate floor area does not exceed 15,000 square feet (1394 m²).
2. Membrane structures or tents need not be separated from buildings where all of the following conditions are met:
 - 2.1. The aggregate floor area of the membrane structure or tent shall not exceed 10,000 square feet (929 m²).
 - 2.2. The aggregate floor area of the building and membrane structure or tent shall not exceed the allowable floor area including increases as indicated in the California Building Code.
 - 2.3. Required means of egress are provided for both the building and the membrane structure or tent including travel distances.
 - 2.4. Fire apparatus access roads are provided in accordance with Section 503.
3. When approved by the enforcing agency, tents may be located in or on permanent buildings provided such use does not constitute an undue hazard.

Fire Break CFC 3103.8.6

An unobstructed fire break passageway or fire road not less than 12 feet (3658 mm) wide and free from guy ropes or other obstructions shall be maintained on all sides of all tents and membrane structures unless otherwise approved by the fire code official.

Water-Filled Vessels CFC 3103.9.4

Water-filled vessels shall not be used to anchor a tent or membrane structure unless approved and in accordance with the tent or membrane structure manufacturer's instructions.

Exiting CFC 3103.12.3

Exit openings from tents shall remain open unless covered by a flame-resistant curtain. The curtain shall comply with the following requirements:

Curtains shall be free sliding on a metal support. The support shall be not less than 80 inches (2032 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.

Curtains shall be of a color, or colors, that contrasts with the color of the tent.

Means of Egress

1. Means of egress for temporary tents and membrane structures shall be in accordance with Sections 3103.12.1 through 3103.12.8.
2. 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 (30 480 mm) or less from an exit.
3. Tents or membrane structures or a usable portion thereof shall have not less than one exit and not less than the number of exits required by Table 3103.12.2. The total width of means of egress in inches (mm) shall be not less than the total occupant load served by a means of egress multiplied by 0.2 inches (5 mm) per person.

TABLE 3103.12.2
MINIMUM NUMBER OF MEANS OF EGRESS AND MEANS OF EGRESS WIDTHS FROM
TEMPORARY MEMBRANE STRUCTURES AND TENTS

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 ^a	7	120	96

For SI: 1 inch = 25.4 mm.

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

Doors CFC 3103.12.4

Exit doors shall swing in the direction of exit travel. To avoid hazardous air and pressure loss in air-supported membrane structures, such doors shall be automatic closing against operating pressures. Opening force at the door edge shall not exceed 15 pounds.

Aisle CFC 3103.12.5

The arrangement of aisles shall be subject to approval by the fire code official and shall be maintained clear at all times during occupancy.

The width of aisles without fixed seating shall be in accordance with the following:

1. 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.
2. 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.

Exit Signs CFC 3103.12.6

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

Exit Sign Illumination CFC 3103.12.6.1

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 luminaires supplied in either of the following manners:

Two separate circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less.

Two separate sources of power, one of which shall be an approved emergency system, shall be provided where the occupant load exceeds 300. Emergency systems shall be supplied from storage batteries or from the on-site generator set, and the system shall be installed in accordance with *the California Electrical Code*. The emergency system provided shall have a minimum duration of 90 minutes when operated at full design demand.

Means of Egress Illumination and Maintenance

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. CFC 3103.12.7

The required width of exits, aisles and passageways shall be maintained at all times to a public way. Guy wires, guy ropes and other support members shall not cross a means of egress at a height of less than 8 feet (2438 mm). The surface of means of egress shall be maintained in an approved manner. CFC 3103.12.8

Tent Material CFC 3104.1

Tents and membrane structures, both temporary and permanent, shall be in accordance with this section and Sections 3106 and 3107. Permanent tents and membrane structures shall also comply with the *California Building Code*.

Existing Membrane Structures and Other (Large) Existing Tents. *California Code of Regulations, Title 19, Division 1, §341*

Existing membranes of membrane structures and large (10 or more capacity) existing tents may continue to be used provided evidence of satisfactory flame resistance is available to the enforcing authority. Such evidence may be in the form of certification that the fabric passes the standard small scale flame resistance test as set forth in California Code of Regulations, Title 19, Division 1, Chapter 8 regulations or through passage of effective field tests.

Abatement of Fire or Panic Hazards. *California Code of Regulations, Title 19, Division 1, §321*

Any condition that presents a fire hazard, would contribute to the rapid spread of fire, interfere with the rapid exit of persons from the tents, or interfere with or delay the extinguishment of a fire, shall be immediately corrected as ordered by the enforcing authority.

Flame Resistance Standards. *California Code of Regulations, Title 19, Division 1, §315.(a)*

- a. *All tent fabrics and all interior decorative fabrics or materials shall be flame resistant in accordance with appropriate standards set forth in California Code of Regulations, Title 19, Division 1, Chapter 8.*

Tent tops and sidewalls shall be made either from fabric which has been flame resistant treated with an approved exterior chemical process by an approved application concern, or from inherently flame-resistant fabric approved and listed by the State Fire Marshal.

Flame Resistance. *California Code of Regulations, Title 19, Division 1, §332.(a)*

- a. *All tents manufactured for sale, sold, rented, offered for sale or used in California shall be made from nonflammable material or one of the following flame-resistant fabrics or material approved by the State Fire Marshal:*
- 1. Fabrics complying with the State Fire Marshal's requirements for flame resistance for exterior use, as set forth in California Code of Regulations, Title 19, Division 1, Chapter 8, or*
 - 2. Fabrics complying with the flame-resistance requirements set forth in "A Specification for Flame-Resistance Materials Used in Camping Tentage" published in 1975 by Canvas Products Association International, hereinafter referred to as CPAI-84.*

Exceptions:

- 1. Tents used for committal services at cemeteries.*
- 2. Tents or similar fabric enclosures used within a sound stage or equivalent enclosure equipped with an overhead automatic fire extinguishing system.*

Flame Propagation Performance Testing and Certification CFC 3104.2

Before a permit is granted, the owner or agent shall file with the fire code official a certificate provided by the product manufacturer to verify that the materials have been tested and certified by an approved testing laboratory. The certificate shall indicate that the floor coverings, tents, membrane structures and their appurtenances, which include sidewalls, drops and tarpaulins, are composed of materials meeting the flame propagation performance of Test Method 2 of NFPA 701. Additionally, it shall indicate that the bunting and combustible decorative materials and effects are composed of material meeting the flame propagation performance criteria of Test Method 1 or Test Method 2 of NFPA 701, as applicable. Alternatively, the materials shall be treated with a flame retardant in an approved manner and meet the flame propagation performance criteria of the applicable test method of NFPA 701. The certificate shall indicate compliance with the testing requirements of NFPA 701, Chapter 16. The flame propagation performance criteria shall be effective for the period specified by the permit.

Label CFC 3104.3

Membrane structures or tents shall have a permanently affixed label bearing the following information:

1. The identification of size and fabric or material.
2. The names and addresses of the manufacturers of the tent or air-supported structure.
3. A statement that the fabric or material meets the requirements of Section 3104.2.
4. If treated, the date the fabric or material was last treated with flame-retardant solution, the trade name or kind of chemical used in treatment, name of person or firm treating the fabric or material, and name of testing agency and test standard by which the fabric or material was tested.
5. If untreated, a statement that no treatment was applied when the fabric or material met the requirements of Section 3104.2.

Requirements Pertaining to All Tents. California Code of Regulations, Title 19, Division 1, §334. All tents manufactured for sale in California shall be labeled in accordance with the appropriate provisions of California Code of Regulations, Title 19, Division 1, Section 335.

Labeling of Tents. California Code of Regulations, Title 19, Division 1, §335.(a) and (b)

- a. Each section of top and sidewall in large tents shall have a durable label, permanently affixed, bearing the following information:
 - 1. The Seal of Registration.
 - 2. If treated fabric, the name and registration number of the approved application concern and approved chemical used, and the date of treatment.
 - 3. If registered fabric, the trade name and registration number of the approved fabric, and the date of production.
 - 4. In lieu of attached labels, the required information may be applied directly to the fabric by print, stamp or stencil.

- b. Small tents shall have a permanently affixed label bearing the information in California Code of Regulations, Title 19, Division 1, Section 335, subsection (a), or shall comply with the provisions specified in CPAI-84 (1975) which reads as follows:
 - 1. Certification. A statement that the materials used in the manufacture of the item meet the flame resistance requirements of CPAI-84.
 - 2. Manufacturer Identification. An identification of the manufacturer of the item. If the item bears a private label, it shall identify the private labeler and shall also contain a code mark which will permit the seller of the item to identify the manufacturer to the purchaser upon request.
 - 3. Code Number. A number enabling the manufacturer to identify from his records the suppliers and suppliers' lot numbers of the certified materials used in the item. The manufacturer shall also maintain records identifying the parties to whom he sold camping tentage. Further, he shall maintain records identifying items manufactured from lots of certified material. Records shall be maintained for four (4) years.
 - 4. Warning label.

24 pt. type

WARNING

16 pt. type

**KEEP ALL FLAME
AND HEAT SOURCES
AWAY FROM THIS
TENT FABRIC**

This tent is made with flame-resistant fabric which meets CPAI-84 specifications. It is not fire proof. The fabric will burn if left in continuous contact with any flame source. 12 pt. type

The application of any foreign substance to the tent fabric may render the flame resistant properties ineffective. 12 pt. type

- c. This warning label or its equivalent must be permanently affixed to the tent at one conspicuous location, and must block letters on a white background. The first paragraph of the body of the label must be placed in a conspicuous location on each carton containing the tent.

Fire Extinguishers CFC 3105.9, CFC 906.

A minimum of one 2A10BC rated fire extinguisher or larger (such as 3A40BC) shall be provided for each tent. (California Fire Code)

Inside a larger tent, a fire extinguisher shall be accessible within seventy-five (75) feet of travel distance. (California Fire Code)

A K-class rated wet chemical fire extinguisher shall be provided for deep-fat fryers. (California Fire Code)

Each fire extinguisher must be serviced annually or after it has been used whichever occurs first. (There must be a current State Fire Marshal maintenance tag attached to the extinguisher or a fire extinguisher sales receipt dated within the last twelve [12] months or a label on the fire extinguisher indicating that the extinguisher was manufactured within the last twelve [12] months.) (CCR, Title 19, Division 1, Chapter 3)

Cooking Appliances or Devices CFC 3106.5

Outdoor assembly events with concession stands or booths using cooking appliances or devices shall comply with Sections 3106.5.1 through 3106.5.3.

Heating and cooking equipment shall be in accordance with Sections 3107.12.1 through 3107.12.7.

Heating or cooking equipment, tanks, piping, hoses, fittings, valves, tubing and other related components shall be installed as specified in the *International Fuel Gas Code* and the California Mechanical Code, and shall be approved by the fire code official. CFC 3107.12.1

Cooking and heating equipment shall not be located within 10 feet of *exits* or combustible materials.

Cooking Tents - Tents with sidewalls or drops where cooking is performed shall be separated from other tents or membrane structures by not less than 20 feet. CFC 3107.12.5

Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet (6096 mm) of a tent or membrane structure. CFC 3107.12.6

Venting CFC 3107.12.2

Gas, liquid and solid fuel-burning equipment designed to be vented shall be vented to the outside air as specified in the *International Fuel Gas Code* and the *California Mechanical Code*. Such vents shall be equipped with *approved* spark arresters where required. Where vents or flues are used, all portions of the tent or membrane structure shall be not less than 12 inches (305 mm) from the flue or vent.

Separation from Tents or Structures CFC 3106.5.1

Cooking appliances or devices that produce sparks or grease-laden vapors or flying embers (firebrands) shall not be used within 20 feet (6096 mm) of a tent or temporary structure.

Exceptions:

1. Designated cooking tents not occupied by the public when approved by the fire code official.
2. Tents or structures where cooking appliances are protected with an automatic fire-extinguishing system in accordance with Section 904.13.

Protection CFC 3106.5.2

Cooking equipment using combustible oils or solids shall meet the following:

A noncombustible lid shall be immediately available. The lid shall be of sufficient size to cover the cooking well completely.

The equipment shall be placed on a noncombustible surface.

An approved portable fire extinguisher for protection from cooking grease fires shall be provided at a location approved by the fire code official.

Liquefied Petroleum Gas (LP-Gas). *California Code of Regulations, Title 19, Division 1, §325 Liquefied petroleum gas shall not be stored or used in connection with any tent unless the storage containers, equipment, fittings, appliances, placement, use and operation complies with the provisions of California Code of Regulations, Title 8, Article 5, Subchapter 1, Chapter 4.*

The use of liquefied petroleum gas (LP-gas) shall be in accordance with Chapter 61.

The storage, handling and use of LP-gas and LP-gas equipment shall be in accordance with Sections 3107.13.1 through 3107.13.3.

LP-gas equipment such as containers, tanks, piping, hoses, fittings, valves, tubing and other related components shall be approved and in accordance with Chapter 61 and with the *International Fuel Gas Code*. CFC 3107.13.1

LP-gas containers and tanks shall be located outside in accordance with Table 6104.3. Pressure relief devices shall be pointed away from the tent or membrane structure. CFC 3107.13.2

Portable LP-gas containers, tanks, piping, valves and fittings that 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 located in an approved location. Portable LP-gas containers shall be secured to prevent unauthorized movement. CFC 3107.13.3

Electrical Equipment and Wiring CFC 3106.6

Outdoor assembly events with concession stands or booths using electrical equipment and temporary wiring for electrical power or lighting shall comply with the applicable provisions of *the California Electrical Code* and Sections 3106.6.1 through 3106.6.3.

Electrical equipment and wiring shall be listed and labeled for outdoor use. CFC 3106.6.1

Generators CFC 3106.6.2

Generators shall be installed not less than 10 feet (3048 mm) from combustible materials, and shall be isolated from the public by physical guard, fence or enclosure installed not less than 3 feet (914 mm) away from the internal combustion power source.

Each generator shall be provided with an approved portable fire extinguisher complying with Section 906. CFC 3106.6.3

Weeds and Combustible Materials CFC 3107.2

All weeds, vegetation, hay, straw, sawdust, shavings, trash, litter, waste materials, and other combustible vegetation and materials shall be removed from under structures, tents, grandstands, bleachers, and rides.

(b) Sawdust, shavings or other combustible material used on the floor or ground shall be made flame resistant or when approved by the enforcing authority shall be kept adequately damp when tent is occupied.

(b) Hay, straw, trash and other similar flammable material shall be stored more than 50 feet from any tent except upon approval of the enforcing authority.

Exception: Tents to which the public is not admitted.

Smoking CFC 3107.3, CCR Title 19 Division 1 Section 316

Smoking is not permitted in any tent and in any adjacent areas where hay or other highly flammable materials are kept. "No Smoking" signs shall be conspicuously posted in all tents open to the public and wherever otherwise specified by the enforcing authority.

Open or Exposed Flame CFC3107.4

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 (6096 mm) of the tent or membrane structures while open to the public unless approved by the fire code official.

Fireworks and Open Flames. *California Code of Regulations, Title 19, Division 1, §317*
Fireworks, open flame or any device emitting flame or spark shall not be used in or immediately adjacent to any tent while open to the public, except when approved in writing by the enforcing authority.

Fireworks CFC 3107.5

Fireworks shall not be used within 100 feet (30 480 mm) of tents or membrane structures.

Spot Lighting CFC 3107.6

Spot or effect lighting shall only be by electricity, and all combustible construction located within 6 feet (1829 mm) of such equipment shall be protected with approved noncombustible insulation not less than 9¹/₄ inches (235 mm) thick.

Safety Film CFC 3107.7

Motion pictures shall not be displayed in tents or membrane structures unless the motion picture film is safety film.

Clearance CFC 3107.8

There shall be a clearance of not less than 3 feet (914 mm) between the fabric envelope and all contents located inside membrane structures.