

## **Temporary Tents and Membrane Structures**

### **North Carolina Fire Code 2018 Requirements**

For events on State owned properties involving the erection of tents, canopies, membrane structures, the *NC Fire Code 2018* requires the tents, canopies, membrane structures to be evaluated for fire and life safety and a permit issued. State Construction Office (SCO) is responsible for evaluation per *NC Fire Code 2018*, SCO shall issue a permit in the form of a signed approval letter or E-mail. SCO's approval acknowledges Code compliance and does not constitute an agreement for use of the space. That is obtained from the Department of Administration – Facility Management Division or the owning Agency/University. Tents, canopies, membrane structures permit on Community College campuses shall be obtained from local authority.

The following requirements apply for the erection of Tents, Canopies, Membrane structures:

1. Structure with sides over 800 square feet. *Section 3103.2.2*
2. Structure without sides over 1800 square feet, 75% to 100% open sides. *Section 3103.2.2*
3. Structures are to be certified as composed of flame resistance material or treated with flame retardant to meet flame propagation performance criteria of NFPA 701.
4. Structures with occupant load of 50 or more shall have detail Site and Floor Plans.
  - a. Site Plan:  
Show 20 feet wide fire lane and 20 feet from other structures, lot lines, building lines, parked vehicles, internal combustion engines etc.
  - b. Floor Plan:  
Show layout of tables, chairs, furniture, platform and equipment. A 44 inches wide clear aisle shall be maintained for egress.  
Show location exit(s) if structure have sides. ( ## of exits)  
Location of portable fire extinguisher(s).  
Location of No Smoking sign.  
Location of Occupant Load sign.  
The plans are to indicate if the structure(s) will or will not have flaps or sides. This will affect the placement of exit, exit signs, fire extinguishers and other life safety equipment.
5. Smoking is not allowed within these structures.
6. Air supported structure with more than 200 occupants shall include auxiliary emergency power that will switch on automatically and capable of running for 4 hours.
7. Calculation of occupant load shall utilize Load Table 1004.1.2 NCBC 2018:  
Standing only:           5 sf per person.  
Seating only:            7 sf per person.  
Seating at Table:       15 sf per person.
8. Open flame or devices emitting flame, fire, heat with combustible liquids, gas, charcoal as fuel or any unapproved equipment are not allowed inside or within 20 feet of such structures while occupied by the general public.
9. Restroom accommodations provided for public use shall include accessibility access and fixtures.
10. Refer to Chapter 31, NC Fire Code 2018 for additional code requirements.

The Owner must direct the event organizer to submit plans to SCO at the address below. This must be done 30 days prior to event is scheduled to allow ample time for review and for the vendor to respond to any resulting questions and/or a possible site visit by staff to better assess the plan. If the Owner or vendor does not submit their plans to SCO soon enough to allow a reasonable time for evaluation and approval, the event cannot be approved and must be either reschedule or cancelled.

If a situation arises where it is necessary for SCO to ask the local jurisdiction to review the event plans and/or inspect the structure on our behalf (e.g., due to a time or location issue), the cost for such local jurisdiction inspection permit will be borne by the Owner or event organizer.

For questions, contact SCO at 919-807-2095 to speak with Farouk Zaman. Plans/applications can be mail to us at: State Construction Office, 1307 Mail Service Center, Raleigh, NC 27699-1307; or hand delivered to New Education Building, 301 North Wilmington Street, Suite 450, Raleigh, NC 278601; or Courier number 56-02-01; or emailed to [sco.permits@doa.nc.gov](mailto:sco.permits@doa.nc.gov) ; or faxed 919-807-4110.

### Tent/Membrane Permit 2018

The NC Fire Code requires tent other membrane structures to be evaluated for fire and life safety with a permit issued prior to an event. For all State-owned property the State Construction Office is responsible for that evaluation and granting of a permit. Upon obtaining satisfactory evidence that the proposed structure will be in accordance with the minimum Code requirements, SCO will issue a permit in the form of a signed approval letter/E-mail. Applicants should submit the completed application with required attachments to SCO at least **30 days** prior to the event. E-mail to: [sco.permits@doa.nc.gov](mailto:sco.permits@doa.nc.gov)

#### SECTION I - Event Information

Applicant's Name:	Department:
Phone Number:	E-Mail Address:
Event Address/Location:	
Name/Type of Event:	
Set Up Date:	Time: <span style="margin-left: 100px;">Event Date:</span>

#### SECTION II - Tent/Membrane Structure Checklist

Application is for: TENT  or MEMBRANE STRUCTURE  # of Structures  Size:

#	Yes	No	N/A	LIST
1				Tent >800 sq.ft with sides/flaps. Permit required
2				Tent >1800 sq.ft without sides. Permit required
3				Air-supported Structure >400 sq ft. Additional information is required. See NC Fire Code 2018
4				Attached certificate(s), flame resistant material or treated with flame retardant, by manufacturer
5				Tent with sides, at least 2 marked exits that are 72" wide. (More than 199 occupants, see Table 3103.12.2 NCFC 2018)
6				Exit with curtains shall be free sliding on a metal support at a minimum of 80" above the floor. When fully opened, no part of the curtain obstructs the exit.
7				Exit signs for tent with sides/flaps shall be lit with battery backup.
8				"No Smoking" sign shall be conspicuously posted in accordance.
9				An "Occupant Load" sign noting the occupant load shall be posted. NC Admin Code 2018.
10				Aisles shall be 44" clear width free of obstructions in public area.
11				20 ft wide fire lane to the tent.
12				Fire Department vehicle access to within 150 feet around the tent.
13				Maintain 20 feet clearance between structure and other tents, membrane structures, lot lines, building lines, parked vehicles, or internal combustion engines. (Support ropes and guy wires are part of the tent. The 20 feet clearance will be measured from this point out.)
14				Open flames and other devices emitting flame, fire, heat or flammable or combustible liquids, gas, charcoal or other cooking devices maintained at least 20 feet away from tent. (This excludes floor warming devices such as solid flammables, butane or other similar devices which do not pose an ignition hazard.)
15				Cooking and heating equipment more than 10 feet from exits and combustible material.
16				Fire extinguishers located within 75 feet of all points within the tent.
17				Combustible vegetation removed to a distance of 30 feet from the area to be occupied by the tent/membrane structure.
18				Accessibility fixtures, including an accessible walking surface to accommodate persons with disability. Note that grass is <b>NOT</b> an accessible walking surface.
19				Tent/membrane structure shall be maintained in good condition and adequately roped, braced and anchored to withstand the elements of weather and prevent collapse. Ropes, guy wires, etc. must be readily visible to minimize tripping hazard.
20				Restroom accommodations for the event. Indicate the location and type (i.e. portables or in buildings) on the Site Plan. Location: <input style="width: 200px;" type="text"/>

#### SECTION III - Attachments

A				Certificate of Flame Resistance
B				Occupant load calculation for the event - Standing 5 SF; Seating 7 SF or Seating with tables 15 SF. If occupant load >50, a tent floor plan with dimensions showing seating, tables, exit aisles, exit locations, exit widths and equipment within the tent. OCCUPANT LOAD <input style="width: 50px;" type="text"/>
C				Dimension Site Plan showing tent location, 20 ft clearance from other structures, and Fire Department vehicular access to within 150 ft.