



BOULDER FIRE DEPARTMENT

Community Risk Reduction

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COOKING OPERATIONS FOR FOOD VENDORS UTILIZING TENTS

The City of Boulder has adopted the 2018 International Fire Code in which Boulder Fire Rescue shall enforce. Failure to comply with this fire code will result in a written violation to the event organizer and will need to be corrected immediately.

The enforcement of this new code will require some change and planning by both the event organizer and businesses participating in the event. This will require the designing of new layout plans for food vendors, change in the set up of each food vendor booth and equipment requirements of each food vendor. A few of the major changes to be implemented beginning in the 2020 season are as follows:

- All portable generators shall have the protection of a serviced and tagged fire extinguisher with a minimum rating of 10-B no further than 3 feet from the generator.
- All portable generators shall be a minimum of 10 feet from all combustibles and isolated from the public with a fence or enclosure.
- All tents utilizing cooking operations or devices that produce sparks or grease-laden vapors or flying embers, shall not be erected within 20 feet of any other tent not utilizing cooking operations and or temporary structure.
- All tents and shade material utilized for cooking operations shall have flame propagation performance criteria of NFPA 701. If there is no proof of such criteria, operations will be shut down until criteria can be met.
- All cooking equipment used within each tent, shall have the protection of one serviced and tagged, 1.5-gallon Class K fire extinguisher per tent.
- All cooking equipment utilizing combustible oils or solids, shall have a non-combustible lid of sufficient size to cover the cooking well/container completely.
- All cooking equipment shall be placed on a non-combustible surface to prevent fire spread and environmental damage.
- All portable LP-gas containers shall be a minimum of 5 feet from all lot lines of adjoining property.
- All portable LP-gas containers being used during cooking operations shall no longer be allowed under tents. The minimum distance from combustibles shall be 10 feet.
- Fire apparatus access roads to include parking lots and access from parking lots shall be a minimum of 20 feet.

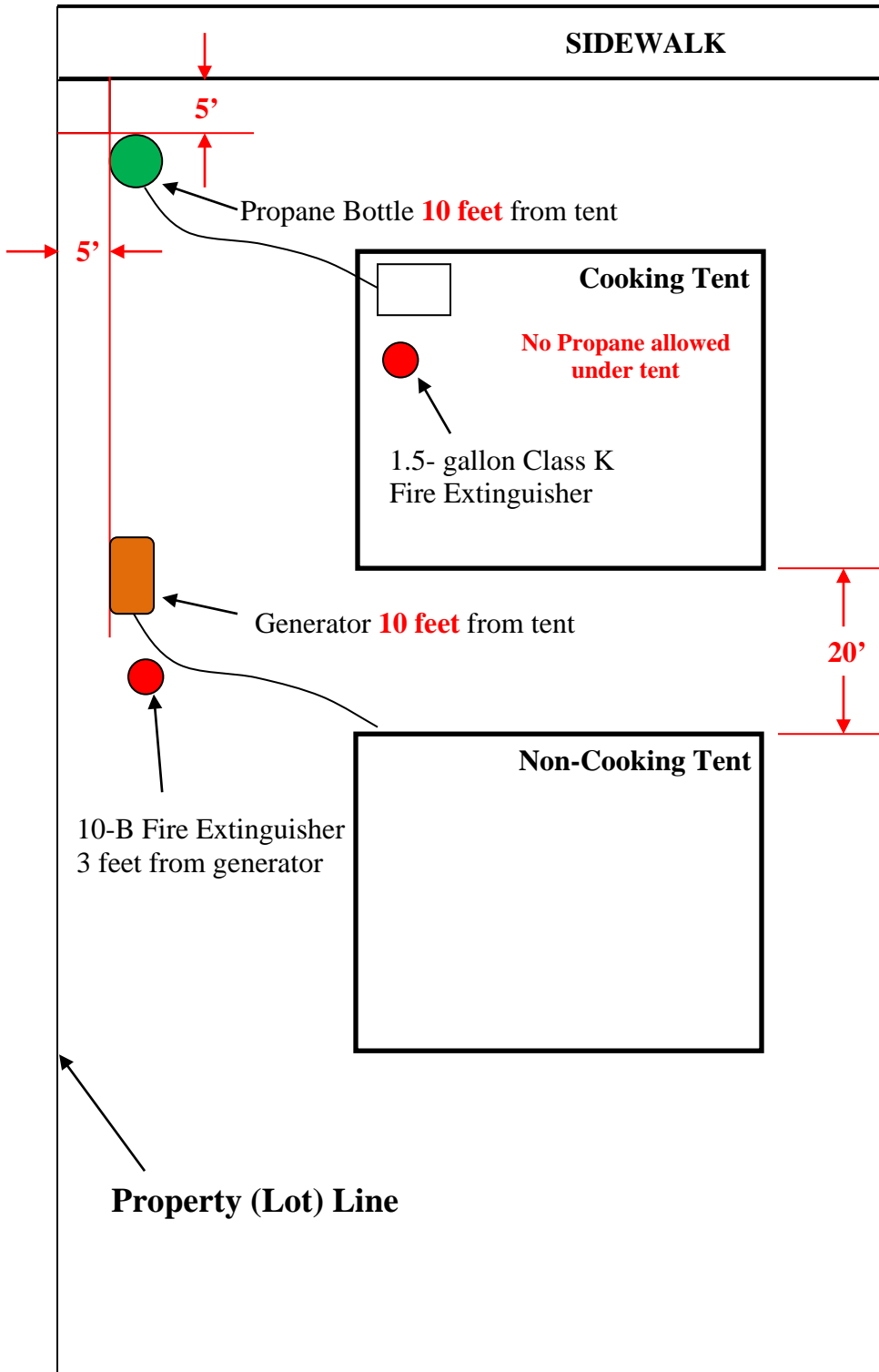
It is important for all event organizers to begin planning early for these changes and be able to provide a layout map of the cooking area(s) they plan to have participate in their event.

Basic Scenario #1 Layout Drawing

(Not to Scale)

STREET

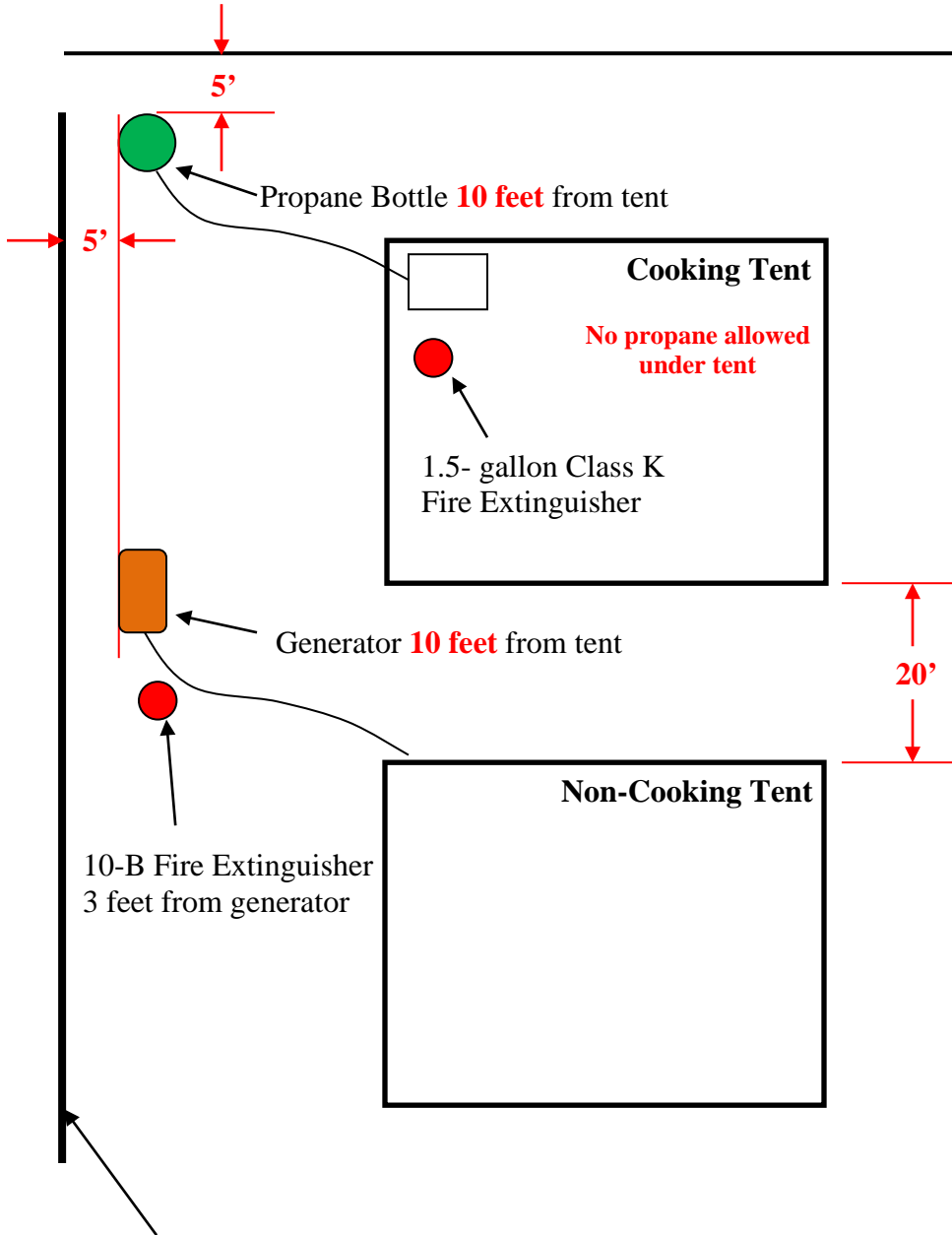
SIDEWALK



Basic Scenario #2 Layout Drawing

(Not to Scale)


STREET



Building to include eaves or other attached construction

Checklist for Food Tent

The 2018 International Fire Codes (IFC) shall be followed if a tent for cooking operations is to be used within the City of Boulder. This checklist refers to the most common codes about this subject, but the use of a tent or canopy may be subject to other fire codes. Since the language in the IFC may be confusing, the following list is written in layperson terminology. The actual code references may be found in the pages following of this document.

	N/A	Code	Description
		304.1	All accumulated waste and trash have been removed
		305.1	All ignition sources have a safe clearance from any type of combustible
		906.1	If generator is utilized, a portable fire extinguisher with a minimum rating of 10-B has been placed no further than 3-feet from the generator
		906.2	All portable fire extinguishers have had an annual service by a licensed company, and they have a current tag verifying the inspection.
		906.4	A Class K type portable fire extinguisher is readily available for the protection of the cooking equipment.
		3103.2	If a tent is larger than 400 square feet, a permit has been attained prior to constructing the tent for use.
		3103.2(2.2)	If multiple tents are put side by side and the total square footage exceeds 700 square feet, a 12-foot fire break is required.
		3103.8.1	A minimum of 20-feet is required for all access roads and fire lanes. This is to include parking lots and access from a parking lot.
		3103.8.6	All fire breaks are to be a minimum of 12-feet and free from guy ropes used to anchor tents or any other obstructions.
		3103.9	All tents stable and anchored properly to withstand wind and prevent collapse.
		3104.2	All tents and material used for shading shall meet the flame spread criteria of NFPA 701 with evidence showing proof of the criteria.
		3105.8	Tents shall not interfere with egress from a building or block a fire lane.
		3106.5.1	Tents performing cooking operations shall be 20-feet from tents or temporary structures that are not performing cooking operations.
		3106.5.2	Non-combustible lids of sufficient size, shall be immediately available to cover the cooking pans and or wells completely.
		3106.6.1	Electrical equipment and wiring shall be listed and labeled for outdoor use.
		3106.6.2	Generators shall be installed not less than 10-feet from combustibles to include all tents. Generators shall be isolated from the public by fence or enclosure.
		6104.3	All LP-gas containers (propane) shall be a minimum of 5-feet from lot lines, sidewalks and streets.
		6107.3	All LP-gas containers (propane) shall be a minimum of 10-feet from combustible materials to include all tents.
		6109.13	All LP-gas containers (propane) shall avoid being tampered by the public by providing portable fencing to enclose all LP-gas containers (propane).

2018 International Fire Code

The following are the actual fire codes (in short form) that are to be enforced by Boulder Fire Rescue. These are intended to substantially reduce the potential for fire, flammable gas vapor incidents and personal injury to all participants within the outdoor events.

Chapter 3 – General Requirements

Section 301 - General

Paragraph 301.1 – **Scope**

- The provisions of this chapter shall govern the occupancy and maintenance of all structures and premises for precautions against fire and the spread of fire and general requirements of fire safety. *The requirements of Chapter 3 prescribe fire safety precautions for conditions that are likely to cause or contribute to the spread of fire in any building or structure or on any premises, regardless of occupancy.*

Chapter 3 – General Requirements

Section 304 – Combustible Waste Material

Paragraph 304.1 – **Waste Accumulation Prohibited**

- Combustible waste material creating a fire hazard shall not be allowed to accumulate in buildings or structures or upon premises. *Accumulated waste, trash, construction debris and other natural materials, such as grass clippings, leaves and shrubbery cuttings, can become a serious fire hazard.*

Chapter 3 – General Requirements

Section 304 - Combustible Waste Material

Paragraph 304.1.1 – **Waste Material**

- Accumulations of wastepaper, wood, hay, straw, weeds, litter or combustible or flammable waste or rubbish of any type shall not be permitted to remain on a roof or in any court, yard, vacant lot, alley, parking lot, open space, or beneath a grandstand, bleacher, pier, wharf, manufactured home, recreational vehicle or other similar structure. *Unkept storage or accumulation of trash, waste rags, wastepaper, scrub brush and weeds, litter and other combustible materials is prohibited. Litter and trash represent a serious fire hazard because of their ease of ignition and rapid heat release once ignited.*

Chapter 3 – General Requirements

Section 305 – Ignition Sources

Paragraph 305.1 – **Clearance from Ignition Sources**

- Clearance between ignition sources, such as luminaires, heaters, flame-producing devices and combustible materials, shall be maintained in an approved manner. *Establishing safe clearances will usually mean following the requirements of the International Building Code or other codes adopted by the jurisdiction as well as having the approval of the fire code official.*

Chapter 3 – General Requirements

Section 305 – Ignition Sources

Paragraph 305.2 – Hot Ashes and Spontaneous Ignition Sources

- Hot ashes, cinders, smoldering coals or greasy or oily materials subject to spontaneous ignition shall not be deposited in a combustible receptacle, within 10 feet of other combustible material including combustible walls and partitions or within 2 feet of openings to buildings.

Exception: The minimum required separation distance to other combustible materials shall be 2 feet where the material is deposited in a covered, noncombustible receptacle placed on a noncombustible floor, ground surface or stand.

Every year fires are started when someone carelessly scoops ashes containing glowing embers into paper bags or cardboard cartons. In many cases, safe distances must be maintained from combustible construction and building openings for added protection.

Chapter 3 – General Requirements

Section 308 – Open Flames

Paragraph 308.1.1 – Where Prohibited

- A person shall not take or utilize an open flame or light in a structure, vessel, boat or other place where highly flammable, combustible or explosive material is utilized or stored. Lighting appliances shall be well-secured in a glass globe and wire mesh cage or a similar approved device.

This is intended to maintain separation between ignitable combustible materials and ignition sources that involve an open flame in any vessel, structure or occupancy.

Chapter 3 – General Requirements

Section 308 – Open Flames

Paragraph 308.1.2 – Throwing or Placing Sources of Ignition

- A person shall not throw or place, or cause to be thrown or placed, a lighted match, cigar, cigarette, matches, or other flaming or glowing substance or object on any surface or article where it can cause an unwanted fire.

Carelessness in disposing of smoking materials and other flaming or glowing objects such as hot skillets and or pans has caused great property loss. Grease fires causing splattering and not properly extinguished in an outdoor event can cause grass, brush and forest fires as well as fires in dwellings and other structures.

Chapter 3 – General Requirements

Section 308 – Open Flames

Paragraph 308.1.5 – Location Near Combustibles

- Open flames such as from candles, lanterns, kerosene heaters and gas-fired heaters shall not be located on or near decorative material or similar combustible materials.

Accidents involving gas-fired space heaters, candles and lanterns used in both outdoor and indoor settings are not at all uncommon to ignite nearby combustibles.

Chapter 3 – General Requirements

Section 308 – Open Flames

Paragraph 308.1.6.2 – Portable Fueled Open-Flame Devices

- Portable open-flame devices fueled by flammable or combustible gases or liquids shall be enclosed or installed in such a manner as to prevent the flame from contacting combustible material.

The use of portable devices in situations where they might be placed on unstable platforms or where they could be knocked over by human contact is prohibited.

Chapter 9 – Fire Protection and Life Safety Systems

Section 906 – Portable Fire Extinguishers

Paragraph 906.1 – **Where Required**

- A portable fire extinguisher with a minimum rating of a 10-B shall be installed in the following location:
 1. In areas where flammable or combustible liquids are stored, used or dispensed (generators).
A fire extinguisher with a minimum rating of a 10-B is required to be no further than 3 feet from a portable generator if utilized. Portable fire extinguishers are required to give the occupants the means to suppress a fire in its beginning stage.

Chapter 9 – Fire Protection and Life Safety Systems

Section 906 – Portable Fire Extinguishers

Paragraph 906.2 – **General Requirements**

- Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.
NFPA 10 contains minimum requirements for the selection, installation and maintenance of portable fire extinguishers. Maintenance of a portable fire extinguisher requires an annual service and a tag by a licensed technician.

Chapter 9 – Fire Protection and Life Safety Systems

Section 906 – Portable Fire Extinguishers

Paragraph 906.3.2 – **Class B Fire Hazards**

- Portable fire extinguishers for occupancies involving flammable or combustible liquids with depths less than or equal to 0.25 inch shall be selected and placed in accordance with Table 906.3(2). Portable fire extinguishers for occupancies involving flammable or combustible liquids with a depth of greater than 0.25-inch shall be selected and placed in accordance with NFPA 10.
Class B fires involve flammable liquids which is found in portable generators. Selection of a fire extinguisher is made based on the depth of the liquid that could become involved in a fire. In the case of a portable generator, NFPA 10 requires a fire extinguisher with a minimum rating of a 10-B.

Chapter 9 – Fire Protection and Life Safety Systems

Section 906 – Portable Fire Extinguishers

Paragraph 906.4 – **Cooking Equipment Fires**

- Fire extinguishers provided for the protection of cooking equipment shall be of an approved type compatible with the automatic fire-extinguishing system agent. Cooking equipment involving solid fuels or vegetable, or animal oils and fats shall be protected by a Class K-rated portable extinguisher in accordance with Sections 906.1, Item 2 and 906.4.2 as applicable.
The combination of high-efficiency cooking appliances and hotter burning cooking media creates a potentially severe fire hazard. A manual means of extinguishment is desirable to attack a fire in its incipient stage. As indicated, a 1.5-gallon capacity, Class K rated portable fire extinguisher must be located within 30 feet of travel distance of commercial type cooking equipment.

Chapter 9 – Fire Protection and Life Safety Systems

Section 906 – Portable Fire Extinguishers

Paragraph 906.4.2 – Class K Portable Fire Extinguishers for Deep Fryers

- Where hazard areas include deep fat fryers, listed Class K portable fire extinguishers shall be provided as follows:
 1. For up to four fryers having a maximum cooking medium capacity of 80 pounds each: one Class K portable fire extinguisher of a minimum 1.5- gallon capacity.

Commercial cooking operations use improved, more efficient deep fat fryer-type cooking appliances and more healthful, unsaturated cooking oils that require a much higher cooking temperature. The Class K extinguishing agent and extinguishers were developed to deal with this new hazard. Class K extinguishers use a wet chemical, potassium acetate-based agent that has proven to be more effective in fighting these fires and provides a cooling effect for the deep fat fryer hazard.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3103 - Temporary Tents and Membrane Structures

Paragraph 3103.2 – Approval Required

- Tents and membrane structures having an area more than 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.

Exceptions: Tents open on all sides which comply with all the following:

2.1. Individual tents having a maximum size of 700 square feet.

2.2. The total area of multiple tents placed side by side without a fire break clearance of 12 feet not exceeding 700 square feet total.

2.3. A minimum clearance of 12 feet to all structures and other tents.

The event organizer is responsible for the layout of all tents being erected during an event. They must follow strict fire codes and allow for fire breaks once the total area of all the tents reach 700 square feet. Therefore, the organizer accounts for only the tents themselves and not any other tent or membrane used for shade. If a shade tent is added to your tent, it is a high possibility that the total square footage will be exceeded and a permit and or 12-foot fire break will be required.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures Section

3103 - Temporary Tents and Membrane Structures

Paragraph 3103.8.1 – Access

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

The same access rules apply to membrane structures and structures erected using conventional construction materials. Because membrane structures can become serious fire hazards, depending on membrane material and structure contents, maintaining a minimum of 20-foot code-required fire access roads and lanes is especially important.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3103 - Temporary Tents and Membrane Structures

Paragraph 3103.8.6 – Fire Break

- An unobstructed fire break passageway or fire road not less than 12 feet 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.

This requirement for a clear path makes the membrane structures more accessible to emergency response personnel. It also results in an open space into which flaming embers or other debris can fall without endangering other structures or public traffic ways.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3103 - Temporary Tents and Membrane Structures

Paragraph 3103.9 – **Structural Stability and Anchorage Required**

- Tents or membrane structures and their appurtenances shall be designed and installed to withstand the elements of weather and prevent collapsing. Documentation of structural stability shall be furnished to the fire code official.

Having secure anchorage to prevent damage or loss caused by wind or precipitation ensures that the structures have been designed and erected per manufacturer recommendations. This is to include any shade tents or membranes to be attached to another tent.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3104 - Temporary and Permanent Tents and Membrane Structures

Paragraph 3104.2 - **Flame Propagation Performance Treatment**

- The owner of all tents and membrane structures shall be able to show the fire code official a certificate executed by an approved testing laboratory certifying that the tents and membrane structures and their accessories, are composed of material meeting flame propagation performance criteria of NFPA 701. A permanently affixed label on the material bearing the propagation performance criteria of NFPA 701 is sufficient.

Making certain the tent structures and shade tents/membranes are compliant to NFPA 701 makes them less prone to flame spread which is a crucial step in fire safety. Without the proof of the tents/membranes complying to NFPA 701, they will have to be removed.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3105 - Temporary Special Event Structures

Paragraph 3105.2 – **Approval**

- Temporary special event structures in excess of 400 square feet shall not be erected, operated or maintained for any purpose without first obtaining approval and a permit from the fire code official and or the building official.

This section requires that both the fire code official and or the building official issue a permit to construct a temporary special event structure where the structure exceeds 400 square feet in area.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3105 - Temporary Special Event Structures

Paragraph 3105.8 – **Location**

- Temporary special event structure shall be located a distance from property lines and buildings to accommodate distances indicated in the construction drawings for guy wires, cross-bracing, ground anchors or ballast. Location shall not interfere with egress from a building or encroach on fire apparatus access roads.

A fire of any size within a temporary special event structure would almost certainly involve any membrane coverings and structural support elements. Requiring clear space around the structure helps reduce burning membrane sections and flying embers that would endanger other structures or interfere with the functions of providing a clear egress path from the event structure or any structure adjacent to it and fire department access to the structure.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3106 – Outdoor Assembly Events

Paragraph 3106.5 – **Cooking Appliances or Devices**

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

This section introduces the requirements for the use of cooking appliances or devices in concession stands or booths within outdoor assembly events in the following sections.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3106 – Outdoor Assembly Events

Paragraph 3106.5.1 – **Separation from Tents or Structures**

- Cooking appliances or devices that produce sparks or grease-laden vapors or flying embers (firebrands) shall not be used within 20 feet 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 904.12.

The 20-foot limit is intended to separate this potential source of ignition from tents and temporary structures not performing cooking operations. Requirements for keeping the open area free of combustible materials or other debris that could hinder emergency response efforts also apply.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3106 – Outdoor Assembly Events

Paragraph 3106.5.2 – **Protection**

- Cooking equipment using combustible oils or solids shall meet the following:
 1. A noncombustible lid shall be immediately available. The lid shall be of sufficient size to cover the cooking well completely.
 2. The equipment shall be placed on a noncombustible surface.
 3. An approved portable fire extinguisher for protection from cooking grease fires shall be provided at a location approved by the fire code official.

Because cooking equipment using combustible oils or solids within the outdoor assembly area can be a significant fire hazard, this section requires that a noncombustible lid that completely covers each cooking container be available to be used immediately. Additionally, the cooking equipment is to be used only on top of a noncombustible surface to prevent fire spread from anything coming out of the cooking container and landing below.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3106 – Outdoor Assembly Events

Paragraph 3106.5.3 – **Liquefied Petroleum Gas (LP-Gas)**

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

This section refers to the requirements in Chapter 61 for the use of liquefied petroleum gas in outdoor assembly events. See the commentary to Chapter 61 for further information.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3106 – Outdoor Assembly Events

Paragraph 3106. – **Electrical Equipment and Wiring**

- 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 NFPA 70 and Sections 3106.6.1 through 3106.6.3.

This section introduces the requirements provided in the following subsections for outdoor assembly events with concession stands or booths using electrical equipment and temporary wiring. It also refers to the specific applicable requirements of NFPA 70 for this use of equipment and wiring.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3106 – Outdoor Assembly Events

Paragraph 3106.6.1 – **Outdoor Use**

- Electrical equipment and wiring shall be *listed* and *labeled* for outdoor use.

This section makes it clear, thereby allowing the fire code official to enforce, that all electrical equipment used for outdoor assembly events is to be specifically listed and labeled for outdoor use. Equipment that is only listed and labeled for indoor use is unsafe for outdoor use and is prohibited.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3106 – Outdoor Assembly Events

Paragraph 3106.6.2 – **Generators**

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

This section provides the separation and physical protection requirements for generators that are used for outdoor assembly events. Similar to the requirement of Section 3107.12.3 for heating and cooking equipment, the 10-foot distance mitigates the effects of the heat and ignition potential of the generators. The physical protection requirement is intended to prevent personal injury from contact or close proximity to the generators in these crowded situations.

Chapter 31 - Tents, Temporary Special Event Structures and Other Membrane Structures

Section 3106 – Outdoor Assembly Events

Paragraph 3106.6.3 – **Portable Fire Extinguishers**

- Each generator shall be provided with an *approved* portable fire extinguisher complying with Section 906.

This section refers to Section 906 for the requirements to provide portable fire extinguishers for each generator. This fire extinguisher is separate from the fire extinguisher required for the cooking equipment. A fire extinguisher with a minimum rating of a 10-B is required to be no further than 3 feet from a portable generator if utilized.

Chapter 61 – Liquified Petroleum Gases

Section 6104 – Location of LP-Gas Containers

Paragraph 6104.3 – **Container Location**

- LP-gas containers shall be located with respect to buildings and *lot lines* of adjoining property that can be built upon, in accordance with Table 6104.3.

This paragraph references Table 6104.3, which contains the requirements for siting LP-gas containers on a piece of property. Separating tanks from property lines at a minimum of 5 feet, allows escaping gas to disperse or dilute before it can enter a building or encounter an ignition source.

Chapter 61 – Liquified Petroleum Gases

Section 6107 – Location of LP-Gas Containers

Paragraph 6107.3 – **Clearance to Combustibles**

- Weeds, grass, brush, trash and other combustible materials shall be kept not less than 10 feet from LP-gas tanks or containers.

The concern addressed here is the potential threat to a container of LP-gas from the ignition of nearby combustible material. Combustibles to include tent material, shall be not less than 10 feet from any LP-gas container. LP-gas containers are no longer allowed under any tent.

Chapter 61 – Liquified Petroleum Gases

Section 6109 – Storage of LP-Gas Containers Awaiting Use or Resale

Paragraph 6109.12 – **Location of Storage Outside of Buildings**

- Storage outside of buildings of LP-gas containers awaiting use, resale or part of a cylinder exchange program shall be located in accordance with Table 6109.12.

This section regulates, by reference to Table 6109.12, storage of LP-gas containers awaiting use shall be at a minimum of 10 feet from combustible materials.

Chapter 61 – Liquified Petroleum Gases

Section 6109 – Storage of LP-Gas Containers Awaiting Use or Resale

Paragraph 6109.13 – **Protection of Containers**

- LP-gas containers shall be stored within a suitable enclosure or otherwise protected against tampering. Vehicle impact protection shall be provided as required by Section 6107.4.

Exception: Vehicle impact protection shall not be required for protection of LP-gas containers where the containers are kept in lockable, ventilated cabinets of metal construction.

At public facilities, tampering with LP-gas containers may be a problem. For that reason, portable fencing s to be used to provide tampering protection from the public

IMPORTANT!!

- ❖ Vendors not complying with the above regulations at any time shall be subjected to stopping all operations. Operations shall resume after compliance is in effect and a re-inspection has been performed.

The Fire Department reserves the right to evaluate food preparation safety issues on a case-by-case basis, and to require necessary adjustments in the interest of public safety. Representatives of the Fire Department may be present during the set-up period prior to the event, and will make occasional tours of food preparation areas to assure that these guidelines are being observed.

You may contact the office of Administration Specialist Amber Wright, at 303-441-4179 to schedule an inspection or to schedule a meeting if you have any questions as to the applicability of these guidelines to your operation.

Regards,

Mike Rangel

Mike Rangel
Deputy Fire Marshal
Boulder Fire-Rescue