



## OREGON FIRE CODE Interpretations and Technical Advisories

A collaborative service by local and state fire professionals, along with our stakeholders and customers, to provide consistent and concise application of Oregon's fire prevention and life safety regulations.

**Date:** September 22, 2015

**Ruling:** Technical Advisory No. 15-01 (Revised TA# 11-09)

**Subject:** Statewide Guidelines for Fairs, Trade Shows, Carnivals, or Common Venue Events

**Code Reference:** 2014 Oregon Fire Code

[http://ecodes.biz/ecodes\\_support/free\\_resources/Oregon/14\\_Fire/14\\_ORFire\\_main.html](http://ecodes.biz/ecodes_support/free_resources/Oregon/14_Fire/14_ORFire_main.html)

**Purpose:** Through a collaborated effort with the Oregon Fire Service and stakeholders, this document is designed to assist fire agencies, fair and event centers, event planners, vendors, concessionaires, and other parties planning for and conducting fairs, trade shows, carnivals, or common venue events.

**Goal:** The goal of this document is to provide a consistent approach for application and use of the most common fair and event fire code applications. Ultimately the local fire code official approves all mentioned events. It is the intent to provide consistent application: however, the fire code official may have reason for more stringent standards.

### Section 1–GENERAL REQUIREMENTS

**1.1 Purpose.** The purpose of the general requirement section is to target fire code requirements of a general nature. For more specific regulations please refer to Sections 2 through 10 of this Technical Advisory. The fire code official is authorized to enforce the provisions of this code as directed in ORS 476.060 and OAR Chapter 837, Division 39 and shall have the authority to adopt policies, rules and regulations in order to clarify the application of its provisions (OFC 104.1).

**1.2 Permits.** An operational permit may be required by the fire code official. Permit fees and code compliance conditions are requirements prior to issuance of a permit. Contact the local fire authority regarding specific permits, conditions, and fees (OFC 105.6).

**1.3 Assigned Fire Watch Personnel.** When, in opinion of the fire code official, it is essential for public safety in a place of assembly or any other use where people congregate because the number of persons, or the nature of the performance, exhibition, display, contest, or activity, the owner or operator of the event shall provide one or more fire watch personnel, as required and

approved, to remain on duty during the times such places are open to the public, or when such activity is being conducted. (OFC 403.1).

**1.3.1 Duties.** Fire watch personnel shall keep diligent watch for fires, obstructions to means of egress and other hazards during the time such event is open to the public or such activity is being conducted and take prompt measures for remediation of hazards, extinguishment of fires that occur and assist in the evacuation or relocation of the occupants (OFC 403.1.1).

**1.3.2 Personnel** shall have a means of communicating a (9-1-1) fire department response and between other managers/personnel at the event.

**1.3.3 Personnel** shall be familiar with all exits, fire extinguisher locations and operation, and any building suppression/alarm system control panels.

**Definition: FIRE WATCH.** A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department (OFC 202).

**1.4 Public Safety Plan.** Where the fire code official determines that an indoor or outdoor gathering of persons has an adverse impact on public safety through diminished access, to buildings structures, fire hydrants and fire apparatus access roads or where such gatherings adversely affect public safety services of any kind, the fire code official shall have the authority to order the development of, or prescribe a plan for, the provision of an approved level of public safety. (OFC 403.2)

**1.4.1 Contents.** The public safety plan, where required by Section 403.2, shall address such items as emergency vehicle ingress and egress, fire protection, emergency egress or escape routes, emergency medical services, public assembly areas and the directing of both attendees and vehicles (including the parking of vehicles), vendor and food concession distribution, and the need for the presence of law enforcement, and fire and emergency medical services personnel at the event (OFC 403.2.1).

**1.4.2 Site plans.** When required by the fire code official, a site plan shall be submitted for review and approval (OFC 404.3.2). A site plan shall include the following:

1. Fire department access roads and radiuses (fire lanes).
2. Parking plan.
3. Property lines.
4. Fire protection features such as fire hydrants, fire department connections, standpipes, and other firefighting water supplies.
5. Fire alarm panel location and alarm coverage.
6. Physical structures.
7. Stages and platforms.
8. Temporary structures (tents, booths, mobile units).
9. Fences, cages and barriers.

10. Aisles, exits and egress points.
11. Exit signs and egress lighting.
12. Seating and table configurations.
13. Vehicle layout (for vehicle display).
14. Fire extinguisher size and placement.
15. Location of LP and/or compressed gas cylinders.
16. Location of dumpsters and waste receptacles.
17. Designated "Smoking Areas".
18. Address plan for naming, numbering, or lettering buildings, structures, or large area tents.

**1.5 Crowd Managers.** Trained crowd managers shall be provided for facilities or events where more than 1,000 persons congregate. The minimum number of crowd managers shall be established at a ratio of one crowd manager to every 250 persons. Where approved by the fire code official, the ratio of crowd managers shall be permitted to be reduced where the facility is equipped throughout with an approved automatic sprinkler system or based upon the nature of the event (OFC 403.3).

**1.5.1 Duties.** Person(s) assigned the duties of crowd manager should be able to:

- Conduct pre-event inspections to identify problems with exits and egress paths, and assure required fire systems are operational
- Use a portable fire extinguisher
- Guide the crowd in an emergency
- Recognize and know when to use protection strategies, including defend-in-place, evacuation or partial evacuation
- React to deteriorating weather conditions
- Identify problem attendees, and what to do once they're identified
- Coordinate with emergency responders

**1.5.2 Training.** Where required by the fire code official, personnel assigned crowd manager duties shall complete approved training in crowd management and provide documentation of such training. An example of training can be found at [www.crowdmanagers.com](http://www.crowdmanagers.com).

**1.6 Smoking.** Smoking or carrying of a lighted pipe, cigar, cigarette or any other type of smoking paraphernalia or material is prohibited in the areas indicated in Oregon Fire Code Sections 310.2 through 310.8. There shall be no smoking where conditions are such that smoking is a hazard such as inside buildings, livestock areas, barns, tents, canopies, or exhibit booths.

**1.6.1** "No Smoking" signs shall be conspicuously located, maintained, and complied with to meet the intent of the Oregon Fire Code and this guideline (OFC 310.3).

**1.6.2** Designated smoking areas, if approved at designated locations by the fire code official, shall be provided with non-combustible ashtrays or match receivers provided on each table and at other appropriate locations (OFC 310.6).

**1.7 Open flame.** Candles, torches, and other open flame devices used for decorative, ceremonial, or demonstrative purposes shall be approved by the fire code official. The following may be used by the fire code official to ensure adequate safeguards are in place (OFC 308).

**Note: There are no restrictions on the use of flameless type candles.**

**1.7.1** Open flame or other devices emitting flame, fire or heat or any flammable or combustible liquid, gas, charcoal or other cooking device or any other unapproved devices shall not be permitted inside or located within 20 feet of tent or membrane structure unless approved by the fire code official (see “Tents” of this guideline) (OFC 3104.7).

**1.7.2** Open-flame cooking devices shall not be operated on combustible balconies or within 10 feet of combustible construction (OFC 308.1.4).

**1.7.3** Open flame devices used in conjunction with theatrical performance shall be first approved by the fire official and in accordance with NFPA 160 (OFC 308.3.2).

**1.7.4** Candles (if first approved by the fire code official) shall be securely supported on substantial noncombustible bases and the candle flames are protected (OFC 308.3 exception 1.1.3).

**1.7.4.1** Open-flame decorative device use shall meet the following criteria per Oregon Fire Code 308.3.1:

1. Decorative flaming devices that use Class 1 or 2 liquids or LP gas are strictly prohibited
2. Wax, liquid or solid fueled devices containing more than 8 ounces of fuel must self-extinguish and not leak at a rate of more than 0.25 tsp per minute if tipped over.
3. The device or holder will return to the upright position when tilted to a 45 degree angle from vertical (exception: device self-extinguishes and does not leak at a rate of more than 0.25 tsp per minute if tipped over).
4. The flame shall be enclosed except where openings on the side are not more than 0.375-inch or where openings are on top and the distance to the top is such that a piece of tissue paper placed on top will not ignite in 10 seconds.
5. Chimneys are noncombustible and securely attached unless the device self-extinguishes when tipped over.
6. Fuel canisters safely sealed for storage. Flammable/Combustible liquids stored per OFC Chapter 57.
7. Shades shall be noncombustible material and secured to the device.
8. Candelabras with open flame shall be securely fastened in place to prevent overturning, away from combustibles and shall not be passed from one person to another.

**1.7.5** Open flames shall not be utilized in areas where combustible items such as tablecloths, displays, and merchandise are present (OFC 308.1.5).

**Exception:** When flame is enclosed and where the opening on top does not pose an ignition hazard and approved by the fire code official.

**1.7.6** Candles and open flame devices are prohibited in areas where people stand, or in an aisle or exit (OFC 308.1.7.1).

**1.7.7** Lit handheld candles shall not be passed from one person to another (OFC 308.1.7).

**1.7.8** Torches and handheld flaming devices shall be approved by the fire code official.

**1.7.9** See Section 4 of this Technical Advisory, titled Cooking, for application of open flaming devices for cooking.

**1.8 Recreational Fires and Bonfires.** Contact fire code official for authorization before a recreational or bonfire is kindled. Permits may be required in accordance with Section 1.2 of this Technical Advisory.

**1.8.1** Definition: Recreational Fire. An outdoor fire burning materials other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, portable outdoor fireplace, barbeque grill or barbeque pit and has a total fuel area of 3 feet or less in diameter and 2 feet or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes.

**1.8.2** Recreational fires are allowed year-round under “Low Fire Danger Level” except if prohibited by special ordinance. This authority can be withdrawn by the fire code official, Fire District, Oregon Department of Forestry (ODF) or Oregon Department of Environmental Quality for burning prohibited materials or if smoke becomes a hazard to public safety.

**1.8.3** If property is located within ODF boundaries, recreational fires are prohibited without a special burn permit during the ODF declared Fire Season (typically July through October unless a season ending fall rain event occurs earlier in October).

**1.8.4** Recreational fires are not for disposal purposes or to be used in order to burn prohibited materials such as plastic, rubber or garbage. For fire safety reasons recreational fires shall be 25 feet from any structure or combustible material, or only 15 feet if contained in a non-combustible fire pit. (OFC 307.4.2)

**1.8.5** Definition: Bonfire. An outdoor fire utilized for ceremonial purposes.

**1.8.6** Bonfire- A bonfire shall not be conducted within 50 feet of a structure or combustible material unless the fire is contained in a barbecue pit. Conditions which could cause a fire to spread within 50 feet of a structure shall be eliminated prior to ignition. (OFC 307.4.1)

**1.9 Decorative materials.** Decorative materials in Assembly occupancies shall meet the requirements listed in OFC Section 807. Tablecloths, merchandise, and displays are not considered decorations (OFC 807).

**1.10 Fire extinguishers** (OFC 906.2). Fire extinguishers are required on site in accordance with NFPA 10. The fire code official may require fire extinguishers for every booth or exhibit, or may apply the travel distance application to meet the intent of the guideline. Fire extinguishers shall comply with the following:

**1.10.1** The minimum size fire extinguisher shall be a **2-A:10-B:C** for general use. Larger extinguishers may be required for specific hazards.

**1.10.2** Fire extinguisher application for cooking will be found in Section 4 of this guideline titled Cooking.

**1.10.3** All trained staff shall be familiar with the use and location of the fire extinguisher.

**1.10.4** All fire extinguishers shall indicate as being serviced by a certified person within the past 12 months and inspected within the last 30 days.

**1.10.5** Fire extinguishers shall be made readily visible and accessible.

**1.10.6** Fire extinguishers shall be mounted in an approved location with top of the extinguisher no higher than 5 feet and not less than 4 inches off the ground. Fire extinguishers weighing more than 40 pounds shall be mounted no higher than 3 ½ feet above the ground.

**1.11 Exiting and aisles.** Exiting and aisles shall comply with the following:

**1.11.1** Each concession stand/booth shall have **a minimum of one exit** leading directly out of the area without exiting through intervening spaces including other concession stand/booth, display, or enclosed areas (OFC 1007.1).

**1.11.2** Aisles and exits shall be kept clear and free of obstructions. Easels, signs, displays, tables, and other objects shall not encroach into aisles and exit paths, or exit doors (OFC 1003.6).

**1.11.3** Exit doors shall not be covered with drapes or similar impeding their visibility. Facility or building exits, stairs, corridors, and vestibules shall not be used for any purpose except for egress (OFC 1030.6).

**1.11.4** Exit doors shall function with a single action and shall not be able to lock patrons in an area or facility (OFC 1008.1.9).

**1.11.5** Means of egress shall be illuminated by light having an intensity of not less than 1 footcandle at floor level while the structure or tent is occupied (OFC 1006.1).

**1.11.6** Approved exit signs are required when two exits are required or when the occupant load exceeds 50 (OFC 1011.1).

**1.11.7** Aisles and exit access from concession stands/booths and areas with an occupant load of less than 50 require a minimum of 36 inches of width and 80 inches in height (OFC 1017.3).

**1.11.8** Major aisles and walkways are established based on occupant load and may range from 8 feet of unobstructed width for small venue events and 10 feet of unobstructed width for large venue events. Travel distance to an exit door shall not exceed 200 feet (OFC 1028.7).

**Exceptions:** 1) 250 feet in a sprinkled building.  
2) 400 feet in open air seating.

**1.12 Occupant load.** The occupant load shall be assigned by the fire code official in accordance with the anticipated use. The fire code official may require the posting of occupant loads in areas of assembly (OFC 1004).

**1.13 Seating—tables and chairs.** The placement of tables and chairs shall comply with the following:

**1.13.1 Aisles and exit access.** The common path of egress travel shall not exceed 30 feet from any seat in the exit access (OFC 1028.10.1.2).

**1.13.2 Chair rows.** The minimum aisle access width between the front of one row of chairs and the back of the next row shall be 12 inches for rows of up to 14 chairs, and that distance increases if there are more than 14 chairs per continuous row. The minimum clear width of 12 inches between rows shall be increased by 0.3 inches for every additional seat beyond 14 seats, but the minimum clear width is not required to exceed 22 inches. Aisles between rows of chairs shall be a minimum of 48 inches (OFC 1028.10.2).

**1.13.3 Bonding.** When greater than 200 seats are assembled in one area the seats shall either be fastened to the floor or fastened together (bonded) in groups of not less than three (OFC 1028.12).

**1.14 Waste—Trash** (OFC 304). Combustible waste material shall not accumulate and a waste collection and removal plan shall be established. Waste receptacles/containers shall comply with the following:

**1.14.1** Adequate non-combustible waste receptacles shall be onsite and distributed strategically.

**1.14.2** Combustible waste receptacle, i.e. commercially made cardboard receptacle, maybe used with the approval of the fire code official.

**1.14.3** Waste receptacles shall not be placed near an exit, in an exit path, under an open stairway, nor near any heat source. (OFC 304.2)

**1.14.4** Waste containers exceeding 1.5 cubic yards (40.5 cubic feet) shall maintain a distance of 5 feet from any tent, membrane or combustible structure. (OFC 304.3.3)

**1.14.5** Combustible trash shall be removed at least once a day from the structure during the period the structure is occupied by the public (OFC 3104.22).

**1.15 Temporary Generators.** Generators shall comply with the following:

**1.15.1** Separated from tents or membrane structures by minimum of 20 feet. (OFC 3104.19)

**1.15.2** Placed on approved surface (OFC 3104.19).

**1.15.3** Isolated from contact with the public by fencing, enclosure or other approved means (OFC 3104.19).

**1.15.4** Flammable and Combustible liquids storage and use shall be in accordance with the following:

**1.15.4.1** Fuel shall be stored outside in an approved manner not less than 50 feet from tents, stands/booths or membrane structures. See OFC Chapter 57 for storage requirements (OFC 3104.17.2).

**1.15.4.2** Refueling shall be performed in an approved location not less than 20 feet from tents, stands/booths or membrane structures. Generators shall not be running during refueling operations (OFC 3104.17.3).

**1.15.4.3** Post NO SMOKING sign and DANGER-FLAMMABLE LIQUIDS sign by generator (OFC 5703.5).

**1.15.4.4** Electrical wiring and equipment shall be installed and maintained in accordance with OFC 605 and NFPA 70 (OFC 5703.1).

**1.15.5** Shall not be operated inside a structure or enclosed tent.

**1.15.6** Shall not be placed near an exit or in an exit path.

**1.15.7** Shall be a minimum of 20 feet from a tent, membrane structure, or combustible structures.

**1.15.8** Provide a fire extinguisher complying with the regulations listed for all generators. Portable generators with a fuel capacity of 1 to 5 gallons shall be provided with a minimum 2A:10B:C extinguisher within 30 feet travel distance or a 2A:20B:C extinguisher within 50 foot travel distance. Portable generators with a fuel capacity of more than 5 gallons shall be provided with a minimum 2A:40B:C extinguisher within 30 feet travel distance or a 2A:80B:C extinguisher within 50 foot travel distance. All extinguishers shall be serviced and tagged by a qualified company/technician or other approved methods (OFC 906, Table 906.3(1), 906.3(2), NFPA 10 Sections 5.4.1.1, 5.4.1.2, 5.4.1.3).



**1.16 Fire alarm systems.** When installed, fire alarm systems shall comply with the following:

**1.16.1** Be serviced annually and have proof of service upon request by the fire code official (OFC 901.6).

**1.16.2** Fire alarm panels shall be made readily accessible and clearly marked if not placed in an obvious location (OFC 509).

**1.16.3** Displays, decorations or other items shall not obstruct any portion of the fire alarm system including detection devices and audible and visual (warning) notification devices (OFC 907.8.1).

**1.17 Fire sprinklers.** When installed, all fire sprinklers systems shall comply with the following:

**1.17.1** Be serviced annually and have proof of service upon request of the fire code official (OFC 901.6).

**1.17.2** The location of the fire sprinkler control valves shall be clearly marked (OFC 509).

**1.17.3** Maintain storage a minimum of 18 inches of clearance below the sprinkler head (OFC 315.3.1).

**1.17.4** No items shall be hung or suspended from fire sprinkler piping, components, or sprinkler heads (OFC 901.4).

**1.18 FIRE DEPARTMENT WATER SUPPLY.** Water supply for fire protection shall be approved by the local fire code official (OFC Appendix B).

**1.18.1 Fire hydrants–fire department connections.** Fire hydrants and fire department connections shall be maintained without obstructions including posts, fences, vehicles, growth, trash, storage or other obstacles which would hinder locating or use. ORS 811.550(16) prohibits parking within 10 feet of a fire hydrant (OFC 507.5.4).

**1.19 Indoor Vehicles, boats and RV displays** (OFC 314.4). Liquid or gas fueled vehicles, boats and RV displays shall comply with the following:

**1.19.1** Fuel tanks shall be no more than a ¼ full or contain more than 5 gallons of fuel, whichever is less.

**1.19.2** Fuel tanks and fill openings shall be closed and sealed to prevent tampering.

**1.19.3** LP-gas or CNG vehicles shall have their quarter-turn tank valves shut off and the engine allowed to run until it stops due to no fuel. Dual fuel vehicles shall comply with this requirement and the requirement to limit fuel tank (flammable liquid) quantities.

**1.19.4** Fueling or de-fueling shall not be done inside a building or tent.

**1.19.5** Batteries shall be disconnected at the hot lead and cable ends taped.

**1.20 Stages.** All stages and platform performance areas shall be noted on the site plan and approved by the fire code official (OFC 404).

## **Section 2–FIRE DEPARTMENT ACCESS**

**2.1 Required Access.** When required and approved by the fire code official, fire department access and fire lanes are to be established and maintained throughout the event. The local fire code official will determine the minimum fire lane, width, height, driving surface, and turning radius, as well as if a turn around, key boxes and gates/barriers are required (OFC 503).

**2.2 Access Design.** When required by the fire code official, fire apparatus access roads shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 13 feet 6 inches. Approved turnaround shall be provided if access road is greater than 150' feet. Provide approved turning radius, surface and load (OFC 503 and Appendix D).

## **Section 3–TENTS, STANDS/BOOTHES AND MEMBRANE STRUCTURES**

### **3.1 Definitions (OFC 202)**

**Tent.** A tent is a structure, enclosure, or shelter made of fabric or pliable material supported by any manner other than air.

**Stands/Booths.** A temporary structure or mobile trailer/vehicle used for the sale of food, concession or merchandise.

**Membrane structure.** A membrane structure is an air-inflated, air-supported, cable or frame-covered structure and not otherwise defined a tent.

**3.2 Flame resistance.** The sidewalls, awnings, drops, and tops of booths, membrane structures, tents shall be composed of flame resistant material or shall be treated with an approved flame retardant. The use of non-treated tarpaulins is prohibited during the hours the event is open to the public. All tents shall have a permanently affixed label indicating the type of tent, size, fabric, or material type, a manufacturer's certificate, or a fabric sample (OFC 3104.1).

**3.3 Location and separation.** Tents shall be located and separated as follows:

**3.3.1** Tents shall maintain a distance of no less than 20 feet from structures, right-of-ways or property lines (location of the tent in relation to other tents, buildings or property lines is dependent upon the aggregate square footage and the use. For the purpose of determining required distances, support ropes and guy wires are considered part of the tent and membrane structure).

**3.3.1.1** Tents **not used for cooking**, the separation distance of 20 feet is not required when the aggregate floor area does not exceed 15,000 square feet (OFC 3103.8.2).

**3.3.1.2** Tents **used for cooking** require 20 feet of separation from other tents; this does not include the adjacent cooking tents (3104.15.5).

**3.3.2** Tents shall have a minimum of a 12 foot fire break on all sides, unless multiple tents are arranged or set side by side (OFC 3103.8.6).

**3.3.3** When multiple tents are arranged or set side by side, the aggregate length shall not exceed the required 150 feet for fire department access without a 20 foot fire break.

**3.3.4** All cooking or heating appliances used in tents shall be a minimum of 10 feet from the exits or any combustible materials (OFC 3104.15.3).

**3.3.5** 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 (OFC 3104.7). See also Section 4.6 regarding cooking tents.

**3.3.6** The storage, handling and use of LP-gas and LP-gas equipment shall be in accordance with OFC 31014.16.1 through 3104.16.3.

**3.3.6.1** LP-gas equipment shall be approved in accordance with OFC Chapter 61 (OFC 3104.16.1).

**3.3.6.2** LP-gas containers shall be located outside. Safety release valves shall be pointed away from the tent or membrane structure (OFC 3104.16.2).

**3.3.6.3** Portable LP-gas containers with a capacity of 500 gallons or less shall have a minimum separation between the container and structure not less than 10 feet (OFC 3104.16.2.1).

**3.3.6.4** Portable LP-gas containers with a capacity of more than 500 gallons shall have a minimum separation between the container and structures not less than 25 feet (OFC 3104.16.2.2).

**3.3.6.5** 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 located in an approved location. Portable LP-gas containers shall be fastened in place to prevent unauthorized movement (OFC 3104.16.3).

**3.4 Means of Egress** (OFC 3103.12). The fire code official shall approve occupant loads and exit locations. In addition to Section 1.8 and 1.9, exits shall be as follows:

**3.4.1** The maximum distance to an exit shall be no more than 100 feet.

**3.4.2 Exits** are determined by the occupants load.

**3.4.2.1** Up to 10 occupants, one exit of at least 72 inches wide.

**3.4.2.2** 10-199 occupants, two exits, each 72 inches wide.

**3.4.2.3** 200-499 occupants, three exits, each 96 inches wide.

**3.4.2.4** For other membrane structures or occupant loads over 499, contact the fire code official.

**3.4.3** Exit signs are required in tents requiring two or more exits.

**3.4.4** Exit signs shall have letters no less than 12 inches and be illuminated by a power source when occupied.

**3.4.5** All guy wires, guy ropes, and other support members shall not cross an exit way at a height of less than 8 feet.

**3.5 Combustible materials.** Hay, straw, and similar combustible materials shall not be stored inside or within 30 feet of a tent being used for cooking or public assembly, except the materials necessary for one day supply for feeding and care of animals (OFC 3104.5).

**3.5.1** Sawdust and shavings may be used for a public performance and exhibits when kept damp.

**3.5.2** Combustible materials shall not be permitted under stands or seats at any time.

**3.6 Anchorage.** All tents or membrane structures and their appurtenances shall be adequately roped, braced, and anchored to withstand the elements of weather and prevent against collapsing. Documentation of structural stability shall be furnished to the fire code official on request (OFC 3103.9).

**3.7 Sleeping.** Sleeping is prohibited in any tent unless approved by the fire code official.

## **Section 4–COOKING AND WARMING OF FOODS**

**4.1 General.** Cooking includes the use of open flame cooking tops, fryers, skillets, WOKS, microwaves, ovens, barbeques, and other specialty cookware. Cooking equipment shall be installed and utilized in accordance to manufacturer's listings and shall be approved by the fire code official (OFC 3104.7).

**4.2 Food warming.** Warming of food through the use of hot plates, sterno cans, and similar devices is not considered cooking for the purposes of this section but shall be approved by the fire code official (OFC 3104.15.4).

**4.3 Exits.** All food concession stands/booths shall have **at least one exit** for staff use that is a minimum 10 feet from cooking equipment, or as approved by the fire code official (OFC 3104.15.3). All required exits shall be not less than 24 inches in clear width.

**4.4 Location.** Each vendor booth shall not be located within 20 feet of amusement rides or devices. Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet of a tent not used for cooking (OFC 3104.15.3).

**4.5 Extinguishers** (OFC 3104.12). Each vendor booth where cooking is being conducted, indoors or outdoors, shall have access to:

- 1) A readily accessible minimum **2A-10-B:C** rated fire extinguisher. Additional fire extinguishers of the same type and rating may be required to ensure that no employee will have to travel more than 75 feet to obtain a fire extinguisher.
- 2) Portable fire extinguishers shall be provided within a 30-foot travel distance of commercial-type cooking equipment. Cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K rated portable extinguisher

**4.6 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 (OFC 3104.15.5).

## **Section 5–HEATING**

**5.1 Heating equipment.** Heating equipment includes electric or fuel burning appliances, portable or permanent heating devices which have open or concealed elements, or open flames. Only listed and approved heating appliances and/or outdoor gas-fired heating appliances utilizing a fuel gas container (DOTn or ASME) that is integral to the appliance shall be used (OFC 603.4.2.2.1).

Heating equipment shall be as follows:

**5.1.1** Installed per International Mechanical Code, International Fuel Gas Code, National Electrical Code NFPA 70, manufacture’s specifications and as approved by the fire code official (OFC 3104.15.1 and OFC 3104.15.7).

**5.1.2** Where vents or flues are used, all portions of the tent or membrane structure shall be not less than 12 inches from the flue or vent (OFC 3104.15.2).

**5.1.3** Heating appliances shall have a heating element or combustion chamber permanently guarded so as to prevent accidental contact by persons or material (OFC 603.4.2.2.4 and 603.5.1).

**5.1.4** Portable outdoor gas-fired heating appliances shall be in accordance with the following:

**5.1.4.1** Storage or use of portable outdoor gas-fired appliances are prohibited inside of any occupancy when: (OFC 603.4.2.1.1)

1. Connected to the fuel gas container
2. Inside of tents, canopies and membrane structures
3. On exterior balconies with exception as allowed in Section 6.19 of NFPA 58.

**5.1.4.2** Portable outdoor gas-fired heating appliances shall be located at least 5 feet from buildings, not located beneath or closer than 5 feet to combustible

decorations and combustible overhangs, awnings, sunshades or similar combustible attachments (OFC 603.4.2.1.2 and 603.4.1.2.3).

**5.1.4.3** Portable outdoor gas-fired heating appliances shall not be located within 5 feet of exits or exit discharges (OFC 603.4.2.1.4).

**5.1.4.4** Portable outdoor gas-fired heating appliances shall be equipped with a tilt or tip-over switch that automatically shuts off the flow of gas if the appliance is tilted more than 15 degrees from the vertical (OFC 603.4.2.2.3).

**5.1.4.5** The following applies for fuel gas containers associated with portable outdoor gas-fired heating appliance: (OFC 603.4.2.3)

1. Do not replace fuel gas container while public is present.
2. Maximum individual capacity of gas containers shall not exceed 20 pounds.
3. Gas containers shall not be stored inside of buildings except in accordance with Section 6109.9 of the OFC.

## **Section 6–LPG-COMPRESSED FLAMMABLE GAS-FUELS**

**6.1 Fuels.** This section addresses propane, butane, natural gas, acetylene, and other compressed flammable gases. This section shall be in compliance with the Oregon Fire Code and the International Fuel Gas Code. Stationary and portable compressed gas containers shall be marked with the name of the gas and in accordance with CGA C-7.

**6.1.1** Installation and connection of LP-gas to appliances shall be in accordance with manufacture specifications, OFC Chapter 61, NFPA 58 and International Fuel Gas Code. (OFC 6103.1)

**6.2 Location.** LP-gas shall be located outside, compressed gas and LP-gas secured to prevent tipping (unauthorized movement) of tank(s), protected to prevent tampering and damage by vehicles or other hazards. Safety release valves shall be pointed away from tent or membrane structure (OFC 3104.16).

**6.2.1** Portable LP-gas containers with a capacity of 500 gallons or less shall be at least 10 feet from the structure.

**6.2.2** Portable LP-gas containers with a capacity of more than 500 gallons shall be at least 25 feet from the structure.

**6.2.3** Compressed gas shall be separated from incompatible materials in accordance with OFC 5003.9.8

**6.2.4** Kept a minimum of 10 feet from combustibles, combustible waste, vegetation and similar materials (OFC 5303.7.2).

**6.2.5** Kept at a distance as to not become a part of an electrical circuit. (OFC 5303.8)

**6.2.6** Placed on a surface which prevent direct contact with soil or unimproved surfaces and prevent the accumulation of water. This is to prevent corrosion (OFC 5303.13).

**6.2.7** LPG tanks shall be located so they are not in contact with direct flame, high heat situations, or sparks. A clearance of no less than 20 feet is required between potential ignition sources and LPG tanks. The use of propane is prohibited in any basement environment (NFPA 58 – 6.23.3.3).

## **Section 7–ELECTRICAL**

**7.1 General.** All electrical equipment shall comply with the following:

**7.1.1** All electrical equipment shall be listed or labeled and used in accordance with the listing or labeling instructions from the manufacturer.

**7.1.2** Electrical wiring, devices, appliances and other equipment shall be ONLY used if in good working condition. Modified or damaged equipment shall NOT be used (OFC 605.1).

**7.1.3** Open junction boxes and open-wiring splices shall be PROHIBITED. Approved covers shall be provided for all switch and electrical outlet boxes (OFC 605.6).

**7.1.4** A minimum working space of 30 inches wide and 36 inches deep and 78 inches high shall be provided in front of all electrical equipment (electrical panels). NO storage of any material shall be located within the working space (OFC 605.3).

**7.2 Appliances and lighting.** Appliances and lighting shall comply with the following:

**7.2.1** Household listed appliances shall NOT be used for commercial purposes (OFC 605.7).

**7.2.2** Clamp type lights and appliances shall be made secure.

**7.3 Extension cords–use.** Extension cord use shall comply with the following:

**7.3.1** Extension cords shall NOT be a substitute for permanent wiring (OFC 605.5).

**7.3.2** Extension cords shall be used ONLY with portable appliances (OFC 605.5).

**7.3.3** Extension cords shall be plugged directly into an approved receptacle and shall serve only ONE portable appliance (OFC 605.5.1).

**Exception:** Approved multi-plug extension cords.

**7.4 Extension cords–location.** Extension cords shall NOT be affixed to structures, extended through walls, ceilings or floors, under doors or floor coverings nor shall such cords be subject to environmental damage or physical impact. Physical protection is required in public areas with foot traffic (OFC 605.5).

**7.5 Ampacity– Conductor sizes** (OFC 605.5.2). The ampacity and conductor size of an extension cord shall comply with the following:

**7.5.1** The ampacity of the extension cords shall NOT be less than the rated capacity of the portable appliance supplied by the cord. The minimum required rating is 15 amps.

**7.5.2** Extension cords shall be a minimum of a 14 gauge, three conductor size with polarized or grounded plug and receptacle.

**7.6 Relocatable power taps (power taps)** (OFC 605.4). Power taps shall comply with the following:

**7.6.1** Multi-plug adaptors, such as cube adaptors shall be approved and listed. Adapters without visible listings or markings will NOT be allowed. Multi-plug adapters must be plugged directly into an approved electrical receptacle.

**7.6.2** Power taps (fused power strips) shall be listed with overcurrent protection (circuit breaker) integrated into the tap.

**7.6.3** Power tap cords and receptacles shall be polarized or grounded type.

**7.6.4** Power taps shall be directly connected to a permanently installed receptacle. Power taps CANNOT be connected to each other creating a chain of power taps.

**7.7 Temporary wiring (other than extension cords)** (OFC 605.9). Temporary wiring shall comply with the following:

**7.7.1** All temporary wiring requires an electrical permit.

**7.7.2** Temporary wiring for electrical power and lighting installations is allowed for a period NOT to exceed 90 days.

**7.7.3** Temporary wiring attached to a structure shall be attached in an approved manner per the State Electrical Code.

## **Section 8–FIREWORKS**

**8.1** The storage and retail sales of fireworks shall comply with the following:

**8.1.1** Sales and storage of fireworks requires a permit from the State Fire Marshal. Local permits and regulations may also apply (OAR 837-012-0620 [9a&b]).

**8.1.2** Permits shall be posted in a conspicuous location near the sales or storage areas.

**8.1.3** Fireworks stands, booths, or tents shall be 10 feet from combustible structures, 15 feet from right of way or property lines, 20 feet from any source of ignition, and 50 feet from fuel dispensing (OAR 837-012-0650 [9a,b,c,d&e]).



**8.1.4** Displays, boxes, or product must not block exits or aisles (OAR 837-012-0655 [3]).

**8.1.5** Tents, side-curtains, and floor covering shall be fire retardant (OAR 837-012-0655 [4]).

**8.1.6** No smoking, open flames, or lighting of fireworks allowed within 100 feet of fireworks tents, or stands/booths (OAR 837-012-0655 [12]).

**8.1.7** “No Smoking” signs shall be conspicuously installed to meet the 100 foot requirement (OAR 837-012-0655 [11]).

**8.1.8** Heaters that have exposed electrical elements or open flames are strictly prohibited (OAR 837-012-0655 [14]).

**8.1.9** A minimum of one **2-A rated** water type fire extinguisher or equivalent shall be provided. Additional fire extinguishers may be required based on tent/stand size and hazard (OAR 837-012-0655 [6]).

## **Section 9–FENCED EVENTS (Including but not limited to beer gardens and concerts)**

**9.1** In addition to Sections 1 through 8 of this technical advisory, fenced events shall comply with the following:

**9.1.1** Yards, patios, courts and similar outdoor areas accessible to and usable by the public shall be provided with an approved means of egress. Also refer to Section 1.8 and 1.9.

**9.1.2** Fenced areas with an occupant load of more than 50 people require at least two approved exits. Additional exits maybe required depending on the occupant load.

**9.1.3** Exits shall not be chained or locked and easily opened from the inside fenced area.

**9.1.4** Exits shall be marked with an exit sign.

**9.1.5** Egress and emergency lighting maybe required at night or after sunset.

**9.1.6** Exit doors/gates shall swing in the direction of egress travel.

## **Section 10–LIVESTOCK BARNs AND ARENAS**

**10.1** In addition to Sections 1 through 8 of this technical advisory, barns and arenas shall comply with the following when used as an assembly:

**10.1.1** Livestock areas are not to be used as sleeping quarters, unless approved by the local fire code official.

**10.1.2** Parking of motorized vehicles, camp trailers, and campers inside livestock/barn areas shall be prohibited.

**10.1.3** Exit doors and egress shall be maintained at all times; i.e. movement of animals.

**10.1.4** Portable heaters are prohibited in livestock buildings where hay, straw, or combustible products are present.

**10.1.5** Heat lamps for newborn animals must be secured and protected in an approved manner.

**10.1.6** Quantities of straw, hay, or similar combustible products shall be limited to a one-day supply for the feeding and care of animals.

**10.1.7** Electric shears, blowers, fans, and vacuums shall be polarized and grounded, in good condition, and shall be only used per listing (i.e. wet areas, dusty areas).