

CHAPTER 3

GENERAL SAFETY PRECAUTIONS

SECTION 301 GENERAL

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.

301.2 Permits. Permits shall be required as set forth in Section 105.6 for the activities or uses regulated by Chapter 3.

301.3 Other permits. A separate permit is required for tents, outdoor fireworks, theatrical and special effects displays, the display of vehicles, and use of open flame.

301.4 Site plans. Site plans shall be submitted to the fire code official for approval in accordance with the following:

Commercial roasting operations: At least 10 work days prior to the operation, site plans shall identify the address of proposed set-up, the location of operation, and distance from building exits.

Indoor displays: A minimum of 30 days prior to set-up of indoor displays, site plans shall be submitted and show all details of the display including location and size of exhibits, aisles and exits and indicate the location of fire extinguishers, hose valves, manual pull stations, and fire alarm strobes. For trade shows and exhibitions, see Chapter 17.

Vehicle displays: At least 10 work days prior to the display of liquid- or gas-fueled vehicles, boats or other motor craft in Group A and M occupancies. For competition and demonstration of liquid- or gas-fueled vehicles, boats or other motor craft in Group A occupancies, see Chapter 17.

Exception: Auto dealerships.

SECTION 302 DEFINITIONS

302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

ASPHALT (ROOFING) KETTLE. A vessel or container used to process, heat, hold for heating or dispense flammable or combustible roofing materials that are in liquid form or will take that form as a result of being exposed to such vessel or container.

BONFIRE. The burning of materials other than rubbish where fuel being burned is not contained in an incinerator, outdoor fireplace, barbecue grill or barbecue pit and with a total fuel area of 6 feet or less in diameter and 5 feet or less in height for pleasure, religious, ceremonial or similar purposes.

COMBUSTIBLE MATERIAL. Material that will ignite through contact with flames or ordinary temperatures, and is not combustible waste material.

COMBUSTIBLE WASTE MATERIAL. Rubbish and refuse including, but not limited to magazines; books; trimmings

from lawns; trees or flower gardens; plastic; pasteboard boxes; rags; paper; straw; sawdust; packing material; shavings; and boxes that will ignite through contact with flames of ordinary temperatures and recyclables.

CONFINED SPACE is a space that is large enough and so configured that an employee can bodily enter and perform assigned work; and has limited or restricted means for entry or exit (for example tanks, vessels, silos, storage bins, hoppers, vaults and pits and spaces that may have limited means of entry) and is not designed for continuous employee occupancy.

EXCAVATION is any man-made cut, cavity, trench or depression in an earth surface, formed by earth removal.

EXHIBITIONS. See "Trade Shows."

EXHIBITS. A space or portable structure used for the display of products or services.

HI-BOY. A cart used to transport hot roofing materials on a roof.

OPEN BURNING. The burning of materials in the outdoors wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. Open burning does not include road flares, smudge pots and similar devices associated with safety or occupational uses typically considered open flames or recreational fires. For the purpose of this definition, a chamber shall be regarded as enclosed when, during the time combustion occurs, only apertures, ducts, stacks, flues or chimneys necessary to provide combustion air and permit the escape of exhaust gas are open.

POWERED INDUSTRIAL TRUCK. A forklift, tractor, platform lift truck or motorized hand truck powered by an electrical motor or internal combustion engine. Powered industrial trucks do not include farm vehicles or automotive vehicles for highway use.

RECREATIONAL FIRE. An outdoor fire burning materials other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, barbecue grill or barbecue pit and has a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes.

TRADE SHOWS. Public or private displays, events or occurrences held in buildings or portions of buildings for gathering together of 50 or more persons for purposes of competition, demonstration, a setting or presentation of something in open view, or showing the merits of a product or service to a prospective consumer.

TRENCH is a narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to

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15 feet or less (measured at the bottom), the excavation is also considered to be a trench.

SECTION 303 ASPHALT KETTLES

303.1 Transporting. Asphalt (tar) kettles shall not be transported over any highway, road or street when the heat source for the kettle is operating.

Exception: Asphalt (tar) kettles in the process of patching road surfaces.

303.2 Location. Asphalt (tar) kettles shall not be located within 20 feet (6096 mm) of any combustible material, combustible building surface or any building opening and within a controlled area identified by the use of traffic cones, barriers or other approved means. Asphalt (tar) kettles and pots shall not be utilized inside or on the roof of a building or structure. Roofing kettles and operating asphalt (tar) kettles shall not block means of egress, gates, roadways or entrances.

303.3 Location of fuel containers. Fuel containers shall be located at least 10 feet (3048 mm) from the burner.

Exception: Containers properly insulated from heat or flame are allowed to be within 2 feet (610 mm) of the burner.

303.4 Attendant. An operating kettle shall be attended by a minimum of one employee knowledgeable of the operations and hazards. The employee shall be within 100 feet (30 480 mm) of the kettle and have the kettle within sight. Ladders or similar obstacles shall not form a part of the route between the attendant and the kettle.

303.5 Fire extinguishers. There shall be a portable fire extinguisher complying with Section 906 and with a minimum 40-B:C rating within 25 feet (7620 mm) of each asphalt (tar) kettle during the period such kettle is being utilized, and one additional portable fire extinguisher with a minimum 40-B:C rating on the roof being covered.

303.6 Lids. Asphalt (tar) kettles shall be equipped with tight-fitting lids.

303.7 Hi-boys. Hi-boys shall be constructed of noncombustible materials. Hi-boys shall be limited to a capacity of 55 gallons (208 L). Fuel sources or heating elements shall not be allowed as part of a hi-boy.

303.8 Roofing kettles. Roofing kettles shall be constructed of noncombustible materials.

303.9 Fuel containers under air pressure. Fuel containers that operate under air pressure shall not exceed 20 gallons (76 L) in capacity and shall be approved.

303.10 Unattended fuel containers. When it is deemed necessary to leave fuel containers in place at the end of a work day, the fuel containers shall be outdoors and secured to prevent unauthorized access to and tampering with the fuel containers. Asphalt kettles and fuel containers shall not be left unattended in a street or roadway.

303.11 Asphalt kettles and all integral working parts shall be in good working condition and shall be maintained free of excessive residue.

303.12 Asphalt kettles shall be provided with an operational temperature gauge.

303.13 A noncombustible support leg shall be utilized to adequately support the weight of the asphalt kettle and contents. The support leg shall ensure that the kettle is level.

303.14 Doors. All asphalt kettles shall have doors permanently attached.

303.14.1 Asphalt kettle doors shall be installed in a workmanlike manner and shall be provided with handles that allow them to be opened without the operator having to stand in front of same.

303.14.2 All kettle doors shall be tightly closed and latched when in transit.

303.15 Vehicular and pedestrian barrier protection. Vehicular and pedestrian barrier protection shall be installed when asphalt kettles are placed in a street or roadway. The barrier protection shall be installed as follows:

1. Barriers shall be at least 3 feet (914 mm) high so as to be visible to vehicular and pedestrian traffic.
2. The barrier shall completely surround the kettle and fuel containers.
3. Barriers shall clearly identify that the area is restricted to authorized persons only.
4. Barriers shall be installed to provide at least 30 feet (9144 mm) between the asphalt kettle operations and occupied Groups A, E or I occupancies.

SECTION 304 COMBUSTIBLE WASTE MATERIAL

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.

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.

Exception: Uncontained bulk waste picked up by the City of Phoenix.

304.1.2 Vegetation. Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises. Vegetation clearance requirements in urban-wildland interface areas shall be in accordance with the *International Urban/Wildland Interface Code*.

304.1.3 Space underneath seats. Spaces underneath grandstand and bleacher seats shall be kept free from combustible and flammable materials. Except where enclosed in not less than 1-hour fire-resistance-rated construction in accordance with the *International Building Code*, spaces underneath grandstand and bleacher seats shall not be occupied or utilized for purposes other than means of egress.

304.2 Storage. Storage of combustible rubbish shall not produce conditions that will create a nuisance or a hazard to the public health, safety or welfare.

304.3 Containers. Combustible rubbish, and waste material kept within a structure shall be stored in accordance with Sections 304.3.1 through 304.3.3.

304.3.1 Spontaneous ignition. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. Contents of such containers shall be removed and disposed of daily.

304.3.2 Capacity exceeding 5.33 cubic feet. Containers with a capacity exceeding 5.33 cubic feet (40 gallons) (0.15 m³) shall be provided with lids. Containers and lids shall be constructed of noncombustible materials or approved combustible materials.

304.3.3 Capacity exceeding 1.5 cubic yards. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cubic feet) (1.15 m³) or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines.

Exceptions:

1. Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout in accordance with Section 903.
2. Storage in a structure shall not be prohibited where the structure is of Type I or Type IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.

SECTION 305 IGNITION SOURCES

305.1 Clearance from ignition sources. Clearance between ignition sources, such as light fixtures, heaters and flame-producing devices, and combustible materials shall be maintained in an approved manner.

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 (3048 mm) of other combustible material including combustible walls and partitions or within 2 feet (610 mm) of openings to buildings.

Exception: The minimum required separation distance to other combustible materials shall be 2 feet (610 mm) where the material is deposited in a covered, noncombustible receptacle placed on a noncombustible floor, ground surface or stand.

305.3 Open-flame warning devices. Open-flame warning devices shall not be used along an excavation, road, or any place where the dislodgment of such device might permit the device to roll, fall or slide on to any area or land containing combustible material.

305.4 Deliberate or negligent burning. It shall be unlawful to deliberately or through negligence set fire to or cause the burn-

ing of combustible material in such a manner as to endanger the safety of persons or property.

SECTION 306 MOTION PICTURE FILM AND SCREENS

306.1 Motion picture projection rooms. Electric arc, xenon or other light source projection equipment which develops hazardous gases, dust or radiation and the projection of ribbon-type cellulose nitrate film, regardless of the light source used in projection, shall be operated within a motion picture projection room complying with Section 409 of the *International Building Code*.

306.2 Cellulose nitrate film storage. Storage of cellulose nitrate film shall be in accordance with NFPA 40.

SECTION 307 OPEN BURNING AND RECREATIONAL FIRES

307.1 General. A person shall not kindle or maintain or authorize to be kindled or maintained any open burning unless conducted and approved in accordance with this section.

307.2 Permit required. A permit shall be obtained from the fire code official in accordance with Section 105.6 prior to conducting open burning, kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or a bonfire. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

307.2.1 Authorization. Where required by state or local law or regulations, open burning shall only be permitted with prior approval from the state or local air and water quality management authority, provided that all conditions specified in the authorization are followed.

307.2.2 Prohibited open burning. Open burning of rubbish that contains paper products is prohibited. Open burning that will be offensive or objectionable because of smoke or odor emissions or local circumstances make such fires hazardous shall be prohibited. The fire code official is authorized to order the extinguishment by the permit holder or the fire department of open burning which creates or adds to a hazardous or objectionable situation.

307.3 Location. The location for open burning shall not be less than 50 feet (15 240 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240 mm) of any structure.

Exceptions:

1. Fires in approved containers that are not less than 15 feet (4572 mm) from a structure.
2. The minimum required distance from a structure shall be 25 feet (7620 mm) where the pile size is 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.

307.3.1 Notifications. Prior to commencement of open burning, the fire department shall be notified.

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- || **307.3.2 Bonfires.** A bonfire shall not be conducted within 50 feet (15 240 mm) 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 (15 240 mm) of a structure shall be eliminated prior to ignition.
- || **307.3.3 Recreational fires.** Recreational fires shall not be conducted within 25 feet (7620 mm) of a structure or combustible material. Conditions which could cause a fire to spread within 25 feet (7620 mm) of a structure shall be eliminated prior to ignition.

307.4 Attendance. Open burning, bonfires or recreational fires shall be constantly attended until the fire is extinguished. A minimum of one portable fire extinguisher complying with Section 906 with a minimum 4-A rating or other approved on-site fire-extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be available for immediate utilization.

307.5 Discontinuance. The fire code official is authorized to require that opening burning, bon fires or recreational fires be immediately discontinued if the fire code official determines that smoke emissions are offensive to occupants of surrounding property or if the fire constitutes an imminent or incipient hazard.

307.6 Warming fires.

307.6.1 General. Warming fires shall be conducted in accordance with Section 307.6 when no other form of heat is available for warming and the following is complied with:

1. All warming fires shall be under control at all times and have a responsible person in constant attendance.
2. A noncombustible container shall be used for burning wood scraps. Maximum size of the container shall be 55 gallons water capacity.
3. A spark arrester shall be installed on the top of each container. The spark arrester shall be constructed of iron, heavy wire mesh or other noncombustible material with openings not larger than $\frac{1}{2}$ inch.

A minimum of 10 feet shall be provided between the warming fire container and combustible materials.

SECTION 308 OPEN FLAMES

308.1 General. This section shall control open flames, fire and burning on all premises.

308.2 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.

308.2.1 Throwing or placing sources of ignition. No person shall 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.

308.3 Open flame. A person shall not utilize or allow to be utilized, an open flame in connection with a public meeting or gathering for purposes of deliberation, entertainment, amusement, instruction, education, recreation, awaiting transportation or similar purpose in Group A or E occupancies without first obtaining a permit in accordance with Section 105.6.

308.3.1 Open-flame cooking devices. Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or within 10 feet (3048 mm) of combustible construction or other combustible materials. In Group R, Division 1 and Group R, Division 2 occupancies, no person shall use fixed or portable charcoal or LP-gas barbecues or store LP-gas on, in or under any attached covered patios, balconies, covered walkways or roof overhangs.

Exceptions:

1. One- and two-family dwellings.
2. Where buildings, balconies and decks are protected by an approved automatic sprinkler system installed in accordance with NFPA 13.
3. Approved electric barbecues used in accordance with the manufacturer's instructions.
4. Approved stationary fuel-fired barbecues complying with the following:
 - A. Connected to plumbing approved by the Development Services Department's Mechanical Section.
 - B. Listed for the fuel being utilized, and
 - C. Used in accordance with the manufacturer's instructions.
 - D. Balconies shall be sprinklered in accordance with Section 903.3.

308.3.1.1 Liquefied-petroleum-gas-fueled cooking devices. LP-gas burners having an LP-gas container with a water capacity greater than 2.5 pounds [nominal 1 pound (0.454 kg) LP-gas capacity] shall not be located on combustible balconies or within 10 feet (3048 mm) of combustible construction.

Exception: One- and two-family dwellings.

308.3.2 Open-flame decorative devices. Open-flame decorative devices shall comply with all of the following restrictions:

1. Class I and Class II liquids and LP-gas shall not be used.
2. Liquid- or solid-fueled lighting devices containing more than 8 ounces (237 ml) of fuel must self-extinguish and not leak fuel at a rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.
3. The device or holder shall be constructed to prevent the spillage of liquid fuel or wax at the rate of more than 0.25 teaspoon per minute (1.26 ml per minute) when the device or holder is not in an upright position.
4. The device or holder shall be designed so that it will return to the upright position after being tilted to an angle of 45 degrees from vertical.

Exception: Devices that self-extinguish if tipped over and do not spill fuel or wax at the rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.

5. The flame shall be enclosed except where openings on the side are not more than 0.375 inch (9.5 mm) diameter or where openings are on the top and the distance to the top is such that a piece of tissue paper placed on the top will not ignite in 10 seconds.
6. Chimneys shall be made of noncombustible materials and securely attached to the open-flame device.

Exception: A chimney is not required to be attached to any open-flame device that will self-extinguish if the device is tipped over.
7. Fuel canisters shall be safely sealed for storage.
8. Storage and handling of combustible liquids shall be in accordance with Chapter 34.
9. Shades, where used, shall be made of noncombustible materials and securely attached to the open-flame device holder or chimney.
10. Candelabras with flame-lighted candles shall be securely fastened in place to prevent overturning, and shall be located away from occupants using the area and away from possible contact with drapes, curtains or other combustibles.

308.3.3 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.

308.3.4 Aisles and exits. Candles shall be prohibited in areas where occupants stand, or in an aisle or exit.

308.3.5 Religious ceremonies. When, in the opinion of the fire code official, adequate safeguards have been taken, participants in religious ceremonies are allowed to carry hand-held candles. Hand-held candles shall not be passed from one person to another while lighted.

308.3.6 Theatrical performances. The use of open flame devices that use a flammable or combustible liquid to initiate flames before a proximate audience. Pyrotechnic displays shall be in accordance with Chapter 33.

308.3.6.1 Permits, plans and fees. A permit shall be obtained from the Fire Marshal for the use of open flame devices before a proximate audience. See Section 105.

308.3.6.2 Plans. Two sets of plans shall be submitted to the fire code official at the time of permit application. The plans shall identify the following:

1. Address
2. Name of occupancy or resident name
3. Dates and times of the open flame device use
4. Specific site on the property where the open flame device will be used
5. Distance to proximate audience
6. Means employed to keep audience away from open flame

7. Distance from the flame to combustible materials, if applicable
8. Height of ceiling or structure member, if applicable
9. Maximum horizontal and vertical distances the devices will be thrown, if applicable

308.3.6.3 Fees. Fees shall be in accordance with Chapter 46.

308.3.6.4 Liability insurance. Insurance shall be in accordance with Section 113.

308.3.6.5 Demonstration. Prior to permit issuance, the fire code official may require a demonstration of the use of the open flame devices. When approved, the fire code official shall issue a permit.

308.3.6.6 Fire extinguisher. A minimum of 2, 2¹/₂ gallon approved pressurized water and one 2A:10BC fire extinguishers shall be provided within a 30 foot travel distance. The extinguishers shall be visible and accessible.

308.3.6.7 Distance. A minimum distance of 10 feet shall be maintained between the flame and the audience or spectators.

308.3.6.8 Combustible materials. A minimum distance of 10 feet shall be maintained between the flame and combustible materials, including ceilings and structure members.

308.3.7 Group A occupancies. Open-flame devices shall not be used in a Group A occupancy.

Exceptions:

1. Open-flame devices are allowed to be used in the following situations, provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants:
 - 1.1. Where necessary for ceremonial or religious purposes in accordance with Section 308.3.5.
 - 1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.6.
 - 1.3. Where candles on tables are securely supported on substantial noncombustible bases and the candle flames are protected.
2. Heat-producing equipment complying with Chapter 6 and the *International Mechanical Code*.
3. Gas lights are allowed to be used provided adequate precautions satisfactory to the fire code official are taken to prevent ignition of combustible materials.

308.3.8 Group R-2 dormitories. Candles, incense and similar open-flame-producing items shall not be allowed in sleeping units in Group R-2 dormitory occupancies.

308.4 Torches for removing paint. Persons utilizing a torch or other flame-producing device for removing paint from a structure shall provide a minimum of one portable fire extinguisher

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complying with Section 906 and with a minimum 4-A rating, two portable fire extinguishers, each with a minimum 2-A rating, or a water hose connected to the water supply on the premises where such burning is done. The person doing the burning shall remain on the premises 1 hour after the torch or flame-producing device is utilized.

308.4.1 Permit. A permit in accordance with Section 105.6 shall be secured from the fire code official prior to the utilization of a torch or flame-producing device.

308.5 Open-flame devices. Torches and other devices, machines or processes liable to start or cause fire shall not be operated or used in or upon hazardous fire areas, except by a permit in accordance with Section 105.6 secured from the fire code official.

Exception: Use within inhabited premises or designated campsites which are a minimum of 30 feet (9144 mm) from grass-, grain-, brush- or forest-covered areas.

308.5.1 Signals and markers. Flame-employing devices, such as lanterns or kerosene road flares, shall not be operated or used as a signal or marker in or upon hazardous fire areas.

Exception: The proper use of fuses at the scenes of emergencies or as required by standard railroad operating procedures.

308.5.2 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.

Exceptions:

1. LP-gas-fueled devices used for sweating pipe joints or removing paint in accordance with Chapter 38.
2. Cutting and welding operations in accordance with Chapter 26.
3. Torches or flame-producing devices in accordance with Section 308.4.
4. Candles and open-flame decorative devices in accordance with Section 308.3.

308.6 Flaming food and beverage preparation. The preparation of flaming foods or beverages in places of assembly and drinking or dining establishments shall be in accordance with Section 308.6.

308.6.1 Dispensing. Flammable or combustible liquids used in the preparation of flaming foods or beverages shall be dispensed from one of the following:

1. A 1-ounce (29.6 ml) container; or
2. A container not exceeding 1-quart (946.5 ml) capacity with a controlled pouring device that will limit the flow to a 1-ounce (29.6 ml) serving.

308.6.2 Containers not in use. Containers shall be secured to prevent spillage when not in use.

308.6.3 Serving of flaming food. The serving of flaming foods or beverages shall be done in a safe manner and shall not create high flames. The pouring, ladling or spooning of

liquids is restricted to a maximum height of 8 inches (203 mm) above the receiving receptacle.

308.6.4 Location. Flaming foods or beverages shall be prepared only in the immediate vicinity of the table being serviced. They shall not be transported or carried while burning.

308.6.5 Fire protection. The person preparing the flaming foods or beverages shall have a wet cloth towel immediately available for use in smothering the flames in the event of an emergency.

SECTION 309 POWERED INDUSTRIAL TRUCKS

309.1 General. Powered industrial trucks shall be operated and maintained in accordance with this section.

309.2 Battery chargers. Battery chargers shall be of an approved type. Combustible storage shall be kept a minimum of 3 feet (915 mm) from battery chargers. Battery charging shall not be conducted in areas accessible to the public.

309.3 Ventilation. Ventilation shall be provided in an approved manner in battery-charging areas to prevent a dangerous accumulation of flammable gases.

309.4 Fire extinguishers. Battery-charging areas shall be provided with a fire extinguisher complying with Section 906 having a minimum 4-A:20-B:C rating within 20 feet (6096 mm) of the battery charger.

309.5 Refueling. Powered industrial trucks using liquid fuel or LP-gas shall be refueled outside of buildings or in areas specifically approved for that purpose. Fixed fuel-dispensing equipment and associated fueling operations shall be in accordance with Chapter 22. Other fuel-dispensing equipment and operations, including cylinder exchange for LP-gas-fueled vehicles, shall be in accordance with Chapter 34 for flammable and combustible liquids or Chapter 38 for LP-gas

309.6 Repairs. Repairs to fuel systems, electrical systems and repairs utilizing open flame or welding shall be done in approved locations outside of buildings or in areas specifically approved for that purpose.

SECTION 310 SMOKING

310.1 General. The 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 this section.

310.2 Prohibited areas. Smoking shall be prohibited where conditions are such as to make smoking a hazard, and in spaces where flammable or combustible materials are stored or handled.

310.3 “No Smoking” signs. The fire code official is authorized to order the posting of “No Smoking” signs in a conspicuous location in each structure or location in which smoking is prohibited.

310.4 Removal of signs prohibited. A posted “No Smoking” sign shall not be obscured, removed, defaced, mutilated or destroyed.

310.5 Compliance with “No Smoking” signs. Smoking shall not be permitted nor shall a person smoke, throw or deposit any lighted or smoldering substance in any place where “No Smoking” signs are posted.

310.6 Ash trays. Where smoking is permitted, suitable noncombustible ash trays or match receivers shall be provided on each table and at other appropriate locations.

310.7 Burning objects. Lighted matches, cigarettes, cigars or other burning object shall not be discarded in such a manner that could cause ignition of other combustible material.

310.8 Hazardous environmental conditions. When the fire code official determines that hazardous environmental conditions necessitate controlled use of smoking materials, the ignition or use of such materials in mountainous, brush-covered or forest-covered areas or other designated areas is prohibited except in approved designated smoking areas.

SECTION 311 VACANT PREMISES

311.1 General. Temporarily unoccupied buildings, structures, premises or portions thereof, including tenant spaces, shall be safeguarded and maintained in accordance with this section.

311.1.1 Abandoned premises. Buildings, structures and premises for which an owner cannot be identified or located by dispatch of a certificate of mailing to the last known or registered address, which persistently or repeatedly become unprotected or unsecured, which have been occupied by unauthorized persons or for illegal purposes, or which present a danger of structural collapse or fire spread to adjacent properties shall be considered abandoned, declared unsafe and abated by demolition or rehabilitation in accordance with the *International Property Maintenance Code* and the *International Building Code*.

311.1.2 Tenant spaces. Storage and lease plans required by this code shall be revised and updated to reflect temporary or partial vacancies.

311.2 Safeguarding vacant premises. Temporarily unoccupied buildings, structures, premises or portions thereof shall be secured and protected in accordance with this section.

311.2.1 Security. Exterior openings and interior openings accessible to other tenants or unauthorized persons shall be boarded, locked, blocked or otherwise protected to prevent entry by unauthorized individuals.

311.2.2 Fire protection. Fire alarm, sprinkler and standpipe systems shall be maintained in an operable condition at all times.

311.2.3 Fire separation. Fire-resistance-rated partitions, fire barriers, and fire walls separating vacant tenant spaces from the remainder of the building shall be maintained. Openings, joints, and penetrations in fire-resistance-rated assemblies shall be protected in accordance with Chapter 7.

311.3 Removal of combustibles. Persons owning, or in charge or control of, a vacant building or portion thereof, shall remove therefrom all accumulations of combustible materials, flammable or combustible waste or rubbish and shall securely lock or otherwise secure doors, windows and other openings to prevent entry by unauthorized persons. The premises shall be maintained clear of waste or hazardous materials.

Exceptions:

1. Buildings or portions of buildings undergoing additions, alterations, repairs, or change of occupancy in accordance with the *International Building Code*, where waste is controlled and removed as required by Section 304.
2. Seasonally occupied buildings.

311.4 Removal of hazardous materials. Persons owning or having charge or control of a vacant building containing hazardous materials regulated by Chapter 27 shall comply with the facility closure requirements of Section 2701.6.

SECTION 312 VEHICLE IMPACT PROTECTION

312.1 General. Vehicle impact protection required by this code shall be provided by posts that comply with Section 312.2 or by other approved physical barriers that comply with Section 312.3.

312.2 Posts. Guard posts shall comply with all of the following requirements:

1. Constructed of steel not less than 4 inches (102 mm) in diameter and concrete filled.
2. Spaced not more than 4 feet (1219 mm) between posts on center.
3. Set not less than 3 feet (914 mm) deep in a concrete footing of not less than a 15-inch (381 mm) diameter.
4. Set with the top of the posts not less than 3 feet (914 mm) above ground.
5. Located not less than 3 feet (914 mm) from the protected object.

312.3 Other barriers. Physical barriers shall be a minimum of 36 inches (914 mm) in height and shall resist a force of 12,000 pounds (53 375 N) applied 36 inches (914 mm) above the adjacent ground surface.

SECTION 313 FUELED EQUIPMENT

313.1 Fueled equipment. Fueled equipment, including but not limited to motorcycles, mopeds, lawn-care equipment and portable cooking equipment, shall not be stored, operated or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the *International Building Code*.
2. Where allowed by Section 314.

GENERAL SAFETY PRECAUTIONS

313.1.1 Removal. The fire code official is authorized to require removal of fueled equipment from locations where the presence of such equipment is determined by the fire code official to be hazardous.

313.2 Group R occupancies. Vehicles powered by flammable liquids, Class II combustibles liquids, or compressed flammable gases shall not be stored within the living space of Group R buildings.

SECTION 314 INDOOR DISPLAYS

314.1 General. Indoor displays constructed within any occupancy shall comply with Sections 314.

314.2 Fixtures and displays. Fixtures and displays of goods for sale to the public shall be arranged so as to maintain free, immediate and unobstructed access to exits as required by Chapter 10.

314.3 Highly combustible goods. The display of highly combustible goods, including but not limited to flammable or combustible liquids, liquefied flammable gases, oxidizing materials, pyroxylin plastics and agricultural goods, in main exit access aisles, corridors, covered malls, or within 5 feet (1524 mm) of entrances to exits and exterior exit doors is prohibited when a fire involving such goods would rapidly prevent or obstruct egress.

314.4 Vehicles. Liquid- or gas-fueled vehicles, boats or other motorcraft shall not be located indoors except as follows:

1. Batteries are disconnected.
2. Fuel in fuel tanks does not exceed one-quarter tank or 5 gallons (19 L) (whichever is least).
3. Fuel tanks and fill openings are closed and sealed to prevent tampering.
4. Vehicles, boats or other motorcraft equipment are not fueled or defueled within the building.

314.4.1 Display. Display of liquid- or gas-fueled vehicles, boats or other motorcraft, or equipment shall not be located indoors except as follows:

1. Batteries are disconnected.
2. Fuel in fuel tanks does not exceed one-quarter tank or 5 gallons (whichever is less).
3. Fuel tanks and fill openings are closed and sealed to prevent tampering.
4. Vehicles, boats or other motorcraft equipment are not fueled or defueled within the building.

314.4.2 Competitions and demonstrations. Liquid- and gas-fueled vehicles, boats or other motorcraft, or equipment used for competition or demonstration located indoors shall be in accordance with Section 314.4.2.

314.4.2.1 Fuel storage. Fuel for the vehicles, boats or other motorcraft or equipment shall be stored in approved containers in an approved location outside the building.

314.4.2.2 Fueling. Refueling shall be performed outside of the building at an approved site.

314.4.2.3 Spills. Fuel spills shall be cleaned up immediately.

314.5 Hazardous materials. Hazardous materials shall comply with Chapter 27.

SECTION 315 MISCELLANEOUS COMBUSTIBLE MATERIALS STORAGE

315.1 General. Storage, use and handling of miscellaneous combustible materials shall be in accordance with this section. A permit shall be obtained in accordance with Section 105.6.

315.2 Storage in buildings. Storage of combustible materials in buildings shall be orderly. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur.

315.2.1 Ceiling clearance. Storage shall be maintained 2 feet (610 mm) or more below the ceiling in nonsprinklered areas of buildings or a minimum of 18 inches (457 mm) below sprinkler head deflectors in sprinklered areas of buildings.

315.2.2 Means of egress. Combustible materials shall not be stored in exits or exit enclosures.

315.2.3 Equipment rooms. Combustible material shall not be stored in boiler rooms, mechanical rooms, elevator machine rooms or electrical equipment rooms.

315.2.4 Attic, under-floor and concealed spaces. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire-resistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1.75 inches (44.5 mm) in thickness. Storage shall not be placed on exposed joists.

Exceptions:

1. Areas protected by approved automatic sprinkler systems.
2. Group R-3 and Group U occupancies.

315.3 Outside storage of combustible materials. Combustible materials include, but are not limited to, magazines, books, trimmings from lawns, trees or flower gardens; plastic; paste-board boxes; rags; paper; straw; sawdust; packing material; shavings; boxes; rubbish; mulch, wood pallets or other combustible materials that will ignite through contact with flames of ordinary temperatures.

315.3.1 Outside storage of combustible materials shall not be located within 10 feet (3048 mm) of a property line.

Exceptions:

1. The separation distance is allowed to be reduced to 3 feet (914 mm) for storage not exceeding 6 feet (1829 mm) in height.
2. The separation distance is allowed to be reduced when the fire code official determines that no hazard to the adjoining property exists.

315.3.2 Storage beneath overhead projections from buildings. Combustible materials stored or displayed outside of buildings that are protected by automatic sprinklers shall not be stored or displayed under nonsprinklered eaves, canopies or other projections or overhangs.

315.3.3 Storage beneath a building or structure. Combustible material shall not be stored beneath a building or structure unless specifically constructed or protected for this purpose.

315.3.4 Size of piles. The maximum size of piles shall be 20 feet wide by 150 feet long.

315.3.5 Aisles.

315.3.5.1 Width. Aisles shall be a minimum of 20 feet wide and shall be maintained clear and unobstructed at all times.

315.3.5.2 Dead ends. No dead-end aisles shall be allowed within the facility.

315.3.6 Property securement measures.

315.3.6.1 Fencing. A minimum 6 foot high security industrial fence shall be provided. The gates shall be closed and locked when the facility is not open.

315.3.6.2 Fire apparatus access gates. Gates shall be provided for fire apparatus access. The gates shall be not less than 20 feet in clear width when in the open position. Additional gates complying with this section shall be provided when any portion of the storage exceeds 150 feet from fire apparatus access. When other than a chain and simple padlock are provided to lock gates, an approved key box shall be installed at each gate and shall contain the means to unlock the gate. Fire apparatus access gates shall be in accordance with Chapter 5.

315.3.7 Fire apparatus access roads. Fire apparatus access roads shall be provided to within 150 feet of all combustible materials piles in compliance with Chapter 5.

315.3.8 Fire hydrants. Approved fire hydrants shall be provided in compliance with Chapter 5.

315.3.9 Fire extinguishing equipment. Fire extinguishing equipment shall be provided throughout the facility in accordance with NFPA 10, Portable Fire Extinguishers. Travel distance to reach fire-extinguishing equipment shall not exceed 75 feet.

315.3.10 Additional equipment. A reliable means of rotating the combustible materials shall be readily available on the property (for example, front end loader or back hoe with bucket).

315.3.11 Fire watch. When required, a fire watch shall be provided. Fire watch responsibilities include detecting and reporting any fire or evidence of fire and shall remain on site until smoldering or fire extinguishment.

315.3.12 Vegetation. Weeds, grass and similar vegetation shall be eliminated throughout the entire yard and within 20 feet of the combustible materials piles.

315.3.13 Sources of ignition. Smoking shall be prohibited within the storage area. Potential sources of ignition such as

hot work, warming or open fires and heating devices shall not be allowed within 60 feet of storage piles.

315.3.14 Housekeeping. Storage shall be maintained in a compact, orderly manner.

SECTION 316 COMMERCIAL OPEN FLAME COOKING OPERATIONS

316.1 Applicability. Section 316 shall apply to the commercial outdoor cooking of food products using an open flame or flammable gas other than LP-gas.

Hose and fitting connections to the buildings natural gas piping shall not be allowed, unless approved by the Development Services Department.

316.2 Planning Department approval. Prior to fire code official approval, the City of Phoenix Planning Department shall approve the location. Development Services approval shall be obtained if a permanent canopy or shade structure is used.

316.3 LP-gas requirements.

316.3.1 LP-gas cylinders shall be in accordance with Section 3803.3.

316.3.2 The hose and appurtenances shall be approved for LP-gas use in accordance with Chapter 38.

Manifolding of flammable gas cylinders is not permitted.

316.3.3 LP-gas cylinder securement. To prevent falling, LP-gas cylinders shall be secured to a fixed object or on an approved cart manufactured specifically for cylinders. Securement shall be achieved using one or more noncombustible restraints.

316.4. Placement. The commercial open flame cooking device shall be located at least 10 feet from any exit.

The commercial open flame cooking device shall be located a minimum of 10 feet from LP-gas cylinders, combustible materials, and combustible building surfaces, including building eaves.

An approved means shall be used to prevent the public and vehicular traffic from accessing within 4 feet of the commercial open flame cooking device and the LP-gas cylinder.

Attendance. During operation, the commercial open flame cooking device and LP-gas cylinders shall not be left unattended at any time.

316.5 Fire extinguishers. An approved, visible and accessible 20:BC minimum rated portable fire extinguisher shall be provided within 10 feet of commercial open flame cooking device operations.

316.6 Storage. Storage of LP-gas cylinders and commercial open flame cooking devices shall be outdoors in a secure location to prevent unauthorized access and tampering. Each LP-gas cylinder in storage shall have valve protection installed.

316.7 Refilling LP-gas cylinders. The refilling of LP-gas cylinders shall be conducted a minimum of 20 feet from any source of ignition.

**SECTION 317
COMBUSTIBLE DECORATIVE MATERIALS – FIELD
FLAME TEST**

317.1 General. The procedure for conducting field flame tests on combustible decorative materials shall be in accordance with Section 317.

317.2 Applicability. Section 317 applies to combustible decorative materials including, but not limited to, curtains, draperies, cloth, paper, plastics, vegetation, hay, split bamboo, straw, shavings, vines, leaves, trees, moss, streamers and similar materials used for decorative effect.

317.3 Upon request by the fire code official, the business owner or designee shall provide proof of flame retardancy. The proof shall be in the form of a certificate from the decorative material manufacturer, or shall submit documentation that a flame retardant has been applied to the decorative material and is deemed flame retardant.

317.4 Match flame test. A match flame test shall be conducted as follows:

1. The test shall be performed in a draft-free, safe location.
2. Test samples shall be dry and shall be at least 1½ in. wide and 4 in. long.
3. The sample shall be held in a vertical position with the flame from wood match applied to the center of the bottom edge and the bottom edge ½ in. above the bottom of the flame.
4. After 12 seconds of flame exposure, the match shall be removed from the sample.

317.5 Passing field flame test. A combustible decorative material may be deemed flame resistant when all of the following criteria is met:

1. The flame does not spread over the complete length of the sample or in excess of 4 inches from the bottom of the sample, and
2. When the fire is removed, there is no more than 2 seconds of after-flame, and
3. The material does not break or drip flaming particles.

317.6 Failing field flame test. The fire code official shall require that combustible decorative materials that do not meet the criteria set forth in Section 317 be removed from the building or structure.

317.7 Prohibition. Combustible decorative materials shall not be used in a building without prior approval of the fire code official or the building official.

**SECTION 318
GAS METERS AND PIPING**

318.1 Aboveground gas meters, regulators and piping exposed to vehicular damage due to proximity to alleys, driveways or parking areas shall be protected in accordance with Section 312.

**SECTION 319
MANUFACTURED HOME AND RECREATIONAL
VEHICLE SITES**

319.1 The fire safety requirements for manufactured home and recreational vehicle sites, including accessory buildings, structures and communities, shall comply with all applicable articles chapters of this code.

This section shall not apply to the interior of manufactured homes or recreational vehicles, or the distance between manufactured homes and recreational vehicles.

**SECTION 320
EXCAVATIONS AND CONFINED SPACES**

320.1 Scope. This section shall apply to any man-made cut, cavity, trench or depression in an earth surface formed by earth removal and procedures to protect employees from the hazards of entry into confined spaces.

320.2 Excavations and trenches. Excavations and trenches shall be in accordance with Title 29 Code of Federal Regulations, Part 1926.650 – 1926.652, Subpart P.

320.3 Confined spaces. Confined spaces shall be in accordance with Title 29 Code of Federal Regulations, Part 1910.

320.4 Unsafe conditions. When in the opinion of the fire code official, an unsafe condition exists, excavation and confined space operations shall cease and all persons removed until such time as adequate means have been taken to provide for the safety of persons working in or around the excavation or confined space.

**SECTION 321
SWIMMING POOL BARRIERS**

321.1 General. Swimming pool barriers shall be maintained in accordance with Appendix G of the *International Building Code*.