

Sec. 10-160. - International Fire Code adopted by reference.

The International Fire Code, 2018 edition, promulgated by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois 60408, is adopted by reference there to and incorporated into this Code as the Fire Code of the City. The purpose and subject matter of the International Fire Code is to establish minimum regulations that promote safety and safeguard life and property from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises and to provide safety to firefighters and emergency responders during emergency operations. Except as may be otherwise provided in Section 10-161, the International Fire Code is adopted in full, including the standards, outline of contents, the index contained therein, but only Appendix B and C.

(Ord. No. 2994, § 1, 6-5-07, eff. 7-1-07; Ord. No. 3137, § 1, 7-13-10; Ord. No. 3253, § 1, 7-23-13; Ord. No. 3397, § 1, 8-23-16)

Editor's note— Ord. No. 2994, § 1, adopted June 5, 2007, effective July 1, 2007, repealed the former § 10-160, and enacted a new § 10-160 as set out herein. The former § 10-160 pertained to similar subject matter and derived from Ord. No. 2853, § 1, adopted Nov. 9, 2004.

Charter reference— Adoption by reference, § 8.10.

Cross reference— Adoption by reference authorized, § 2-55.

State Law reference— Adoption by reference, C.R.S. § 31-16-201 et seq. Sec. 10-161. - Amendments to International Fire Code.

The International Fire Code, adopted in Section 10-160, is hereby amended with section numbers referring to section numbers of the International Fire Code; to read as follows:

Subsection 101.1 is hereby amended by the addition of the words double-underlined, to read as follows:

101.1 Title. These regulations shall be known as the *Fire Code* of the City of Thornton, hereinafter referred to as “this code.”

Subsection 102.7 is hereby amended by the addition of the words doubled-underlined to read as follows:

102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 80, except as amended by this reference, and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall apply.

References to NFPA standards listed in Chapter 80 are hereby amended to read as follows:

<u>NFPA</u>	
<u>Standard reference number</u>	
(a)	<u>13- 19</u>
(b)	<u>13D- 19</u>
(c)	<u>13R- 19</u>
(d)	<u>25- 11</u>
(e)	<u>72- 19</u>

Subsection 103 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

SECTION 103
DEPARTMENT OF FIRE PREVENTION
FIRE PREVENTION DIVISION

Subsection 103.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

103.1 General. The ~~department of fire prevention~~ Fire Prevention Division is established within the jurisdiction under the direction of the fire code official. The function of the ~~department~~ Division shall be the implementation, administration and enforcement of the provisions of this code.

Subsection 103.2 is hereby repealed in its entirety.

Subsection 103.3 is hereby repealed in its entirety.

Subsection 103.4 is hereby repealed and reenacted to read as follows:

103.4 Liability. The fire chief, fire code official and other individuals charged with the control or extinguishment of any fire, the enforcement of this code or any other official duties, acting in good faith and without malice in the discharge of their duties, shall not thereby be rendered personally liable for any damage that may accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of their duties. This code shall not be construed to relieve from or lessen the responsibility of any persons owning, operating, or controlling any building, structure or facility for damages to persons or property caused by defects, nor shall the Thornton Fire Department or the City be held as assuming any such liability by reason of the inspections authorized by this code or any certificates of inspection or permits issued under this code.

Subsection 103.4.1 is hereby repealed in its entirety.

A new *subsection 105.1.7* is hereby enacted to read as follows:

105.1.7 Fees. The fee for construction permits shall be as set forth in an amount as determined from time to time by resolution of the City Council, and shall be collected by the City of Thornton Building Inspection Division.

Subsection 105.2 is hereby amended by the addition of the words double-underlined to read as follows:

105.2 Application. Application for a permit required by this code shall be made to the fire code official in such form and detail as prescribed by the fire code official. Applications for construction permits shall be submitted to the Building Inspection Division prior to the issuance of a building permit, when applicable. A deferred submittal of construction permits may be approved by the building code official and fire code official, when requested. Applications for permits shall be accompanied by such plans as prescribed by the fire code official.

Subsection 105.4.1 is hereby repealed and reenacted to read as follows:

105.4.1 Submittals. Construction documents shall be submitted in two or more sets and in such form and detail as required by the fire code official. Fire protection system construction documents, including shop drawings, calculations, specifications, and other required information, shall be reviewed and signed by a design professional certified as a NICET Level III or IV, as defined by the National Institute for Certification in Engineering Technologies, a Professional Engineer, or other approved certification or equivalent training.

Exception:

1. Design professional review is not required for alterations to existing fire sprinkler systems involving the addition or relocation of less than 20 sprinklers, provided the work does not have an adverse affect on the integrity or performance of the existing system.
2. Design professional review is not required for alterations to existing fire alarm systems involving the addition or relocation of less than 5 devices, provided the work does not have an adverse affect on the integrity or performance of the existing system.

Subsection 105.6.32 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

105.6.32 Open burning. An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road, or other public or private ground. Instructions and stipulations of the permit shall be adhered to.

Exception: ~~Recreational fires.~~ Fires located at Group R-3 occupancies contained by a commercially available chiminea, outdoor fireplace or fire pit, or other approved method having a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.

Subsection 106.1 is hereby repealed and reenacted to read as follows:

106.1 Fees. The fee for inspections shall be as set forth in an amount as determined from time to time by resolution of the City Council, and shall be collected by the Building Inspection Division.

Subsection 109.1 is hereby repealed in its entirety.

Subsection 110.4 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

110.4 Violation penalties. It shall be unlawful for any person who shall to violate a provision of this code or ~~shall fail to comply with any of the requirements thereof or who shall to~~ erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code. Any person who is found guilty, pleads guilty, or pleads nolo contendere to a violation of this code shall be punished ~~shall be guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. as provided in Section 1-8(a) of the Thornton City Code.~~ Each day that a violation continues after due notice has been served shall be deemed a separate offense. A violation of any provision of this code is declared to be a serious threat to public health and safety.

Subsection 112.4 is hereby repealed in its entirety.

Section 202 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

202 General 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. **AUTOMATIC EXTERNAL DEFIBRILLATOR (AED).** A computerized medical device manufactured under the guidelines of the Food and Drug Administration (FDA).

BONFIRE. ~~An outdoor fire utilized~~ Open burning in an outdoor location for ceremonial purposes.

NOVELTY. A device containing small amounts of pyrotechnic and/or explosive composition. Such devices produce limited visible or audible effects.

OPEN BURNING. The burning of materials 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 barbecue grills, road flares, smudgepots and similar devices associated with safety or occupational uses typically considered open flames, ~~recreational fires~~ or use of portable outdoor fireplaces. 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.

POPPERS. A popper is an object commonly used at parties. It emits a loud popping noise by means of a small friction-actuated explosive charge that is activated by pulling a string. The charge or compressed air blows out some confetti or streamers and emits a popping sound.

~~**RECREATIONAL FIRE.** An outdoor fire burning materials other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, barbeque grill or barbeque 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.~~

SILVICULTURE. A branch of forestry dealing with the development and care of forests.

SNAPPERS. Snappers are small paper balls filled with a friction-sensitive composition that lets off a loud 'bang' when thrown against a hard surface.

Subsection 305.4 is hereby repealed and reenacted to read as follows:

305.4 Arson. It shall be unlawful for a person to intentionally, knowingly or recklessly, within the City, do the following:

1. Start or maintain a fire or cause an explosion on public property or private property unless specifically exempted, as provided herein.

Exceptions:

1. Fires contained in an incinerator, fireplace, or similar approved device when used in accordance with this code and the Thornton City Code.
 2. Open burning and open flames conducted in accordance with the provisions of this code and the Thornton City Code.
2. Set fire to, burn, cause to be burned or by the use of any explosive, damage or destroy, or cause to be damaged or destroyed, the property of another without the consent of the property owner, other than a building or occupied structure, when such property damaged or destroyed is of a value less than one hundred dollars or the value cannot be ascertained.

305.4.1 Violation penalties. Violations of this Section 305.4 shall be punished as provided in Section 1-8(b) of the Thornton City Code.

Subsection 307 is hereby repealed and reenacted to read as follows:

**SECTION 307
OPEN BURNING**

307.1 General. It shall be unlawful for a person to kindle or maintain or authorize to be kindled or maintained any open burning unless conducted and approved in

accordance with this section. It shall be unlawful to violate any condition or requirement of an Open Burning permit issued pursuant to this Section 307.

307.1.1 Approved open burning. Open burning shall only be conducted for the following purposes or activities:

1. Recognized silvicultural, range or wildlife management practices.
2. Prevention or control of disease or pests.
3. Fires used for the training or demonstration of firefighting, fire investigation, fire extinguisher operation, or other approved similar activities.
4. Bonfires used in a government-sponsored or co-sponsored ceremony. The terms "government-sponsored or co-sponsored" shall mean the state or a political subdivision of the state or the federal government or agency thereof.
5. Fires contained by a commercially available chiminea, outdoor fireplace or fire pit, or other approved method having a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.

307.2 Permit required. A permit shall be obtained from the fire code official in accordance with Section 105.6 prior to kindling a fire. 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 from other agencies. 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 Permit restrictions. Open burning may be restricted or prohibited on any day at any time due to current or expected weather conditions and/or fire behavior. Open burning that may pose a health risk because of smoke or odor emissions due to atmospheric conditions or local circumstances 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 potentially hazardous situation or condition.

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

Exceptions:

1. The minimum required distance from a structure shall be 15 feet (4,572 mm) where the fuel being burned is wood or other solid fuel and the fire is contained by a commercially available chiminea, outdoor fireplace or fire pit,

or other approved method having a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.

2. The minimum required distance from a structure to any point of the burner shall be 5 feet (1,524 mm) where the fuel being burned is natural gas or propane and the fire is contained by a commercially available chiminea, outdoor fireplace or fire pit, or other approved method having a burner of 3 feet (914 mm) or less in diameter with a maximum flame height of 2 feet (610 mm).

307.4 Container construction. Commercially available chimineas, outdoor fireplaces, fire pits and similar approved containers shall be constructed of metal, concrete, or other approved non-combustible materials. For fires located at Group R-3 occupancies where the fuel being burned is wood or other combustibles that emit sparks and embers, all openings shall be covered with wire mesh or other screening materials that will prevent the passage of sparks and embers.

307.5 Attendance. Open burning shall be constantly attended until the fire is extinguished. As required by the fire code official, a minimum of one portable fire extinguisher with a minimum 4-A rating and complying with Section 906, 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.

307.6 Weather conditions. Open burning is prohibited on windy or gusty days; surface wind speeds shall not exceed 15 miles per hour. The fire code official may also determine an acceptable wind direction if a particular wind direction may result in a hazardous fire or smoke condition.

307.7 Time. Open burning shall take place after sunrise and be completed before sunset unless an alternate time is specifically approved by the fire code official.

Subsection 308.1.4 is hereby repealed in its entirety.

Subsection 308.1.6.3 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

308.1.6.3 Sky lanterns. A person shall not release or cause to be released an untethered ~~a~~ sky lantern.

Subsection 311.5 is hereby repealed in its entirety.

Subsection 311.6 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

311.6 Unoccupied tenant spaces in mall buildings. Unoccupied tenant spaces in ~~covered and open mall~~ buildings shall be:

1. Kept free from the storage of any materials.

2. Separated from the remainder of the building by partitions of not less than 0.5-inch-thick (12.7 mm) gypsum board or an *approved* equivalent to the underside of the ceiling of the adjoining tenant spaces.
3. Without doors or other access openings other than one door that shall be kept key locked in the closed position except during that time when opened for inspection.
4. Kept free from combustible waste and be broomswept clean.

A new Subsection 408 is hereby enacted to read as follows:

Section 408
Automatic External Defibrillator (AED)

408.1 Where required. Approved Automatic External Defibrillators (AED's) in new buildings and structures shall be provided in the locations described in this Section.

408.1.1 Group A. An AED shall be provided in all Group A occupancies with an occupant load of 1,000 or more.

408.1.2 Group E. An AED shall be provided in Group E occupancies with a fire area greater than 20,000 square feet.

408.1.3 Group I. An AED shall be provided in buildings with a Group I fire area.

Exception: A Group I facility with any type defibrillator.

408.1.4 Group M. An AED shall be provided in Group M occupancies with a fire area greater than 50,000 square feet.

408.1.5 Group R. An AED shall be provided in Group R occupancies with an occupant load of 500 or more per building.

408.1.6 High-rise. An AED shall be provided in all buildings classified as high-rise in accordance with the 2018 International Building Code.

408.2 Installation requirements. AED's shall be installed in accordance with Sections 408.2.1 through 408.2.4

408.2.1 Location. AED's shall be stored in a conspicuous location approved by the fire code official.

408.2.2 Hangers and brackets. AED's not stored in cabinets shall be installed on hangers or brackets securely anchored to the mounting surface in accordance with the manufacturer's installation instructions.

408.2.3 Cabinets. Cabinets used to house AED's shall not be locked or shall be provided with a means of ready access.

408.2.4 Height above floor. AED's shall be installed so that the top is not more than 5 feet above the floor. The clearance between the floor and the bottom of installed AED's shall not be less than ~~four (4)~~ nine (9) inches.

408.3 Testing and maintenance. AED's shall be inspected, tested, and maintained in accordance with the manufacturer.

408.3.1 Records. Records of all inspection, tests, and maintenance shall be maintained on the premises for a minimum of three years and shall be copied to the fire code official upon request.

408.3.2 Registration. AED's shall be registered with the Thornton Fire Department.

408.3.3 Usage. The use of an AED shall be reported to the Thornton Fire Department.

Subsection 503.1.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exceptions:

1. The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where any of the following conditions occur:
 - 1.1 The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, ~~903.3.1.2 or 903.3.1.3.~~ provided access roads are extended to within 150 feet (45 720 mm) of at least one, approved side of the building.
 - 1.2 The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.2, provided the dimension does not exceed 200 feet (60 960 mm).
 - ~~1.23.~~ Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other

similar conditions, and an approved alternative means of fire protection is provided.

1.3.4. There are not more than two Group R-3 or Group U occupancies, provided access roads are extended to within 150 feet (45 720 mm) of at least one, approved side of the building.

Subsection 503.1.2 is hereby repealed and reenacted to read as follows:

503.1.2 At least two separate and approved fire apparatus access roads shall be provided to the following occupancies, buildings, and facilities:

1. Occupancies in Group A with an occupant load greater than 100, and Groups E, F-1, H, I, R-1, R-2, and S-1.
2. Occupancies in Groups R-3, R-4 and buildings constructed in accordance with the *International Residential Code*, as adopted by the City of Thornton in Section 10-166, located on dead-end roads greater than 500 feet in length.
3. Buildings and facilities containing high-piled combustible storage.
4. Buildings and facilities required to provide aerial fire apparatus access roads in accordance with Section 503.2.1.1.
5. Buildings and facilities with a required fire flow of 2,000 gallons per minute or greater.
6. Buildings and facilities with an aggregate building area in excess of 62,000 square feet (5760 m²).
7. Fire code official may require more than one fire apparatus access based on the potential for impairment caused by vehicle congestions, climatic conditions or other factors that could limit access.

Subsection 503.2.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), ~~except for approved security gates in accordance with Section 503.6,~~ and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

Exception:

Approved traffic-control devices as approved by Development Engineering and the Thornton Fire Department.

New subsections 503.2.1.1, 503.2.1.1.1, 503.2.1.1.2, and 503.2.1.1.3 are hereby enacted to read as follows:

503.2.1.1 Aerial fire apparatus access roads. Buildings or portions of buildings or facilities exceeding 30 feet (9144 mm) in height above the lowest level of fire department vehicle access shall be provided with at least one approved fire apparatus access road capable of accommodating fire department aerial apparatus during firefighting operations. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.

Exception: Buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

503.2.1.1.1 Width. Designated aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm).

503.2.1.1.2 Proximity to building. The centerline of designated aerial fire apparatus access roads shall be located no less than 15 feet (3048 mm) and no more than 30 feet (9144 mm) from the roofline of the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

503.2.1.1.3 Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the fire code official.

Subsection 503.2.7 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

503.2.7 Grade. The grade of the fire apparatus access road shall be ~~within the limits established by the fire code official based on the fire department's apparatus~~ not exceed 5%.

A new subsection 503.2.9 is hereby enacted to read as follows:

503.2.9 Traffic calming devices. The location and design of speed bumps, traffic circles, and similar traffic calming devices on public and private roads are required to be approved by Development Engineering and the Thornton Fire Department.

~~**503.6 Security gates.** The installation of security gates across a fire apparatus access road shall be approved by the fire chief. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electronic gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.~~

Subsection 503.6.1 is hereby amended by the addition of the words double-underlined, to read as follows:

503.6.1 Where electrically-operated security gates are installed in areas with a residential occupancy, they shall have the following means of emergency operation:

1. An approved key switch.
2. A touch-pad that will accept an approved fire department code or access card.
3. An approved traffic control device for fire apparatus access that complies with Section 700 of the Standards & Specifications for the Design and Construction of Public Improvements, as adopted by the City of Thornton.
4. The gates shall open upon loss of power.
5. The gates shall be capable of being manually opened.

503.6.2 Where electrically-operated security gates are installed in commercial areas, they shall have the following means of emergency operation:

1. An approved key switch.
2. A touch-pad that will accept an approved fire department code or access card.
3. The gates shall open upon loss of power.
4. The gates shall be capable of being manually opened.

A new subsection 504.1.1 is hereby enacted to read as follows:

504.1.1 Slope. The slope of the ground within 15 feet (3048 mm) of the perimeter of the building, as measured from the edges of roof eave overhangs, shall not exceed the following:

1. 5 percent, as measured parallel to the face of the exterior walls.
2. 10 percent, as measured perpendicular to the face of the exterior walls.

Exceptions:

1. Buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. Where an approved path cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar

conditions, and an approved alternative means of fire protection is provided.

3. Where there are not more than two Group R-3 or Group U occupancies.
4. An alternative distance for buildings less than 3 stories in height as approved by the Fire Code Official.
5. Where access to a side or portion of a building does not require ladder access as approved by the Fire Code Official.

Subsection 505.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

505.1 Address identification. New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than ~~4 inches (102 mm)~~ 6 inches (152.4 mm) high with a minimum stroke width of ~~0.5 inch (12.7 mm)~~ 0.75 inch (19.05 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure. Address numbers shall be maintained.

Exception: Existing buildings with previously approved address numbers that are visible from the street.

Subsection 506.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

506.1 Where required. ~~Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require~~ All buildings and facilities with a monitored fire protection system shall be provided with a key Knox box ~~to be installed in an approved location. The key Knox box shall be of an approved type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the fire code official.~~

Subsection 507.3 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

507.3 Fire flow. Fire flow requirements for buildings or portions of buildings and facilities shall be determined in accordance with Appendix B as amended by the City of Thornton, by an approved method.

Subsection 507.5 is hereby amended by the addition of the words double-underlined to read as follows:

507.5 Fire hydrant systems. Fire hydrant systems shall comply with Sections 507.5.1 through 507.5.6 and Appendix C as amended by the City of Thornton.

Subsection 507.5.1.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

507.5.1.1 Hydrant for standpipe and fire sprinkler systems. Buildings equipped with a standpipe and fire sprinkler system installed in accordance with Section 905 shall have a fire hydrant within ~~100 feet (30,480mm)~~ 50 feet (15,240 mm) of fire department connections.

Exception: The distance shall be permitted to exceed ~~100 feet (30,480mm)~~ 50 feet (15,240 mm) where approved by the fire code official.

Subsection 507.5.5 is hereby amended by the addition of the words double-underlined to read as follows:

507.5.5 Clear space around hydrants. A 3-foot (914 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved. Landscaping within the clear space shall be limited to mulch or ground cover height plant material.

Subsection 510.2 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

510.2 Emergency responder radio coverage in existing buildings. ~~Existing buildings shall be provided radio coverage for emergency responders required in Chapter 11.~~ Existing buildings other than Group R-3, that do not have approved radio coverage for emergency responders in the building based on existing coverage levels of the public safety communication systems, shall be equipped with such coverage according to one of the following:

1. Where an existing wired communication system cannot be repaired or is being replaced, or where not approved in accordance with Section 510.1, Exception 1.

2. Within a time frame established by the adopting authority.

Exception: Where it is determined by the fire code official that the radio coverage system not needed.

Subsection 510.4.2.3 is hereby amended by the addition of the words double-underlined to read as follows:

510.4.2.3 Standby power. Emergency responder radio coverage systems shall be provided with standby power in accordance with Section 604. The standby power supply shall be capable of operating the emergency responder radio coverage system for a duration of not less than 24 hours. Where a building fire alarm system is installed, loss of the primary power supply shall be monitored by the building fire alarm system in accordance with NFPA 72.

A new subsection 901.4.1.1 is hereby enacted to read as follows:

901.4.1.1 Design approach for High-Piled Combustible Storage. Where the size and height of a building or portion thereof will accommodate High-Piled Combustible Storage, the building shall comply with the fire protection requirements of Chapter 32. The fire protection features required by Chapter 32 shall be based on the most restrictive design requirements, except where modifications are approved by the fire code official.

A new subsection 901.5.2 is hereby enacted to read as follows:

901.5.2 Hydrostatic testing of CPVC piping. Hydrostatic testing of sprinkler systems with CPVC piping shall be performed with approved test plugs.

Subsection 901.6.2.1 is hereby repealed in its entirety.

Subsection 903.2.8 is hereby amended by the addition of the words double-underlined to read as follows:

903.2.8 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

Exceptions:

1. Occupancies in Group R-3 with 8 or fewer occupants.
2. Occupancies in Group R-4 with 8 or fewer occupants.

Subsection 903.2.9 #5 is hereby amended by the addition of the words double-underlined to read as follows:

5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m²)

Exception: Self-service storage facilities where the individual units are less than 2,500 square feet (232 m²).

Subsection 903.3.2 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

903.3.2 Quick-response and residential sprinklers. Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers

shall be installed in the following areas in accordance with Section 903.3.1 and their listings: Quick-response or residential automatic sprinklers in Group R dwelling units and sleeping areas in all occupancies shall be used only in wet systems.

1. Throughout all spaces within a smoke compartment containing care recipient *sleeping units* in Group I-2 in accordance with the *International Building Code*.
2. Throughout all spaces within a smoke compartment containing treatment rooms in ambulatory care facilities
3. *Dwelling units* and *sleeping units* in Group R and I-1 occupancies.
4. Light-hazard occupancies as defined in NFPA 13.

Subsection 903.6 is hereby repealed and reenacted to read as follows:

903.6 Fire sprinkler riser rooms. Sprinkler risers shall be located in a room that is readily accessible to fire department personnel as approved by the Fire Code Official. Access to sprinkler riser rooms shall not be through any portion of residential dwelling units.

Subsection 905.12 is hereby repealed in its entirety.

Subsection 907.2.7.1 is hereby repealed in its entirety.

A new *subsection 907.5.2.1.3* is hereby enacted to read as follows:

907.5.2.1.3 Minimum sound pressure. The minimum sound pressure levels shall be: 75 dBA in occupancies in Group R and I; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies.

Exception: Group I occupancies that are staffed 24 hours as approved by the fire code official.

Subsection 907.9 is hereby repealed and reenacted to read as follows:

907.9 Occupancy requirements. A fire alarm system shall be installed in accordance with Sections 907.9.1.

907.9.1 Group R-2. A manual and automatic fire alarm system shall be installed in existing Group R-2 occupancies more than three stories in height or with more than 16 dwelling units or sleeping units. Owners shall be permitted three years from the effective date of this ordinance to bring any structures into compliance with this Section.

Exceptions:

1. Where each living unit is separated from other contiguous living units by fire barriers having a fire-resistance rating of not less than 0.75 hour, and where

each living unit has either its own independent exit or its own independent stairway or ramp discharging at grade.

2. A separate fire alarm system is not required in buildings that are equipped throughout with and approved supervised automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm to notify all occupants.
3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1022.6, Exception 4.

Subsection 912.2.2 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

912.2.2 Existing buildings. ~~On existing buildings, wherever the fire department connection is not visible to approaching fire apparatus,~~ the fire department connection shall be indicated by an approved sign mounted on the street front or on the side of the building. Such sign shall have the letters "FDC" not less than 6 inches (152 mm) high and words in letters not less than 2 inches (51 mm) high or an arrow to indicate the location. Such signs shall be subject to the approval of the fire code official.

A new subsection 912.8 is hereby enacted to read as follows:

912.8 Connection details. For sprinkler and standpipe systems, at least one, 2.5-inch hose connection shall be provided for each 500 gallons per minute of system demand. At least two such connections shall be provided for sprinkler systems installed in accordance with Section 903.3.1.1 and for all standpipe systems.

When the system demand exceeds 1,000 gallons per minute, at least one, 5-inch, 30 degree pattern hose connection with threadless couplings that are compatible with fire department hose shall be provided. When the system demand exceeds 1,500 gallons per minute, at least two such connections shall be provided.

Exception: When system demands exceed the pressure limitations of the 5-inch hose or other equipment supplying the fire department connection, the appropriate number of 2.5-inch hose connections shall be used.

Subsection 1015.2 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

1015.2 Where required. Guards shall be located along window wells and open-sided walking surfaces, including mezzanines, equipment platforms, aisles, stairs.

ramps and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Guards shall be adequate in strength and attachment in accordance with Section 1607.8 of the International Building Code.

Exception: Guards are not required for the following locations:

1. On the loading side of loading docks or piers.
2. On the audience side of stages and raised platforms, including stairs leading UP to the stage and raised platforms.
3. On raised stage and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations.
4. At vertical openings in the performance area of stages and platforms.
5. At elevated walking surfaces appurtenant to stages and platforms for access to and utilization of special lighting or equipment.
6. Along vehicle service pits not accessible to the public.
7. In assembly seating areas at cross aisles in accordance with Section-1029.17.2

Subsections 1030.1, 1030.2, and 1030.4 are hereby amended to read as follows:

1030.1 General. In addition to the *means of egress* required by this chapter, provisions shall be made for *emergency escape and rescue openings* in Group R-2 occupancies in accordance with Tables 1006.3.2(1) and 1006.3.2(2) and Group R-3 occupancies. Basements and sleeping rooms below the fourth story above *grade plane* shall have at least one exterior *emergency escape and rescue opening* in accordance with this section. Where basements contain one or more sleeping rooms, *emergency escape and rescue openings* shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Such openings shall open directly into a *public way* or to a *yard or court* that opens to a *public way*.

Exceptions:

1. *Emergency escape and rescue openings* are not required from basements or sleeping rooms that have an *exit door* or *exit access door* that opens directly into a public way or to a yard, court or exterior exit balcony that opens to a public way.
2. Basements without habitable spaces and having not more than 200 square feet (18.6 mm) in floor area and having ceiling heights less than required in the International Building Code Section 1208.2 shall not be required to have *emergency escape and rescue openings*.
3. *Emergency escape and rescue openings* are not required where existing basements undergo alterations or repairs except that new sleeping rooms

created in an existing basement shall be provided with emergency escape and rescue openings that comply with section 1030.2 through 1030.5.

1030.2 Minimum size. *Emergency escape and rescue openings* shall have a minimum net clear opening of 5.7 square feet (0.53 mm).

1030.4 Operational constraints. *Emergency escape and rescue openings* shall be operational from the inside of the room without the use of keys or tools. Bars, grilles, grates or similar devices are permitted to be placed over *emergency escape and rescue openings* provided the minimum net clear opening size complies with Section 1030.2 and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening. Such bars, grilles or grates shall weigh no more than 30 pounds (13.6 kg). Where such bars, grilles, grates or similar devices are installed in existing buildings, *smoke alarms* shall be installed in accordance with Section 907.2.11 regardless of the valuation of the *alteration* .

Chapter 11 is hereby repealed in its entirety.

A new subsection 3310.3 is hereby enacted to read as follows:

3310.3 Temporary fire apparatus access specification. *Temporary fire apparatus access roads shall be installed and arranged according to 3310.3.1-3310.3.3.*

3310.3.1 Dimensions. *Temporary fire apparatus access roads shall have an unobstructed width or not less than 20 feet and a vertical clear of not less than 13 feet 6 inches.*

3310.3.2 Surface. *Temporary fire apparatus access roads shall have surface consisting of asphalt, angular rock or class 6 road base. The surface shall be capable of supporting the imposed load or fire apparatus weighing 80,000 pounds and drivable in all kinds of weather.*

3310.3.3 Dead Ends. *Dead-end temporary fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for fire apparatus turnaround.*

Subsection 5307.3 is hereby amended by the addition of the words double-underlined to read as follows:

5307.3 Insulated liquid carbon dioxide systems used in beverage dispensing applications. Insulation liquid carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications shall comply with Sections 5307.3.1. Carbon Dioxide systems installed prior to the effective date of this code shall comply with Section 5307.3.1. Owners shall be permitted one year from the date of discovery of an existing carbon dioxide system to bring the existing carbon dioxide system into compliance with Section 5307.3.1.

Subsection 5504.3.1.1.3 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

5504.3.1.1.3 Location. Containers of *cryogenic fluids* shall not be located within diked areas containing other hazardous materials.

Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited for Group R occupancies within the territorial limits of the City of Thornton, as they exist from time to time, except as permitted by specific use permit, as approved by the fire code official or as permitted by any other ordinance of the Thornton City Code.

Subsection 5601.1.3 is hereby repealed and reenacted to read as follows:

5601.1.3 Fireworks. The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.:

Any person who pleads guilty or is found guilty of a first violation shall be subject to a minimum mandatory fine in the amount of \$500.00. Any person who pleads guilty or is found guilty of a second or subsequent violation within a 12-month period shall be subject to a minimum mandatory fine in the amount of \$1000.00.

Exception:

1. The use of fireworks for display as permitted in Section 5608 the International Fire Code, as adopted and amended by the City. Fireworks displays are allowed in the City of Thornton only for government-sponsored or co-sponsored events. The terms "government-sponsored or co-sponsored" shall mean the state or a political subdivision of the state or the federal government or agency thereof.
2. The sales and use of the Novelty Devices specifically identified as Party Poppers and Snapper devices provided they meet the requirements identified in the American Pyrotechnics Association Standard. The devices shall be clearly marked and labeled to meet the requirements of the Consumers Product Safety Commission applicable to consumer fireworks devices and packaged in strong outer packing that is sealed to prevent leakage of the contents.

Subsection 5704.2.9.6.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

5704.2.9.6.1 Locations where above-ground tanks are prohibited. Storage of Class I and II liquids in above-ground tanks outside of buildings is prohibited ~~within the limits established by law in the adopting ordinance as the limits of districts in which such storage is prohibited (see Section 3 of the Sample Ordinance for Adoption of the International Fire Code on page v)~~ for Group R occupancies within the territorial limits of the City of Thornton, as they exist from time to time, except as permitted by specific use permit, as approved by the fire code official or as permitted by any other ordinance of the Thornton City Code.

A new subsection 5704.2.9.6.4 is hereby enacted to read as follows:

5704.2.9.6.4 Construction. When the storage of Class I and II liquids in aboveground tanks outside of buildings is permitted, tanks shall be designed and installed in accordance with the requirements for protected above-ground tanks.

Exception: Alternate types of above-ground tanks may be approved by the fire code official based on other fire protection features or increased distances from property lines, public ways, buildings, and other tanks.

Subsection 5706.2.4.4 is hereby repealed in its entirety.

Subsection 5706.3.1.3 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

5706.3.1.3 Buildings. Wells shall not be drilled within 350 feet (106,680 mm) ~~400 feet (30,480 mm)~~ of buildings not necessary to the operation of the well.

Subsection 5706.3.1.3.1 is hereby repealed in its entirety.

Subsection 5706.3.1.3.2 is hereby amended by the addition of the words double-underlined, to read as follows:

5706.3.1.3.2 Existing wells. Where wells are existing, buildings shall not be constructed within ~~the distances set forth in Section 3406.3.1 for separation of wells or buildings~~200 feet (60,960 mm) of wells. A reduction in the required separations, not to exceed 50%, may be approved based on alternative materials and methods that provide an equivalent level of safety to adjacent buildings and occupants. The alternative methods and materials shall be presented by a professional engineer or licensed architect, as applicable, as determined by the City.

Subsection 5706.3.5 is hereby amended by the addition of the words double-underlined to read as follows:

5706.3.5 Storage Tanks. Storage of flammable or combustible liquids in tanks shall be in accordance with Section 5704, except that production tanks and associated on-site production equipment shall be located at least 350 feet (106,680 mm) from any building not necessary to the operation of the well and at least 500 feet (152,400 mm) from a building with an occupancy of Group A, E or I.

When production tanks and associated on-site production equipment are existing, main buildings shall not be constructed within the distances set forth in this section for separation of production tanks and associated on-site production equipment. A reduction in the required separations, not to exceed 50%, may be approved based on alternative materials and methods that provide an equivalent level of safety to adjacent

buildings and occupants. The alternative methods and materials shall be presented by a professional engineer or licensed architect, as applicable, as determined by the City. Oil storage tanks or groups of tanks shall have posted in a conspicuous place, on or near such tank or tanks, an approved sign with the name of the owner or operator, or the lease number and the telephone number where a responsible person can be reached at any time.

Subsection 5806.2 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

5806.2 Limitations. Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited ~~within the limits established by law as the limits of districts in which such storage is prohibited (see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page viii)~~ for Group R occupancies within the territorial limits of the City of Thornton, as they exist from time to time, except as permitted by specific use permit, as approved by the fire code official or as permitted by any other ordinance of the Thornton City Code.

Subsection 6104.2 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

6104.2 Maximum capacity within established limits. ~~Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L) (see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page viii). The storage of liquefied petroleum gas is prohibited for Group R occupancies within the territorial limits of the City of Thornton, as they exist from time to time, except as permitted by specific use permit, as approved by the fire code official or as permitted by any other ordinance of the Thornton City Code.~~

Exception: ~~In particular installations, this capacity limit shall be determined by the fire code official, after consideration of special features such as topographical conditions, nature of occupancy, and proximity to buildings, capacity of proposed containers, degree of fire protection to be provided and capabilities of the fire department. When public utilities are not available for use as a fuel source. At such time as utilities do become available, as determined by the City, this exemption will not apply.~~

APPENDIX B, Fire-Flow Requirements for Buildings.

Table B105.1(1), is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

Table B105.1(1)
Required Fire-Flow for One- and Two-Family Dwellings, Group R-3 and R-4 Buildings
and Townhouses

FIRE-FLOW CALCULATION AREA (square feet)	AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE-FLOW (gallons per minute)	FLOW DURATION (hours)
0-3,600	No automatic sprinkler system	1,000	1
3,601 and greater	No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1(2) at the required fire-flow rate
0-3,600	Section 903.3.1.3 of the <i>International Fire Code</i> or Section P2904 of the <i>International Residential Code</i>	<u>500</u> 750	1/2
3,601 and greater	Section 903.3.1.3 of the <i>International Fire Code</i> or Section P2904 of the <i>International Residential Code</i>	1/2 3/4 value in Table B105.1(2)	1

For SI: 1 square foot = 0.0929 m², 1 gallon per minute = 3.785 L/m.

Table B105.2, is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

Table B105.2
Required Fire-Flow for Buildings Other Than One- and Two-Family Dwellings, Group R-3 and R-4 Buildings and Townhouses

AUTOMATIC SPRINKLER SYSTEM (Design Standard)	MINIMUM FIRE-FLOW (gallons per minute)	FLOW DURATION (hours)
No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1(2)
Section 903.3.1.1 of the <i>International Fire Code</i>	<u>25</u> 50 % of the value in Table B105.1(2) ^a	Duration in Table B105.1(2) at the reduced flow rate
Section 903.3.1.2 of the <i>International Fire Code</i>	<u>25</u> 75 % of the value in Table B105.1(2) ^b	Duration in Table B105.1(2) at the reduced flow rate

For SI: 1 gallon per minute = 3.785 L/m.

a. The reduced fire-flow shall be not less than ~~4,000~~ 1,500 gallons per minute.

b. The reduced fire-flow shall be not less than 1,500 gallons per minute.

APPENDIX C, Fire Hydrant Locations and Distribution.

Table C102.1, footnote c is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

- C. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed ~~4,000~~ 1,200 feet to provide for transportation hazards.

Table C102.1, footnote f is hereby repealed in its entirety.

Table C102.1, footnote g is hereby repealed in its entirety.