

COUNCIL COMMUNICATION

Meeting Date: July 13, 2010	1 st Reading _____ 2 nd Reading <u> X </u>	Legal Review:	Agenda Location: Public Hearing	Agenda Item: 9B
Subject: AN ORDINANCE AMENDING CHAPTER 10 OF THE THORNTON CITY CODE (“CODE”) BY ADOPTING BY REFERENCE THE 2009 INTERNATIONAL FIRE CODE AND AMENDMENTS THERETO AND REPEALING SECTION 10-161.1.				
Prepared by: Chad McCollum		Approved by: Jack Ethredge		Ordinance previously introduced by: <u>Humenik</u>
Reviewed by: John Staley		Presented by: Chad McCollum Fire Marshal/Assistant Chief		

KEY CONSIDERATIONS:

- On June 8, 2010, the City Council reviewed these amendments to the International Fire Code and set July 13, 2010, as the public hearing date.
- This Ordinance adopts the 2009 International Fire Code with amendments, which will become effective on August 2, 2010.
- The Building Code Advisory Board (BCAB) held a public hearing on April 14, 2010, regarding the adoption of the 2009 International Fire Code as amended, and unanimously passed a resolution to recommend adoption.
- The 2009 International Fire Code represents standards that have been updated and amended to conform to industry standards. The 2009 International Fire Code is compatible with the International Building, Residential, Mechanical, Plumbing, Energy Conservation, and Fuel Gas Codes.
- The amendments have been presented to the Home Builders Association of Metropolitan Denver and they have no objections to adoption of the 2009 International Fire Code as amended.
- There are no substantial changes from the 2006 to the 2009 edition of the fire code or the City's amendments. Most of the amendments in this Ordinance are in the currently adopted 2006 International Fire Code.
- The first reading of the Ordinance was passed by City Council at the June 8, 2010 meeting.

BUDGET/STAFF IMPLICATIONS:

- All fees authorized in the International Fire Code are existing fees that are currently collected by the Building Inspection Division. There are no new fees proposed.

RECOMMENDATION:

- Staff recommends approval of the Ordinance adopting the 2009 edition of the International Fire Code, with proposed amendments, and establishing August 2, 2010 as the effective date. The most current set of codes, developed on an international level, are being adopted throughout the country and reflect current methods of building construction and fire protection. The regulations in the IFC safeguard life and property from the hazards of fire, explosion or dangerous conditions in buildings, structures and premises.

HISTORY: (includes previous City Council action)

- The City of Thornton, like other jurisdictions in Colorado, has historically adopted the latest editions of the International Codes as published by the International Code Council (ICC) every three years.
- In 2000, ICC produced and published, after several code hearings, the first full set of the International Codes. Currently, the City of Thornton has adopted the 2006 edition of the International Fire Code and has been enforcing this code since July 1, 2007.

INTRODUCED BY: Humenik

AN ORDINANCE AMENDING SECTIONS 10-160 AND 10-161 OF THE THORNTON CITY CODE BY ADOPTING BY REFERENCE THE 2009 INTERNATIONAL FIRE CODE AND AMENDMENTS THERETO AND REPEALING SECTION 10-161.1.

WHEREAS, the City of Thornton ("City") adopted the 2006 International Fire Code on June 5, 2007, as the City's fire code; and

WHEREAS, the 2009 International Fire Code represents standards that have been updated and amended to conform with changing fire protection methods; and

WHEREAS, it is deemed to be in the best interests of the citizens of the City and necessary to promote the public health, safety and general welfare to adopt by reference the updated version of the 2009 International Fire Code and local amendments.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF THORNTON, COLORADO, AS FOLLOWS:

1. Section 10-160 of the Code is hereby repealed and reenacted to read as follows:

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

The International Fire Code, 2009 edition, promulgated by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, Illinois 60408, is adopted by reference thereto 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 .

2. Section 10-161 of the Code is hereby repealed and reenacted to read as follows:

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 double-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 47, 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 47 are hereby amended to read as follows:

NFPA

Standard reference number

- (a) 13- 10
- (b) 13D- 10
- (c) 13R- 10
- (d) 25- 08
- (e) 72- 10

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~~ City 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 105.1.4* is hereby enacted to read as follows:

105.1.4 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 105.6.30 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

105.6.30 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 108.1 is hereby repealed in its entirety.

Subsection 109.3 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

109.3 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 111.4 is hereby repealed in its entirety.

Section 113 is hereby repealed and reenacted to read as follows:

113.1 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 302.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

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.

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

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 ~~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.

~~**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.~~

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(a) 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 restrictions, prohibitions, or 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 5 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 311.5 is hereby repealed in its entirety.

Subsection 314.4 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

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

~~1. Batteries are disconnected.~~

21. Fuel in fuel tanks does not exceed one-quarter tank or 5 gallons (19 L) (whichever is least).

32. Fuel tanks and fill openings are closed and sealed to prevent tampering.

43. Vehicles, boats or other motorcraft equipment are not fueled or defueled within the building.

A new definition has been added to Section 402.1 to read as follows:

Automatic External Defibrillator (AED). A computerized medical device manufactured under the guidelines of the Food and Drug Administration (FDA).

A new Subsection 408.12 is hereby enacted to read as follows:

408.12 Automatic External Defibrillator (AED)

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

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

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

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

Exception: A Group I facility with any type defibrillator.

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

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

408.12.1.6 High-rise. An AED shall be provided in all buildings classified as high-rise in accordance with the 2006 International Building Code.

408.12.2 Installation requirements. AED's shall be installed in accordance with Sections 408.12.2.1 through 408.12.2.4

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

408.12.2.2 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.

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

408.12.2.4 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 4 inches.

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

408.12.3.1 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.

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

408.12.5 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.

Exception: The fire code official is authorized to increase the dimension of 150 feet (45,720 mm) where:

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.
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).
- ~~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.
- ~~34.~~ 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 Additional access. 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 and R-4 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).

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:

1. 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, and 503.2.1.1.2* 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) from the roofline of the building, and shall be positioned parallel to the longest side of the building, unless as otherwise approved. The maximum distance shall allow a 65-foot (21 336 mm) ladder to reach the roof of the building, where the base of the ladder is 8 feet (1626 mm) above the ground.

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 7%.~~ The grade of an aerial fire apparatus access road shall 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.

Subsection 503.6 is hereby amended by the addition of the words double-underlined, to read as follows:

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 utilizing an approved lock or key switch.

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 4-digit fire department code.
3. An Opticom device that complies with Section 7 of the City of Thornton 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.
6. Gates shall not close until manually reset upon approval by the fire department.

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 4-digit fire department code.
3. The gates shall open upon loss of power.
4. The gates shall be capable of being manually opened.
5. Gates shall not close until manually reset upon approval by the fire department.

The security gates and the emergency operations shall be maintained operational at all times.

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

504.1.1 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 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 have *approved* address numbers, building numbers or *approved* building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches (101.6 mm) ~~4 inches (101.6 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 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.

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 box to be installed in an approved location. The key box shall be of an approved type 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 ~~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.

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.

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 23. The fire protection features required by Chapter 23

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.
2. Occupancies in Group R-4 with no more than eight occupants.

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 or 903.3.1.2 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 patient sleeping units in Group I-2 in accordance with the *International Building Code*.
2. Dwelling units and sleeping units in Group R and I-1 occupancies.
3. 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 905.11 is hereby repealed in its entirety.

Subsection 907.2.7.1 is hereby repealed in its entirety.

Subsection 907.3 is hereby repealed and reenacted to read as follows:

907.3 Occupancy requirements. A fire alarm system shall be installed in accordance with Sections 907.3.1.

907.3.1 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 units, 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 908.7 is hereby added as a new subsection to read as follows:

908.7 Carbon monoxide alarms. For new construction of all dwelling units, an approved carbon monoxide alarm shall be installed outside within 15 feet (4572 mm) of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

908.7.1 Where required in existing dwellings. Where interior work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section 908.7.

908.7.2 Alarm requirements. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions. A listed smoke/carbon monoxide detector may be used if the signals clearly differentiate between the two hazards. Carbon monoxide detectors may be hard wired, plugged into an unswitched outlet or battery powered and attached to the wall or ceiling. Carbon monoxide detectors are not required to be interconnected.

Subsection 910.2.1 is hereby amended by the addition of the words double-underlined to read as follows:

910.2.1 Group F-1 or S-1. Buildings and portions thereof used as a Group F-1 or S-1 occupancy having more than 50,000 square feet (4645 m²) of undivided area.

Exceptions:

1. Group S-1 aircraft repair hangars.
2. In areas protected by early suppression fast response (ESFR) sprinkler systems installed in accordance with NFPA 13.

A new *subsection 912.7* is hereby enacted to read as follows:

912.7 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 1009.4.2, exception 6 is hereby amended by the deletion of the words stricken and the addition of the words double-underlined to read as follows:

Exceptions:

6. See ~~Section 3404.1~~ the International Existing Building Code for the replacement of existing *stairways*.

Subsection 1013.1 is hereby amended by the addition of the words double-underlined to read as follows:

1013.1 *Where required. Guards shall be located along open-sided walking surfaces, including window wells, mezzanines, equipment platforms, 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 1607.7.*

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 steps 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 where *guards* in accordance with Section 1028.14 are permitted and provided.

Subsections 1029.1, 1029.2, 1029.3, 1029.4, and 1029.5.1 are hereby amended by the deletion of the words stricken and the addition of the words double-underlined to read as follows:

1029.1 *General. In addition to the means of egress required by this chapter, provisions shall be made for emergency escape and rescue in Group R and I-1 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.~~ In other than Group R-3 occupancies, buildings equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
- ~~2.~~ 1 In other than Group R-3 occupancies, sleeping rooms provided with a door to a fire-resistance-rated *corridor* having access to two remote *exits* in opposite directions.
- ~~3.~~ 2 The *emergency escape and rescue opening* is permitted to open onto a balcony within an *atrium* in accordance with the requirements of Section 404, provided the balcony provides access to an *exit* and the dwelling unit or sleeping unit has a *means of egress* that is not open to the *atrium*.
- ~~4.~~ Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue windows.
- ~~5.~~ 3 *High-rise buildings* in accordance with Section 403.
- ~~6.~~ 4 *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*.
- ~~7.~~ 5 Basements without *habitable spaces* and having no more than 200 square feet (18.6m²) in floor area and having ceiling heights less than required in Section 1208.2 shall not be required to have emergency escape windows.

1029.2 *Minimum size. Emergency escape and rescue openings* shall have a minimum net clear opening of 5.7 square feet (0.53 m²).

Exception: ~~The minimum net clear opening for *emergency escape and rescue grade-floor openings* shall be 5 square feet (0.46 m²).~~

1029.3 *Maximum height from floor. Emergency escape and rescue openings* shall have the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor.

Exception: Buildings permitted prior to May 23, 1977 may have egress windows with a sill height of not more than 48 inches.

1029.4 *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 1029.2 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. 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*.

1029.5.1 Minimum size. The minimum horizontal area of the window well shall be 9 square feet (0.84m²), with a minimum dimension of 36 inches (914 mm). The area of the window well shall allow the *emergency escape and rescue opening* to be fully opened.

Exception: Buildings permitted prior to November 17, 1995, are not required to meet the window well provisions of this section unless an egress window is required or added.

Subsection 3204.3.1.1.3 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

3204.3.1.1.3 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 3301.1.3 is hereby repealed and reenacted to read as follows:

3301.1.3 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 will result in a minimum mandatory fine of \$1,000.00.

Exception: The use of fireworks for display as permitted in Section 3308. 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.

Subsection 3404.2.9.6.1 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

3404.2.9.6.1 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 3404.2.9.6.4 is hereby enacted to read as follows:

3404.2.9.6.4 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 3406.2.4.4 is hereby repealed in its entirety.

Subsection 3406.3.1.3 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

3406.3.1.3 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 3406.3.1.3.1 is hereby repealed in its entirety.

Subsection 3406.3.1.3.2 is hereby amended by the addition of the words double-underlined, to read as follows:

3406.3.1.3.2 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. Reductions in required separations 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 Development Engineering and the Thornton Fire Department.

Subsection 3406.3.5 is hereby amended by the addition of the words double-underlined to read as follows:

3406.3.5 Storage Tanks. Storage of flammable or combustible liquids in tanks shall be in accordance with Section 3404, 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. Reductions in required separations 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 3506.2 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken, to read as follows:

3506.2 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 3804.2 is hereby amended by the addition of the words double-underlined and the deletion of the words stricken to read as follows:

~~3804.2 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.~~

Chapter 46 is hereby repealed in its entirety.

APPENDIX B, Fire-Flow Requirements for Buildings.

Subsection B104.2 is hereby amended by the addition of the words double-underlined to read as follows:

B104.2 Area separation. Portions of buildings which are separated by fire walls having a fire-resistance rating of not less than 4 hours without openings, constructed in accordance with the *International Building Code*, are allowed to be considered as separate fire-flow calculation areas.

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

B105.1 One- and two-family dwellings. The minimum fire-flow requirements for one- and two-family dwellings having a fire-flow calculation area which does not exceed 3,600 square feet (344.5 m²) shall be 1,000 gallons per minute (3785.4 L/min). Fire flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet (344.5 m²) shall not be less than that specified in Table B105.1.

Exception: A reduction in required fire flow of ~~50~~25 percent is allowed when the building is provided with an approved automatic sprinkler system.

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

B105.2 Buildings other than one- and two-family dwellings. The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.1.

Exception: A reduction in required fire flow of up to ~~75 percent~~ 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 ~~or 903.3.1.2~~ of the *International Fire Code*. ~~Where buildings are also of Type I or II construction and are a light-hazard occupancy as defined by NFPA 13, the reduction may be up to 75 percent.~~ A reduction in required fire flow of up to 25

percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.2 of the *International Fire Code*. The resulting fire flow shall not be less than 1,500 gallons per minute (5678 l/min) for the prescribed duration as specified in Table B105.1.

APPENDIX C, Fire Hydrant Locations and Distribution.

Table C105.1, 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.

3. If any portion of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the constitutionality or validity of the remaining portions of this ordinance. City Council hereby declares that it would have passed this ordinance and each part hereof irrespective of the fact that any one part be declared unconstitutional or invalid.

4. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

5. The repeal or amendment of any provision of the Code by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any and all proper actions, suits, proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

6. This ordinance shall take effect on August 2, 2010.

INTRODUCED, READ, PASSED on first reading, ordered posted in full, and title ordered published by the City Council of the City of Thornton, Colorado, on June 8, 2010.

PASSED AND ADOPTED on second and final reading on _____, 2010.

CITY OF THORNTON, COLORADO

Erik Hansen, Mayor

ATTEST:

Nancy A. Vincent, City Clerk

THIS ORDINANCE IS ON FILE IN THE CITY CLERK'S OFFICE FOR PUBLIC INSPECTION.

APPROVED AS TO LEGAL FORM:

Margaret Emerich, City Attorney

PUBLICATION:

Posted in six (6) public places after first and second readings.

Published in the Northglenn-Thornton Sentinel after first reading on June 17, 2010, and after second and final reading on _____, 2010.