

# AGENDA ITEM SUMMARY

## FORT COLLINS CITY COUNCIL

ITEM NUMBER: 13

DATE: December 16, 2008

STAFF: Kevin Wilson

### SUBJECT

Hearing and First Reading of Ordinance No. 160, 2008, Amending Chapter 9 of the City Code and Adopting by Reference the 2006 International Fire Code, with Amendments.

### RECOMMENDATION

Staff recommends adoption of the Ordinance on First Reading.

### EXECUTIVE SUMMARY

The City of Fort Collins has historically adopted the Uniform Fire Code (UFC) as a model for the identification, correction and prevention of fire safety hazards. Currently, the City is administering the 1999 Edition. Adoption of the 2006 International Fire Code would replace the now outdated 1999 UFC currently in use.

### BACKGROUND

The City of Fort Collins has historically adopted the Uniform Fire Code (UFC) as a model code for the identification, correction and prevention of fire safety hazards. This model code is developed and published by the International Fire Code Institute (IFCI) on three-year cycles. In 2000, a process began to consolidate the different code documents used throughout the country under one umbrella document and code development process. The International Code Council facilitated this process, which has resulted in a unified international approach to building and fire safety. The 2006 International Building and Fire Codes will be the first International Codes adopted by the Fort Collins and Larimer County Building Departments' and PFA, and will bring those entities in alignment with all of the neighboring jurisdictions. The adoption of the companion International Building and Fire Codes will continue a long standing agreement between the three government entities to utilize congruent codes.

Both building departments have recently adopted the 2006 Edition of the International Building Code (IBC). At the August 2007 PFA Board meeting the Board appointed the Fire Code Review Committee (FCRC). This voluntary Committee was asked to review the 2006 IFC and the proposed amendments. The FCRC met every Wednesday for 4 months in order to review the Code. Fire Prevention staff participated in this review with the FCRC, which included detailed discussions of every Code chapter and section. This process provided both staff and committee members important insights about community issues/concerns and the Fire Code. The hard work and commitment of the FCRC has provided PFA with a quality community safety tool.

PFA's participation in code development at the national level has resulted in many of its recommended code changes being reflected in the final 2006 IFC as adopted by the International Code Council. This allowed staff to reduce the number of existing amendments and bring new and very useful sections forward from the proposed 2009 IFC, while maintaining close to the same number of overall amendments.

The most notable improvements in this Code is the focus on firefighter and emergency responder safety, which is more prominently applied than in all previous codes.

The FCRC completed its work on Thursday October 23, 2008 and recommends adoption of the 2006 International Fire Code along with the accompanying amendments.

On December 8, the Poudre Valley Fire Protection District Board of Directors adopted the 2006 International Fire Code and all proposed amendments. To date, there has been no opposition to the Code or proposed amendments. The Fire Code Review Committee deserves much gratitude for its outstanding work on the Fire Code.

The 2006 Edition of the International Fire Code is an excellent companion document to the 2006 IBC as adopted by the City of Fort Collins and Larimer County.

## **ATTACHMENTS**

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1. Resolution 06-9 of the Poudre Fire Authority Board of Directors Appointing a Fire Code Review Committee.
2. Poudre Fire Authority Board of Directors Meeting-October 28, 2008 minutes.

Resolution 06-9  
Appointing a Fire Code Review Committee

Whereas, the adoption and application of the current edition of the Uniform Fire Code contributes to minimizing human suffering and property loss from fire, and

Whereas, the 2006 edition of the International Fire Code represents the most current of the International Fire Code, and

Whereas, the Board desires to include community input from those impacted by the enforcement of the code through the adoption process.


Now, therefore, be it resolved by the Poudre Fire Authority Board of Directors that the following community members are appointed to the 2006 International Fire Code Review Committee:

2006 International Fire Code Review Committee

Mr. Craig Campbell Farmers Insurance Group	Ms. Tasha Green QLT, USA, Inc.
Ms. Terry King Front Range Fire Protection	Mr. Doug Swanson Poehlmann Construction
Mr. Mike Sibbald Coldwell Banker	Mr. Stan Griep Larimer County Building
Mr. Robert Bisetti Bisetti's Restaurant	Mr. Rob Helmick Larimer County Senior Planner Dev. Review
Mr. Mike Gebo City of Fort Collins Building Department	Mr. Cameron Gloss Fort Collins Planning
Ms. Becky Davidson Town of Timnath Administrator/Engineer	Mr. Ken Quintana Colorado State University
Mr. Doug Biggie West Fort Collins Water District	Mr. John Holcombe Poudre School District
Mr. Joe Schweitzer Front Range Fire Protection	

Approved by the Poudre Fire Authority Board of Directors this 22<sup>nd</sup> day of August, 2006.

  
PFA Board Chairman

  
Attest

**ATTACHMENT 2**

**POUDRE FIRE AUTHORITY  
BOARD OF DIRECTORS MEETING  
October 28, 2008**

The Poudre Fire Authority Board of Directors met on October 28, 2008 at 9:00 a.m. at PFA Headquarters, 102 Remington Street. Directors Mike DiTullio, Lisa Poppaw, Darin Atteberry, Doug Hutchinson, and Jerry McMorris, Chief John Mulligan, Director of Administrative Services Guy Boyd, Division Chiefs Kevin Wilson, Mike Gress, and Recording Secretary Kirsten Howard were present.

Chairman Mike DiTullio called the meeting to order.

**CONSENT ITEMS**

**September 23, 2008 Minutes**

Doug Hutchinson made a motion to approve the consent items as presented. Jerry McMorris seconded the motion. The motion passed by unanimous vote of the Board.

**DISCUSSION ITEMS**

**Fire Code Adoption**

Kevin Wilson stated that these are exciting times, and he is asking the Board to approve the code adoption document from the Fire Code Review Committee and to direct staff to pursue adoption of the 2006 International Fire Code. Kevin added that in August of 2006, the Board appointed a code review committee, and since that time the committee has gone through the 2006 code book page by page and have come up with the code adoption document.

Kevin highlighted several amendments in the code including cisterns, false alarms, blended fuels, and appendixes, and added that the County and City codes work together and the building code has been approved. He stated that the next step is the first reading in the City and Town of Timnath, then it goes to the County Commissioners and they ratify the code. Kevin stated that the most important change is the addition of the language which adds conditions affecting the safety of firefighters during emergency incidents.

Darin Atteberry asked about people who are blending fuels in their garages. Kevin stated that these codes are for the commercial fuel vendors. John Mulligan stated that it is illegal to make fuel at your home, and this portion of the code pertains to service stations that use blended fuels. Kevin added that home use is covered under flammable liquids in the HMMP.

Doug Hutchinson asked if the committee members had any concerns. Kevin replied that the one area that caused a stir was the issue of barbeque grills on balconies. Kevin stated we have

not had that kind of loss locally, but the insurance industry is enforcing that part of the code. This does not apply to single family dwellings, and has been amended out of the code. Kevin added that the committee kept in no open flame within 10 feet of a combustible surface, but will let the insurance industry deal with the 4-plex leases.

John Mulligan added that a uniform fire code is a benefit to the community, and the code may get more restrictive, but an ongoing process allows for constant checking and amending of prior decisions. Kevin added that the building and fire code for County and City are joined at the hip. A lot of what is in the fire code is in the building code and vice versa, which works well for the customer. Darin asked about the changes for land use requirements. Kevin stated that the land use requirement was not changed; rather it was added to the fire code.

Darin clarified that a developer who does work in Fort Collins has no changes. Kevin agreed. Darin asked about fireworks possession and what those changes were. Kevin stated that fireworks are not legal within City limits, which hasn't changed, but the County package has been amended to allow what the State will allow. The code was cleaned up to fit City rules. Kevin added that Teresa Ablao has helped in the review of this process, made changes, and added state statute for related items.

Mike DiTullio asked about open burning. Kevin stated that nothing has changed, only the definition of open burning was added, which includes what is a fire pit and what is agricultural burning. Mike DiTullio asked what the difference is between code and when the sheriff declares a no-burn ban. Shawn Brann stated that when the Commissioners enact an open burn ban, they will on occasion allow a waiver of the ban given certain conditions be met, otherwise Fire Prevention staff are held by the sheriff to enforce the burn ban. Kevin added that when State and County step in we don't go against them. Shawn added that the sheriff is the county fire marshal in unincorporated areas.

Darin Atteberry made a motion approving Resolution 08-12 pursuing adoption of the 2006 International Fire Code as proposed by Kevin Wilson and Chief Mulligan. Lisa Poppaw seconded the motion. The motion passed by unanimous vote of the Board.

ORDINANCE NO. 160, 2008  
OF THE COUNCIL OF THE CITY OF FORT COLLINS  
AMENDING CHAPTER 9 OF THE CODE OF THE CITY OF FORT COLLINS  
AND ADOPTING BY REFERENCE THE 2006 INTERNATIONAL FIRE  
CODE, WITH AMENDMENTS

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That Section 9-1 of the Code of the City of Fort Collins is hereby repealed in its entirety and reenacted to read as follows:

**Sec. 9-1. Adoption of the International Fire Code, 2006 Edition.**

Pursuant to the authority conferred by Article II, Section 7 of the Charter and by Section 31-16-201 et seq., C.R.S., there is hereby adopted by reference as the fire code of the city, for the purposes of safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises, International Fire Code, 2006 Edition, as promulgated by the International Code Council. Except as any portion of this fire code is herein after added to, deleted, modified or amended in this Chapter, this fire code shall include all articles and appendices in the International Fire Code, 2006 Edition. Not less than three (3) copies of this fire code shall be on file in the office of the Fire Marshal and may be inspected at regular business hours and purchased from the Fire Prevention Bureau at a price not to exceed eighty seven dollars (\$87.00) per copy. The provisions of this fire code shall be controlling within the limits of the City of Fort Collins.

Section 2. That Section 9-2 of the Code of the City of Fort Collins is hereby repealed in its entirety and reenacted to read as follows:

[Editor's Note: All amendments from this point forward indicate amendments to the International Fire Code, 2006 Edition adopted by reference in Section 1 above.]

**Sec. 9-2 Amendments, additions, and deletions.**

The following articles, sections, divisions, subsections and appendices of the International Fire Code, 2006 Edition, are hereby added, amended, deleted and renumbered, except as noted, to read as follows:

(1) *Section 101.1* is hereby amended to read as follows:

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

(2) *Section 101.2*, is hereby amended to read as follows:

**“101.2 Scope.** This code establishes regulations affecting or relating to structures, processes, premises and safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
3. Fire hazards in the structure or on the premises from occupancy or operation;
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems.
5. **Conditions affecting the safety of firefighters and emergency responders during emergency operations.”**

(3) *Section 103.4* is hereby amended to read as follows:

**“103.4 Liability.** The fire code official, officer or employee charged with the enforcement of this code, ~~while acting for the jurisdiction,~~ shall not thereby be rendered liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act ~~required or permitted in the discharge of official duties~~ **or omission occurring during the performance of his or her duties and within the scope of his or her employment, unless such act or omission is willful and wanton, as provided in the Colorado Governmental Immunity Act, CRS Section 24-10-101 et seq.”**

**“103.4.1 Legal defense.** Any suit instituted against any officer or employee because of an act **or omission** performed by that officer or employee **during the performance of his or her duties and within the scope of his or her employment, unless such act or omission is willful and wanton** ~~in the lawful discharge of duties~~ and under the provisions of this code shall be defended, **consistent with the Colorado Governmental Immunity Act, CRS Section 24-10-101 et seq.,** by the legal representative of the jurisdiction until the final termination of the proceedings. The fire code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code; and any officer of the department of fire prevention, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.”

(4) *Section 105.6* is deleted in its entirety and reenacted to read as follows:

**“Section 105.6 Required operational permits.** The fire code official is authorized to issue operational permits for the operations set forth in sections 105.6.1 through

105.6.46.”

“**105.6.1 Aerosol products.** An operational permit is required to manufacture, store or handle an aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds (227 kg) net weight.”

“**105.6.2 Amusement buildings.** An operational permit is required to operate a special amusement building.”

“**105.6.4 Carnivals and fairs.** An operational permit is required to conduct a carnival or fair.”

“**105.6.5 Cellulose nitrate film.** An operational permit is required to store, handle or use cellulose nitrate film in a Group A occupancy.”

**105.6.6 Combustible dust-producing operations.** An operational permit is required to operate a grain elevator, flour starch mill, feed mill, or a plant pulverizing aluminum, coal, cocoa, magnesium, spices or sugar, or other operations producing combustible dusts as defined in Chapter 2.”

“**105.6.7 Combustible fibers.** An operational permit is required for the storage and handling of combustible fibers in quantities greater than 100 cubic feet (2.8m<sup>3</sup>).

**Exception:** A permit is not required for agricultural storage.”

“**105.6.8 Compressed gases.** An operational permit is required for the storage, use or handling at normal temperature and pressure (NTP) of compressed gases in excess of the amounts listed in Table 105.6.20

**Exception:** Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle.”

“**105.6.9 Covered mall buildings.** An operational permit is required for:

1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid-or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.”

“**105.6.10 Cryogenic fluids.** An operational permit is required to produce, store, transport on site, use, handle or dispense cryogenic fluids in excess of the amounts listed in Table 105.6.20.



**Exception:** Permits are not required for vehicles equipped for and using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading.”

**“105.6.14 Explosives.** An operational permit is required for the manufacture, storage, handling, sale or use of any quantity of explosives, explosive materials, fireworks or pyrotechnic special effects within the scope of Chapter 33.

**Exception:** Storage in Group R-3 occupancies of smokeless propellant, black powder and small arms primers for personal use, not for resale and in accordance with Section 3306.”

**“105.6.16 Flammable and combustible liquids.** An operational permit is required:

1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOTn) nor does it apply to piping systems.
2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:
  - 2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the code official, would cause an unsafe condition.
  - 2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.
3. To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.
4. To remove Class I or Class II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes.
5. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.
6. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or combustible liquid tank.

7. To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than that for which the tank was designed and constructed.
8. To manufacture, process, blend or refine flammable or combustible liquids.
9. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.
10. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.”

“**105.6.19 Fumigation and thermal insecticidal fogging.** An operational permit is required to operate a business of fumigation or thermal insecticidal fogging and to maintain a room, vault or chamber in which a toxic or flammable fumigant is used.”

“**105.6.20 Hazardous materials.** An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed in Table 105.6.20, unless directed to acquire an operational permit for combustible liquids, explosives or LPG.”

**2006 International Fire Code**

**Table 105.6.20**

**Permit Amounts required for Hazardous Materials  
Management Plans**

TYPE OF MATERIAL	QUANTITIES
<b>Combustible Liquids</b>	See Section 105.6.16 for Operational Permit Requirements
<b>Corrosive Materials</b> Gases Liquids Solids	200 cubic feet 55 gallons 1000 pounds
<b>Cryogenic Fluids</b> Flammable  Oxidizer (including O <sub>2</sub> , LOX)  Corrosive Highly Toxic Nonflammable/Inert	More than 1 gallon inside 60 gallons outside 10 gallons inside 50 gallons outside Any Amount Any Amount 60 gallons inside 500 gallons outside
<b>Explosive Materials</b>	See Section 105.6.14 for Operational Permit Requirements
<b>Flammable Materials</b> Gases Liquids	200 cubic feet 5 gallons inside

TYPE OF MATERIAL	QUANTITIES
Solids	10 gallons outside* 100 pounds
<b>Inert Gases</b>	6,000 cubic feet
<b>Liquid Petroleum Gases(LPG)</b>  LPG Bottle Exchange Program Other LPG Use	2,000 gallons single 4,000 gallons aggregate 150 gallons per cage See Section 105.6.27 for Operational Permit Requirements
<b>Organic Peroxides</b> Liquids Class I Class II Class III Class IV Class V Solids Class I Class II Class III Class IV Class V	Any Any 1 gallon 2 gallons No Permit Required  Any Any 10 pounds 20 pounds No Permit Required
<b>Oxidizing Materials</b> Gases Liquids Class 4 Class 3 Class 2 Class 1 Solids Class 4 Class 3 Class 2 Class 1	504 cubic feet  Any Amount 1 gallon** No Permit Required No Permit Required  Any Amount 10 pounds*** No Permit Required No Permit Required
<b>Oxidizing Materials</b> Gases Liquids Class 4 Class 3 Class 2 Class 1 Solids Class 4 Class 3 Class 2 Class 1	504 cubic feet  Any Amount 1 gallon** No Permit Required No Permit Required  Any Amount 10 pounds*** No Permit Required No Permit Required
<b>Pyrophoric Materials</b> Gases Liquids Solids	Any Amount Any Amount Any Amount

<b>Toxic Materials</b> Gases Liquids Solids <b>Highly Toxic Materials</b> Gases Liquids Solids	Any Amount 10 gallons 100 pounds  Any Amount Any Amount Any Amount
<b>Unstable (Reactive) Materials</b> Gases Liquids Class 4 Class 3 Class 2 Class 1 Solids Class 4 Class 3 Class 2 Class 1	Any Amount  Any Amount Any Amount 5 gallons No Permit Required  Any Amount Any Amount 50 pounds No Permit Required
<b>Water-reactive Materials</b> Liquids Class 3 Class 2 Class 1 Solids Class 3 Class 2 Class 1	 Any Amount 5 gallons 55 gallons  Any Amount 50 pounds 500 pounds

\* requires a 704M placard but no HMMP

\*\* 20 gallons when table 2703.1(1) Note k applies and hazard identification signs in accordance with Section 2703.5 are provided for quantities of 20 gallons or less

\*\*\* 200 pounds when Table 2703.1(1) Note k applies and hazard identification signs in accordance with Section 2703.5 are provided for quantities of 200 pounds or less

Note: Converting pounds to cubic feet

Volume of Gas (ft.<sup>3</sup>) = Volume in cylinder (lbs) X Specific Volume of Gas (cu. ft.)

Butane = 36.05 pounds per cubic foot or 6.45 cubic feet per pound

Propane = 31.12 pounds per cubic foot or 8.62 cubic feet per pound

Chlorine (Cl<sub>2</sub>) = 150lbs X 5.4 ft.<sup>3</sup>/lb = 810 ft.<sup>3</sup>

Note: Hazardous Materials are defined as one of the following items:

Explosives, compressed gas, flammable and combustible liquids, flammable solids, organic peroxides, oxidizers, pyrophoric, unstable-reactive, water-reactive, cryogens, corrosive, and radioactive.

Note: Hazardous Materials will have one or more of the following characteristics:

- 1) corrosive
- 2) reactive (air-reactive, water-reactive, unstable-reactive)
- 3) toxic (by definition)
- 4) flammable (solids, liquids, gases)”

“**105.6.21 HPM facilities.** An operational permit is required to store, handle or use hazardous production materials.”

**“105.6.22 High-piled storage.** An operational permit is required to use a building or portion thereof as a high-piled storage area exceeding 500 square feet (46 m<sup>2</sup>).”

**“105.6.24 Industrial ovens.** An operational permit is required for operation of industrial ovens regulated by Chapter 21.”

**“105.6.26 Liquid-or gas-fueled vehicles or equipment in assembly buildings.** An operational permit is required to display, operate or demonstrate liquid-or gas-fueled vehicles or equipment in assembly buildings.”

**“105.6.27 LP-gas.** An operational permit is required for:

1) Storage and use of LP-gas.

**Exception:** A permit is not required for individual containers with a 500-gallon (1893 L) water capacity or less serving occupancies in Group R-3.

2) Operation of cargo tankers that transport LP-gas.”

**“105.6.28 Magnesium.** An operational permit is required to melt, cast, heat treat or grind more than 10 pounds (4.54 kg) of magnesium.”

**“105.6.29 Miscellaneous combustible storage.** An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71 m<sup>3</sup>) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.”

**“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 contained in an approved portable outdoor fire appliance.”

**“105.6.33 Organic coatings.** An operational permit is required for any organic-coating manufacturing operation producing more than 1 gallon (4 L) of an organic coating in one day.”

**“105.6.35 Private fire hydrants.** An operational permit is required for the removal from service, use or operation of private fire hydrants.

**Exception:** A permit is not required for private industry with trained maintenance personnel, private fire brigade or fire departments to maintain, test and use private hydrants.”

**“105.6.36 Pyrotechnic special effects material.** An operational permit is required for use and handling of pyrotechnic special effects material.”

**“105.6.37 Pyroxylin plastics.** An operational permit is required for storage or handling of more than 25 pounds (11 kg) of cellulose nitrate (pyroxylin) plastics and for the assembly or manufacture of articles involving pyroxylin plastics.”

**“105.6.41 Spraying or dipping.** An operational permit is required to conduct a spraying or dipping operation utilizing flammable or combustible liquids or the application of combustible powders regulated by Chapter 15.”

**“105.6.43 Temporary membrane structures, tents and canopies.** An operational permit is required to operate an air-supported temporary membrane structure or a tent having an area in excess of 400 square feet (37 m<sup>2</sup>), or a canopy in excess of 800 square feet (74 m<sup>2</sup>).

**Exceptions:**

1. Tents used exclusively for recreational camping purposes.
2. Fabric canopies open on all sides which comply with all of the following:
  - 2.1. Individual canopies having a maximum size of 700 square feet (65 m<sup>2</sup>).
  - 2.2. The aggregate area of multiple canopies placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m<sup>2</sup>) total.
  - 2.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.”

(5) *Section 105.7.10* is deleted in its entirety.

(6) *Section 105.7.13* is amended to read as follows.

**“105.7.13 Temporary membrane structures, tents and canopies.** A construction permit is required to erect an air-supported temporary membrane structure or a tent having an area in excess of ~~200~~400 square feet (~~19~~ m<sup>2</sup>), or a canopy in excess of ~~400~~800 square feet (~~37~~ m<sup>2</sup>).

**Exceptions:**

1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.
3. Fabric canopies and awnings open on all sides which comply with all of the

following:

- 3.1. Individual canopies shall have a maximum size of 700 square feet (65 m<sup>2</sup>).
- 3.2. The aggregate area of multiple canopies placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m<sup>2</sup>) total.
- 3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.”

(7) *Section 107.2* is hereby amended to read as follows:

“**107.2 Inspection, testing and operation.** ~~Passive fire systems and~~ Equipment requiring periodic testing or operation to ensure maintenance shall be inspected, tested or operated as specified in this code.”

(8) *Section 108.1* is deleted in its entirety and re-enacted to read as follows:

“**108.1 Board of appeals established.** In order to hear and decide appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals to be known as the Fire Board of Appeals. The members of the City of Fort Collins Building Review Board, as appointed from time to time shall constitute the Fire Board of Appeals. The fire code official shall be an ex officio member of said board but shall have no vote on any matter before the board. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the fire code official.

(9) *Section 108.3* is hereby deleted in its entirety.

(10) *Section 109.3* is hereby amended to read as follows:

“**109.3 Violation penalties.** Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall 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, shall be guilty of a ~~misdemeanor, and upon conviction shall be subject to the penalties, costs and orders as provided by Section 1-15 of the City Code~~ Punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine or imprisonment. Each day that a violation continues after due notice has been served is deemed a separate offense.”

(11) *Section 202, Definitions,* is hereby amended in the following respects:

A definition of “ALCOHOL BLENDED FUELS” is hereby added, to read in its

entirety as follows:

**“ALCOHOL BLENDED FUELS.** Flammable liquids consisting of ethanol or other alcohols blended greater than 15% by volume. Alcohols are polar compounds that exhibit increased moisture absorption, water solubility, polar solvency and solution conductivity relative to gasoline. Alcohol-gasoline blended fuels have unique properties that may affect material compatibility and fire response.”

A definition of “[B] AREA, BUILDING” is hereby added, to read in its entirety as follows:

**“[B] AREA, BUILDING.** The area within surrounding exterior walls (or exterior walls and fire walls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building areas if such areas are included within the horizontal projection of the roof or floor above.”

A definition of “FIRE-CONTAINMENT AREA” is hereby added, to read in its entirety as follows:

**“FIRE-CONTAINMENT AREA.** A portion of a story or basement which is totally enclosed by a smoke and draft barrier of not less than 1-hour, fire-resistive construction. All door openings penetrating such fire-containment areas shall be protected by a tight-fitting, smoke and draft control assembly as specified in *International Building Code* Sections 715.4.3, 715.4.5 and 715.4.7. Openings other than doors and ducts shall be protected as specified in *International Building Code* Sections 715.5 and 715.4.3 and shall be limited to a maximum of 25 percent of any one wall, in compliance with *International Building Code* Section 715.5.7.2. All duct penetrations shall be protected by dampers as specified in *International Building Code* Section 716, Table 716.3.1, (Section 716.3.2-smoke dampers), except that such dampers shall be those that are automatic closing by actuation of a smoke detector. Self closing devices may be used in lieu of automatic closing devices on doors unlikely to be fixed open during normal conditions. Examples are: doors at toilet rooms, stairways, closets and small storage rooms and similar areas.”

(12) *Section 301.1* is hereby amended to read as follows:

**“301.1 Scope.** The provisions of this chapter shall govern the occupancy and maintenance of all structures and premises for precautions against fire and the spread of fire **and general requirements of fire safety.**”

(13) *Section 301.2* is hereby amended to read as follows:

**“301.2 Permits.** Permits shall be required as set forth in Section 105.6 for the activities or uses regulated by Sections ~~306~~, 307, 308.3, 308.4, 308.5 and 315.”

(14) The definition of “OPEN BURNING” contained *Section 302 Definitions*, is



amended in the following respects:

**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 road flares, smudgepots and similar devices associated with safety or occupational uses typically considered open flames or recreational fires **contained in approved portable outdoor fire appliances**. 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.”

(15) *Section 307.2* is hereby amended to read as follows:

**“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 for recognized agricultural, silvicultural or range or wildlife management practices, prevention or control of disease or pests, **non-contained recreational fires**, or a bonfire. Application for such approval shall only be presented by and permits issued to the owner or agent of the land upon which the fire is to be kindled.”

(16) A new subsection 307.2.2 is hereby added and reads in its entirety as follows:

**“307.2.2 Time and Atmospheric Restrictions.** Open burning shall only be performed when time and atmospheric conditions comply with the limits set forth in the Open Burning Permit.”

(17) *Section 308.3.1* is hereby amended to read as follows:

**“308.3.1 Open-flame cooking devices.** Charcoal burners and other open-flame cooking devices shall not be ~~operated on combustible balconies or~~ within 10 feet (3048 mm) of combustible construction.

**Exceptions:**

1. One- and two-family dwellings.
2. Where buildings, balconies and decks are protected by an automatic sprinkler system.”

(18) *Subsection 308.3.1.1* is hereby amended to read as follows:

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

**Exception:**

1. One- and two-family dwellings.
2. Where buildings, balconies and decks are protected by an automatic sprinkler system.”

(19) *Table 405.2* is deleted in its entirety and readopted to read as follows:

**TABLE 405.2  
FIRE AND EVACUATION DRILL  
FREQUENCY AND PARTICIPATION**

<b>GROUP OR OCCUPANCY</b>	<b>FREQUENCY</b>	<b>PARTICIPATION</b>
Group A	Quarterly	Employees
Group B <sup>c</sup>	Annually	Employees
Group E	Quarterly <sup>a</sup>	All occupants
Group I	Quarterly on each shift	Employees <sup>b</sup>
Group R-1	Quarterly on each shift	Employees
Group R-2 <sup>d</sup>	Four annually	All occupants
Group R-4	Quarterly on each shift	Employees <sup>b</sup>
High-rise buildings	Annually	Employees

- a. The frequency shall be allowed to be modified in accordance with Section 408.3.2.
- b. Fire and evacuation drills in residential care assisted living facilities may include complete evacuation of the premises in accordance with Section 408.10.5. Where occupants receive habilitation or rehabilitation training, fire prevention and fire safety practices shall be included as part of the training program.
- c. Group B buildings having an occupant load of 500 or more persons ore more than 100 persons above or below the lowest level of exit discharge.
- d. Applicable to Group R-2 college and university buildings in accordance with Section 408.3.

(20) *Section 506.1* is hereby amended to read as follows:

**“506.1 Where required. Where Key boxes are required on all fire sprinklered buildings or when** access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving, fire-fighting purposes, or property conservation purposes. The key box is 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.

(21) *Section 508.2* is hereby amended to read as follows:

**“508.2 Type of water supply.** A water supply shall consist of ~~reservoirs,~~ pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required sustainable fire flow.”

(22) A new *Section 607.4* is hereby added and reads in its entirety as follows:

**“607.4 Fire service access elevator lobbies.** Where fire service access elevators are required by Section 3007 of the *International Building Code*, fire service access elevator lobbies shall be maintained free of storage and furnishings.”

(23) A new definition of “FIRE-CONTAINMENT AREA” is hereby added to *Section 702, Definitions*, to read in its entirety as follows:

**“FIRE-CONTAINMENT AREA.** A portion of a story or basement which is totally enclosed by a smoke and draft barrier of not less than one-hour, fire-resistive construction. All door openings penetrating such fire-containment areas shall be protected by a tight-fitting, smoke and draft control assembly as specified in *International Building Code* Sections 715.4.3, 715.4.5 and 715.4.7. Openings other than doors and ducts shall be protected as specified in *International Building Code* Sections 715.5 and 715.4.3 and shall be limited to a maximum of 25 percent of any one wall, in compliance with *International Building Code* Section 715.5.7.2. All duct penetrations shall be protected by dampers as specified in *International Building Code* Section 716, Table 716.3.1, (Section 716.3.2-smoke dampers), except that such dampers shall be those that are automatic closing by actuation of a smoke detector. Self closing devices may be used in lieu of automatic closing devices on doors unlikely to be fixed open during normal conditions. Examples are: doors at toilet rooms, stairways, closets and small storage rooms and similar areas.”

(24) *Section 703.1*, is hereby amended to read as follows:

**“703.1 Maintenance.** The required fire-resistance rating of fire-resistance-rated construction (including walls, firestops, shaft enclosures, partitions, smoke barriers, floors, fire-resistive coatings and sprayed fire-resistant materials applied to structural members and fire-resistant joint systems) shall be maintained. Such elements shall be **visually inspected annually**, properly repaired, restored or replaced when damaged, altered, breached or penetrated. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings and holes made for any reason shall be protected with approved methods capable of resisting the passage of smoke and fire. Openings through fire resistance-rated assemblies shall be protected by self- or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly.”

(25) Section 703.1.2 is hereby amended to read as follows:

**“703.1.2 Smoke barriers and smoke partitions.** Required smoke barriers and smoke partitions shall be maintained to prevent the passage of smoke. All openings protected with approved smoke barrier doors or smoke dampers shall be maintained in accordance with NFPA 105.”

(26) A new Section 703.1.3 is hereby added, to read in its entirety as follows:

**“703.1.3 Fire walls, fire barriers and fire partitions.** Required fire walls, fire barriers and fire partitions shall be maintained to prevent the passage of fire. All openings protected with approved doors or fire dampers shall be maintained in accordance with NFPA 80.”

(27) Section 807.1.2, is hereby amended to read as follows:

**“807.1.2 Combustible decorative materials.** The permissible amount of decorative materials meeting the flame propagation performance criteria of NFPA 701 shall not exceed 10 percent of the aggregate area of specific walls and ceilings wall or ceilings area to which it is attached.

**Exceptions:**

1. In auditoriums in Group A, the permissible amount of decorative material meeting the flame propagation performance criteria of NFPA 701 shall not exceed ~~50~~ 75 percent of the aggregate wall area of walls and ceiling where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, and where the material is installed in accordance with Section 803.4 of the *International Building Code*.
2. The amount of fabric partitions suspended from the ceiling and not supported by the floor in Group B and M occupancies shall not be limited.”

(28) Section 901.6 is hereby amended to read as follows:

**“901.6 Inspection, testing and maintenance.** Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective. Unless otherwise required by the fire code official, semi-annual inspections and testing of such systems shall be conducted by qualified persons approved by the fire code official. Non-required fire protection systems and equipment shall be inspected, tested and maintained or removed.”

(29) Section 903.2 is hereby amended to read as follows:

**“903.2 Where required.** Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

**Exceptions:**

1. Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic fire alarm system and are separated from the remainder of the building by fire barriers consisting of not less than 1-hour fire-resistance-rated walls and 2-hour fire-resistance-rated floor/ceiling assemblies.
2. Maximum Allowable Fire-Contained Areas, as identified in amendment Table 903.1 are required when an approved automatic sprinkler system is not provided.

(30) A New *Table 903.1* is hereby added and reads in its entirety as follows:

**TABLE 903.1  
MAXIMUM ALLOWABLE FIRE-CONTAINMENT AREA  
(IN SQUARE FEET)**

*Types of Construction*

<i>Occupancy</i>	<i>IA</i>	<i>IB</i>	<i>IIA</i>	<i>IIB</i>	<i>IIIA</i>	<i>IIIB</i>	<i>IV-HT</i>	<i>VA</i>	<i>VB</i>
A1	10,000	10,000	NP	NP	NP	NP	NP	NP	NP
A2,	10,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
A3, 4	10,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
B, F1, M, S1, U	10,000	10,000	7,000	5,000	7,000	5,000	7,000	7,000	5,000
F2, S2	20,000	20,000	10,000	7,000	10,000	7,000	10,000	10,000	5,000
E	10,000	10,000	7,000	5,000	7,000	5,000	7,000	7,000	5,000

NP = Not Permitted"

(31) A new *Subsection 903.6.2* is hereby added to read as follows:

**“903.6.2 Group I-2.** An automatic sprinkler system shall be provided throughout Group I-2 fire areas. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, and in all floors between the Group I-2 occupancy and the level of exit discharge.”

(32) A new *Subsection 904.11.6.6*, is hereby added, to read in its entirety as follows:

**“904.11.6.6 Existing automatic fire extinguishing systems.** Where changes in the cooking media, positioning of cooking equipment or replacement of cooking equipment occur in existing commercial cooking systems, the automatic fire extinguishing system shall be required to comply with the applicable provisions of Sections 904.11 through 904.11.4.”

(33) A new *Section 907.20.6*, is hereby added, to read in its entirety as follows:

**“907.20.6 Excessive False Alarms.** An excessive number of false alarms shall be defined as two (2) alarm activations for a fire alarm system within a 60 (sixty) day period provided that any such activations are not the result of a cause reasonably beyond the control of the owner, tenant or operator of the building. In the event of an excessive number of false alarms, the fire code official may order the building owner, tenant or operator of the building, or party responsible for the building to take reasonable actions necessary to prevent false alarms. These actions may include: repair or replacement of the faulty alarm components, addition of tamper proof devices, modification of system design, and repair of other building components which affect alarm system performance. The fire code official may also require the building owner, tenant or operator or party responsible for the building to obtain an approved maintenance contract with a qualified fire alarm maintenance technician as required by NFPA 72 to provide continuous maintenance service of the system.”

(34) *Section 2202.1, Definitions* is amended by the addition of a new definition “ALCOHOL BLENDED FUELS” which reads in its entirety as follows:

**“ALCOHOL BLENDED FUELS.** Flammable liquids consisting of ethanol or other alcohols blended greater than 15% by volume. Alcohols are polar compounds that exhibit increased moisture absorption, water solubility, polar solvency and solution conductivity relative to gasoline. Alcohol-gasoline blended fuels have unique properties that may affect material compatibility and fire response.”

(35) A new *Subsection 2205.2.4*, is hereby added and reads in its entirety as follows:

**“2205.2.4 Inspections.** Flammable and combustible liquid fuel dispensing and containment equipment shall be periodically inspected where required by the fire code official to verify that it is in proper working order and not subject to leakage.”

(36) A new *Subsection 2205.2.5*, is hereby added and reads in its entirety as follows:

**“2205.2.5 Repairs and service.** The fire code official is authorized to require damaged or unsafe containment and dispensing equipment to be repaired or serviced in an approved manner, including, but not limited to, equipment that shows signs of physical damage, internal and external corrosion, leakage, brittleness, aging or undue wear and tear.”

(37) A new *Section 2206.7*, is amended to read as follows:

**“2206.7 Fuel-dispensing systems for flammable or combustible liquids.** The design, fabrication and installation of fuel-dispensing systems for flammable or combustible liquid fuels shall be in accordance with Sections 2206.7.1 through 2206.7.9.2.4. Alcohol blended fuel dispensing systems shall also comply with Section 2206.8.

(38) A new *Section 2206.8*, is hereby added and reads in its entirety as follows:

**“2206.8 Alcohol blended fuel-dispensing operations.** The design, fabrication and installation of alcohol blended fuel dispensing systems shall also be in accordance with Sections 2206.7 and Sections 2206.8.1 through 2206.8.5.”

**“2206.8.1 Approval of equipment.** Dispensers, hoses, nozzles, breakaway fittings, swivels, flexible connectors or dispenser emergency shutoff valves, vapor recovery systems and pumps used in alcohol blended fuel-dispensing systems shall be listed or approved for the specific purpose for which it is being used.”

**“2206.8.2 Change of system contents.** Fuel dispensing systems subject to change in contents from gasoline to alcohol blended fuels shall be subject to fire code official review and approval prior to commencing dispensing operations.”

**“2206.8.3 Facility identification.** Facilities dispensing alcohol blended fuels shall be identified by any means approved by the fire official.”

**“2206.8.4 Marking.** Dispensers shall be marked in an approved manner to identify the types of alcohol blended fuels to be dispensed.”

**“2206.8.5 Maintenance and inspection.** Equipment shall be maintained and inspected in accordance with Section 2205.2.”

(39) A new *Section 2305.8*, is hereby added and reads in its entirety as follows:

**“2305.8 Designation of storage heights.** Where required by the fire code official, a visual method of indicating the maximum allowable storage height shall be provided.”

(40) *Section 3301.1.3* is hereby amended to read as follows:

**“3301.1.3 Fireworks.** The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

**Exceptions:**

1. Storage and handling of fireworks as allowed in Section 3304.
2. ~~Manufacture, assembly and testing of fireworks as allowed in Section 3305.~~
3. The use of fireworks for display as allowed in Section 3308.
4. ~~The possession, storage, sale, handling and use of specific types of Division 1.4G fireworks where allowed by applicable laws, ordinances and regulations, provided such fireworks comply with, CPSC 16 CFR, Parts 1500 and 1507, and DOT 49 CFR, Parts 100-178, for consumer fireworks.~~

(41) *Section 3304.10.4* is hereby amended to read as follows:

**“3304.10.4 Storage of misfires.** Explosive materials and fireworks recovered from blasting or display misfires shall be placed in a magazine until an experienced person has determined the proper method for disposal. **The magazine shall not be located within 100 feet of any place of habitation.”**

(42) *Appendix A* is deleted in its entirety.

(43) *Appendix B* is deleted in its entirety and readopted to read as follows.

## **APPENDIX B FIRE-FLOW REQUIREMENTS FOR BUILDINGS**

### **SECTION B101 GENERAL**

**“B101.1 Scope.** The procedure for determining fire-flow requirements for buildings or portions of buildings hereafter constructed shall be in accordance with this appendix. This appendix does not apply to structures other than buildings.”

### **SECTION B102 DEFINITIONS**

**“B102.1 Definitions.** For the purpose of this appendix, certain terms are defined as follows:

**FIRE-FLOW.** The flow rate of a water supply, measured at 20 pounds per square inch (psi) (138 kPa) residual pressure, that is available for fire fighting.

**FIRE-FLOW CALCULATION AREA.** The floor area, in square feet (m<sup>2</sup>), used to determine the required fire flow.”

### **SECTION B103 MODIFICATIONS**

**“B103.1 Decreases.** The fire chief is authorized to reduce the fire-flow requirements for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire-flow requirements is impractical.

**B103.2 Increases.** The fire chief is authorized to increase the fire-flow requirements where conditions indicate an unusual susceptibility to group fires or conflagrations. An increase shall not be more than twice that required for the building under consideration.



**B103.3 Areas without water supply systems.** For information regarding water supplies for fire-fighting purposes in rural and suburban areas in which adequate and reliable water supply systems do not exist, the fire code official is authorized to utilize NFPA 1142 or the *International Wildland-Urban Interface Code*.”

## **SECTION B104 FIRE-FLOW CALCULATION AREA**

“**B104.1 General.** The fire-flow calculation area shall be the total floor area of all floor levels within the exterior walls, and under the horizontal projections of the roof of a building, except as modified in Section B 104.3.

**B104.2 Area separation.** Portions of buildings which are separated by fire walls without openings, constructed in accordance with the International Building Code, are allowed to be considered as separate fire-flow calculation areas.

**B104.3 Type IA and Type IB construction.** The fire-flow calculation area of buildings constructed of Type IA and Type IB construction shall be the area of the three largest successive floors.

**Exception:** Fire-flow calculation area for open parking garages shall be determined by the area of the largest floor.”

## **SECTION B105 FIRE-FLOW REQUIREMENTS FOR BUILDINGS**

“**B105.1 One- and two-family dwellings.** The minimum fire-flow requirements for one- and two-family shall be 1,000 gallons per minute in urban areas and 500 gallons per minute in rural areas.

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

**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 B 105.

**Exception:** A reduction in required fire-flow of up to 75 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. 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 B 105.

### **TABLE B 105**

<b>APPLICATION</b>	<b>FIRE FLOW REQUIREMENTS (gpm)</b>	<b>SPACING BETWEEN HYDRANTS (feet)</b>	<b>MAXIMUM DISTANCE FROM ANY POINT ON A STREET OR ROAD FRONTAGE TO A HYDRANT (feet)</b>
Commercial	1500	600	300
Urban Residential	1,000	800	400
Rural Residential	500	800	400

**SECTION B 106  
GENERAL**

“**B106.1 Scope.** Fire hydrants shall be provided in accordance with this appendix for the protection of buildings, or portions of buildings, hereafter constructed.”

**SECTION B 107  
LOCATION**

“**B107.1 Fire hydrant locations.** Fire hydrants shall be provided along required fire apparatus access roads and adjacent public streets.”

**SECTION B 108  
NUMBER OF FIRE HYDRANTS**

“**B108.1 Fire hydrants available.** The number of fire hydrants available to a complex or subdivision shall not be less than that determined by spacing requirements listed in Table B105 when applied to fire apparatus access roads and perimeter public streets from which fire operations could be conducted.”

**SECTION B109  
CONSIDERATION OF EXISTING FIRE HYDRANTS**

“**B109.1 Existing fire hydrants.** Existing fire hydrants on public streets are allowed to be considered as available. Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are established to prevent obstruction of such roads.”

**SECTION B 110  
DISTRIBUTION OF FIRE HYDRANTS**

“**B110.1 Hydrant spacing.** The average spacing between fire hydrants shall not exceed that listed in Table B 105.

**Exception:** The fire chief is authorized to accept a deficiency of up to 10 percent where existing fire hydrants provide all or a portion of the required fire hydrant service.

Regardless of the average spacing, fire hydrants shall be located such that all points on streets and access roads adjacent to a building are within the distances listed in Table B105.”

(44) *Appendix C* is deleted in its entirety.

(45) A new Appendix D is hereby added to read as follows:

## **APPENDIX D FIRE APPARATUS ACCESS ROADS**

### **SECTION D 101 GENERAL**

**“D101.1 Scope.** Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the *International Fire Code*”.

### **SECTION D 102 REQUIRED ACCESS**

**“D102.1 Access and loading.** Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 80,000 pounds (34 050 kg).”

### **SECTION D 103 MINIMUM SPECIFICATIONS**

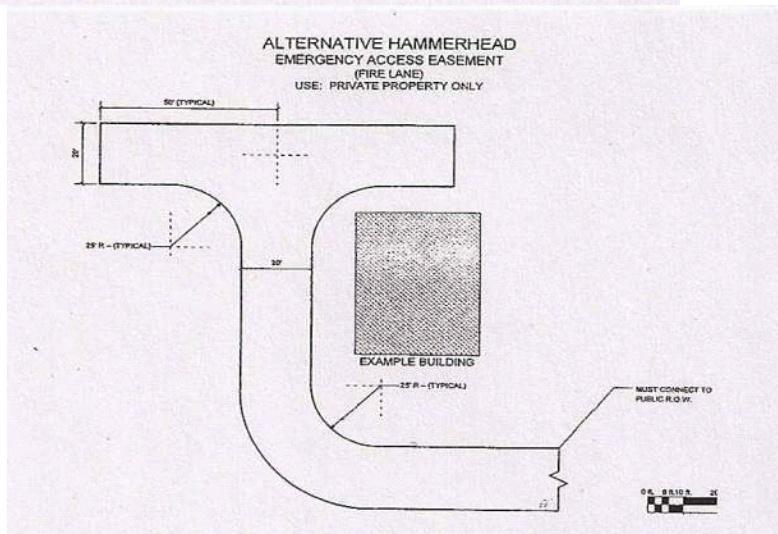
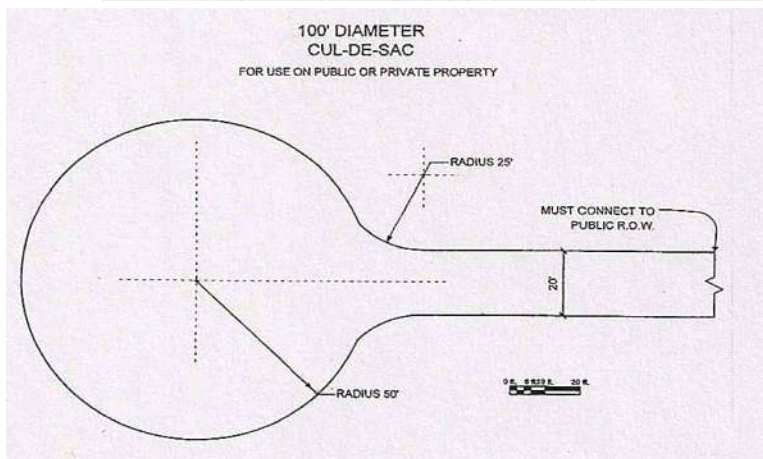
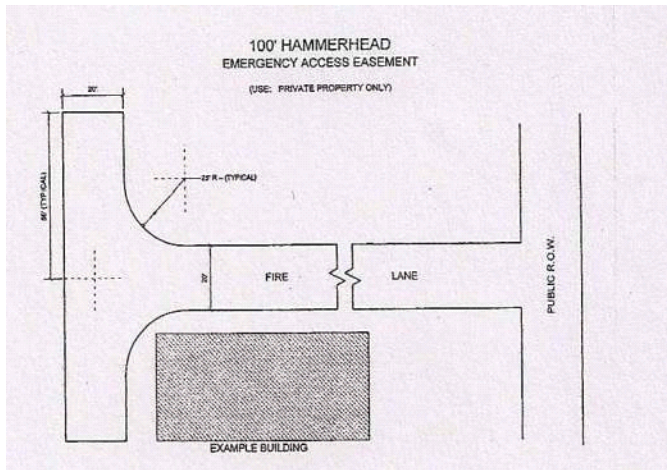
**“D103.1 Access road width with a hydrant.** Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm). See Figure D103.1.”

**“D103.2 Grade.** Fire apparatus access roads shall not exceed 10 percent in grade.

**Exception:** Grades steeper than 10 percent as approved by the fire code official.”

**“D103.3 Turning radius.** The minimum turning radius shall be determined by the fire code official.

Figure 103.1



**“D103.4 Dead ends.** Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D 103.4.”

**TABLE D 103.4**

**REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS**

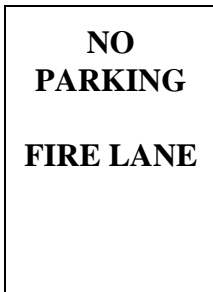
LENGTH(feet)	WIDTH(feet)	TURNAROUNDS REQUIRED
0-150	20	None required
151-660	20	100-foot Hammerhead, 100-foot cul-de-sac in accordance
Over 660	Special approval required with	

**“D103.5 Fire apparatus access road gates.** Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools or when a key box containing the key(s) to the lock is installed at the gate location.
7. Gate design and locking device specifications shall be submitted for approval by the fire code official prior to installation.”

**“D103.6 Signs.** Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING—FIRE LANE signs complying with Figure D 103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required.

Figure D 103.6



**“D103.6.1 Roads 20 to 26 feet in width.** Fire apparatus access roads 20 to 26 feet wide (6096 to 7925 mm) shall be posted on both sides as a fire lane.”

**“D103.6.2 Roads more than 26 feet in width.** Fire apparatus access roads more than 26 feet wide (7925 mm) to 32 feet wide (9754mm) shall be posted on one side of the road as a fire lane.”

## **SECTION D 104 COMMERCIAL AND INDUSTRIAL DEVELOPMENTS**

**“D104.1 Buildings exceeding three stories or 30 feet in height.** Buildings or facilities exceeding 30 feet (9144 mm) or three stories in height shall provide fire apparatus access for each structure at least 30 feet in width.”

**“D104.2 Buildings exceeding 62,000 square feet in area.** Buildings or facilities having a gross building area of more than 62,000 square feet (5760 m<sup>2</sup>) shall be provided with two separate and approved fire apparatus access roads.

**Exception:** Projects having a gross building area of up to 124,000 square feet (11 520 m<sup>2</sup>) that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems.”

**“D104.3 Remoteness.** Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

## **SECTION D 105 AERIAL FIRE APPARATUS ACCESS ROADS**

**“D105.1 Where required.** Buildings or portions of buildings or facilities exceeding 30 feet (9144mm) in height above the lowest level of fire department vehicle access shall be provided with approved fire apparatus access roads capable of accommodating fire department aerial apparatus. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.”

**“D105.2 Width.** Fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm) in the immediate vicinity of any building or portion of building more than 30 feet (9144 mm) in height.”

**“D105.3 Proximity to building.** At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet (4572 mm) and a

maximum of 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building.”

## **SECTION D 106 MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS**

**“D106.1 Projects having more than 100 dwelling units.** Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

**Exception:** Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.”

**“D106.2 Projects having more than 200 dwelling units.** Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.”

## **SECTION D 107 ONE- OR TWO-FAMILY RESIDENTIAL DEVELOPMENTS**

**“D107.1 One- or two-family dwelling residential developments.** Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with separate and approved fire apparatus access roads and shall meet the requirements of Section D104.3.

### **Exceptions:**

1. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.3, access from two directions shall not be required.
2. The number of dwelling units on a single fire apparatus access road shall not exceed 30 dwelling units unless fire apparatus access roads will connect with future development, as determined by the fire code official.”

(46) *Appendix E* is deleted in its entirety.

(47) *Appendix F* is deleted in its entirety.

(48) *Appendix G* is deleted in its entirety.



(49) A new *Appendix I* is hereby added and reads in its entirety as follows:

**APPENDIX I  
FIRE PROTECTION SYSTEMS – UNSAFE CONDITIONS**

**I 101 UNSAFE CONDITIONS**

**“I101.1 General.** This appendix is intended to identify conditions that can occur when fire protection systems are not properly maintained or components have been damaged. This appendix is not intended to provide comprehensive inspection, testing and maintenance requirements, which are found in NFPA 10, 25 and 72. Rather, its intent is to identify problems that are readily observable during fire inspections.”

**“I101.2 Unsafe conditions requiring component replacement.** The following conditions shall be deemed unsafe and shall cause the related component(s) to be replaced to comply with the provisions of this code:

1. Sprinkler heads having any of the following conditions:
  - 1.1. Signs of leakage;
  - 1.2. Paint or other ornamentation that is not factory applied;
  - 1.3. Evidence of corrosion including, but not limited to, discoloration or rust;
  - 1.4. Deformation or damage of any part;
  - 1.5. Improper orientation of sprinkler head;
  - 1.6. Empty glass bulb;
  - 1.7. Sprinkler heads manufactured prior to 1920;
  - 1.8. Replacement sprinkler heads that do not match existing sprinkler heads in orifice size, K-factor temperature rating, coating or deflector type; or 1.9. Sprinkler heads for the protection of cooking equipment that have not been replaced within one year.
  
2. Water pressure and air pressure gauges that have been installed for more than five years and have not been tested to within 3 percent accuracy.”

**“I101.2 Unsafe conditions requiring component repair or replacement.** The following conditions shall be deemed unsafe and shall cause the related component(s) to be repaired or replaced to comply with the provisions of this code:

1. Sprinkler and standpipe system piping and fittings having any of the following conditions:
  - 1.1. Signs of leakage;
  - 1.2. Evidence of corrosion;
  - 1.3. Misalignment; or
  - 1.4. Mechanical damage.
  
2. Sprinkler piping support having any of the following conditions:



- 2.1. Materials resting on or hung from sprinkler piping;
- 2.2. Damaged or loose hangers or braces;
3. Class II and Class III standpipe systems having any of the following conditions:
  - 3.1. No hose or nozzle, where required;
  - 3.2. Hose threads incompatible with fire department hose threads;
  - 3.3. Hose connection cap missing;
  - 3.4. Mildew, cuts, abrasions, and deterioration evident;
  - 3.5. Coupling damaged;
  - 3.6. Gaskets missing or deteriorated; or
  - 3.7. Nozzle missing or obstructed.
4. Hose racks and cabinets having any of the following conditions:
  - 4.1. Difficult to operate or damaged;
  - 4.2. Hose improperly racked or rolled;
  - 4.3. Inability of rack to swing 90 degrees out of the cabinet;
  - 4.4. Cabinet locked, except as permitted by this code;
  - 4.5. Cabinet door will not fully open; or
  - 4.6. Door glazing cracked or broken;
5. Portable fire extinguishers having any of the following conditions:
  - 5.1. Broken seal or tamper indicator;
  - 5.2. Expired maintenance tag;
  - 5.3. Pressure gauge indicator in “red”;
  - 5.4. Signs of leakage or corrosion;
  - 5.5. Mechanical damage, denting or abrasion of tank;
  - 5.6. Presence of repairs such as welding, soldering or brazing;
  - 5.7. Damaged threads; or
  - 5.8. Damaged hose assembly, couplings or swivel joints.
6. Fire alarm and detection control equipment, initiating devices and notification appliances having any of the following conditions:
  - 6.1. Corroded or leaking batteries or terminals;
  - 6.2. Smoke detectors having paint or other ornamentation that is not factory-applied;
  - 6.3. Mechanical damage to heat or smoke detectors; or
  - 6.4. Tripped fuses.
7. Fire department connections having any of the following conditions:
  - 7.1. Fire department connections are not visible or accessible from the fire apparatus access road;
  - 7.2. Couplings or swivels are damaged;
  - 7.3. Plugs and caps are missing or damaged;
  - 7.4. Gaskets are deteriorated;
  - 7.5. Check valve is leaking; or

- 7.6. Identification signs are missing.
- 8. Fire pumps having any of the following conditions:
  - 8.1. Pump room temperature is less than 40 degrees F;

**Exception:** Pump room housing a diesel pump equipped with an engine heater.

- 8.2. Ventilating louvers are not freely operable;
- 8.3. Corroded or leaking system piping;
- 8.4. Diesel fuel tank is less than two-thirds full; or
- 8.5. Battery readings, lubrication oil or cooling water levels are abnormal.

Introduced, considered favorably on first reading, and ordered published this 16th day of December, A.D. 2008, and to be presented for final passage on the 6th day of January, A.D. 2009.

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

Passed and adopted on final reading on the 6th day of January, A.D. 2009.

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Mayor

ATTEST:

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City Clerk