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BUILDINGS AND CONSTRUCTION

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Chapter 15-03

Building Codes: Adoption and Administration

15-03-010 Intent.

The intent of this chapter is to adopt by reference and with modifications the International Building Code, 2009 Edition; the International Residential Code, 2009 Edition; the National Electrical Code, the latest edition adopted by the State of Colorado; the International Plumbing Code, 2009 Edition; the International Mechanical Code, 2009 Edition; the International Fuel Gas Code, 2009 Edition; the International Energy Conservation Code, 2009 Edition; the Uniform Code for the Abatement of Dangerous Buildings, 1997 Edition; the International Fire Code, 2009 Edition; the Uniform Housing Code, 1997 Edition, and the most current edition of the American Society of Mechanical Engineers (ASME) A17.1 Safety Code for Elevators and Escalators.

Hereinafter, all such codes may be referred to as the "Building Code" of the city, hereinafter referred to as "this code." The city council finds that the adoption of such Building Codes is essential in the preservation of the health, safety and welfare of the citizens of the city.

The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through affordability, structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment, to provide safety to fire fighters and emergency responders during emergency operations, regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing equipment and systems, fuel gas systems, mechanical systems, and to regulate the design and construction of buildings for the effective use of energy. (Ord. 1858 §1, 2008; Ord. 1926 §1, 2011)

15-03-020 Adoption of building codes.

The following documents, one copy of each of which is on file in the office of the city clerk, being marked and designated as stated, are hereby referred to, adopted, and made a part hereof as if fully set forth in this codification with, however, the amendments indicated in the following sections of this title. Provisions in the appendices shall not apply unless specifically adopted.

(1) The "International Building Code," 2009 Edition (IBC), published by the International Code Council, Inc., and in particular Chapters 2 through 35 and Appendix C Group U – Agricultural Buildings; Appendix G – Flood-Resistant Construction; Appendix I – Patio Covers; and Appendix J – Grading Inclusive, are hereby adopted as the Building Code for the city. The provisions of the International Building Code as amended shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of every building or structure or any appurtenances connected or attached to such building or structures.

(2) The "International Residential Code for One- and Two-Family Dwellings," 2009 Edition (IRC), published by the International Code Council, Inc., and in particular Chapters 2 through 10 and 12 through 32, Appendix G – Swimming Pools, Spas, and Hot Tubs, and Appendix H – Patio Covers. The provisions of the International Residential Code for One- and Two-Family Dwellings as amended shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above-grade plane in height with a separate means of egress and their accessory structures.

EXCEPTION: Live/work units complying with the requirements of Section 419 of the International Building Code shall be permitted to be built as one- and two-family dwellings or townhouses. Fire suppression required by Section 419.5 of the International Building Code when constructed under the International Residential Code for One- and Two-Family Dwellings shall conform to Section 903.3.1.3 of the International Building Code.

(3) The "Uniform Code for the Abatement of Dangerous Buildings," 1997 Edition (UCADB), published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601, in particular Chapters 1 through 9.

(4) The "Uniform Housing Code," 1997 Edition (UHC), published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601, in particular Chapters 1 through 16.

(5) The "National Electrical Code," (NEC), the latest edition adopted by the State of Colorado, published by the National Fire Protection Association, Inc., and in particular Article 70, Chapters 1 through 9 inclusive, is hereby adopted as the Electrical Code for the city. The provisions of the National Electrical Code as amended shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

(6) The "International Plumbing Code," 2009 Edition (IPC), published by the International Code Council, Inc., in particular Chapters 2 through 13 and Appendix B, Rates of Rainfall for Various Cities, is hereby adopted as the Plumbing Code for the city. The provisions of the International Plumbing Code as amended shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system, nonflammable medical gas, inhalation anesthetic, vacuum piping, nonmedical oxygen systems and sanitary and condensate vacuum collection systems. The installation of fuel gas distribution piping and equipment, fuel-gas-fired water heaters and water heater venting systems shall be regulated by the International Fuel Gas Code.

(7) The "International Mechanical Code," 2009 Edition (IMC), published by the International Code Council, Inc., and in particular Chapters 2 through 15 and Appendix A inclusive, is hereby adopted as the Mechanical Code for the city. The provisions of the International Mechanical Code as amended shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

(8) The "International Fuel Gas Code," 2009 Edition (IFGC), published by the International Code Council, Inc., and in particular Chapters 2 through 8 inclusive, is hereby adopted as the Fuel Gas Code for the city. The provisions of the International Fuel Gas Code, as amended, shall apply to the installation of gas piping systems, gaseous hydrogen systems, fuel gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the outlet of the appliance shutoff valve and the installation and operation of residential and commercial fuel gas appliances and related accessories.

(9) The "International Energy Conservation Code," 2009 Edition (IECC), published by the International Code Council, Inc., and in particular Chapters 2 through 6 inclusive, is hereby adopted as the Energy Code for the city. The provisions of the International Energy Conservation Code as amended shall apply to all matters governing the design and construction of buildings for energy efficiency. The International Energy Conservation Code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve the effective use of energy.

(10) The "International Fire Code," 2009 Edition (IFC), published by the International Code Council, 5203 Leesburg Pike, Suite 708, Falls Church, Virginia 22041-3401, and in particular Chapters 1 through 45 and Appendix B, Fire-Flow Requirements for Buildings; Appendix C, Fire Hydrant Locations and Distribution; Appendix E, Hazard Categories; Appendix F, Hazard Ranking; and Appendix G, Cryogenic Fluids – Weight and Volume Equivalents inclusive.

(11) The most current edition of the ASME A17.1 Safety Code for Elevators and Escalators as published by the American Society of Mechanical Engineers, Three Park Avenue, New York, New York 10016, and hereinafter referred to as the Elevator and Escalator Codes. The provisions of the ASME Codes as adopted by Chapter 15-18 as amended shall apply to the design, construction, operation, inspection, testing, maintenance, alteration, and repair of the equipment identified in ASME, its associated parts, and its hoistways, where located in or adjacent to a building or structure. (Ord. 1926 §2, 2011)

15-03-030 General.

(A) All of the sections of this chapter 15-03, including all of the administrative regulations contained herein below in this chapter 15-03, shall apply to the International Building Code, the International Residential Code, the International Energy Conservation Code, the International Mechanical Code, the National Electrical Code, the ASME Elevator and Escalator Codes, the International Fuel Gas Code and the International Plumbing Code, as adopted in this title 15.

(B) The administrative provisions of sections 15-03-070 to 15-03-140 and sections 15-03-160 to 15-03-180 of Chapter 15-03 do not apply to the International Fire Code, the Uniform Code for the Abatement of Dangerous Buildings and the Uniform Housing Code. Section 15-03-150 does not apply to the International Fire Code. The administrative provisions of the International Fire Code, the Uniform Code for the Abatement of Dangerous

Buildings and the Uniform Housing Code shall be as stated in those codes. Other than as stated in this subsection (B), all other sections of this chapter 15-03 shall apply to the International Fire Code, the Uniform Code for the Abatement of Dangerous Buildings and the Uniform Housing Code.

(C) All of the sections of this chapter 15-03, including all of the administrative regulations of this chapter 15-03, shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures. (Ord. 1858 §1, 2008)

15-03-040 Applicability.

(A) General. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

(B) Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

(C) Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

(D) Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

EXCEPTION: Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and manufacturer's instructions shall apply.

(E) Requirements not covered by this code. Requirements necessary for the strength, stability or proper operation of an existing or proposed mechanical system or fuel gas piping or for the public safety, health and general welfare, not specifically covered by this code, shall be determined by the code official.

(F) Partial invalidity. In the event that any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

(G) Existing structures and installations. The legal occupancy of any structure or installation existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code or the IFC, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

(1) Maintenance. Mechanical, fuel gas piping and plumbing systems, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe and sanitary condition. Devices or safeguards which are required by this code shall be maintained in compliance with the code edition under which they were installed. The owner or the owner's designated agent shall be responsible for maintenance of mechanical and fuel gas piping systems. To determine compliance with this provision, the code official shall have the authority to require a mechanical system and fuel gas piping to be reinspected.

(2) Historic buildings. The provisions of this code relating to the construction, alteration, repair, enlargement, restoration, relocation or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the state or local jurisdiction as historic buildings when such buildings or structures are judged by the code official to be safe and in the public interest of health, safety and welfare regarding any proposed construction, alteration, repair, enlargement, restoration, relocation or moving of buildings.

Any building or structure that is listed in the State or National Register of Historic Places; designated as a historic property under local or state designation law or survey; certified as a contributing resource with a National Register listed or locally designated historic district; or with an opinion or certification that the property is eligible to be listed on the National or State Registers of Historic Places either individually or as a contributing building to a historic district by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, are exempt from the IECC.

(3) Moved buildings. Except as determined by 15-03-040 (G) above, installations that are a part of buildings or structures moved into or within the jurisdiction shall comply with the provisions of this code for new installations.

(4) Additions, alterations, renovations or repairs. Additions, alterations, renovations or repairs to any structure, mechanical, fuel gas piping or plumbing system shall conform to the requirements for a new structure or installation without requiring the existing structure or installation to comply with all of the requirements of this code, unless otherwise stated. Additions, alterations, renovations or repairs shall not cause an existing structure or installation to become unsafe or adversely affect the performance of the building.

Minor additions, alterations, renovations and repairs to existing installations shall meet the provisions for new construction, unless such work is done in the same manner and arrangement as was in the existing system, is not hazardous and is approved.

EXCEPTION: For purposes of the IECC, the following need not comply provided the energy use of the building is not increased:

1. Storm windows installed over existing fenestration.
2. Glass only replacements in an existing sash and frame.
3. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are filled with insulation.
4. Construction where the existing roof, wall or floor cavity is not exposed.
5. Reroofing for roofs where neither the sheathing nor the insulation is exposed. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during the reroofing shall be insulated either above or below the sheathing.
6. Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving door, provided, however, that an existing vestibule that separates a conditioned space from the exterior shall not be removed.
7. Alterations that replace less than fifty percent of the luminaries in a space, provided that such alterations do not increase the installed interior lighting power.
8. Alterations that replace only the bulb and ballast within existing luminaries in a space, provided that the alteration does not increase the installed interior lighting power.

(5) Change in occupancy. It shall be unlawful to make a change in the occupancy of any structure which will subject the structure to any special provision of this code applicable to the new occupancy without approval. The code official shall certify that such structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare. For purposes of the IECC, buildings undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with the IECC. Where the use in a space changes from one use in Table 505.5.2 to another use in Table 505.5.2, the installed lighting wattage shall comply with Section 505.5. Any non-conditioned space that is altered to become conditioned space shall be required to be brought into full compliance with this code.

(H) Mixed occupancy. For purposes of the IECC, where a building includes both residential and commercial occupancies, each occupancy shall be separately considered and meet the applicable provisions of IECC Chapter 4 for residential and Chapter 5 for commercial.

(I) Compliance. Buildings regulated by the IRC shall comply with Chapter 3 and Chapter 4 of the IECC. For purposes of the IECC, other residential buildings shall meet the provisions of IECC Chapter 4. Commercial buildings shall meet the provisions of Chapter 5.

(1) Compliance materials. The code official shall be permitted to approve specific computer software, worksheets, compliance manuals and other similar materials that meet the intent of this code.

(2) Low energy buildings. The following buildings, or portions thereof, separated from the remainder of the building by building thermal envelope assemblies complying with this code shall be exempt from the building thermal envelope provisions of this code:

- a. Those with a peak design rate of energy usage less than $3.4 \text{ Btu/h}\cdot\text{ft}^2$ (10.7 W/m^2) or 1.0 watt/ft^2 (10.7 W/m^2) of floor area for space conditioning purposes.
- b. Those that do not contain conditioned space.

(J) The following additional provisions concerning applicability of certain of the Building Codes shall apply:

(1) Where there is a conflict between the IRC for mechanical systems, fuel gas piping, plumbing and energy conservation and the respective international codes, the IRC shall be applicable for detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures.

(2) Gaseous hydrogen systems. Gaseous hydrogen systems shall be regulated by Chapter 7 of the International Fuel Gas Code (IFGC).

(3) Piping systems. These regulations cover piping systems for natural gas with an operating pressure of 125 pounds per square inch gauge (psig) (862 kPa gauge) or less, and for LP-gas with an operating pressure of 20 psig (140 kPa gauge) or less, except as provided in IFGC section 402.6.1. Coverage shall extend from the point of delivery to the outlet of the equipment shutoff valves. Piping systems requirements shall include design, materials, components, fabrication, assembly, installation, testing, inspection, operation and maintenance.

(4) Gas utilization equipment. Requirements for gas utilization equipment and related accessories shall include installation, combustion and ventilation air and venting and connections to piping systems.

(5) Systems and equipment outside the scope. The IFGC shall not apply to the following:

- a. Portable LP-gas equipment of all types that is not connected to a fixed fuel piping system.
- b. Installation of farm equipment such as brooders, dehydrators, dryers and irrigation equipment.
- c. Raw material (feedstock) applications except for piping to special atmosphere generators.
- d. Oxygen-fuel gas cutting and welding systems.
- e. Industrial gas applications using gases such as acetylene and acetylenic compounds, hydrogen, ammonia, carbon monoxide, oxygen and nitrogen.
- f. Petroleum refineries, pipeline compressor or pumping stations, loading terminals, compounding plants, refinery tank farms and natural gas processing plants.
- g. Integrated chemical plants or portions of such plants where flammable or combustible liquids or gases are produced by, or used in, chemical reactions.
- h. LP-gas installations at utility gas plants.
- i. Liquefied natural gas (LNG) installations.
- j. Fuel gas piping in power and atomic energy plants.
- k. Proprietary items of equipment, apparatus or instruments such as gas-generating sets, compressors and calorimeters.
- l. LP-gas equipment for vaporization, gas mixing and gas manufacturing.
- m. Temporary LP-gas piping for buildings under construction or renovation that is not to become part of the permanent piping system.
- n. Installation of LP-gas systems for railroad switch heating.
- o. Installation of hydrogen gas, LP-gas and compressed natural gas (CNG) systems on vehicles.
- p. Except as provided in section 401.1.1, gas piping, meters, gas pressure regulators and other appurtenances used by the serving gas supplier in the distribution of gas, other than undiluted LP-gas.
- q. Building design and construction, except as specified herein.
- r. Piping systems for mixtures of gas and air within the flammable range with an operating pressure greater than 10 psig (69 kPa gauge).
- s. Portable fuel cell appliances that are neither connected to a fixed piping system nor interconnected to a power grid.

(6) Other fuels. The requirements for the design, installation, maintenance, alteration and inspection of mechanical systems operating with fuels other than fuel gas shall be regulated by the International Mechanical Code. (Ord. 1858 §1, 2008; Ord. 1926 §3, 2011)

15-03-050 Division of building safety and inspection services.

(A) Creation of enforcement agency. The Division of Building Safety and Inspection Services is hereby created and the official in charge thereof shall be known as the building official.

(B) Appointment. The building official shall be appointed by the chief appointing authority of the jurisdiction.

(C) Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the building official shall have the authority to appoint a deputy building official, the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the building official. (Ord. 1858 §1, 2008)

15-03-060 Duties and powers of building official.

(A) General. The building official is hereby authorized and directed to enforce the provisions of this code. The building official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

(B) Applications and permits. The building official shall receive applications, review construction documents and issue permits for the erection, and alteration, demolition and moving of buildings and structures, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

(C) Notices and orders. The building official shall issue all necessary notices or orders to ensure compliance with this code.

(D) Inspections. The building official shall make all of the required inspections, or the building official shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The building official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

(E) Identification. The building official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

(F) Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the building official has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the building official is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the building official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the building official shall have recourse to the remedies provided by law to secure entry.

(G) Department records. The building official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

(H) Liability. The building official, member of the planning and zoning commission or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The building official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

(I) Approved materials and equipment. Materials, equipment and devices approved by the building official shall be constructed and installed in accordance with such approval.

(I) Used materials and equipment. The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the building official.

(J) Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the building official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the building official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

(1) Areas prone to flooding. The building official shall not grant modifications to any provision related to areas prone to flooding as established by:

a. Table R301.2(1) of the IRC without the granting of a variance to such provisions by the planning and zoning commission, or

b. Chapter 17-40 of the Broomfield Municipal Code without the granting of a variance to such provisions by the planning and zoning commission.

(K) Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction or insulating system not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Compliance with the specific performance-based provisions of the International Codes in lieu of specific requirements of this code shall also be permitted as an alternate.

(1) Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

(2) Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the building official for the period required for retention of public records.

(3) Alternative engineered design. The design, documentation, inspection, testing and approval of an alternative engineered design plumbing system shall comply with Sections a. through f. below.

a. Design criteria. An alternative engineered design shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Material, equipment or components shall be designed and installed in accordance with the manufacturer's installation instructions.

b. Submittal. The registered design professional shall indicate on the permit application that the plumbing system is an alternative engineered design. The permit and permanent permit records shall indicate that an alternative engineered design was part of the approved installation.

c. Technical data. The registered design professional shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that the performance meets the intent of this code.

d. Construction documents. The registered design professional shall submit to the code official two complete sets of signed and sealed construction documents for the alternative engineered design. The construction documents shall include floor plans and a riser diagram of the work. Where appropriate, the construction documents shall indicate the direction of flow, all pipe sizes, grade of horizontal piping, loading, and location of fixtures and appliances.

e. Design approval. Where the code official determines that the alternative engineered design conforms to the intent of this code, the plumbing system shall be approved. If the alternative engineered design is not approved, the code official shall notify the registered design professional in writing, stating the reasons thereof.

f. Inspection and testing. The alternative engineered design shall be tested and inspected in accordance with the requirements of section 15-03-110 and IPC section 312.

(4) Above code programs. The code official or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program to exceed the energy efficiency required by this code. Buildings approved in writing by such an energy efficiency program shall be considered in compliance with this code. The requirements identified as "mandatory" in Chapters 4 and 5 of the IECC, as applicable, shall be met. (Ord. 1858 §1, 2008; Ord. 1926 §4, 2011; Ord. 1935 §11, 2011)

15-03-070 Permits.

(A) Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical, plumbing system, elevator, moving walk, escalator or dumbwaiter, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

(B) Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. Retaining walls that are not over 3 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding flammable liquids.
2. Walks not more than 30 inches (762 mm) above adjacent grade and driveways, and not over any basement or story below.
3. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
4. Temporary motion picture, television and theater stage sets and scenery.
5. Swings and other playground equipment.
6. Window awnings supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall of detached one- and two-family dwellings and townhouses not more than three stories above-grade in height and Group R-3 and U occupancies.
7. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

Electrical:

1. Portable motors or other portable appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved receptacle when that cord or cable is permitted by this chapter.
2. Repair or replacement of fixed motors, transformers, or fixed approved appliances of the same type and rating in the same location.
3. Repair or replacement of current-carrying parts of any switch, contractor, or control device.
4. Reinstallation of attachment plug receptacles, but not the outlets therefor.
5. Repair or replacement of any over current device of the required capacity in the same location.
6. Repair or replacement of electrodes or transformers of the same size and capacity for signs or gas tube systems.
7. Removal of electrical wiring.
8. Temporary wiring for experimental purposes in suitable experimental laboratories.

9. The wiring for temporary theater, motion picture, or television stage sets.

10. A permit shall not be required for the installation, alteration, or repair of electrical wiring, apparatus, or equipment or the generation, transmission, distribution, or metering of electrical energy or in the operation of signals or the transmission of intelligence by a public or private utility in the exercise of its function as a serving utility.

11. Listed cord-and-plug connected temporary decorative lighting.

12. Electrical wiring, devices, appliances, apparatus or equipment operating at less than 25 volts and not capable of supplying more than 50 watts of energy.

13. Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

Radio and television transmitting stations:

The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installations of towers and antennas.

Temporary testing systems:

A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

1. Portable heating appliance. In addition, IRC buildings are exempt from cooking and clothes drying appliances.

2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

1. Portable heating appliance.

2. Portable ventilation appliances and equipment.

3. Portable cooling unit.

4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.

5. Replacement of any part that does not alter its approval or make it unsafe.

6. Portable evaporative cooler.

7. Self-contained refrigeration system containing 10 pounds (5 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.

8. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Plumbing:

1. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided that such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

Elevator, moving walk, escalator, or dumbwaiter:

Permits shall not be required for maintenance or minor alterations.

(1) Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the building official.

(2) Repairs. Application or notice to the building official is not required for ordinary repairs to structures, replacement of lamps, or the connection of approved portable electrical equipment to approved permanently installed receptacles. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement, or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring, or mechanical or other work affecting public health or general safety.

(3) Public service agencies. A permit shall not be required for the installation, alteration or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right.

(C) Application for permit. To obtain a permit, the applicant shall first file an application therefor in writing on a form furnished by the department of building safety for that purpose. Such application shall:

1. Identify and describe the work to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by legal description, street address, or similar description that will readily identify and definitely locate the proposed building or work.
3. Indicate the use and occupancy for which the proposed work is intended.
4. Be accompanied by construction documents and other information as required in section 15-03-080.
5. State the valuation of the proposed work.
6. Be signed by the applicant or the applicant's authorized agent.
7. Give such other data and information as required by the building official.

(1) Action on application. The building official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the building official shall reject such application in writing, stating the reasons therefor. If the building official is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the building official shall issue a permit therefor as soon as practicable.

a. Determination of substantially improved or substantially damaged existing buildings in flood hazard areas. For applications for reconstruction, rehabilitation, addition, or other improvement of existing buildings or structures regulated by the IRC located in an area prone to flooding as established by Table R301.2(1), the building official shall examine or cause to be examined the construction documents, and shall prepare a finding with regard to the value of the proposed work. For buildings that have sustained damage of any origin, the value of the proposed work shall include the cost to repair the building or structure to its pre-damage condition. If the building official finds that the value of proposed work equals or exceeds fifty percent of the market value of the building or structure before the damage has occurred or the improvement is started, the finding shall be provided to the planning and zoning commission for a determination of substantial improvement or substantial damage. Applications determined by the planning and zoning commission to constitute substantial improvement or substantial damage shall meet the requirements of section R322.

(2) Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

(D) Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the building official from requiring the correction of errors in the construction documents and other data. The building official is also authorized to prevent occupancy or use of a structure where in violation of this code or of any other ordinances of this jurisdiction.

(E) Expiration. Every permit issued shall become invalid, unless the work on the site authorized by such permit is commenced within 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Before such work recommences; if the open permit is out of the current adopted code cycle, a new permit shall first be obtained after additional plan review as needed with subsequent work conforming to the current adopted codes; or, if the open permit is still within the current adopted code cycle, a new permit shall be first obtained, provided that no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year. The fee for such new permits shall be one-half the amount required for a new permit for such work.

The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

(F) Suspension or revocation. The building official is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate, or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code.

(G) Placement of permit. The building permit or copy shall be kept on the site of the work until the completion of the project.

(H) Responsibility. It shall be the duty of every person who performs work for the installation or repair of building, structure, electrical, gas, mechanical or plumbing systems, for which this code is applicable, to comply with this code. (Ord. 1858 §1, 2008; Ord. 1926 §5, 2011; Ord. 1935 §12, 2011)

15-03-080 Submittal documents.

(A) Submittal documents. Submittal documents consisting of construction documents, statement of special inspections, geotechnical reports and other data shall be submitted in two or more sets with each permit application. The construction documents shall be prepared by a registered design professional where required by the State of Colorado regulations. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

EXCEPTION: The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional, if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this code.

(1) Information on construction documents. Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the building official. Construction documents shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed, and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official. Where required by the building official, all braced wall lines shall be identified on the construction documents and all pertinent information including, but not limited to, bracing methods, location and length of braced wall panels, foundation requirements of braced wall panels at top and bottom shall be provided. Construction documents for buildings more than two stories in height shall indicate where penetrations will be made for electrical, plumbing, mechanical, fuel gas-piping systems or similar systems and the materials and methods for maintaining required structural safety, fire-resistance rating and fireblocking.

Details shall include, but are not limited to, as applicable, insulation materials and their R-values; fenestration U-factors and SHGCs; area-weighted U-factor and SHGC calculations; mechanical system design criteria; mechanical and service water heating system and equipment types, sizes and efficiencies; economizer description; equipment and system controls; fan motor horsepower (hp) and controls; duct sealing, duct and pipe insulation and location; lighting fixture schedule with wattage and control narrative; and air sealing details.

(2) Manufacturer's installation instructions. Manufacturer's installation instructions, as required by this code, shall be available on the job site at the time of inspection.

(3) Information for construction in flood hazard areas. For buildings and structures regulated by the IBC and IRC and located in whole or in part in flood hazard areas as established by IRC Table R301.2(1), construction documents shall include:

a. Delineation of flood hazard areas, floodway boundaries, and flood zones, and the design flood elevation, as appropriate;

b. The elevation of the proposed lowest floor, including basement, in areas of shallow flooding (AO zones), the height of the proposed lowest floor, including basement, above the highest adjacent grade; and

c. The elevation of the bottom of the lowest horizontal structural member in coastal high-hazard areas (V Zone); and

d. If design flood elevations are not included on the community's Flood Insurance Rate Map (FIRM), the building official and the applicant shall obtain and reasonably utilize any design flood elevation and floodway data available from other sources.

(4) Means of egress. The construction documents shall show in sufficient detail the location, construction, size, and character of all portions of the means of egress in compliance with the provisions of this code. In other than Group R-3 occupancies or buildings constructed under the International Residential Code, the construction documents shall designate the number of occupants to be accommodated on every floor and in all rooms and spaces.

(5) Exterior wall envelope. Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code.

The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane, and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system which was tested, where applicable, as well as the test procedure used.

(B) Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades, and the proposed finished grades, and, as applicable, flood-hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted. Where design flood elevations are not specified, they shall be established in accordance with IBC Section 1612.3.1

(C) Examination of documents. The building official shall examine or cause to be examined the accompanying submittal documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

(1) Approval of construction documents. When the building official issues a permit, the construction documents shall be approved, in writing or by stamp, as "Reviewed for Code Compliance." One set of construction documents so reviewed shall be retained by the building official. The other set shall be returned to the applicant, shall be kept at the site of work, and shall be open to inspection by the building official or a duly authorized representative.

(2) Previous approvals. This code shall not require changes in the construction documents, construction, or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

(3) Phased approval. The building official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for the foundation or other parts of a building or structure shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure will be granted.

(4) Design professional in responsible charge.

a. General. When it is required that documents be prepared by a registered design professional, the building official shall be authorized to require the owner to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible

charge. If the circumstances require, the owner shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original registered design professional in responsible charge. The building official shall be notified in writing by the owner if the registered design professional in responsible charge is changed or is unable to continue to perform the duties. The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building. Where structural observation is required by IBC section 1709, the statement of special inspections shall name the individual or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur (see also duties specified in IBC section 1704). When plans, computations, and specifications are required by this section to be prepared or designed by an engineer or architect, such documents must bear the original signature and seal of the architect or engineer. Acceptable seals and signatures are original embossed or rubber-stamped seals with handwritten ink signatures.

b. Deferred submittals. For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the application and that are to be submitted to the building official within a specified period. Deferral of any submittal items shall have the prior approval of the building official. The registered design professional in responsible charge shall list the deferred submittals on the construction documents for review by the building official. Documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the building official with a notation indicating that the deferred submittal documents have been reviewed and been found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until the design and submittal documents have been approved by the building official.

(D) Amended construction documents. Work shall be installed in accordance with the approved construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

(E) Retention of construction documents. One set of approved construction documents shall be retained by the building official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws. One set of approved construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress. (Ord. 1858 §1, 2008; Ord. 1926 §6, 2011)

15-03-090 Temporary structures, equipment, systems, and uses.

(A) General. The building official is authorized to issue a permit for temporary structures, equipment, systems and uses. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The building official is authorized to grant extensions for demonstrated cause.

(B) Conformance. Temporary structures, equipment, systems and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure public health, safety, and general welfare.

(C) Temporary power. The building official is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat, or power in the National Electrical Code.

(D) Termination of approval. The building official is authorized to terminate such permit for a temporary structure, equipment, systems or uses and to order the temporary structure, equipment, systems or use to be discontinued. (Ord. 1858 §1, 2008; Ord. 1926 §7, 2011)

15-03-100 Fees.

(A) Payment of fees. A permit shall not be valid until the fees prescribed by law have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

(B) Schedule of permit fees. On buildings, structures, electrical, gas, mechanical, plumbing, systems, or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with Table 1-A.

EXCEPTION: Building permit and plan review fees shall not be charged for elevators, escalators, moving walks and dumbwaiters when separate fees are charged directly to the applicant by the elevator inspection agency.

**TABLE 1-A
Building Permit Fees**

<i>Total Valuation</i>	<i>Fees</i>
\$1.00 to \$500.00	\$23.50
\$500.01 to \$2,000.00	\$23.59 for the first \$500.00 plus \$3.05 for each additional \$100.00 or fraction thereof, to and including \$2,000.00
\$2,000.01 to \$25,000.00	\$69.25 for the first \$2,000.00 plus \$14.00 for each additional \$1,000.00 or fraction thereof, to and including \$25,000.00
\$25,000.01 to \$50,000.00	\$391.75 for the first \$25,000.00 plus \$10.10 for each additional \$1,000.00 or fraction thereof, to and including \$50,000.00
\$50,000.01 to \$100,000.00	\$643.75 for the first \$50,000.00 plus \$7.00 for each additional \$1,000.00 or fraction thereof, to and including \$100,000.00
\$100,000.01 to \$500,000.00	\$993.75 for the first \$100,000.00 plus \$5.60 for each additional \$1,000.00 or fraction thereof, to and including \$500,000.00
\$500,000.01 and up	\$3,233.75 for the first \$500,000.00 plus \$4.75 for each additional \$1,000.00 or fraction thereof

Other Inspection Fees

- | | |
|---|--|
| 1. Plan review fee | 65% of the building permit fee. After the original plan review fee, an annual plan review fee may be paid for each house model in a subdivision in lieu of each house built, provided that no changes are made after the original plan review. |
| 2. Reinspection fee | \$50.00 each |
| 3. Inspection outside of normal business hours (minimum charge two hours) | \$50.00/hr |
| 4. Inspection for which no fee is specifically indicated (minimum charge one-half hour) | \$50.00/hr. |
| 5. Additional plan review required by changes, additions, or revisions to approved plans (minimum charge one-half hour) | \$50.00/hr. |
| 6. Noncompliance grading statement | \$50.00. In addition, performance guarantee shall be submitted in accordance with subsection 15-05-010(F). |
| 7. Work without a permit investigation fee | An additional amount equal to the permit fee |
| 8. Inspection fees for mobile homes and travel trailer parks per space | \$50.00 |
| 9. Demolition | \$23.50 |
| 10. Completion/Clean-up | \$23.50 |
| 11. Sump to sewer | \$75.00 |
| 12. Temporary stand/kiosk | \$50.00 |

Exemption

The government of the United States of America, the state and its political subdivisions, the city, and all agencies and departments thereof shall be exempt from the payment of fees for work performed on buildings or structures owned wholly by such agencies or departments and devoted to governmental use.

(C) Building permit valuations. The applicant for a permit shall provide an estimated permit value at the time of application. Permit valuations shall include total value of work, including materials and labor, for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment, and permanent systems. If, in the opinion of the building official, the valuation is underestimated on the application, the permit shall be denied, unless

the applicant can show detailed estimates to meet the approval of the building official. Final building permit valuation shall be set by the building official based on the most recent Building Valuation Data published in the "Building Safety Journal" magazine by the International Code Council as a minimum.

(D) Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical, or plumbing system before obtaining the necessary permits shall be subject to the investigation fee established in Table 1-A that shall be in addition to the required permit fees.

(E) Related fees. The payment of the fee for the construction, alteration, removal, or demolition for work done in connection to or concurrently with the work authorized by a building permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

(F) Refunds. The code official shall authorize the refunding of fees as follows:

(1) The full amount of any fee paid hereunder which was erroneously paid or collected.

(2) Not more than eighty percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.

(3) Not more than eighty percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended.

The code official shall not authorize the refunding of any fee paid, except upon written application filed by the original permittee not later than 180 days after the date of fee payment. The building official is authorized to adjust the refund amount and timing if justifiable cause is demonstrated.

(G) Elevator certificate of inspection. The fee for the annual certificate of inspection for existing installation shall be \$215.00. This fee shall not apply to new installation for which a separate building permit fee is paid at the time a building permit is issued. (Ord. 1858 §1, 2008; Ord. 1912 §1, 2009)

15-03-110 Inspections and testing.

(A) General. Construction or work for which a permit is required shall be subject to inspection by the building official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the building official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

(B) Preliminary inspection. Before issuing a permit, the building official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

(C) Required inspections. The building official, upon notification, shall make the inspections set forth in subsections (1) through (14) below.

(1) Footing and foundation inspection. Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. The foundation inspection shall include excavations for thickened slabs intended for the support of bearing walls, partitions, structural supports, or equipment and special requirements for wood foundations.

Special inspections shall be in accordance with IBC section 1802.2.2.4, as amended, and IRC section R401.4.4, as amended. Materials for the foundation shall be on the job, except where concrete is ready-mixed in accordance with ASTM C 94, the concrete need not be on the job.

EXCEPTION: Special inspections are not required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.

(2) Concrete slab and under-floor inspection. Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories, and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor. Underground inspection shall be made after trenches or ditches are excavated and bedded, piping installed, and before backfill is put in place. When excavated soil contains rocks, broken concrete, frozen

chunks, and other rubble that would damage or break the piping or cause corrosive action, clean backfill shall be on the job site.

Special inspections shall be in accordance with IBC section 1802.2.2.4, as amended, and IRC section R401.4.4, as amended.

(3) Lowest floor elevation. In flood hazard areas, upon placement of the lowest floor, including the basement, and prior to further vertical construction, the elevation certification required in IBC section 1612.5 and IRC section R322 shall be submitted to the building official.

(4) Plumbing, mechanical, gas, and electrical systems inspection. Rough inspection of plumbing, mechanical, gas, and electrical systems shall be made after the roof, framing, fireblocking and bracing are in place and all ducting and other components to be concealed are complete, prior to covering or concealment, before fixtures or appliances are set or installed, and prior to framing inspection. For single-family dwellings, all rough inspections shall be done at the same time as the rough framing inspection. For multi-family and commercial buildings, rough electrical may be done at the same time as the rough frame inspection.

EXCEPTION: Ground-source heat pump loop systems tested in accordance with IMC section 1208.1.1 and IRC section M2105.1 shall be permitted to be backfilled prior to inspection.

The requirements of this section shall not be considered to prohibit the operation of any heating equipment or appliances installed to replace existing heating equipment or appliances serving an occupied portion of a structure, provided that a request for inspection of such heating equipment or appliances has been filed with the department not more than forty-eight hours after such replacement work is completed, and before any portion of such equipment or appliances is concealed by any permanent portion of the structure.

(5) Frame inspection. Framing inspections shall be made after the roof deck or sheathing, all framing, fireblocking, and bracing are in place and pipes, chimneys, and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes, and ducts are approved.

EXCEPTIONS:

a. For single-family dwellings, all rough inspections shall be done at the same time as the rough framing inspection.

b. For multi-family and commercial buildings, rough electrical may be done at the same time as the rough frame inspection.

(6) Lath and gypsum board inspection. Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.

EXCEPTION: Gypsum board in buildings regulated by the IRC that is not part of a fire-resistance-rated assembly, shear assembly, garage/house separation or located in areas where there will be direct exposure to water or subject to continuous high humidity.

(7) Fire-resistance-rated construction inspection. Where fire-resistance-rated construction is required between dwelling units, required per Chapter 7 of the IBC, or required due to location on property, the building official shall require an inspection of such construction after all lathing and/or wallboard is in place, but before any plaster is applied, or before wallboard joints and fasteners are taped and finished.

(8) Fire-resistant and smoke resistant penetrations. Protection of joints and penetrations in fire-resistance-rated assemblies, smoke barriers, and smoke partitions shall not be concealed from view until inspected and approved.

(9) Energy efficiency inspections. Inspections shall be made to determine compliance with Chapter 13 of the IBC as applicable and shall include, but not be limited to, inspections for: envelope insulation R- and U-values, fenestration U-value, duct system R- value, and HVAC and water-heating equipment efficiency.

(10) Floodplain inspections. For construction in areas prone to flooding as established by Table R301.2(1), upon placement of the lowest floor, including basement, and prior to further vertical construction, the building official shall require submission of documentation, prepared and sealed by a registered design professional, of the elevation of the lowest floor, including basement, required in section R322.

(11) Other inspections. In addition to the inspections specified above, the building official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the department of building safety.

(12) Special inspections. For special inspections, see IBC section 1704.

(13) Final inspection. The final inspection shall be made after all work required by the building permit is completed.

(14) Evaluation and follow-up inspection services. Prior to the approval of a prefabricated construction assembly (closed, prefabricated plumbing system for purposes of the IPC) having concealed work and the issuance of a permit, the code official shall require the submittal of an evaluation report on each prefabricated construction assembly, indicating the complete details of the installation, including a description of the system and its components, the basis upon which the system is being evaluated, test results, and similar information, and other data as necessary for the code official to determine conformance to this code.

a. Evaluation service. The code official shall designate the evaluation service of an approved agency as the evaluation agency, and review such agency's evaluation report for adequacy and conformance to this code.

b. Follow-up inspection. Except where ready access is provided to installations, service equipment and accessories for complete inspection at the site without disassembly or dismantling, the code official shall conduct the in-plant inspections as frequently as necessary to ensure conformance to the approved evaluation report or shall designate an independent, approved inspection agency to conduct such inspections. The inspection agency shall furnish the code official with the follow-up inspection manual and a report of inspections upon request, and the installation shall have an identifying label permanently affixed to the system indicating that factory inspections have been performed.

c. Test and inspection records. Required test and inspection records shall be available to the code official at all times during the fabrication of the installation and the erection of the building; or such records as the code official designates shall be filed.

(15) The owner of any elevator, dumbwaiter, escalator, or moving walk shall cause periodic inspection, tests, and maintenance to be made on such conveyances as required in the ASME elevator codes as adopted by Title 15-18.

(D) Testing. Installations shall be tested as required in this code and in accordance with sections 1 through 3 below. Tests shall be made by the permit holder and observed by the code official.

(1) New, altered, extended or repaired systems. New installations and parts of existing systems, which have been altered, extended, renovated or repaired, shall be tested as prescribed herein to disclose leaks and defects.

(2) Apparatus, material and labor for tests. Apparatus, material and labor required for testing a mechanical system or part thereof shall be furnished by the permit holder.

(3) Reinspection and testing. Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made so as to achieve compliance with this code. The work or installation shall then be resubmitted to the code official for inspection and testing.

(E) Temporary connection. The code official shall have the authority to authorize the temporary connection of an installation to the sources of energy for the purpose of testing the installation or for use under a temporary certificate of occupancy.

(F) Special inspections. Special inspections of alternative engineered design plumbing systems shall be conducted in accordance with Sections 1 and 2 below.

(1) Periodic inspection. The registered design professional or designated inspector shall periodically inspect and observe the alternative engineered design to determine that the installation is in accordance with the approved construction documents. All discrepancies shall be brought to the immediate attention of the plumbing contractor for correction. Records shall be kept of all inspections.

(2) Written report. The registered design professional shall submit a final report in writing to the code official upon completion of the installation, certifying that the alternative engineered design conforms to the approved construction documents. A notice of approval for the plumbing system shall not be issued until a written certification has been submitted.

(G) Operation of electrical equipment. The requirements of this section shall not be construed to prohibit the operation of any electrical system or equipment installed to replace existing equipment. The request for inspection of such equipment must have been filed with the building official not more than 48 hours after such replacement

work is completed and before any portion of such electrical system is concealed by any permanent portion of the building.

(H) Inspection agencies. The building official is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

(I) Inspection requests. It shall be the duty of the holder of the building permit or their duly authorized agent to notify the building official when work is ready for inspection. The building official may require that every request for inspection be filed at least one working day before such inspection is desired. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

(J) Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the building official. The building official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the building official.

(K) Inspection record card. Work requiring a permit shall not be commenced until the permit holder or his or her agent shall have posted an inspection record card in a conspicuous place on the premises and in such position as to allow the building official conveniently to make the required entries thereon in such position by the permit holder until final approval has been granted by the building official.

(L) Reinspections. A reinspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for are not made. This section is not to be interpreted as requiring reinspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or reinspection.

Reinspection fees may be assessed when the inspection record card is not posted or otherwise available on the work site, the approved plans and engineered roof truss sheets are not readily available to the inspector, the building is not dried in which includes installation of all windows, doors, roof paper along with roof vents and roof jacks, failure to have required pressure tests on plumbing and mechanical work, same set of corrections as for previous buildings by the same builder, for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the building official.

To obtain a reinspection, the applicant shall file an application therefor in writing on a form furnished for that purpose and pay the reinspection fee in accordance with Table 1-A.

In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

EXCEPTION: Reinspections for elevators, escalators, moving walks and dumbwaiters shall be in accordance with the agreement with the elevator inspection agency. (Ord. 1858 §1, 2008; Ord. 1926 §8, 2011)

15-03-120 Certificate of occupancy.

(A) Use and occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the building official has issued a certificate of occupancy therefor as provided herein. It shall be unlawful to operate any elevator, dumbwaiter, escalator, or moving walk without a current certificate of inspection issued by the building official. Issuance of a certificate of occupancy or certificate of inspection shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Certificates presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid.

EXCEPTIONS:

1. Certificates of occupancy are not required for work exempt from permits under section 15-03-070(B).
2. Accessory buildings or structures.

Certificates of inspection for elevators, dumbwaiters, escalators, or moving walks shall be issued annually upon payment of prescribed fees and the presentation of a valid inspection report indicating that the conveyance is safe and that the inspection was made within the previous six months. Certificates shall not be issued when the correspondence is posted as unsafe pursuant to 8.11.3. Certificate of inspection fees shall be paid in accordance with section 15-03-100.

EXCEPTION: Only the initial certificate of inspection shall be required for elevator, dumbwaiter, escalator, or moving walk conveyances within a dwelling unit.

(B) Certificate issued. After the building official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department of building safety, the building official shall issue a certificate of occupancy that contains the following:

- (1) The building permit number.
- (2) The address of the structure.
- (3) The name and address of the owner.
- (4) A description of that portion of the structure for which the certificate is issued.
- (5) A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
- (6) The name of the building official.
- (7) The edition of the code under which the permit was issued.
- (8) The use and occupancy, in accordance with the provisions of IBC Chapter 3, as applicable.
- (9) The type of construction as defined in Chapter 6 of the IBC, as applicable.
- (10) The design occupant load when applicable.
- (11) If an automatic sprinkler system is provided, whether the sprinkler system is required.
- (12) Any special stipulations and conditions of the building permit.

(C) Temporary occupancy. The building official is authorized to issue a temporary certificate of occupancy before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied safely. The building official shall set a time period during which the temporary certificate of occupancy is valid.

(D) Revocation. The building official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code. (Ord. 1858 §1, 2008; Ord. 1926 §9, 2011)

15-03-130 Service utilities.

(A) Connection of service utilities. No person shall make connections from a utility, source of energy, fuel, or power to any building or system that is regulated by this code for which a permit is required, until released by the building official.

(1) Electrical connection approval. An electrical system or equipment regulated by this code for which a permit is required shall not be connected to a source of energy or power until approved by the building official. The following minimum requirements must be met prior to approval:

- a. If a gas forced air furnace is to be installed, the furnace must be electrically connected in a permanent fashion to include control wiring; the venting must be inspected and passed for temporary use; and the gas line must be inspected and approved.
- b. The electrical system must be completely roughed in, including grounding, inspected, and passed. The panel must be dead-fronted for safe operation.

(B) Temporary connection. The building official shall have the authority to authorize the temporary connection of the building or system to the utility source of energy, fuel, or power.

(C) Authority to disconnect service utilities. The building official shall have the authority to authorize disconnection of utility service to the building, structure, or system regulated by this code and the codes referenced in case of emergency where necessary to eliminate an immediate hazard to life or property or when such utility connection has been made without the approval required by section (A) or (B) above. The building official shall notify the serving utility, and wherever possible, the owner and occupant of the building, structure, or service system

of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure, or service system shall be notified in writing, as soon as practical thereafter. (Ord. 1858 §1, 2008)

15-03-140 Powers of planning and zoning commission.

(A) General. The authority to hear and decide appeals of orders, decisions, or determinations made by the building official relative to the application and interpretation of this code shall be vested in the planning and zoning commission.

(B) Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The commission shall have no authority relative to interpretation of the administrative provisions of this code, nor shall the commission be empowered to waive requirements of this code. Appeals made concerning the regulations of this code shall be heard and decided by the planning and zoning commission.

(1) Determination of substantial improvement in areas prone to flooding. When the building official provides a finding required in section 15-03-070(C)(1)a., the planning and zoning commission shall determine whether the value of the proposed work constitutes a substantial improvement. A *substantial improvement* means any repair, reconstruction, rehabilitation, addition, or improvement of a building or structure, the cost of which equals or exceeds fifty percent of the market value of the building or structure before the improvement or repair is started. If the building or structure has sustained substantial damage, all repairs are considered substantial improvement, regardless of the actual repair work performed. The term does not include:

- a. Improvements of a building or structure required to correct existing health, sanitary, or safety code violations identified by the building official and which are the minimum necessary to assure safe living conditions; or
- b. Any alteration of an historic building or structure, provided that the alteration will not preclude the continued designation as an historic building or structure. For the purpose of this exclusion, an historic building is in accordance with chapter 17-72 of the Broomfield Municipal Code.

(2) Criteria for issuance of a variance for areas prone to flooding. A variance shall only be issued upon:

- a. A showing of good and sufficient cause that the unique characteristics of the size, configuration, or topography of the site render the elevation standards in IBC section G105.7 and IRC section R324 inappropriate.
- b. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
- c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- d. A determination that the variance is the minimum necessary to afford relief, considering the flood hazard.
- e. Submission to the applicant of written notice specifying the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and stating that construction below the design flood elevation increases risks to life and property. (Ord. 1858 §1, 2008; Ord. 1935 §10, 2011)

15-03-150 Violations.

(A) Unlawful acts. It shall be unlawful for any person, firm, or corporation to erect, construct, alter, extend, repair, move, remove, demolish, or occupy any building, structure, or equipment regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

(B) Notice of violation. The building official is authorized to serve a notice of violation or order on the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition, or occupancy of a building, structure, or equipment in violation of the provisions of this code, or in violation of a detailed

statement or a plan approved thereunder, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

(C) Prosecution of violation. If the notice of violation is not complied with promptly, the building official is authorized to request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct, or abate such violation, or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

(D) Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters, or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this title, shall be subject to penalties as prescribed in chapter 1-12, B.M.C. (Ord. 1858 §1, 2008)

15-03-160 Stop work order.

(A) Authority. Whenever the building official finds any work regulated by this code being performed in a manner either contrary to the provisions of this code or dangerous or unsafe, the building official is authorized to issue a stop work order.

(B) Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work will be permitted to resume.

(C) Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law in chapter 1-12, B.M.C. (Ord. 1858 §1, 2008)

15-03-170 Reserved.

15-03-180 Unsafe structures, equipment, and systems.

(A) Conditions. Structures, equipment, or systems that are or hereafter become unsafe, unsanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or which constitute a fire hazard or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. The owner of any elevator, dumbwaiter, escalator, or moving walk shall cause periodic inspection, tests, and maintenance to be made on such conveyances as required by the ASME Codes as adopted by Chapter 15-18. Unsafe structures, equipment, or systems shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.

(B) Record. The building official shall cause a report to be filed on an unsafe condition. The report shall state the occupancy of the structure and the nature of the unsafe condition.

(C) Notice. If an unsafe condition is found, the building official shall serve on the owner, agent, or person in control of the structure, a written notice that describes the condition deemed unsafe and specifies the required repairs or improvements to be made to abate the unsafe condition, or that requires the unsafe structure to be demolished within a stipulated time. Such notice shall require the person thus notified to declare immediately to the building official acceptance or rejection of the terms of the order. For elevators, escalators, or moving walks, if the building official finds that the unsafe condition endangers human life, he or she shall cause to be placed on such elevator, escalator, or moving walk, in a conspicuous place, a notice stating that such conveyance is unsafe. The owner shall see to it that such notice of unsafe condition is legibly maintained where placed by the building official. A posted notice of unsafe conditions shall be removed only by the building official when he or she is satisfied that the unsafe conditions have been corrected.

(D) Method of service. Such notice shall be deemed properly served if a copy thereof is: (a) delivered to the owner personally; (b) sent by certified or registered mail addressed to the owner at the last known address with return receipt requested; or (c) delivered in any other manner as prescribed by local law. If the certified or registered letter is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by such notice. Service of such notice in the foregoing manner upon the owner's agent or upon the person responsible for the structure shall constitute service of notice upon the owner.

(E) Restoration. The structure or equipment determined to be unsafe by the building official is permitted to be restored to a safe condition. To the extent that repairs, alterations, or additions are made or a change of occupancy

occurs during the restoration of the structure, such repairs, alterations, additions, or change of occupancy shall comply with the requirements of section 15-03-070 and IBC Chapter 34, or other adopted codes as applicable. (Ord. 1858 §1, 2008)

Chapter 15-04

International Building Code

15-04-010 Amendments to the International Building Code.

The following amendments are hereby made to the 2009 International Building Code which shall be referred to in this Chapter 15-04 as the IBC:

(A) Chapter 1 is hereby deleted. Refer to BMC Chapter 15-03 for administrative requirements.

(B) Section 419 Live Work Units is amended by modifying section 419.3, 419.7 and adding section 419.9:

419.3 Means of egress. Except as modified by this section, the means of egress components for a live/work unit shall be designed in accordance with Chapter 10 for the function served.

419.3.1 Egress capacity. The egress capacity for each element of the live/work unit shall be based on the occupant load for the function served in accordance with Table 1004.1.1.

419.3.2 Spiral stairways. Spiral stairways that conform to the requirements of Section 1009.9 shall be permitted.

419.7 Accessibility. Accessibility shall be designed in accordance with Chapter 11 for the function served.

419.9 Plumbing Facilities. The work area of the live/work unit shall be provided with minimum plumbing facilities as specified by Chapter 29, based on the function of the work area. Where the nonresidential area of the live/work unit is required to be accessible by Section 1103.2.13, the plumbing fixtures specified by Chapter 29 shall be accessible.

(C) Section 707.2 is amended by adding the following Exception to section 707.2.7:

EXCEPTION 7.8 Such openings in buildings protected by automatic fire extinguishing systems shall be provided with draft stops as required by NFPA13.

(D) Subsection 903.2.7 Group R is amended to read as follows:

903.2.7 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.

EXCEPTION: An automatic sprinkler system installed in accordance with section 903.3.1.1 shall be provided throughout all Group R-2 occupancies that meet the federal Fair Housing Act definition of senior housing or housing for older persons.

(E) Subsection 905.2 Installation Standards is amended to read as follows:

905.2 Installation standards. Standpipe systems shall be installed in accordance with this section and NFPA14. Fire hose is not required for any class of standpipe system. Standpipe hose outlets shall be 2.5-inch outlets with 2.5-inch-to-1.5-inch reducing caps.

(F) Subsection 912.1 Installation is amended to read as follows:

912.1 Installation. Fire department connections shall be installed in accordance with this section and the NFPA standard applicable to the system design. Where fire department connections are required, the number of 2.5-inch inlets provided shall not be less than one for each 250 gallons per minute of system demand or major fraction thereof, to a maximum of six 2.5-inch inlets. Each 2.5-inch inlet shall be equipped with a clapper valve to allow each hose to be connected and charged before the addition of more hoses.

(G) The word "carpets" is hereby deleted from Section 1009.4.1, and this section will now read:

Section 1009.4.1 Dimension reference surfaces. For the purpose of this section, all dimensions are exclusive of rugs or runners.

(H) A new Exception 6 to Section 1203.3.2 shall be added to read as follows:

EXCEPTION 6. Ventilation is not required for spaces below noncombustible structural basement floors located below grade.

(I) Subsection 1205.4.1 Controls is hereby deleted in its entirety.

(J) A new Exception to Section 1209.1 shall be added to read as follows:

EXCEPTION: Access is not required for spaces below noncombustible structural basement floors where there is no building equipment such as electrical, plumbing, mechanical or gas systems.

(K) A subsection 4 shall be added to Section 1510.3 to read as follows:

4. For asphalt shingles, when the building is located in an area subject to moderate or severe hail exposure according to Figure R903.5 of the International Residential Code.

(L) Section 1608.2 is amended to read as follows:

1608.2 Ground Snow Loads. The ground snow load shall be 30 psf. The design roof snow load shall be no less than 30 psf at any element of the roof.

(M) Section 1609.3 is amended to read as follows:

1609.3 Basic wind speed. Minimum basic wind speed for the city and county is hereby designated as ninety-five miles per hour fastest mile (110 mph 3-second gust).

(N) Section 1612.3 is amended to read as follows:

1612.3 Establishment of flood hazard areas. To establish flood hazard areas, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for City and County of Broomfield," dated August 18, 2004, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and the Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map supporting data are hereby adopted by reference and declared to be part of this section.

(O) A new Section 1704.17 is added to read as follows:

1704.17 Foundations & Flatwork. All foundation and flatwork for which a soil report or engineered foundation is required. (See amended Section 1802.2.2 for these requirements.)

(P) Section 1802.2.2 Expansive Soils is amended to read as follows:

1802.2.2 Expansive Soils.

1802.2.2.1 General. Expansive soils are deemed present throughout most of the city and county. A soils report and engineered foundation plan are required for all new construction. Such plans must be prepared by a Colorado registered professional engineer. The documents shall specifically include design computations for pier diameter and length for commercial construction, describe methods to provide restraint from lateral soil pressures, provide a slab performance risk evaluation, compaction and soil preparation requirements for slabs on grade, and other information deemed necessary by the engineer of record.

EXCEPTION: If the existing foundation for a building is performing adequately, foundations for additions to existing buildings are allowed to match the existing foundation type.

1802.2.2.2 Borings. Borings shall be conducted on each lot to determine consistency of soil conditions with the soil investigation report. When isolated residences are investigated, at least two borings shall be drilled on each lot, generally at opposite corners of the proposed structure. When more than two adjacent lots are being investigated, at least one boring shall be drilled near the center of each building footprint. The depth of boring may be varied when each lot is located in a subdivision containing multiple lots.

1802.2.2.3 Water Control. All residential foundations are required to be provided with perimeter drainage systems. The perimeter drainage system shall be designed to collect water around below-grade foundation walls which define rooms or areas which either are or could become habitable spaces.

EXCEPTION: The Building Official may waive such requirements when sufficient documentation is provided by the engineer of record to substantiate his or her recommendation that such system is not necessary.

1802.2.2.3.1 Materials. Piping in conformance with ASTM Designation D2729-89 or equivalent

shall be used for perimeter drains.

1802.2.2.3.2 Termination. Unless perimeter drains are designed to daylight, they shall terminate in sump pits with pumps installed. Piping for sump pumps shall discharge at least five feet away from foundations or as otherwise approved by the Building Official.

1802.2.2.3.3 Installation. Perimeter drains shall be installed in proper bedding materials. The bedding materials shall be of such size and installed in such manner to allow ground water to seep into the perimeter drain. Landscape fabric or other measures to restrict the passage of fines shall be used to further protect the perimeter drain from blockage.

1802.2.2.4 Special Inspections.

1802.2.2.4.1 Pier Drilling Log. The pier inspections shall be reported on a drilling log which contains detailed information on each hole including total depth, depth to bedrock, descriptions of the various strata the hole was drilled through, the condition of the hole, and whether ground water was encountered; the drilling log shall be stamped by a Colorado licensed professional engineer.

1802.2.2.4.2 Foundation Walls. Foundation walls shall be inspected just prior to placement of concrete. The inspection shall be under the supervision of a Colorado licensed professional engineer. Such inspection shall confirm compliance with the design drawings and other provisions of this code.

1802.2.2.4.2.1 Foundation, Underslab, and Excavation Trench Backfill. Foundation, underslab, and excavation trench backfill shall be moisture conditioned and compacted to control settlement.

Additionally, all backfill and compaction recommendations contained in the geotechnical report and the structural engineer's foundation design shall be followed. If conflicts exist, the most stringent requirement shall be followed.

Fill materials shall not contain debris, clods over 6" diameter, or frozen soil. Water shall be added uniformly to the stockpiled materials, or as backfill is placed so that water content at the time of compaction is within tolerances established by the engineering documents. Flooding or puddling of the backfill is not allowed. Fill shall be placed in loose lifts as established by the engineering documents. The surface of each lift shall be compacted as established by the engineering documents.

Over-compaction shall be avoided to reduce potential wall damage. Backfill and compaction of foundation walls shall not take place until the wall has gained sufficient strength, temporary bracing of the walls is provided, or other equivalent measures are used to limit damage to walls during the backfill and compaction process.

The placement and compaction of foundation, underslab, and excavation trench backfill shall be observed by a person working under the supervision of a Colorado licensed professional engineer. The observations shall be performed at a frequency sufficient to provide reasonable assurance that backfill has been placed in substantial conformance with these requirements. At least one observation visit shall be performed for each of the following: foundation backfill, trench backfill, and underslab preparation.

1802.2.2.4.3 Perimeter Drainage and Dampproofing. Perimeter drainage systems and dampproofing of foundation walls shall be inspected under the supervision of a Colorado licensed professional engineer.

1802.2.2.4.4 Basement Floors. All slab on grade and structural floor systems shall be inspected under the supervision of a Colorado licensed professional engineer.

1802.2.2.4.5 Reporting. Reports for the above-mentioned special inspections shall be submitted within ten (10) days of the inspection and shall be stamped by a Colorado licensed professional engineer. Framing inspections will not be performed by the city prior to receipt of the special inspection reports.

1802.2.2.5 Basement Floors. All residential basement floors exceeding 150 square feet in area shall be constructed as structural floor systems. When such floor systems are designed to withstand lateral foundation loads as well as floor loading, the plans shall so indicate.

EXCEPTION: Slab-on-grade basement floors may be used when the slab performance risk evaluation is low or moderate and sufficient documentation is provided by the engineer of record to substantiate the performance risk assessment. Such assessment shall include but not be limited to consideration of all of the following factors: geologic structure; soil and bedrock profile and profile variability; material type

and engineering properties of materials below the slab; swell tests and/or suction tests; depth and magnitude of moisture increase; existing and anticipated ground water conditions; location of any nearby surface water sources; type of basement; tolerable movement for the intended use; performance history and experience in the area; surface topography; previous and future grading; surface and subsurface drainage; and site landscaping, irrigation and vegetation. The slab performance risk shall be defined as shown in Table 1802.2.2.5.

**TABLE 1802.2.2.5
Swell Potential Descriptions and Corresponding Slab Performance Risk Categories**

<i>Slab Performance Risk Category</i>	<i>Representative Percent Swell (500 psf Surcharge)</i>	<i>Representative Percent Swell (1000 psf Surcharge)</i>
Low	0 to <3	0 to <2
Moderate	3 to <5	2 to <4
High	5 to <8	4 to <6
Very High	≥ 8	≥ 6

Note: The representative percent swell values presented are not measured values; rather, they are a judgment of the swell of the soil and bedrock profile likely to influence performance.

The Building Official may, however, determine that the documentation is insufficient to support the exception.

Developers and builders or their representatives shall comply with the disclosure to purchaser requirements set forth in section 6-6.5-101, C.R.S.

In addition, prior to issuance of a certificate of occupancy for a residence with a slab-on-grade basement floor, a statement signed by the home buyer shall be submitted wherein the home buyer acknowledges to have read the soils report and/or summary soils report, understands the risks associated with a slab-on-grade basement floor, and chooses to accept those risks. If the buyer is unknown at the time of issuance of a certificate of occupancy, the statement shall be prepared and signed by the builder. In either case, the statement shall be recorded by the builder in the office of the county clerk and recorder. The builder shall pay the recording fee. The statement shall also include the name of the builder, the legal description of the property, and any other pertinent information required by the building official.

New walls for basement finishes in existing buildings with existing slab-on-grade floors shall be provided with a slip joint (or float) in accordance with the soils report for the site to allow for vertical slab movement. In the absence of a soil report, a minimum of 1½" slip joint shall be provided. Doorways shall also be designed to allow vertical movement, and wall finish materials shall not extend to the floor.

1802.2.2.5.1 Ventilation. Adequate underfloor ventilation systems shall be provided to ventilate underfloor areas when structural floor systems are required. Such systems shall be designed to provide at least one air change per hour, be controlled by a de-humidistat, and exhaust to the outside.

EXCEPTIONS:

1. The building official may approve alternates to such requirements when sufficient documentation is provided by the engineer of record to substantiate his or her alternate method is at least the equivalent of that prescribed.
2. Ventilation is not required for spaces below noncombustible structural basement floors located below grade.

1802.2.2.5.2 Under Floor Grading. When structural basement floors are installed, a minimum of 18" of clear space is required below untreated wood floor joists and any wood girders or beams. Where steel or concrete beams or joists are used, the minimum clearance shall be as recommended by the soils engineer.

The surface of the underfloor area shall be graded to a relatively flat plane to slope toward the sump pit, or toward drain systems installed to control free water in the underfloor space. The underfloor area shall not allow ponding of water.

(Q) Section 3408.1 Change of Occupancy is amended by the addition of an Exception to read as follows:

EXCEPTION: The provisions of the ICC Performance Code for Buildings and Facilities shall apply to those portions of buildings, structures, facilities, and premises undergoing a change of occupancy where performance-based design was employed to provide an acceptable level of life safety and property protection from the hazards of fire, explosion, or dangerous conditions.

(R) Section 3412.2 is amended by inserting the following date: December 19, 1961.

(S) A new section J112, Site Grading, is added to Appendix J to read as follows:

Section J112 Site Grading.

J112.1 General. Grading shall be performed in such a manner as to minimize impact from drainage on adjacent properties and to minimize damage to structures. The provisions of this section are minimums, and greater protection may be required by the soil report or engineered foundation plan.

J112.2 Minimum/maximum yard slopes.

J112.2.1 Front and side yards. Front and side yards shall have a minimum slope of five (5) percent and a maximum slope of twenty-five (25) percent away from the building for a minimum distance of four (4) feet from the building.

J112.2.2 Rear yards. Rear yards shall have a minimum slope of five (5) percent and a maximum slope of twenty-five (25) percent away from the building for a minimum distance of ten (10) feet from the building.

J112.3 Seasonal limits. No fill material shall be placed, spread, or rolled while it is frozen or thawing or during unfavorable weather conditions.

J112.4 Gutters and Downspouts. Gutters will be required on all eave portions of roofs. The location and direction of downspouts shall be such that no drainage or ponding problems are created and water is carried a minimum distance of five (5) feet from buildings or as recommended by the soils report. Where practical, downspouts shall not discharge onto hard surfaces, driveways, sidewalks, or patios.

J112.5 Window wells. Window wells shall extend a minimum of four (4) inches above final grade.

J112.6 Exposed foundation walls. Final grading shall be performed in such a manner that exposed, unfinished foundation walls do not exceed eighteen (18) inches above grade. For a foundation wall to be considered finished, the exterior wall/finish materials or other approved materials shall effectively decorate or mask the foundation wall.

J112.7 Site grading plans and certificates.

J112.7.1 General. In addition to the requirements found in sections J101 through J111, grading performance plans and grading performance certificates are required in conjunction with building permits for new single-family dwellings and townhouses. The city engineer may waive this requirement if he or she determines that adequate grading and drainage plans have been otherwise approved and implemented.

J112.7.2 Grading performance plans. Each building permit application shall be accompanied by a site drainage plan. The plan shall indicate the following:

1. Direction of flow.
2. Grade elevations sufficient to show percent of slope along property lines, drainage swales, and away from the house. NOTE: In addition to the minimum yard drainage requirements in Section J112.2, all other locations shall provide a minimum two-percent slope.
3. Conformance with overall subdivision drainage plan.

J112.7.3 Grading performance certificate. Prior to issuance of a certificate of occupancy, a grading performance certificate shall be provided to the Building Official. The document shall be prepared by a Colorado licensed land surveyor or Colorado registered professional engineer. The grading performance certificate shall indicate and affirm the following:

1. Direction of flow.
2. Grade elevations sufficient to show percent of slope along property lines, drainage swales, and away from the house. NOTE: In addition to the minimum yard drainage requirements in Section J112.2, all other locations shall provide a minimum two-percent slope.

3. Conformance with overall subdivision drainage plan.

4. An affirmative statement that the inspection of the site has been performed and that the lot will drain adequately and in conformance with the grading performance plan and drainage will not result in ponding or flooding conditions on adjacent lots.

The grading shall be maintained by the property owner in accordance with the grading performance certificate. Any subsequent installation of landscaping or building improvements shall neither substantially deviate from the grading performance certificate nor contribute to drainage problems on adjacent properties.

J112.7.4 Grading noncompliance statement. When inclement weather, soil conditions, or other reasons force postponement of final grading, so that a grading performance certificate cannot be provided, no certificate of occupancy shall be issued unless a grading noncompliance statement is filed. The filing fee is \$50.00. In addition, a deposit of \$ 450.00 shall be submitted with the noncompliance statement, which is refundable if a grading performance certificate is submitted prior to the grading noncompliance expiration date and approved by the city. The statement may take the place of a grading performance certificate for up to 90 days. After such time the statement expires and remedies in chapter 1-12, B.M.C., may be pursued.

(Ord. 1926 §11, 2011)

Chapter 15-05

International Residential Code

15-05-010 Amendments to the International Residential Code.

The following amendments are hereby made to the 2009 International Residential Code, which shall be referred to in this chapter 15-05 as the IRC:

- (A) Chapter 1 is hereby deleted. Refer to BMC chapter 15-03 for administrative requirements.
- (B) Table R301.2(1), Climatic and geographic design criteria is hereby amended as follows:

**TABLE R301.2(1)
Climatic and Geographic Design Criteria**

GROUND SNOW LOAD:	30
WIND SPEED (mph):	110
SEISMIC DESIGN CATEGORY:	B
SUBJECT TO DAMAGE FROM:	
Weathering:	Severe
Frost line depth:	36"
Termite:	n/s
WINTER DESIGN TEMP:	1°F
ICE BARRIER UNDERLAYMENT REQUIRED:	No
FLOOD HAZARDS:	1973/1988
AIR FREEZING INDEX:	500-1000
ANNUAL MEAN TEMP.:	50°F

- (C) Section R302.2 exception is hereby amended to read as follows:

R302.2 Townhouses.

EXCEPTION: A common 2-hour fire resistance rated wall assembly tested in accordance with ASTM E119 or UL 263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.

(D) Exception 5 to subsection R308.4 is hereby amended to read as follows:

EXCEPTION 5: Glazing in Section R308.4, Item 7, when a protective bar is installed on the accessible side(s) of the glazing 36 inches +/- 2 inches (914 mm +/- 51 mm) above the floor. The bar shall be capable of withstanding a horizontal load of 50 pounds per linear foot (730 N/m) without contacting the glass and be a minimum of 1½ inches (38 mm) in height.

(E) Exception 9 to subsection R308.4 is hereby amended to read as follows:

EXCEPTION 9: Safety glazing in Section R 308.4, Items 10 and 11, is not required where:

9.1 The side of a stairway, landing or ramp has a guardrail or handrail, including balusters or in-fill panels, complying with the provisions of sections 1013 and 1607.7 of the IBC; or when a solid wall or panel extends from the plane of the adjacent walking surface to 34 inches (863 mm) to 36 inches (914 mm) above the floor and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as the protective bar; and

9.2 The plane of the glass is more than 18 inches (457 mm) from the railing.

(F) Section R311.7.4 is hereby amended by deleting the word "carpets":

R311.7.4 Stair treads and risers. Stair treads and risers shall meet the requirements of this section. For the purposes of this section, the dimensions and dimensioned surfaces shall be exclusive of rugs and runners.

(G) Section R313.1 is hereby amended to read as follows:

R313.1 Townhouse automatic sprinkler systems. An automatic residential fire sprinkler system shall be installed in all new townhouses. This subsection G shall not be effective until such time as the City Council adopts a separate Ordinance making Section R313.1 effective.

EXCEPTION: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.

R313.1.1 Design and installation. Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with Section P2904 or NFPA 13D.

(H) Section R313.2 is hereby amended to read as follows:

R313.2 One- and two-family dwellings automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in one- and two-family dwellings. This subsection H shall not be effective until such time as the City Council adopts a separate Ordinance making Section R313.2 effective.

EXCEPTION: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing buildings that are not already provided with an automatic residential sprinkler system.

(I) Under the Exceptions of subsection R314.4, Alterations, repairs and additions, the exception numbered 2 is hereby amended to read as follows:

2. Smoke alarms in existing areas shall not be required to be interconnected and hardwired where battery-operated detectors are provided and no electrical work is being performed in the area requiring a detector.

(J) Subsection R401.3, Drainage, is hereby amended to read as follows:

R401.3 Drainage and site grading.

R401.3.1 General. Grading shall be performed in such a manner as to minimize impact from drainage on adjacent properties and to minimize damage to structures. The provisions of this section are minimums, and greater protection may be required by the soil report or engineered foundation plan.

R401.3.2 Yards. All yards shall have a minimum slope of five (5) percent and a maximum slope of twenty-five (25) percent away from the building for a minimum distance of ten (10) feet from the building, except where lot lines, walls, slopes, or other physical barriers prohibit 6 inches (152 mm) of fall within 10 feet (3048 mm), drains and swales shall be provided to ensure drainage away from the structure.

R401.3.3 Seasonal limits. No fill material shall be placed, spread, or rolled while it is frozen or thawing or during unfavorable weather conditions.

R401.3.4 Downspouts. The location and direction of downspouts shall be such that no drainage or ponding problems are created and water is carried a minimum distance of three (3) feet from buildings. Where practical, downspouts shall not dump onto hard surfaces, driveways, sidewalks, or patios.

R401.3.5 Window wells. Window wells shall extend a minimum of four (4) inches above final grade.

R401.3.6 Exposed foundation walls. Final grading shall be performed in such a manner that exposed, unfinished foundation walls do not exceed eighteen (18) inches above grade. For a foundation wall to be considered finished, the exterior wall/finish materials or other approved materials shall effectively decorate or mask the foundation wall.

R401.3.7 Site grading plans and certificates.

R401.3.7.1 General. Grading performance plans and grading performance certificates are required in conjunction with building permits for new one- and two-family dwellings. The city engineer may waive this requirement if he or she determines that adequate grading and drainage plans have been otherwise approved and implemented.

R401.3.7.2 Grading performance plans. Each building permit application shall be accompanied by a site drainage plan. The plan shall indicate the following:

1. Direction of flow.
2. Grade elevations sufficient to show percent of slope along property lines, drainage swales, and away from the house. NOTE: In addition to the minimum yard drainage requirements in Section R401.3.2, all other locations shall provide a minimum two-percent slope.
3. Conformance with overall subdivision drainage plan.

R401.3.7.3 Grading performance certificate. Prior to issuance of a certificate of occupancy, a grading performance certificate shall be provided to the building official. The document shall be prepared by a Colorado licensed land surveyor or Colorado registered professional engineer. The grading performance certificate shall indicate and affirm the following:

1. Direction of flow.
2. Grade elevations sufficient to show percent of slope along property lines, drainage swales, and away from the house. NOTE: In addition to the minimum yard drainage requirements in Section 401.3.2, all other locations shall provide a minimum two-percent slope.
3. Conformance with overall subdivision drainage plan.
4. An affirmative statement that the inspection of the site has been performed and that the lot will drain adequately and in conformance with the grading performance plan and drainage will not result in ponding or flooding conditions on adjacent lots.

The grading shall be maintained by the property owner in accordance with the grading performance certificate. Any subsequent installation of landscaping or building improvements shall neither substantially deviate from the grading performance certificate nor contribute to drainage problems on adjacent properties.

R401.3.7.4 Grading noncompliance statement. When inclement weather, soil conditions, or other reasons force postponement of final grading, so that a grading performance certificate cannot be provided, no certificate of occupancy shall be issued unless a grading noncompliance statement is filed. The filing fee is \$50.00. In addition, a deposit of \$450.00 shall be submitted with the noncompliance statement, which is refundable if a grading performance certificate is submitted prior to the grading noncompliance expiration date and if approved by the city. The statement may take the place of a grading performance certificate for up to 120 days. After such time, the statement expires and remedies in chapter 1-12, B.M.C., may be pursued.

(K) Subsection R401.4, Soil tests, is hereby amended to read as follows:

R401.4 Expansive soils.

R401.4.1 General. Expansive soils are deemed present throughout most of the city. A soils report and engineered foundation plan are required for all new construction. Such plans must be prepared by a Colorado registered professional engineer. The documents shall specifically include design computations for

pier diameter and length, describe methods to provide restraint from lateral soil pressures, provide a slab performance risk evaluation, compaction and soil preparation requirements for slabs on grade, and other information deemed necessary by the engineer of record.

EXCEPTION: If the existing foundation for a building is performing adequately, foundations for additions to existing buildings are allowed to match the existing foundation type.

R401.4.2 Borings. Borings shall be conducted on each lot to determine consistency of soil conditions with the soil investigation report. When isolated residences are investigated, at least two borings shall be drilled on each lot, generally at opposite corners of the proposed structure. When more than two adjacent lots are being investigated, at least one boring shall be drilled near the center of each building footprint. The depth of boring may be varied when each lot is located in a subdivision containing multiple lots.

R401.4.3 Water control. All residential foundations are required to be provided with perimeter drainage systems. The perimeter drainage system shall be designed to collect water around below-grade foundation walls which define rooms or areas which either are or could become habitable spaces.

EXCEPTION: The building official may waive such requirements when sufficient documentation is provided by the engineer of record to substantiate his or her recommendation that such system is not necessary.

R401.4.3.1 Materials. Piping in conformance with ASTM Designation D2729-89 or equivalent shall be used for perimeter drains.

R401.4.3.2 Termination. Unless perimeter drains are designed to daylight, they shall terminate in sump pits with pumps installed. Piping for sump pumps shall discharge at least five feet away from foundations or as otherwise approved by the building official.

R401.4.3.3 Installation. Perimeter drains shall be installed in proper bedding materials. The bedding materials shall be of such size and installed in such manner to allow ground water to seep into the perimeter drain. Landscape fabric or other measures to restrict the passage of fines shall be used to further protect the perimeter drain from blockage.

R401.4.4 Special inspections.

R401.4.4.1 Piers. A sufficient number of the piers, but in no case less than 25%, shall be inspected, as determined necessary by the special inspector, to verify consistency of soil report findings. Such piers shall be selected from all levels when there is more than one level and at opposite corners of the structure.

R401.4.4.2 Pier drilling log. The pier inspections shall be reported on a drilling log which contains detailed information on each hole including total depth, depth to bedrock, descriptions of the various strata the hole was drilled through, the condition of the hole, and whether ground water was encountered; the drilling log shall be stamped by a Colorado licensed professional engineer.

R401.4.4.3 Foundation walls. Foundation walls shall be inspected just prior to placement of concrete. The inspection shall be under the supervision of a Colorado licensed professional engineer. Such inspection shall confirm compliance with the design drawings and other provisions of this code.

R401.4.4.3.1 Foundation, underslab, and excavation trench backfill. Foundation, underslab, and excavation trench backfill shall be moisture conditioned and compacted to control settlement. Additionally, all backfill and compaction recommendations contained in the geotechnical report and the structural engineers foundation design shall be followed. If conflicts exist, the most stringent requirement shall be followed.

Fill materials shall not contain debris, clods over 6" diameter, or frozen soil. Water shall be added uniformly to the stockpiled materials, or as backfill is placed so that water content at the time of compaction is within tolerances established by the engineering documents. Flooding or puddling of the backfill is not allowed. Fill shall be placed in loose lifts as established by the engineering documents. The surface of each lift shall be compacted as established by the engineering documents.

Over-compaction shall be avoided to reduce potential wall damage. Backfill and compaction of foundation walls shall not take place until the wall has gained sufficient strength, temporary bracing of the walls is provided, or other equivalent measures are used to limit damage to walls during the backfill and compaction process.

The placement and compaction of foundation, underslab, and excavation trench backfill shall be observed by a person working under the supervision of a Colorado licensed professional engineer. The observations shall be performed at a frequency sufficient to provide reasonable assurance that backfill has been placed in substantial conformance with these requirements. At least one observation visit shall be performed for each of the following: foundation backfill, trench backfill, and underslab preparation.

R401.4.4.4 Perimeter drainage and dampproofing. Perimeter drainage systems and dampproofing of foundation walls shall be inspected under the supervision of a Colorado licensed professional engineer.

R401.4.4.5 Basement floors. All slab on grade and structural floor systems shall be inspected under the supervision of a Colorado licensed professional engineer.

R401.4.4.6 Reporting. Reports for the above-mentioned special inspections shall be submitted within ten (10) days of the inspection and shall be stamped by a Colorado licensed professional engineer. Framing inspections will not be performed by the City prior to receipt of the special inspection reports.

R401.4.5 Basement floors. All residential basement floors exceeding 150 square feet in area shall be constructed as structural floor systems. When such floor systems are designed to withstand lateral foundation loads as well as floor loading, the plans shall so indicate.

EXCEPTION: Slab-on-grade basement floors may be used when the slab performance risk evaluation is low or moderate and sufficient documentation is provided by the engineer of record to substantiate the performance risk assessment. Such assessment shall include but not be limited to consideration of all of the following factors: geologic structure; soil and bedrock profile and profile variability; material type and engineering properties of materials below the slab; swell tests and/or suction tests; depth and magnitude of moisture increase; existing and anticipated ground water conditions; location of any nearby surface water sources; type of basement; tolerable movement for the intended use; performance history and experience in the area; surface topography; previous and future grading; surface and subsurface drainage; and site landscaping, irrigation and vegetation. The slab performance risk shall be defined as shown in Table 401.4.5.

**TABLE 401.4.5
Swell Potential Descriptions and Corresponding Slab Performance Risk Categories**

<i>Slab Performance Risk Category</i>	<i>Representative Percent Swell (500 psf Surcharge)</i>	<i>Representative Percent Swell (1000 psf Surcharge)</i>
Low	0 to <3	0 to <2
Moderate	3 to <5	2 to <4
High	5 to <8	4 to <6
Very High	≥ 8	≥ 6

Note: The representative percent swell values presented are not measured values; rather, they are a judgment of the swell of the soil and bedrock profile likely to influence performance.

The building official may, however, determine that the documentation is insufficient to support the exception.

Developers and builders or their representatives shall comply with the disclosure to purchaser requirements set forth in section 6-6.5-101, C.R.S.

In addition, prior to issuance of a certificate of occupancy for a residence with a slab-on-grade basement floor, a statement signed by the home buyer shall be submitted wherein the home buyer acknowledges to have read the soils report and/or summary soils report, understands the risks associated with a slab-on-grade basement floor, and chooses to accept those risks. If the buyer is unknown at the time of issuance of a certificate of occupancy, the statement shall be prepared and signed by the builder. In either case, the statement shall be recorded by the builder in the office of the county clerk and recorder. The builder shall pay the recording fee. The statement shall also include the name of the builder, the legal description of the property, and any other pertinent information required by the building official.

New walls for basement finishes in existing buildings with existing slab on grade floors shall be provided with a slip joint (or float) in accordance with the soils report for the site to allow for vertical slab

movement. In the absence of a soil report, a minimum of 1½" slip joint shall be provided. Doorways shall also be designed to allow vertical movement, and wall finish materials shall not extend to the floor.

R401.4.5.1 Ventilation. Adequate underfloor ventilation systems shall be provided to ventilate underfloor areas when structural floor systems are required. Such systems shall be designed to provide at least one air change per hour, be controlled by a humidistat, and exhaust to the outside.

EXCEPTIONS:

1. The building official may approve alternates to such requirements when sufficient documentation is provided by the engineer of record to substantiate his or her alternate method is at least the equivalent of that prescribed.

2. Ventilation is not required for spaces below noncombustible structural basement floors located below grade.

R401.4.5.2 Underfloor grading. When structural basement floors are installed, a minimum of 18" of clear space is required below untreated wood floor joists and any wood girders or beams.

Where steel or concrete beams or joists are used, the minimum clearance shall be as recommended by the soils engineer.

The surface of the underfloor area shall be graded to a relatively flat plane to slope toward the sump pit, or toward drain systems installed to control free water in the underfloor space. The underfloor area shall not allow ponding of water.

(L) An Exception is hereby added to subsection R408.4 to read as follows:

EXCEPTION: Access is not required for spaces below noncombustible structural basement floors located below grade where there is no mechanical equipment.

(M) A new section R905.2.8.5 Drip edge shall be added to read as follows:

R905.2.8.5 Drip edge. Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of 2 inches (51 mm). Eave drip edges shall extend ¼ inch (6.4 mm) below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) o.c.

(N) Delete Part IV – Energy Conservation (Chapter 11 Energy Efficiency) in its entirety. For energy code provisions, see the adopted International Energy Conservation Code.

(O) Subsection G2417.4.1 (406.4.1) Test pressure is hereby amended to read as follows:

G2417.4.1(406.4.1) Test pressure. The test pressure to be used shall be no less than 10 psi (68.9 KPA) gauge pressure. For welded piping and for piping carrying gas at a pressure in excess of 14 inches (356 mm) water column pressure, the test pressure shall not be less than 60 psi (413.4 KPA) gauge pressure.

(P) Subsection P2801.2 Installation is hereby amended to read as follows:

P2801.2 Installation. Water heaters shall be installed in accordance with this chapter and Chapters 13, 20, and 24.

(Q) A new section P2903.11 Irrigation rain sensors is hereby added and will read as follows:

P2903.11 Irrigation rain sensors. An approved rain sensor device shall be installed in an approved location for all new irrigation system permits.

(R) Subsection P2904.4 Water service pipe is hereby amended by adding the following sentence:

There shall be a minimum of 20 feet of copper water service pipe extending from the building for the water pipe ground electrode.

(S) Subsection P3103.1 Roof extension is hereby amended to read as follows:

P3103.1 Roof extension. All vent pipes which extend through a roof shall be terminated at least 12 inches above the roof, except where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet (2134 mm) above the roof.

(T) Section 3008 is deleted in its entirety.

(U) Subsection P3104.4 Vertical rise of vent is hereby amended to read as follows:

P3104.4 Vertical rise of vent. Unless prohibited by structural conditions, every dry vent shall rise vertically to a minimum of 6 inches (152 mm) above the flood level of the highest trap or trapped fixture being vented. Vents that are less than 6 inches (152 mm) above the flood level rim of the fixture require approved drainage type fittings with slope back to the drain.

(V) Part VIII Electrical (Chapters 33 through 43) is hereby deleted in its entirety. For electrical code provisions see the adopted National Electrical Code. (Ord. 1926 §12, 2011)

Chapter 15-07

International Energy Conservation Code

15-07-010 Amendments to the International Energy Conservation Code.

The following amendments are hereby made to the International Energy Conservation Code:

(A) Chapter 1 is hereby deleted. Refer to BMC Chapter 15-03 for administrative requirements.

(B) Subsection 302, Design conditions, is hereby amended to read as follows:

Section 302 Design conditions. The outdoor and interior design conditions shall be as established in Tables 302.1 and 302.2 herein below.

TABLE 302.1
Outdoor Design Conditions

Elevation (feet)		5344
Latitude (degrees north)		40
Winter	Heating 99% dry bulb (degrees)	1
	Cooling 1% dry bulb (degrees)	91
Summer	Coincident wet bulb	59
	Design grains (50% RH)	-41
Daily Range (DR)		High (H)
Relative Humidity (winter and summer)		50%

TABLE 302.2
Interior Design Conditions

Heating (degrees)		70
Cooling (degrees)		75
Heating Temperature Difference (HTD)		69
Cooling Temperature Difference (CTD)		16
Cooling Load Temperature Difference (CLTD)		21.0
Altitude Correction Factor (ACF)		0.84
Moisture Content		68.2
Air Density		0.063
Wind Velocity Values	Heating (mph)	15
	Cooling (mph)	7.5
Solar Heat Gain Coefficient (SHGC): While not required per Table 402.1.1 of the IECC, the SHGC is still required data for Manual J. SHGC should be taken directly from sticker on glass. If not known, either use default as per Table 102.2(3) of the IECC or equation SHGC = 0.87 x SC (shading coefficient) under A4-5 of Manual J.		

(C) Section 403.2.2 Exception is deleted in its entirety.

(D) Section 404.1 is hereby amended to read as follows:

Section 404.1 Lighting equipment (mandatory). A minimum of 50 percent of the lamps in permanently installed lighting fixtures shall be high efficacy lamps.

(Ord. 1858 §1, 2008; Ord. 1926 §13, 2011)

Chapter 15-08

Uniform Housing Code

15-08-010 Amendments to the Uniform Housing Code.

The following amendments are hereby made to the 1997 Uniform Housing Code:

(A) Section 301 - GENERAL, is amended to read as follows:

No building or structure regulated by this code shall be erected, constructed, enlarged, altered, repaired, moved, improved, removed, converted, or demolished unless a separate permit for each building or structure has first been obtained from the building official in the manner and according to the applicable conditions prescribed in section 15-03-070.

(B) Section 302 – FEES, is amended to read as follows:

When a building permit is required by section 301 of this code, the appropriate fees shall be paid as specified in section 15-03-100.

(C) Section 303 - INSPECTION, is amended to read as follows:

Buildings or structures within the scope of this code and all construction or work for which a permit is required shall be subject to inspection by the building official in accordance with and in the manner provided by this code and section 15-03-110 and section 1704 of the International Building Code as adopted in this title.

(D) The first paragraph of section 401 - DEFINITIONS, is hereby replaced as follows:

401.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings indicated in this chapter.

401.2 Interchangeability. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

401.3 Terms defined in other codes. Where terms are not defined in this code, such terms shall have meanings ascribed to them as in other code publications of the International Code Council.

401.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

401.5 Definitions.

BUILDING CODE is the International Building Code or the International Residential Code, as applicable, promulgated by the International Code Council, as adopted in this Title.

The rest of the definitions to remain unchanged.

(E) Section 504.4 - HALLWAYS, is amended to read as follows:

All public hallways, stairs, and other exitways shall be adequately lighted at all times in accordance with the Building Code.

(Ord. 1858 §1, 2008)

Chapter 15-10

International Mechanical Code

15-10-010 Amendments to the International Mechanical Code.

The following amendments are hereby made to the 2009 International Mechanical Code:

(A) Chapter 1 is hereby deleted. Refer to BMC chapter 15-03 for administrative requirements.

(B) Subsection 306.5.1, Sloped roofs, is amended by adding the following exception:

EXCEPTION: This subsection shall not apply to Group R-3 occupancies.

(C) Subsection 603.11 is amended by the addition of the following sentence:

Appliances shall be connected to the duct system by means of an approved flexible connection, unless the building official waives such connection as unnecessary for protection against expansive soil movement.

(Ord. 1858 §1, 2008; Ord. 1926 §14, 2011)

Chapter 15-12

National Electrical Code

15-12-010 Amendments to the National Electrical Code.

The following amendments are hereby made to the National Electrical Code. The following amendment section numbers are based on the latest edition adopted by the State of Colorado; however, the section numbers of subsequent NEC editions may change. The intent is to apply the following amendments regardless of changes to section numbers of subsequent NEC editions.

(A) A new section 210.11(C)(4) is added to Article 210, Branch circuits, to read as follows:

(4) Two 20A branch circuits with breakers installed in the panel are required to be brought into any unfinished basement in a single-family dwelling to facilitate subsequent finish.

(B) The paragraph of section 334.10 is amended to read as follows:

334.10 Uses permitted. Type NM, Type NMS, and Type NMC cables shall only be permitted to be used in one- and two-family dwellings, and multi-family dwellings not exceeding five stories in height.

(C) A new sentence is added to the end of section 408.30 to read as follows:

The panelboard serving single-family dwellings shall contain, in addition to the required circuits, space for two future circuits.

(D) Part V Public Safety Radio Amplification System is hereby deleted in its entirety. Refer to the International Fire Code for requirements. (Ord. 1926 §15, 2011)

Chapter 15-14

Electrical Contractor's Registration

15-14-010 Registration certificate; required.

It shall be unlawful for any person to conduct, carry on, or engage in the business, trade, or calling of installing, replacing, or altering electrical wires, fixtures, fixed appliances, or apparatus within the city, unless employed and supervised by a duly registered electrical contractor, without first having obtained an electrical contractor's registration certificate from the building official or his or her designee. (Ord. 1858 §1, 2008)

15-14-020 Registration certificate; nontransferable.

No certificate issued under the provisions of this chapter shall be assigned or transferred to any person other than the person to whom it is issued. (Ord. 1858 §1, 2008)

15-14-030 Registration certificate; application.

Application for an electrical contractor's certificate of registration shall be made on such forms as the building official shall require. Such application must contain information sufficient to establish the applicant's qualifications for a certificate. The building official may require such other information of an applicant as he or she deems necessary to enforce the terms of this chapter. (Ord. 1858 §1, 2008)

15-14-040 Qualifications of applicant.

To be qualified to secure or retain an electrical registration certificate, an applicant must be a master electrician, currently licensed by the State of Colorado or must designate and have in charge of and responsible for all electrical work, an employee who is a master electrician, currently licensed by the State of Colorado. No such employee may be designated for more than one license. Such an employee shall be designated as such in the registration application. (Ord. 1858 §1, 2008)

15-14-050 Certificate term.

(A) All contractor's registration certificates issued after the effective date of this chapter will expire on February 28, 2009.

(B) All electrical contractor's registrations issued pursuant to any prior ordinances of the city will remain valid until February 28, 2009.

(C) After December 28, 2009, all electrical contractor's registrations shall run concurrently with the State of Colorado licenses and shall be renewed in the City and County of Broomfield when license renewals are required by the State of Colorado. (Ord. 1858 §1, 2008)

15-14-060 Duties of certificate holder.

It shall be the duty of any electrical contractor registrants to:

(A) Retain his or her master electrician's license from the State of Colorado, or the alternative, to retain in his or her employment a state-licensed master electrician as provided in section 15-14-040;

(B) Immediately notify the city's building official of any revocation, suspension, or other change in the status of his or her master electrician's license or that of his or her employee designated pursuant to section 15-14-040;

(C) Report in writing to the building official any accident occurring in the course of this trade within the city which results in injury or death to any person or damage to any building or structure;

(D) Provide safety measures and equipment to protect workers and the public, as necessary;

(E) Observe all provisions of the municipal code; and

(F) Present his or her registration card when so requested by the building official or his or her authorized representative. (Ord. 1858 §1, 2008)

15-14-070 Revocation, suspension, and denial of certificate; generally.

The building official may revoke, suspend, or deny a certificate of registration provided for in this chapter if he or she finds that the certificate holder is responsible for one or more of the following acts or omissions:

(A) Failure to comply with the terms of section 15-14-060.

(B) Violation of the terms of section 15-14-020.

(C) Intentional evasion of the requirements of this chapter, chapter 15-12, chapter 3-04, or chapter 3-08. (Ord. 1858 §1, 2008)

15-14-080 Revocation, suspension, and denial of certificate; procedure.

If the building official determines that a certificate of registration should be revoked, suspended, or denied under the terms of this chapter, the procedure therefor shall be as provided in sections 15-32-160 through 15-32-180 of this code. (Ord. 1858 §1, 2008)

Chapter 15-16

International Fire Code

15-16-010 Amendments to the International Fire Code.

The following amendments are hereby made to the 2009 International Fire Code which may also be referred to in this Title 15 as the IFC:

(A) Subsection 101.1, Title, of the IFC is amended to read as follows:

101.1 Title. These regulations shall be known as the Fire Code of the City and County of Broomfield, hereinafter referred to as "this code."

(B) Subsection 102.3, Change of use or occupancy, of the IFC is amended by the addition of an exception to read as follows:

EXCEPTION: The provisions of the ICC Performance Code for Buildings and Facilities shall apply to those portions of buildings, structures, facilities, and premises undergoing a change of occupancy where performance-based design was employed to provide an acceptable level of life safety and property protection from the hazards of fire, explosion, or dangerous conditions.

(C) Subsection 102.4, Application of Building Code, of the IFC is amended by the addition of an exception to read as follows:

EXCEPTION: The provisions of the ICC Performance Code for Buildings and Facilities shall apply to those portions of new and existing buildings, structures, facilities, and premises where performance-based design was employed to provide an acceptable level of life safety and property protection from the hazards of fire, explosion, or dangerous conditions.

(D) Subsection 102.6, Application of Residential Code, of the IFC is amended by the addition of an Exception, to Item 1 only, to read as follows:

EXCEPTION: Dwelling unit fire sprinkler systems, or portions thereof, installed in accordance with Section P2904 of the 2009 International Residential Code do not require a permit. Nevertheless, dwelling unit fire sprinkler systems, or portions thereof, installed in accordance with NFPA 13D require a permit pursuant to Section 105.7.1 of this code.

(E) Subsection 102.7, Referenced Codes and Standards, of the IFC is amended by adding the following sentence:

Where this code refers to the ICC Electrical Code, it means the latest edition of the National Electrical Code adopted by the State of Colorado.

(F) Subsection 105.4.1, Submittals, of the IFC is amended to read as follows:

105.4.1 Submittals. Construction documents shall be submitted in one or more sets and in such form and detail as required by the fire code official. The construction documents shall be prepared by a registered design professional when said documents are submitted in support of an application for a construction permit required by Section 105.7.1, 105.7.3, 105.7.5, 105.7.6, 105.7.8, 105.7.13, or 105.7.15. When requested, qualification statements shall be submitted to the fire code official for the registered design professional to demonstrate compliance with the professional qualifications defined in Section 202.

(G) A new Subsection 105.4.7 of the IFC is added to read as follows:

105.4.7 Fire protection and life safety analysis. The fire code official may require the owner or agent to provide, without charge to the jurisdiction, a Fire Protection and Life Safety Analysis prior to submitting construction drawings for high-rise buildings; covered mall buildings; buildings containing atriums connecting more than two stories; buildings containing high-piled combustible storage; Group A occupancies with an occupant load of 300 or more; Group H occupancies requiring a Hazardous Materials Management Plan and/or a Hazardous Materials Inventory Statement in accordance with Chapter 27; Groups I-2 and I-3 occupancies; any building, structure, or facility utilizing a performance-based approach to design in accordance with Section 104.8 or 104.9; and other structures or facilities as required by the fire code official. A Fire Protection and Life Safety Analysis shall provide a description of the fire protection and life safety systems design for the proposed building and/or facility. This description shall include the basic concepts used for suppression, alarm, notification, egress, fire-resistive assemblies, smoke control, stair pressurization, and other related systems; as well as the coordination of those systems. Upon completion of the project, a copy of the approved

documentation shall be maintained at the site and by the fire code official until demolition of the building and/or facility. The Fire Protection and Life Safety Analysis shall:

1. Be prepared by a qualified engineer, specialist, laboratory, or fire safety specialty organization acceptable to the fire code official;
2. Bear the seal of a registered design professional;
3. Include a preliminary plan of the building, facility, or structure, drawn to scale upon suitable material;
4. Provide an analysis of fire protection water supplies for the building, facility, or structure, in accordance with Section 507;
5. Explain the intended use of the building, facility, or structure, or the applicable portions thereof, including special processes, the materials within the building, and the maximum height of any storage;
6. Describe all active and passive fire protection features of a specific facility, including, but not limited to, the basic concepts used for fire suppression, alarm, notification, egress, fire-resistive assemblies, smoke control, stair pressurization, and other related systems, as well as the coordination and integration of those systems with one another; and
7. Analyze the design, operation, use, coordination, and interaction of the fire-protection and life-safety systems.

Prior to issuing operational or construction permits required by this code, the fire code official must determine, with reasonable certainty, that the fire protection and life safety features as documented in the Fire Protection and Life Safety Analysis achieve minimum code compliance and provide the level of protection intended by this code.

The fire code official shall specify the required organization, content categories, and format of the Fire Protection and Life Safety Analysis.

(H) Subsection 105.7.5, Fire alarm and detection systems and related equipment, of the IFC is amended to read as follows:

105.7.5 Fire alarm and detection systems and related equipment. A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment, including emergency alarm systems (Section 908) and smoke control systems (Section 909). Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

(I) A new Subsection 105.7.15, Explosion control, of the IFC is added to read as follows:

105.7.15 Explosion control. A construction permit is required to install or modify explosion control provided as required in Section 911.

(J) Subsection 106.2.1, Inspection requests, of the IFC is amended by adding the following sentence:

Whenever any installation subject to inspection prior to use is required, the fire code official is authorized to require that every such request for inspection be filed not less than two working days before such inspection is desired.

(K) Section 108, of the IFC, is repealed in its entirety and re-enacted to read as follows:

SECTION 108 APPEALS

108.1 Appeals procedure – general. Any person, firm, or corporation aggrieved by any application, interpretation, or order made by fire district personnel pursuant to any provision of this code or the standards adopted herein may appeal such decision, interpretation, or order to the fire chief. The fire chief shall establish reasonable rules for such appeal and shall make a record of all proceedings. The decision of the fire chief shall be considered a final administrative decision.

108.2 Appeals procedure – administrative decisions. The authority to determine the suitability of alternate materials and types of construction and to provide reasonable interpretations of the provisions of this code shall be vested in the planning and zoning commission. The planning and zoning commission shall adopt reasonable rules and regulations for conducting its investigation and shall render decisions and findings in writing to the fire chief, with a duplicate copy to the appellant.

(L) Subsection 109.3, Violation penalties, of the IFC is 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, of a permit or certificate used under provisions of this code, shall be punishable as prescribed in Chapter 1-12, Broomfield Municipal Code. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

(M) Subsection 111.4, Violation penalties, of the IFC is amended to read as follows:

111.4 Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable for such penalties as prescribed in Chapter 1-12, Broomfield Municipal Code.

(N) Section 113, Fees, of the IFC is repealed in its entirety and re-enacted to read as follows:

SECTION 113 FEES

113.1 Fees. The imposition of fees for inspection-related services pursuant to provisions of this code shall be in accordance with this Section 113. The fees set forth in this Section 113 shall be paid to the North Metro Fire Rescue District.

EXCEPTION: The government of the United States of America, the state and its political subdivisions, the city and county, and all agencies and departments thereof shall be exempt from the payment of fees for work performed on buildings or structures owned wholly by such agencies or departments and devoted to governmental use.

113.2 Payment of fees. A permit shall not be valid until the fees prescribed by law have been paid; nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

113.3 Operational permit fee. An inspection fee shall be charged for any operational permit required by Section 105.6. The inspection fee shall be based upon the time required to conduct inspections authorized by Section 105.2.2 and associated activities, to determine compliance with this code and other applicable laws and ordinances as required by Section 105.2.4, and to issue the permit as specified in Section 105.3.7.

The operational permit fee shall be calculated at the rate of \$50.00 per hour, with a minimum operational permit fee of \$25.00.

113.4 Construction permit fee. A fee shall be charged for any construction permit required by Section 105.7 of this code. The fee for a construction permit shall be established pursuant to Table 113.4. The construction permit fee is intended to cover the cost of inspections required or requested in connection with the work for which the permit is granted, and the associated costs of processing the application. An application for a permit shall include an estimate of the total value of the work, including materials and labor, for which the permit is being sought. If, in the opinion of the fire code official, the valuation is underestimated on the application, the permit shall be denied, unless written estimates are provided in a form acceptable to the fire code official, and that support the valuation set forth in the application. Final construction permit valuation shall be set by the fire code official.

**TABLE 113.4
Construction Permit Fee**

<i>Total Valuation</i>	<i>Fee</i>
\$1.00 to \$500.00	\$23.50
\$500.01 to \$2,000.00	\$23.50 for the first \$500.00, plus \$3.05 for each additional \$100.00 or fraction thereof, to and including \$2,000.00
\$2,000.01 to \$25,000.00	\$69.25 for the first \$2,000.00, plus \$14.00 for each additional \$1,000.00 or fraction thereof, to and including \$25,000.00
\$25,000.01 to \$50,000.00	\$391.75 for the first \$25,000.00, plus \$10.10 for each additional \$1,000.00 or fraction thereof, to and including \$50,000.00
\$50,000.01 to \$100,000.00	\$643.75 for the first \$50,000.00, plus \$7.00 for each additional \$1,000.00 or fraction thereof, to and including \$100,000.00
\$100,000.01 to \$500,000.00	\$993.75 for the first \$100,000.00, plus \$5.60 for each additional \$1,000.00 or fraction thereof, to and including \$500,000.00
\$500,000.01 and up	\$3,233.75 for the first \$500,000.00, plus \$4.75 for each additional \$1,000.00 or fraction thereof

Fees for re-inspections, for inspections outside normal business hours, or for inspections for which no fee is otherwise established shall be \$50.00 per hour for each inspector. The minimum fee for miscellaneous inspections and for re-inspections shall be \$50.00. The minimum fee for requested inspections outside normal business hours shall be \$100.00.

113.5 Plan review fee. The plan review fee is intended to cover the significant costs and expenses incurred by the Fire District in reviewing materials necessary to perform appropriate inspections of construction, uses, processes, and operations. The fee shall be assessed based on the reasonable, customary, and necessary time associated with reviewing or evaluating site plans; construction documents and calculations; changes, additions, or revisions to approved plans; construction documents resubmitted after the fire code official's issuing a written statement explaining the reasons that a previous submittal does not conform to the requirements of this code and the laws and ordinances applicable thereto; rational engineering analyses; requests to use alternate materials and methods; performance-based designs; technical opinions and reports; hazardous materials management plans and hazardous materials inventory statements required by the fire code official pursuant to Sections 407, 2701.5, or 3305.2.1; and all other types of plans necessary to implement, administer, and enforce the provisions of this code. When submittal documents are incomplete or changed so as to require additional plan review, an additional plan review fee shall be charged.

The plan review fee required by this Section 113.5 is separate from the construction permit fee required by Section 113.4.

113.5.1 Initial construction-document review. The plan review fee for the initial submittal of construction documents in support of an application for a construction permit shall be equal to 65 percent of the construction permit fee. The plan review fee shall be paid at the time of submitting construction documents for plan review.

113.5.2 Other plan reviews. Other than review of the initial submittal of construction documents pursuant to Section 113.5.1, all other plan review fees shall be calculated at the rate of \$50.00 an hour, with a minimum plan review fee of \$25.00.

113.6 Emergency alarm inspection fee. An emergency alarm inspection fee shall be charged for all Category II fire alarms, as defined in Section 113.6.1.

EXCEPTION: When waived, for cause, by the fire code official.

113.6.1 Definitions. For the purpose of this Section 113.6, the following terms shall have the following meanings:

CATEGORY I ALARMS. An alarm requiring a fire department response where the system operated properly and a fire department inspection reveals the alarm was caused by a malicious or mischievous action; a guest; circumstances beyond the control of the owner, occupant, or lessee; or by an actual smoke or fire condition.

CATEGORY II ALARMS. An alarm requiring a fire department response where a fire department inspection reveals the alarm was caused by a system malfunction, by a user error, or by an undetermined cause.

SYSTEM MALFUNCTION. An alarm which a fire department inspection reveals was caused by: (1) poor or improper maintenance; (2) improper installation of alarm equipment, hardware, or wiring; or, (3) improper action of the alarm monitoring center or fire alarm installation/testing company.

UNDETERMINED CAUSE. Any alarm for which a fire department inspection does not reveal the apparent cause.

USER ERROR. The intentional or negligent act or omission of an agent, employee, contractor, or representative of the owner, occupant, or lessee.

113.6.2 Emergency Alarm Inspection Fee Schedule.

113.6.2.1 Category I alarms. A fee shall not be assessed.

113.6.2.2 Category II alarms. The owner, or a representative of the owner, of a fire alarm system transmitting a Category II alarm shall be assessed a fee in accordance with Table 113.6.2.2. There is no limit on the amount of Category II alarm fees that may be assessed in a calendar year or calendar quarter.

Where multiple buildings are protected by a single system, the number of Category II alarms caused by system malfunction shall be counted separately for each building, if the location of the malfunction can be ascertained.

EXCEPTION: Category II alarms transmitted in the first 30 calendar days after the fire department accepts a new system for service shall not be included in the number of alarms.

**Table 113.6.2.2
Category II Emergency Alarm Inspection Fee**

The fees set forth in Table 113.6.2.2 shall progressively increase by an additional \$100.00 for each Category II alarm after the first chargeable alarm, with no fee limit in any one calendar year or calendar quarter.

<i>Number of Alarms</i>	<i>Fee for Each Alarm</i>	
	Alarms within a calendar year for a system serving: 1. Any apartment building; or 2. Commercial buildings ¹ : (a) less than 180,000 sq. ft.; and (b) with 5 or fewer tenants	Alarms within a calendar quarter for a system serving commercial buildings ¹ : 1. 180,000 sq. ft. or larger; or 2. With more than 5 tenants
1	\$0.00	\$0.00
2	\$0.00	\$0.00
3	\$0.00	\$200.00
4	\$200.00	\$300.00
5	\$300.00	\$400.00
6	\$400.00	\$500.00
7 or more	Progressively increasing at \$100 increments	Progressively increasing at \$100 increments
¹ For the purposes of this table, commercial buildings include all buildings other than apartment houses and one- or two-family dwellings.		

113.6.2.2.1 Rebate eligibility. The fire department may rebate one-half of an emergency alarm inspection fee if, within thirty calendar days of the alarm, the owner, occupant, or lessee submits to the fire department written documentation, acceptable to the fire department, establishing that necessary repairs or corrections have been made to the system by a qualified agent.

113.7 Unauthorized work inspection fee. Any person or entity who commences any work before obtaining a construction permit required by Section 105.7 shall be subject to an inspection fee in an amount equal to the amount of the construction permit fee or \$250.00, whichever is greater. The fee shall be separate from and in addition to a construction permit fee. Payment of the inspection fee shall not relieve any person from compliance with all other provisions of this code or from any penalty prescribed by law. The inspection fee shall be assessed regardless whether or not a construction permit is then or subsequently issued.

EXCEPTION: When approved in writing by the fire code official, work may commence prior to obtaining a construction permit.

113.8 Related fees. The payment of the fee for construction, uses, processes, or operations authorized by an operational permit or construction permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law or required by Section 113.

113.9 Fee refunds. The fire code official is authorized to establish a fee refund policy.

(O) Section 202, General Definitions, of the IFC is amended by defining "REGISTERED DESIGN PROFESSIONAL" to read as follows:

REGISTERED DESIGN PROFESSIONAL. An engineer, licensed to practice professional engineering, as defined by the statutory requirements of the professional licensure laws of the State of Colorado, who shall be responsible and accountable to possess the required knowledge and skills to perform design, analysis, and verification in accordance with the provisions of this code and applicable professional standards of practice.

(P) Subsection 311.5, Placards, of the IFC is deleted in its entirety.

(Q) Subsection 504.3, Stairway access to roof, of the IFC is amended to read as follows:

504.3 Stairway access to roof. New buildings four or more stories above grade plane, except those with a roof slope greater than four units vertical in 12 units horizontal (33.3-percent slope), shall be provided with a stairway to the roof. When an exit enclosure is required by Section 1022, the stairway to the roof shall be located within an exit enclosure. Stairway access to the roof shall be in accordance with Section 1009.13. Such stairway shall be marked at street and floor levels with a sign indicating that the stairway continues to the roof. Where roofs are used for roof gardens or for other purposes, stairways shall be provided as required for such occupancy classification.

(R) Section 510, Emergency Responder Radio Coverage, of the IFC is repealed in its entirety and re-enacted to read as follows:

510.1 Purpose. The purpose of Section 510 is to provide minimum standards to insure a reasonable degree of reliability for emergency services communication from within certain buildings and structures within the city to and from emergency communication centers. It is the responsibility of the emergency service provider to receive the signal to and from the building or structure.

510.2 Scope. The provisions of Section 510 shall apply to:

1. New buildings and structures greater than 50,000 square feet or additions or modifications that cause the buildings to be greater than 50,000 square feet.

2. All basements over 10,000 square feet where the design occupant load is greater than 50, regardless of the occupancy.

3. Existing buildings and structures of any size or construction type where the Police Chief or the Fire Chief determines that lack of adequate radio coverage for emergency services providers either constitutes a special hazard to occupants or emergency responders or would otherwise likely result in unduly difficult conduct of emergency operations.

4. For purposes of this section, neither horizontal building separations as prescribed in Section 509.2 of the 2009 International Building Code® nor fire walls can be used to define separate buildings.

510.3 Radio coverage. Except as otherwise provided in this article, no person shall erect, construct, or modify any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for emergency services providers.

1. After a building permit has been issued, upon request by the owner or the owner's agent, the police department will, within ten to fourteen days, identify the frequency range or ranges that must be supported.

2. In the event that an emergency service provider modifies its communications equipment in any way that impairs its ability to communicate with an existing system installed in accordance with this part, such agency shall be responsible for all costs associated with reestablishing communications within the affected building or structure.

3. Adequate radio coverage for emergency services providers requires:

(a) That on each floor, 85% of valid tests conducted in accordance with Section 510.5 result in intelligible two-way communications between the appropriate dispatch center and the tester in the building; and

(b) That 100% of valid tests conducted in accordance with Section 510.5 result in intelligible two-way communications between the appropriate dispatch center and the tester within the following building spaces:

- (1) Throughout vertical exit enclosures and horizontal exit passageways;
- (2) Fire command centers, if provided;
- (3) Police substation.

4. FCC Authorization: If amplification is used in the system, all FCC authorizations must be obtained prior to the use of the system. A copy of these authorizations shall be provided to the city.

510.4 Enhanced amplification systems.

510.4.1 Amplification systems allowed. Where buildings and structures are required to provide amenities to achieve adequate signal strength, such buildings and structures shall be equipped with any of the following to achieve the required adequate radio coverage: radiating cable systems, internal multiple antenna systems with a frequency range as established in Section 510.3, with amplification systems as needed, voting receiver system, or any other approved system.

510.4.2 Secondary power. If any part of the installed system or systems contains an electrically powered component, the system shall be capable of operation on an independent battery and/or generator system for a period of at least four hours without external power input or maintenance. The battery system shall automatically charge in the presence of external power input.

510.5 Method to conduct the tests. Measurements shall be made using the following guidelines:

1. Each measurement shall be made using a portable radio in general use by each emergency-service-provider agency, which agencies minimally include the police department and the fire department. Any digital, non-simplex channel programmed into such radio may be used during testing; the same channel need not be used for all tests.

2. Portable radios used in testing shall not be displaying "low battery" indications.

3. During test transmissions, the portable radio shall be held approximately two (2) inches from the mouth of the tester, at approximately a 45-degree angle with the tester's face, with the built-in microphone and speaker directed towards the tester's mouth, and with the antenna in a vertical orientation above the radio. The antenna of each radio shall be mounted directly on the top of the radio body/case. The built-in microphone shall be used for all testing; shoulder or other attached microphones/headsets shall not be used for testing.

4. The tester shall orient himself or herself so as to be facing towards the exterior wall of the building nearest the point of the test.

5. Both initial and annual tests shall be conducted by persons employed by the emergency-service-provider agency. At least one tester from the police department and one tester from the fire department shall conduct initial and annual tests, unless alternate arrangements are approved by both agencies.

6. Each tester shall be solely responsible for determining whether or not radio messages received in the building are intelligible; the dispatcher at the emergency-agency dispatch center shall be solely responsible for determining whether or not radio messages received in the dispatch center are intelligible. An unintelligible message constitutes a failure of the test at the specific location being tested (see below).

7. The tester in the building shall initiate each test by attempting to transmit a message to the dispatch center. Failure to receive a reply from the dispatch center constitutes a failure of the test at the specific location being tested.

8. The tester in the building shall exercise reasonableness and discretion in the conduct of all tests. If the tester believes a particular test is not valid (e.g., is flawed by human error), then the results of that test may be discarded and the test shall be repeated.

510.6 Initial tests.

1. Each floor of the structure shall be divided into 100-foot grids, and testing shall be performed at the center of each grid. In critical areas, including (but not limited to) those areas enumerated in Section 810-82(c)(2), the grids shall be reduced to 25 feet. At least one test shall be conducted at the center of every room having a use identified in Section 810-82(c)(2)b or 810-82(c)(2)c. The size of the grids may also be further reduced upon recommendation of any tester in areas where displays, equipment, stock, or any other obstruction may significantly affect communications or attenuate radio signals.
2. A test shall be performed on every landing within vertical exit enclosures.

510.7 Annual tests.

1. Annual tests will be conducted jointly by the fire department and the police department. If the communications appear to have degraded or if the testing fails to demonstrate adequate system performance, the owner of the building or structure shall remedy the problem and restore the system in a manner consistent with the original approval criteria.
2. If the degradation to the system is due to building additions or remodeling, the owner of the building or structure is required to remedy the problem and restore the system in a manner consistent with the original approval criteria in order to obtain a final inspection for occupancy.
3. Any system degradation or failure not related to the performance of the owner's on-site system will be the responsibility of the appropriate emergency service agency.

(S) A new Section 511, Fire Protection in Recreational Vehicle, Mobile Home, and Manufactured Housing Parks, Sales Lots, and Storage Lots, of the IFC is added to read as follows:

511 Recreational Vehicle, Mobile Home, and Manufactured Housing Parks, Sales Lots, and Storage Lots. Recreational vehicle, mobile home, and manufactured housing parks, sales lots, and storage lots shall provide and maintain fire hydrants and access roads in accordance with Sections 503 and 507.

EXCEPTION: Recreational vehicle parks located in remote areas shall be provided with protection and access roadways as required by the fire code official.

(T) A new Section 603.10, Carbon monoxide alarm and detector maintenance, inspection, and testing, of the IFC is added to read as follows:

603.10 Carbon monoxide alarm and detector maintenance, inspection, and testing. The building owner shall be responsible to maintain all carbon monoxide alarms and detectors in an operable condition at all times. Maintenance, inspection, and testing shall be performed in accordance with the manufacturer's instructions or nationally recognized standards. A written record shall be maintained and shall be made available to the fire code official.

(U) Subsection 903.2.6, Group I, of the IFC is amended to read as follows:

903.2.6 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.2.6.1 Group I-1. An automatic sprinkler system installed in accordance with Section 903.3.1.2 or 903.3.1.3 shall be allowed in Group I-1 facilities.

EXCEPTION: An automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be provided throughout Group I-1 facilities that meet the federal Fair Housing Act definition of senior housing or housing for older persons.

(V) Subsection 903.2.7, Group M, of the IFC is amended by replacing Condition 4 in its entirety with:

4. A Group M Occupancy that is used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 m²).

(W) Subsection 903.2.8, Group R, of the IFC is amended 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.

EXCEPTION: An automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be provided throughout all Group R-2 occupancies that meet the federal Fair Housing Act definition of senior housing or housing for older persons.

(X) Subsection 905.2, Installation standard, of the IFC is amended to read as follows:

905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14. Fire hose is not required for any class of standpipe system.

(Y) Subsection 912.1, Installation, of the IFC is amended to read as follows:

912.1 Installation. Fire department connections shall be installed in accordance with this section and the NFPA standard applicable to the system design and shall comply with Sections 912.2 through 912.6. Where fire department connections are required, the number of 2.5-inch inlets provided shall not be less than one for each 250 gallons per minute of system demand or major fraction thereof, to a maximum of six 2.5-inch inlets. Each 2.5-inch inlet shall be equipped with a clapper valve to allow each hose to be connected and charged before the addition of more hoses.

(Z) Section 3301.1.3, Fireworks, of the IFC is amended by deleting Exception 4.

(AA) Subsection 3404.2.9.6.1, Locations where above-ground tanks are prohibited, of the IFC is amended to read as follows:

3404.2.9.6.1 Locations where above-ground tanks are prohibited. The storage of Class I and II liquids in above-ground tanks outside of buildings is prohibited within the city and county of Broomfield.

EXCEPTIONS:

1. When approved by the fire code official. Notwithstanding other provisions of this chapter for above-ground tanks, Sections 3404.2.9.6.1.1 and 3404.2.9.6.1.2 shall not apply to Class I and II liquids unless the storage of such liquids is approved by the fire code official.

2. Protected above-ground tanks in accordance with Section 3404.2.9.7 and tanks in at-grade or above-grade vaults in accordance with Section 3404.2.8. For such tanks provided with intrinsic secondary containment, the distances in Table 22.4.1.1(b) of NFPA 30 shall apply and shall be reduced by one-half, but not to less than 5 feet (1524 mm).

(BB) Subsection 3406.2.4.4, Locations where above-ground tanks are prohibited, of the IFC is amended to read as follows:

3406.2.4.4 Locations where above-ground tanks are prohibited. The storage of Class I and II liquids in above-ground tanks is prohibited within the city and county of Broomfield.

EXCEPTION: When approved by the fire code official.

(CC) Subsection 3804.2, Maximum capacity within established limits, of the IFC, retaining the Exception as printed, is amended to read as follows:

3804.2 Maximum capacity within established limits. Within the city and county of Broomfield, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L).

(DD) Subsection 4601.1, Scope, of the IFC is amended to read as follows:

4601.1 Scope. The provisions of this chapter shall apply to existing buildings constructed prior to the adoption of this code.

EXCEPTION: Buildings, portions of buildings, and life safety components therein, including the means of egress, that currently comply with the code under which constructed.

(EE) The NFPA standards in Chapter 47, Referenced Standards, of the IFC are retained except as modified in the following table:

NFPA Standards

<i>Standard reference number:</i>	<i>Change to:</i>
12-05	12-08
12A-04	12A-09
13-07	13-10
13D-07	13D-10
13R-07	13R-10

17-02	17-09
17A-02	17A-09
20-07	20-10
22-03	22-08
24-07	24-10
59A-06	59A-09
72-07	72-10
80-07	80-10
101-06	101-09
105-07	105-10
170-06	170-09
241-04	241-09
260-03	260-09
261-03	261-09
484-06	484-09
703-06	703-09
1123-06	1123-10
484-02	484-06
495-01	495-06
498-01	498-06
505-02	505-06
654-00	654-06
655-01	655-07
664-02	664-07
701-99	701-04
703-00	703-06
704-01	704-07
750-03	750-06
1123-00	1123-06
1124-03	1124-06
1125-01	1125-07
1126-01	1126-06

(Ord. 1926 §16, 2011; Ord. 1935 §13, 2011)

Chapter 15-18

Elevator and Escalator Codes

15-18-010 Amendments to the Elevator and Escalator Codes.

The following amendments are hereby made to the Elevator and Escalator Codes:

(A) A new section 8.12 of Part VIII of the most current edition of the ASME A17.1 Safety Code for Elevators and Escalators is added to read as follows:

SECTION 8.12
PERMITS AND CERTIFICATES OF INSPECTION

8.12.1 Permits. It shall be unlawful to hereafter install any new elevator, moving walk, escalator, or dumbwaiter, or to make major alterations to any existing elevator, dumbwaiter, escalator, or moving walk without having first obtained a permit for such installation from the building official. Permits shall not be required for maintenance or minor alterations.

8.12.2 Certificates of inspection.

8.12.2a General. It shall be unlawful to operate any elevator, dumbwaiter, escalator, or moving walk without a current certificate of inspection issued by the building official. Such certificate shall be issued annually upon payment of prescribed fees and the presentation of a valid inspection report indicating that the conveyance is safe and that the inspection was made within the previous six months. Certificates shall not be issued when the correspondence is posted as unsafe pursuant to 8.11.3.

EXCEPTION: Only the initial certificate of inspection shall be required for elevator, dumbwaiter, escalator, or moving walk conveyances within a dwelling unit.

8.12.2b Fees. The fee for the annual certificate of inspection for existing installation shall be \$215.00. This fee shall not apply to new installation for which a separate building permit fee is paid at the time a building permit is issued.

8.12.2c Application for permits. Application for a permit to install shall be made on forms provided by the building official, and the permit shall be issued to an owner upon payment of the permit fees specified in section 15-03-100, as amended.

8.12.2d Application for certificates of inspection. Application for a certificate of inspection shall be made by the owner of an elevator, dumbwaiter, escalator, or moving walk. Applications shall be accompanied by an inspection report approved by the building official. Fees as specified in this section shall be paid at the time of application.

(B) A new section 8.13 of Part X of the most current edition of the ASME A17.1 Safety Code for Elevators and Escalators is added to read as follows:

SECTION 8.13
OWNER RESPONSIBILITY AND UNSAFE CONDITIONS

8.13.1 General. The owner shall be responsible for the safe operation and maintenance of each elevator, dumbwaiter, escalator, or moving walk installation and shall cause periodic inspection, tests, and maintenance to be made on such conveyances as required in the most current edition of the ASME A17.1, Safety Code for Elevators and Escalators.

8.13.2 Unsafe conditions. When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner and the building official a full and true report of such inspection and such unsafe condition. If the building official finds that the unsafe condition endangers human life, he shall cause to be placed on such elevator, escalator, or moving walk in a conspicuous place, a notice stating that such conveyance is unsafe. The owner shall see to it that such notice of unsafe condition is legibly maintained where placed by the building official. The building official shall also issue an order in writing to the owner requiring the repairs or alterations to be made to such conveyance which are necessary to render it safe and may order the operation thereof discontinued until the repairs or alterations are made or the unsafe conditions are removed. A posted notice of unsafe conditions shall be removed only by the building official when he is satisfied that the unsafe conditions have been corrected.

(Ord. 1858 §1, 2008; Ord. 1912 §2, 2009; Ord. 1926 §17, 2011)

Chapter 15-20

Fire Lanes

15-20-010 Title.

This chapter is known and may be cited as the "Broomfield Fire Lanes Ordinance." (Ord. 1858 §1, 2008)

15-20-020 Definitions.

As used in this chapter, the following words shall have the meanings respectively ascribed to them:

(A) *Fire department* means the North Metro Fire Rescue District. The city is located entirely within said district.

(B) *Fire lane* means that portion of any public or private property designated pursuant to the provisions of this chapter for the safe and unobstructed passage of firefighting vehicles, equipment, and personnel.

(C) *Fire safety area* means that portion of any public or private property designated pursuant to the provisions of this chapter to be kept clear of obstruction for purposes of access to water taps, fire hydrants, electrical or other utility outlets, or for purposes of access to or utilization of fire-prevention facilities or equipment.

(D) *Traffic engineer* means the city engineer of the city. (Ord. 1858 §1, 2008)

15-20-030 Designation; property owner notice; request for modification.

(A) Every fire lane or fire safety area shall be designated in writing, including a drawing, diagram, plat, or map with sufficient detail to establish with reasonable certainty the location and dimensions of such fire lane or fire safety area. Such designation shall be approved by the fire department and by the city's traffic engineer, and shall be filed in the office of the traffic engineer. Any designation which includes a portion of a state highway shall also be approved by the division of highways of the Colorado highway department.

(B) Upon the filing of the designation of a fire lane or fire safety area located on public property, or located on private property and so designated with the consent of the owner of such property, the traffic engineer may cause such fire lane or fire safety area to be scheduled and signposted as provided by this chapter.

(C) Upon the filing of the designation of a fire lane or fire safety area located on private property and so designated without the consent of the owner of such property, the city traffic engineer shall issue and serve upon such owner, by certified mail, a notice describing the fire lane or fire safety area so designated, and notifying such owner that the designation of the fire lane or fire safety area shall take effect on a date certain, not less than fifteen days thereafter, unless request for modification or relief therefrom is received by the traffic engineer within such time. If no request for modification or relief therefrom is received by the traffic engineer within the time provided by the notice and this section, the traffic engineer may cause the fire lane or fire safety area to be scheduled and signposted as provided by this chapter.

(D) Upon receipt of a request for modification of or for relief from a designation of a fire lane or fire safety area pursuant to this chapter, the traffic engineer may conduct or cause to be conducted such further investigation as may be required, and thereafter affirm, revoke, or modify the designation. If the owner consents to the decision of the traffic engineer, the traffic engineer may cause such fire lane or fire safety area to be scheduled and signposted as provided by this chapter.

(E) If the owner does not agree with the decision of the traffic engineer on such request for modification or relief, the owner may appeal such decision to the city council. Upon the final designation of such fire lane or fire safety area, the traffic engineer may cause the same to be scheduled and signposted as provided by this chapter. (Ord. 1858 §1, 2008)

15-20-040 Signposting.

Every fire lane or fire safety zone designated and scheduled pursuant to the provisions of this chapter shall be posted by the traffic engineer with one or more official signs giving notice of restrictions or prohibitions authorized by this chapter. (Ord. 1858 §1, 2008)

15-20-050 Recordkeeping.

The traffic engineer shall cause records to be kept of all fire lanes and fire safety zones designated pursuant to this chapter. Such records shall be open to public inspection during business hours, and copies thereof shall be made available to courts and other concerned agencies, officials, and persons requesting the same.

15-20-060 Fire lane requirements.

When official signs are posted giving notice of a fire lane:

(A) No person shall stop, stand, or park a vehicle in a fire lane, or portion thereof, posted to prohibit stopping, standing, or parking;

(B) No person shall stop or park a vehicle in a fire lane, or portion thereof, posted to prohibit standing or parking;

(C) No person shall park a vehicle in a fire lane or any portion thereof; and

(D) No person shall obstruct a fire lane by means of any structure or object other than a vehicle. (Ord. 1858 §1, 2008)

15-20-070 Fire safety area requirements.

When official signs are posted giving notice of a fire safety area:

(A) No person shall stop, stand, or park a vehicle in a fire safety area; and

(B) No person shall obstruct a fire safety area by storing, placing, or leaving therein any object, property, or thing. (Ord. 1858 §1, 2008)

15-20-080 Applicability of provisions to pedestrians.

Nothing in sections 15-20-060 and 15-20-070 shall be construed to prohibit persons from walking or standing on or crossing a fire lane or fire safety area. (Ord. 1858 §1, 2008)

Chapter 15-22

International Fuel Gas Code

15-22-010 Amendments to the International Fuel Gas Code.

The following amendments are hereby made to the 2009 International Fuel Gas Code:

(A) Chapter 1 is hereby deleted. Refer to BMC chapter 15-03 for administrative requirements.

(B) Section 202 - GENERAL DEFINITIONS, of the 2009 International Fuel Gas Code is amended by defining "CERTIFIED PIPE WELDER" to read as follows:

CERTIFIED PIPE WELDER. A person who specializes in the welding of pipes and holds a valid certificate of competency from a recognized testing laboratory based on the requirements of the ASME Boiler and Pressure Vessels Code, section IX.

(C) Section 404 - PIPING SYSTEM INSTALLATION, is amended by adding a new subsection 404.17, Certified pipe welder, to read as follows:

404.17 Certified pipe welder. All welded joints in the piping system shall be welded by a certified pipe welder as defined in section 202.

(D) Subsection 406.4.1 is amended to read as follows:

406.4.1 Test pressure. The test pressure to be used shall be no less than 10 psi (68.9 KPA) gauge pressure. For welding pipe and piping carrying gas at pressures in excess of 14 inches, the test pressure shall not be less than 60 psi (413.4 KPA) gauge pressure.

(Ord. 1858 §1, 2008; Ord. 1926 §18, 2011)

Chapter 15-24

International Plumbing Code

15-24-010 Amendments to the International Plumbing Code.

The following amendments are hereby made to the 2009 International Plumbing Code:

(A) Chapter 1 is hereby deleted. Refer to BMC chapter 15-03 for administrative requirements.

(B) Subsection 305.6.1, Sewer depth, is amended by inserting "36 inches" for the [NUMBER].

(C) A new section is added – Section 315 Irrigation Rain Sensors and will read as follows:

Section 315 Irrigation Rain Sensors. An approved rain sensor device in an approved location will be required on all new irrigation permits.

(D) Subsection 605.3, Water service pipe, is hereby amended by adding the following sentence.

There shall be a minimum of 20 feet of copper water service pipe extending from the building for the water pipe ground electrode.

(E) Subsection 904.1, Roof extension, is amended by inserting "12 inches" for the [NUMBER] and "(254 mm)" immediately thereafter.

(F) Subsection 905.4, Vertical rise of vent, is amended to read as follows:

905.4 Vertical rise of vent. Unless prohibited by structural conditions, every dry vent shall rise vertically to a minimum of 6 inches (152 mm) above the flood level rim of the highest trap or trapped fixture being vented. Vents that are less than 6 inches (152 mm) above the flood level rim of the fixture require approved drainage-type fittings with slope back to the drain.

EXCEPTION: Vents for interceptors located outdoors.

(G) Section 715 is deleted in its entirety. (Ord. 1858 §1, 2008; Ord. 1926 §19, 2011)

Chapter 15-26

Plumbing Contractor's Licenses

15-26-010 Required.

It shall be unlawful for any person to conduct, carry on, or engage in the business, trade, or calling of plumbing, or to install plumbing, in or on any building, structure, or land in the city, for any compensation whatsoever, without first having obtained a plumbing contractor's license from the building official or his or her designee. (Ord. 1858 §1, 2008)

15-26-020 Nontransferable.

No license issued under the provisions of this chapter shall be assigned or transferred to any person other than the person to whom it is issued. (Ord. 1858 §1, 2008)

15-26-030 Application.

Application for a plumbing contractor's license shall be made on such forms as the building official shall require. Such application must contain information sufficient to establish the applicant's qualifications for a license. The building official may require such other information of an applicant as he or she deems necessary to enforce the terms of this chapter. (Ord. 1858 §1, 2008)

15-26-040 Qualifications of applicant.

To be qualified to secure or retain a plumbing contractor's license, an applicant must be a master plumber, currently licensed by the State of Colorado or must designate and have in charge of, and responsible for all plumbing work, an employee who is a master plumber, currently licensed by the State of Colorado. No such employee may be designated for more than one license. Such an employee shall be designated as such in the license application. (Ord. 1858 §1, 2008)

15-26-050 Term.

(A) All plumbing contractor's licenses issued after the effective date of the ordinance codified herein will expire one year from the date of issuance.

(B) All plumbing contractor's licenses issued pursuant to any prior ordinances of the city will remain valid until one year from the date of issuance. (Ord. 1858 §1, 2008)

15-26-060 Duties of licensee.

It shall be the duty of all plumbing contractor licensees to:

(A) Retain his or her master plumber's license from the State of Colorado, or in the alternative to retain in his or her employment a state-licensed master plumber as provided in section 15-26-040;

(B) Immediately notify the building official of any revocation, suspension, or other change in the status of his or her master plumber's license or that of his or her employee designated pursuant to section 15-26-040;

(C) Report in writing to the building official any accident occurring in the course of his or her trade within the city which results in injury or death to any person, or damage to any building or structure;

(D) Provide safety measures and equipment to protect workers and the public, as necessary;

(E) Observe all provisions of the municipal code; and

(F) Present his or her license card when so requested by the building official or his or her authorized representative. (Ord. 1858 §1, 2008)

15-26-070 Revocation, suspension, denial; grounds for.

The building official may revoke, suspend, or deny a license provided for in this chapter if he or she finds that the licensee is responsible for one or more of the following acts or omissions:

(A) Failure to comply with the terms of section 15-26-060.

(B) Violation of the terms of section 15-26-020.

(C) Intentional evasion of the requirements of this chapter, chapter 15-24, chapter 3-04, or chapter 3-08. (Ord. 1858 §1, 2008)

15-26-080 Revocation, suspension, denial; procedure.

If the building official determines that a license should be revoked, suspended, or denied under the terms of this chapter, the procedure therefor shall be as provided in sections 15-32-160 through 15-32-180. (Ord. 1858 §1, 2008)

15-26-090 License fees.

An annual fee of \$100.00 shall be paid by each applicant or licensee prior to the issuance or renewal of any license provided for in this chapter. (Ord. 1858 §1, 2008)

Chapter 15-32

Contractor's Licenses

15-32-010 Required.

Any contractor performing in a business involving the building, construction, alteration, remodeling, repairing, equipping, moving, or wrecking of buildings and other structures shall be licensed as a contractor, as required in this chapter. (Ord. 1858 §1, 2008)

15-32-020 Contractor defined.

(A) *Contractor*, within the meaning of this chapter is any person, which also means and includes a firm, co-partnership, corporation, association, or other organization, or any combination thereof, who:

(1) Undertakes, with or for another within the city, to build, construct, alter, remodel, repair, move, or wreck any building or structure, or any portion thereof, for which a permit from the city is required, and which work is to be done for a fixed sum price, fee percentage, or other compensation.

(2) Builds, constructs, alters, or adds to another building or structure either upon his or her own or another's property.

(3) Holds himself or herself out to perform house-moving or the moving of buildings or structures from one location to another.

(4) Holds himself or herself out to perform the service of wrecking a building or other structure.

(B) The following persons shall not fall within the definition of contractor:

- (1) Employees working for and under the supervision of a contractor.
- (2) Plumbers, electricians, or other specialized trades for which another license or registration certificate is required by the city.
- (3) An owner or occupant making alterations or repairs totaling less than \$1,000.00 in any one calendar year to the building he or she owns or occupies, which repairs do not involve the structure of the building, if the owner or occupant furnishes all the materials.
- (4) A homeowner who constructs his or her own residence, or a building or structure accessory thereto, which is intended for his or her own personal use; however, this will be permitted at only one residence within a period of a year, or such homeowner will be deemed a contractor. (Ord. 1858 §1, 2008)

15-32-030 Classification; fees.

(A) No person shall perform any work as a contractor within the city without having first obtained a license as provided in this chapter. No permits shall be issued for work to be done by a contractor who does not have a valid license as required in this chapter. No work shall be done during the period a permittee's license is suspended or revoked.

(B) The following classes of contractors' licenses are established, and the indicated fees shall be required of contractors within the city:

(1) Class A. This class license shall entitle the holder to contract for the construction, alteration, or repair of any type of structure permitted by this chapter. The annual fee shall be \$150.00. A Class A license is required for all work requiring the supervision of an architect or structural engineer. Possession of an A license permits the activities authorized by Class B or C licenses.

(2) Class B. This license shall entitle the holder to contract for the construction, alteration, or repair of one-family and two-family residences of two stories or less. This contractor may not contract for public buildings or places of public assembly. The aforementioned limitations shall not apply to repairs on buildings not involving structural members. The annual fee shall be \$100.00. Possession of a B license permits the activities authorized by a Class C license.

(3) Class C. This license shall be issued to those engaged in contracting for labor or for labor and material involving specialized trades, such as brick contractors, plastering contractors, and framing contractors. Such licenses may include more than one such trade carried on by the licensee. The annual fee shall be \$50.00. This license shall be issued to wrecking contractors, moving contractors, and mobile home set-up contractors. No wrecking shall be done except by a licensed wrecking contractor, except that a licensed general contractor of the A or B category may wreck minor buildings or remove portions of a building where such wrecking is a portion of a program of alteration or remodeling. (Ord. 1858 §1, 2008)

15-32-040 License; term.

(A) All contractors' licenses issued after the effective date of the ordinance codified herein will expire one year from the date of issuance.

(B) All contractors' licenses issued pursuant to any prior ordinances of the city will remain valid until one year from the date of issuance. (Ord. 1858 §1, 2008)

15-32-050 Building official; authority generally.

The building official shall have the authority in accordance with the terms of this chapter, to approve, deny, suspend, or revoke any license provided for in this chapter. (Ord. 1858 §1, 2008)

15-32-060 Contractor licensing board.

The planning and zoning commission shall be assigned the duties and role of a contractor licensing board. The contractor licensing board shall have the following authority:

- (A) To develop rules, regulations, and procedures relating to contractor license applications;
- (B) To advise the building official on all matters pertaining to licensing;
- (C) To conduct appellate hearings in the event the building official exercises his or her authority to suspend, revoke, or decline to issue a license;

(D) To elect a chairman and vice chairman from among its members; and

(E) To adopt reasonable procedural rules and regulations to carry out its responsibilities, as set forth in this chapter. (Ord. 1858 §1, 2008; Ord. 1942 §1, 2011)

15-32-070 Application; contents.

Applications for contractor's licenses shall be on such forms and shall contain such information as may be required by the building official. Applicants may at any time, or from time to time, be required to furnish additional information with respect to their qualifications and financial status, or other matters relating to or affecting their licenses, as may be deemed necessary or desirable by the building official or the contractor licensing board. Failure to furnish such information within a reasonable time, or to furnish supplemental information as may be required by the building official or the planning and zoning commission, shall be grounds for denial or revocation of license. (Ord. 1858 §1, 2008; Ord. 1942 §2, 2011)

15-32-080 License; fees; renewals.

Persons required to be licensed under the terms of this chapter shall pay the license fees specified in section 15-32-030 to the city clerk. Renewals may be obtained by submitting an application for renewal, on a form prescribed by the building official, together with the license fee and certificate of insurance to the city clerk within thirty days before or after the expiration date of the previous license. Renewal licenses shall be valid for the term indicated in section 15-32-040. If a license is not renewed as provided in this section, a new application will be required. (Ord. 1858 §1, 2008)

15-32-090 Insurance requirements.

At the time application is made for a license, the contractor shall file with the building official a certificate of insurance evidencing that a policy of insurance in at least the minimum amount required by this section has been issued to the applicant; the limits of the insurance; the policy number; the name of the insurance company; the effective date of the policy; and an endorsement requiring a minimum of ten days' advance written notice to the building official in the event of cancellation. Such certificate shall be signed by an authorized agent of the issuing company. At the time the licensee seeks renewal of the license, he or she must submit a new certificate of insurance. A licensee must at all times maintain insurance up to at least the following limits:

(A) A Class A or B licensee must have liability limits of at least \$300,000.00 per individual, \$300,000.00 per occurrence, and \$50,000.00 for property damage.

(B) A Class C licensee must have liability limits of at least \$50,000.00 per individual, \$100,000.00 per occurrence, and \$25,000.00 per property damage. (Ord. 1858 §1, 2008)

15-32-100 Fees; no refund.

License fees shall not be refunded. However, any fee paid by an applicant who is denied a license shall be refunded. (Ord. 1858 §1, 2008)

15-32-110 Classification; upgrading.

Licensees wishing to upgrade their license to a higher classification must submit a new application and pay the difference between the two fees. (Ord. 1858 §1, 2008)

15-32-120 Validity.

(A) A change of name, business designation, or address must be reported to the building inspection office within thirty days after making such a change. Failure of the licensee to report such change within the time limit shall cause the license to expire by force of law and become invalid at the expiration of the thirty-day period.

(B) Incorporation or change in incorporation creating a new legal entity shall require a new license for such entity, even though one or more stockholders or directors have a license.

(C) The organization of a partnership or the change in a partnership creating a new legal entity shall require a new license, even though one or more of the partners are licensed.

(D) The dissolution of a corporation or partnership which has been licensed terminates the license, and no individual or firm may operate under such license.

(E) Licenses are not transferable. (Ord. 1858 §1, 2008)

15-32-130 Denial or revocation; reapplication.

If a license is denied or revoked by the building official, and in case of an appeal, if the denial or revocation has been affirmed by the contractor licensing board, the applicant may reapply, but not sooner than ninety days after the denial or revocation, or in the case of an appeal, ninety days after the order of the board affirming the denial or revocation. (Ord. 1858 §1, 2008)

15-32-140 Licensee responsibility.

All licensees shall be responsible for work requiring a permit under the provisions of this chapter, without limitation, and for the items listed in this section:

(A) To report in writing to the building official any accident occurring in any construction or undertaking which has resulted in lost time, injury, or death to any person, or damage to any building or structure, within seventy-two hours after such accident;

(B) To provide minimum safety measures and equipment to protect workers and the public, as prescribed by this chapter;

(C) To observe any other city ordinances prescribing measures for the safety of workers and of the public;

(D) To present his or her license card when requested by the building official or his or her authorized representative;

(E) To employ a qualified supervisor and to provide the name of such supervisor on the permit inspection card;

(F) To obtain a permit when the same is required;

(G) To faithfully construct, without substantial departure from or disregard of drawings and specifications, when such drawings and specifications have been filed and approved by the building official and a permit issued for same, unless such changes are approved by the building official;

(H) To complete all work authorized on the permit issued under the authority of this chapter, unless good cause is shown;

(I) To obtain inspection services when the same are required by this chapter;

(J) To pay any fee assessed under authority of this chapter; and

(K) To obey any order issued under authority of this chapter. (Ord. 1858 §1, 2008)

15-32-150 Suspension, revocation, or denial; when.

The building official may suspend, revoke, or deny a license when the licensee or applicant, including partners of a partnership, members of a joint venture, or officers, directors, or holders of ten percent or more of the stock of a corporate licensee or applicant, is responsible for one or more of the following acts or omissions:

(A) Failure to comply with any of the licensee responsibilities, as outlined in section 15-32-140, if such failure is not corrected within ten days of written notification of such failure by the building official.

(B) Knowingly combining or conspiring with any other person to permit or allow the licensee's license to be used by such other person.

(C) By acting as principal agent, partner, associate, or in any other capacity with persons, to evade any provisions of this chapter.

(D) Violation of any provision of this title, chapter 3-04, chapter 3-08, or any violation of the laws of the United States, the State of Colorado, or the ordinances of the city having any bearing upon or relation to the work or services performed under the license, or ability to perform the work or services under the license, if such violation is not corrected within ten days of being notified of such failure by the building official.

(E) Any conduct constituting fraud or misrepresentation in or connected with any activity or activities relating to building, or which are licensed or governed by this chapter.

(F) Failure to keep and maintain necessary insurance or necessary state licenses. (Ord. 1858 §1, 2008)

15-32-155 Suspension, revocation, or denial; which.

With regard to the acts or omissions listed in section 15-32-150:

(A) The first act or omission during a term of a license issued under this chapter shall cause the license to be suspended for a period of twenty days.

(B) The second act or omission during a term of a license issued under this chapter shall cause the license to be suspended for a period of forty days.

(C) The third act or omission during the term of a license issued under this chapter shall cause the license to be revoked.

(D) Three or more acts or omissions during the preceding year shall be cause for the denial of a license. (Ord. 1858 §1, 2008)

15-32-160 Suspension, revocation, or denial; procedures.

When any of the acts or omissions as enumerated in section 15-32-150 are committed by a licensee and the building official deems that such license would be suspended, revoked, or denied, the procedure shall be as follows:

(A) The licensee shall be notified, in writing, by certified mail, mailed to the licensee's address of record with the building official, at least ten days prior to suspension, revocation, or denial.

(B) Upon receipt of the notice, the licensee may request a hearing. Such request shall be in writing to the building official within ten days of mailing of the notice.

(C) If a hearing is requested by the licensee, in writing, within the time limit designated above, the building official shall set a time, date, and place for the hearing within five days of receipt of the request for a hearing, and so notify the licensee.

(D) When a hearing is conducted, the licensee and other interested parties may be in attendance. Upon completion of the hearing, the building official may take all the evidence admitted under advisement, and shall within ten days, notify the licensee of his or her findings and ruling, in writing, by certified mail. No suspension or revocation shall be effective while the matter is under advisement, except for emergency suspensions under section 15-32-180.

(E) If the decision rendered by the building official is adverse to the licensee, the licensee may appeal to the contractor licensing board as an "aggrieved" person, and shall file an application for review by the contractor licensing board within thirty days after mailing of notice of the ruling of the building official. (Ord. 1858 §1, 2008)

15-32-170 Contractor licensing board; hearing and review duties.

Should the contractor licensing board be called upon to review an initial decision of the building official, it shall conduct a hearing and set forth its findings and decision in writing. The decision of the contractor licensing board shall be made after notice and a hearing at which any party or applicant shall be entitled to appear and present evidence and be represented by counsel. A record of the hearings before the contractor licensing board shall be kept, whether by electronic transcription, secretarial minutes, or otherwise, and such records shall be kept in the custody of the building official and shall be made available for transcription as may be required. Both the party affected by the board's decision and the city shall be considered parties to every proceeding of this type before the contractor licensing board. (Ord. 1858 §1, 2008)

15-32-180 Emergency suspension.

If the building official finds that emergency cause exists for suspension or revocation of a license, he or she may enter an order for immediate suspension of such license, pending further investigation and proceedings for suspension or revocation, as provided in this chapter. The licensee may, upon notice of such suspension, request an immediate hearing before the building official. The procedure shall thereafter be as provided in this chapter. (Ord. 1858 §1, 2008)