

CITY OF WHEAT RIDGE, COLORADO
INTRODUCED BY COUNCIL MEMBER STITES
Council Bill No. 04
Ordinance No. 1460
Series 2010

TITLE: AN ORDINANCE REPEALING AND REENACTING CERTAIN SECTIONS OF CHAPTER 5 OF THE CODE OF LAWS OF THE CITY OF WHEAT RIDGE CONCERNING THE BUILDING CODE, THE MECHANICAL CODE, THE PLUMBING CODE, THE PROPERTY MAINTENANCE CODE, THE ENERGY CONSERVATION CODE, THE RESIDENTIAL CODE, THE FIRE CODE, THE FUEL GAS CODE AND PENALTIES FOR VIOLATION OF THE SAME

WHEREAS, the City Council ("Council") of the City of Wheat Ridge, Colorado ("City") has authority to enact ordinances for the protection of public health, safety and welfare; and

WHEREAS, the City of Wheat Ridge Home Rule Charter ("Charter") Section 5.16 provides that standard codes promulgated by any recognized trade or professional organization may be adopted by reference; and

WHEREAS, exercising this authority, the Council has determined that it is in the best interest of the City to adopt the 2006 promulgated versions of the International Building Code, the International Mechanical Code, the International Plumbing Code, the International Property Maintenance Code, the International Energy Conservation Code, the International Residential Code, the International Fire Code and the International Fuel Gas Code; and

WHEREAS, the Council wishes to amend certain sections of Chapter 5 of the Code of Laws of the City of Wheat Ridge ("Code") to incorporate the 2006 versions of the above-referenced codes. .

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF WHEAT RIDGE, COLORADO:

Section 1. Section 5-76 of the Code is repealed in its entirety and reenacted to read as follows:

- (a) *Adoption.* The International Building Code, 2006 Edition, is hereby adopted by reference and incorporated into this article as though fully set forth herein as the building construction code of the City of Wheat Ridge. One copy of said International Building Code shall be filed in the office of the city clerk and may be inspected during regular business hours. Except as otherwise provided hereafter, such Code is adopted in full, including the outline of contents, index and appendices contained herein.

- (b) *Amendments.* The International Building Code adopted by this section is amended as follows. Section numbers referred to herein refer to and correspond with the section numbers of the 2006 International Building Code.

101.1 Title. Amend to read in its entirety:

101.1 Title. These regulations shall be known as the *Building Code* of the City of Wheat Ridge, hereinafter referred to as "this code."

105.1.1 Annual permit. Delete entire section.

105.1.2 Annual permit records. Delete entire section.

105.5 Expiration. Amend to read in its entirety:

105.5 Expiration. Every permit issued by the code official under the provisions of this code shall expire one year (365 days) after the date of issuance. The building official is authorized to grant, in writing, one or more extensions of time, for periods of not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

106.1 Submittal documents. Amend to read in its entirety:

106.1 Submittal documents. Construction documents, statement of special inspections and other data shall be submitted in three (3) or more sets with each application for permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. 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 reviewing of construction documents is not necessary to obtain compliance with this code.

106.3.1 Approval of construction documents. Amend to read in its entirety:

106.3.1 Approval of construction documents. When the building official issues a permit, the construction documents shall be approved, in writing or by stamp, as "Approved Subject to Field Inspections – Wheat Ridge Building Dept.". One set of construction documents so reviewed shall be retained by the building official. One 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.

108.2 Schedule of permit fees. Amend to read in its entirety:

108.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority. The permit fee shall be established as set forth in Table 1-A.

108.3 Building permit valuations. Amend to read in its entirety:

108.3 Building permit valuations. The applicant for a permit shall provide an estimated project valuation at the time of application. Permit valuations shall include the value of all work, including foundation work, structural and non-structural building components, electrical, plumbing, mechanical and interior finish materials. Project valuation shall be calculated by the Building Division based on data published on the City website, and the higher of the applicant stated valuation and the division calculated valuation shall be used to determine building permit fees. Final building permit valuation shall be set by the building official.

108.6 Refunds. Amend to read in its entirety:

108.6 Refunds. The code official shall authorize the refunding of fees as follows:

1. The full amount of any fee paid hereunder that was erroneously paid or collected.
2. Not more than 100 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 80 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.
4. Not more than 50 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 after initiation of any plan review effort.

Note: 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.

112 Board of Appeals. Amend to read in its entirety:

112 Board of Appeals. Appeals of decisions and determinations made by the Building Official shall comply with the process and procedures set forth in City of

Wheat Ridge Municipal Code Sections 2-59 and 5-25. 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 the code do not fully apply, or an equally good or better form of construction is proposed.

113.4 Violation penalties. Amend to read in its entirety:

113.4 Violation penalties. Any person or entity 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 or repair work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

114.2 Issuance. Delete entire section.

114.3 Unlawful continuance. Rename and amend in its entirety:

114.3 Issuance and unlawful continuance. Upon notice from the code official that work is being done contrary to the provisions of this code or in a dangerous or unsafe manner such work shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or visibly posted at the work site. The notice shall state the conditions under which the work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than 60 dollars or not more than 1000 dollars.

1101.2 Design. Amend to read in its entirety:

1101.2 Design. Buildings and facilities shall be designed and constructed to be accessible in accordance with this code and ICC A117.1-2003 Edition

1209.2 Attic spaces. Amend to read in its entirety:

1209.2 Attic spaces. An opening not less than 20 inches by 30 inches shall be provided to any attic area having a clear height of over 30 inches. A 30-inch minimum clear headroom in the attic space shall be provided at all points directly above the access opening. The finish opening dimensions of attic accesses shall be a minimum of 20 inches by 30 inches.

1502 Definitions. Add the following text under the definition of "ROOF DECK":

Solidly sheathed deck shall be defined as decking consisting of APA approved wood structural panel sheathing.

Closely fitted deck shall be defined as decking consisted of APA approved wood structural panel sheathing or lumber sheathing conforming to the requirements of Tables 2304.7(1) through 2304.7(5) in which no gap between members exceeds one-half of one inch.

Spaced decking shall be defined as lumber sheathing conforming to the requirements of Tables 2304.7(1) through 2304.7(5) in which any gap between members exceeds one-half of one inch.

1507.2.7 Attachment. Amend to read in its entirety:

1507.2.7 Attachment. Asphalt shingles shall be attached with a minimum of 6 nails per shingle or as specified by the manufacturer, whichever is more restrictive. Where the roof slope exceeds 20 units vertical in 12 units horizontal (167 percent slope) special methods of fastening are required. Special fastening methods shall be tested in accordance with ASTM D 3161, Class F. Asphalt shingle wrappers shall bear a label indicating compliance with ASTM D 3161, Class F.

1507.2.8.2 Ice dam membrane. Amend to read in its entirety:

1507.2.8.2 Ice dam membrane. Ice dam membrane complying with ASTM D1970 shall be required in lieu of normal underlayment at roof eaves and shall extend from the eave edge to a point at least 24 inches inside the exterior wall line of the building.

Exception: Detached structures and attached garages that contain no conditioned floor area.

1805.1 General. Amend to read in its entirety:

1805.1 General. Footings shall be designed and constructed in accordance with Sections 1805.1 through 1805.9. Footings and foundations shall be built on undisturbed soil, compacted fill material or CLSM. Compacted fill material shall be placed in accordance with Section 1803.5. CLSM shall be placed in accordance with 1803.6. All footing and foundation systems for additions and new structures shall be designed by a State of Colorado structural engineer and submitted plans for these systems shall be wet-stamped by the engineer of record at the time of permit application submission.

The top surface of footings shall be level. The bottom surface of footings is permitted to have a slope not exceeding one unit vertical in 10 units horizontal

(10 percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground slopes more than the one unit vertical in 10 units horizontal (10 percent slope).

3109.3 Public swimming pools. Amend to read in its entirety:

3109.3 Public swimming pools. Public swimming pools shall be completely enclosed by a fence at least 60 inches in height or a screen enclosure. Openings in the fence shall not permit the passage of a 4-inch-diameter sphere. The fence or screen enclosure shall be equipped with self-closing and self-latching gates complying with section 3109.4.1.7 Gates.

3109.4.1 Barrier height and clearances. Amend to read in its entirety:

3109.4.1 Barrier height and clearances. The top of the barrier shall be at least 60 inches above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be at ground level or mounted on top of the pool structure, and the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches.

Appendix I: Patio Covers. **Appendix I** is adopted in its entirety to set forth requirements not otherwise covered in other areas of the code for Patio Covers.

Section 2. Section 5-78 of the Code is repealed in its entirety and reenacted to read as follows:

- (a) *Adoption.* The International Mechanical Code, 2006 Edition, is hereby adopted by reference and incorporated into this article as though fully set forth herein as the mechanical code of the City of Wheat Ridge. One copy of said International Mechanical Code shall be filed in the office of the city clerk and may be inspected during regular business hours. Except as otherwise provided hereafter, such code is adopted in full, including the outline of contents and index contained herein.
- (b) *Amendments.* The International Mechanical Code adopted by this section is amended as follows. Section numbers referred to herein refer to and correspond with the section numbers of the 2006 International Mechanical Code.

101.1 Title. Amend to read in its entirety:

101.1 Title. These regulations shall be known as the *Mechanical Code* of the City of Wheat Ridge hereinafter referred to as "this code."

106.3.1 Construction documents. Amend to read in its entirety:

106.3.1 Construction documents. Construction documents, engineering calculations, diagrams and other data shall be submitted in three or more sets with each application for permit. The code official shall require construction documents, computations and specifications to be prepared and designed by a registered design professional when required by state law. Where special conditions exist, the code official is authorized to require additional construction documents to be prepared by a registered design professional. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. Construction documents for buildings more than two stories in height shall indicate where penetrations will be made for mechanical systems, and the materials and methods for maintaining required structural safety, fire-resistance rating and fireblocking.

106.4.3 Expiration. Amend to read in its entirety:

106.4.3 Expiration. Every permit issued by the code official under the provisions of this code shall expire one year (365 days) after the date of issuance. The building official is authorized to grant, in writing, one or more extensions of time, for periods of not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

106.5.2 Fee Schedule. Amend to read in its entirety:

106.5.2 Fee Schedule. The fees for all mechanical work shall be established as set forth in Table 1-A.

106.6.3 Fee refunds. Amend to read in its entirety:

106.6.3 Fee refunds. The code official shall authorize the refunding of fees as follows:

1. The full amount any fee paid hereunder that was erroneously paid or collected.
2. Not more than 100 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 80 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.
4. Not more than 50 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 after initiation of any plan review effort.

Note: 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.

108.4 Violation penalties. Amend to read in its entirety:

108.4 Violation penalties. Any person or entity 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 or repair mechanical work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

108.5 Stop work orders. Amend to read in its entirety:

108.5 Stop work orders. Upon notice from the code official, work on any plumbing system that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or visibly posted at the work site. The notice shall state the conditions under which the work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than 60 dollars or not more than 1000 dollars.

109 Means of Appeal. Amend to read in its entirety:

109 Means of Appeal. Appeals of decisions and determinations made by the Building Official shall comply with the process and procedures set forth in City of Wheat Ridge Municipal Code Sections 2-59 and 5-25. An application for appeal shall be based on claim the true intent of this code or the rules legally adopted there under have been incorrectly interpreted, the provisions of the code do not fully apply, or an equally good or better form of construction is proposed.

Chapter 4 – Ventilation. Delete this chapter and insert:

CHAPTER 4

VENTILATION

SECTION 401 GENERAL

401.1 Scope. This chapter shall govern the ventilation of spaces within a building intended to be occupied. Mechanical exhaust systems, including exhaust systems serving clothes dryers and cooking appliances; hazardous exhaust systems; dust, stock and refuse conveyor systems; subslab soil exhaust

systems; smoke control systems; energy recovery ventilation systems and other systems specified in Section 502 shall comply with Chapter 5.

401.2 Ventilation required. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403.

401.3 When required. Ventilation shall be provided during the periods that the room or space is occupied.

401.4 Intake opening location. Air intake openings shall comply with all of the following:

1. Intake openings shall be located a minimum of 10 feet from lot lines or buildings on the same lot. Where openings front on a street or public way, the distance shall be measured to the centerline of the street or public way.
2. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet horizontally from any hazardous or noxious contaminant source, such as vents, streets, alleys, parking lots and loading docks, except as specified in Item 3 or Section 501.2.1.
3. Intake openings shall be located not less than 3 feet below contaminant sources where such sources are located within 10 feet of the opening.
4. Intake openings on structures in flood hazard areas shall be at or above the design flood level.

401.5 Intake opening protection. Air intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles. Openings in screens, louvers and grilles shall be sized in accordance with Table 401.5, and shall be protected against local weather conditions. Outdoor air intake openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with the *International Building Code*.

Table 401.5
Opening sizes in screens, louvers and grilles protecting air intake openings

Outdoor Opening Type	Minimum and maximum opening sizes in screens, louvers and grilles measured in any direction
Intake openings in residential occupancies	Not < ¼ inch and not > ½ inch
Intake openings in other than residential occupancies	> ¼ inch and not > 1 inch

401.6 Contamination sources. Stationary local sources producing airborne particulates, heat, odors, fumes, spray, vapors, smoke or gases in such quantities as to be irritating or injurious to health shall be provided with an exhaust system in accordance with Chapter 5 or a means of collection and removal of the contaminants. Such exhaust shall discharge directly to an *approved* location at the exterior of the building.

SECTION 402 NATURAL VENTILATION

402.1 Natural ventilation. *Natural ventilation* of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants.

402.2 Ventilation area required. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated.

402.3 Adjoining spaces. Where rooms and spaces without openings to the outdoors are ventilated through an adjoining room, the opening to the adjoining rooms shall be unobstructed and shall have an area not less than 8 percent of the floor area of the interior room space, but not less than 25 square feet. The minimum openable area to the outdoors shall be based on the total floor area being ventilated.

Exception: Exterior openings required for ventilation shall be permitted to open into a thermally isolated sunroom addition or patio cover, provided that the openable area between the sunroom addition or patio cover and the interior room has an area of not less than 8 percent of the floor area of the interior room or space, but not less than 20 square feet. The minimum openable area to the outdoors shall be based on the total floor area being ventilated.

402.4 Openings below grade. Where openings below grade provide required *natural ventilation*, the outside horizontal clear space measured perpendicular to the opening shall be one and one-half times the depth of the opening. The depth of the opening shall be measured from the average adjoining ground level to the bottom of the opening.

SECTION 403 MECHANICAL VENTILATION

403.1 Ventilation system. Mechanical ventilation shall be provided by a method of supply air and return or *exhaust air*. The amount of supply air shall be approximately equal to the amount of return and *exhaust air*. The system shall not be prohibited from producing negative or positive pressure. The system to convey *ventilation air* shall be designed and installed in accordance with Chapter 6.

403.2 Outdoor air required. The minimum outdoor airflow rate shall be determined in accordance with Section 403.3. Ventilation supply systems shall be designed to deliver the required rate of outdoor airflow to the *breathing zone* within each *occupied space*.

Exception: Where the *registered design professional* demonstrates that an engineered ventilation system design will prevent the maximum concentration of contaminants from exceeding that obtainable by the rate of outdoor air ventilation determined in accordance with Section 403.3, the minimum required rate of outdoor air shall be reduced in accordance with such engineered system design.

403.2.1 Recirculation of air. The outdoor air required by Section 403.3 shall not be recirculated. Air in excess of that required by Section 403.3 shall not be prohibited from being recirculated as a component of supply air to building spaces, except that:

1. Ventilation air shall not be recirculated from one *dwelling* to another or to dissimilar occupancies.
2. Supply air to a swimming pool and associated deck areas shall not be recirculated unless such air is dehumidified to maintain the relative humidity of the area at 60 percent or less. Air from this area shall not be recirculated to other spaces where more than 10 percent of the resulting supply airstream consists of air recirculated from these spaces.
3. Where mechanical exhaust is required by Note b in Table 403.3, recirculation of air from such spaces shall be prohibited. All air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3.
4. Where mechanical exhaust is required by Note g in Table 403.3, mechanical exhaust is required and recirculation is prohibited where more than 10 percent of the resulting supply airstream consists of air recirculated from these spaces.

403.2.2 Transfer air. Except where recirculation from such spaces is prohibited by Table 403.3, air transferred from occupiable spaces is not prohibited from serving as *makeup air* for required exhaust systems in such spaces as kitchens, baths, toilet rooms, elevators and smoking lounges. The amount of transfer air and *exhaust air* shall be sufficient to provide the flow rates as specified in Section 403.3. The required outdoor airflow rates specified in Table 403.3 shall be introduced directly into such space or into the occupied spaces from which air is transferred or a combination of both.

403.3 Outdoor airflow rate. Ventilation systems shall be designed to have the capacity to supply the minimum outdoor airflow rate determined in accordance with this section. The occupant load utilized for design of the ventilation system shall not be less than the number determined from the estimated maximum occupant load rate indicated in Table 403.3. Ventilation rates for occupancies not represented in Table 403.3 shall be

those for a listed *occupancy* classification that is most similar in terms of occupant density, activities and building construction; or shall be determined by an *approved* engineering analysis. The ventilation system shall be designed to supply the required rate of *ventilation air* continuously during the period the building is occupied, except as otherwise stated in other provisions of the code.

With the exception of smoking lounges, the ventilation rates in Table 403.3 are based on the absence of smoking in occupiable spaces. Where smoking is anticipated in a space other than a smoking lounge, the ventilation system serving the space shall be designed to provide ventilation over and above that required by Table 403.3 in accordance with accepted engineering practice.

Exception: The occupant load is not required to be determined based on the estimated maximum occupant load rate indicated in Table 403.3 where *approved* statistical data document the accuracy of an alternate anticipated occupant density.

403.3.1 Zone outdoor airflow. The minimum outdoor airflow required to be supplied to each zone shall be determined as a function of *occupancy* classification and space air distribution effectiveness in accordance with Sections 403.3.1.1 through 403.3.1.3.

403.3.1.1 Breathing zone outdoor airflow. The outdoor airflow rate required in the *breathing zone* (V_{bz}) of the *occupiable space* or spaces in a zone shall be determined in accordance with Equation 4-1.

$$V_{bz} = R_p P_z + R_a A_z \quad \text{(Equation 4-1)}$$

A_z = Zone floor area: the *net occupiable floor area* of the space or spaces in the zone.

P_z = Zone population: the number of people in the space or spaces in the zone.

R_p = People outdoor air rate: the outdoor airflow rate required per person from Table 403.3

R_a = Area outdoor air rate: the outdoor airflow rate required per unit area from Table 403.3

**TABLE 403.3
MINIMUM VENTILATION RATES**

OCCUPANCY CLASSIFICATION	PEOPLE OUTDOOR AIRFLOW RATE IN SHEATHING ZONE, R_p	AREA OUTDOOR AIRFLOW RATE IN SHEATHING ZONE, R_a	DEFAULT OCCUPANCY DENSITY #/1000 FT ^{2a}	EXHAUST AIRFLOW RATE CFM/FT ^{2a}
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	CFM/PERSON	CFM/FT ^{2a}		
Correctional facilities				
Cells				
without plumbing fixtures	5	0.12	25	---
with plumbing fixtures	5	0.12	25	1.0
Dining Halls				
(see food and beverage service)	---	---	---	---
Guard Stations	5	0.06	15	---
Day rooms	5	0.06	30	---
Booking/waiting	7.5	0.06	30	---
Dry cleaners, laundries				
Coin-operated dry cleaner	15	---	20	---
Coin-operated laundries	7.5	0.06	20	---
Commercial dry cleaner	30	---	30	---
Commercial laundry	25	---	10	---
Storage, pick up	7.5	0.12	30	---
Education				
Auditoriums	5	0.06	150	---
Corridors (see public spaces)	---	---	---	---
Media center	10	0.12	25	---
Sports locker rooms ^g	---	---	---	0.5
Music/theater/dance	10	0.06	35	---
Smoking lounges ^b	60	---	70	---
Day care (through age 4)	10	0.18	25	--
Classrooms (ages 5-8)	10	0.12	25	---
Classrooms (age 9 plus)	10	0.12	35	---
Lecture classroom	7.5	0.06	65	---
Lecture hall (fixed seats)	7.5	0.06	150	---
Art classroom ^g	10	0.18	20	0.7
Science laboratories ^g	10	0.18	25	1.0
Wood/metal shops ^g	10	0.18	20	0.5
Computer lab	10	0.12	25	---
Multiuse assembly	7.5	0.06	100	---
Locker/dressing rooms ^g	---	---	---	0.25
Food and beverage service				
Bars, cocktail lounges	7.5	0.18	100	---
Cafeteria, fast food	7.5	0.18	100	---
Dining rooms	7.5	0.18	70	---
Kitchens (cooking) ^b	---	---	---	0.7
OCCUPANCY CLASSIFICATION	PEOPLE OUTDOOR AIRFLOW RATE IN SHEATHING ZONE, R _p CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN SHEATHING ZONE, R _a CFM/FT ^{2a}	DEFAULT OCCUPANCY DENSITY #/1000 FT ^{2a}	EXHAUST AIRFLOW RATE CFM/FT ^{2a}
Hospitals, nursing and convalescent homes				
Autopsy rooms ^b	---	---	---	0.5

Medical procedure rooms	15	---	20	---
Operating rooms	30	---	20	---
Patient rooms	25	---	10	---
Physical therapy	15	---	20	---
Recovery and ICU	15	---	20	---
Hotels, motels, resorts and dormitories				
Multipurpose assembly	5	0.06	120	---
Bathroom/toilet - private ^g	---	---	---	25/50 ^f
Bedroom/living room	5	0.06	10	---
Conference/meeting	5	0.06	50	---
Dormitory sleeping areas	5	0.06	20	---
Gambling casinos	7.5	0.18	120	---
Lobbies/prefunction	7.5	0.06	30	---
Offices				
Conference rooms	5	0.06	50	---
Office spaces	5	0.06	5	---
Reception areas	5	0.06	30	---
Telephone/data entry	5	0.06	60	---
Main entry lobbies	5	0.06	10	---
Private dwellings, single and multiple				
Garages, common for multiple units ^b	---	---	---	0.75 100 cfm per car
Garages, separate for each dwelling ^b	---	---	---	25/100 ^f
Kitchens ^b				---
Living areas ^c	0.35 ACH but not less than 15 cfm/person	---	Based upon number of bedrooms. First bedroom, 2; each additional bedroom, 1	---
Toilet rooms and bathrooms ^g	---	---	---	20/50 ^f
OCCUPANCY CLASSIFICATION	PEOPLE OUTDOOR AIRFLOW RATE IN SHEATHING ZONE, R_p CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN SHEATHING ZONE, R_a CFM/FT^{2 a}	DEFAULT OCCUPANCY DENSITY #/1000 FT^{2 a}	EXHAUST AIRFLOW RATE CFM/FT^{2 a}
Public spaces				
Corridors	---	0.06	---	---
Elevator car	---	---	---	1.0
Shower room (per shower head) ^g	---	---	---	50/20 ^f
Smoking lounges ^b	60	---	70	---
Toilet rooms – public ^g	---	---	---	50/70 ^e
Places of religious worship	5	0.06	120	---
Courtrooms	5	0.06	70	---
Legislative chambers	5	0.06	50	---
Libraries	5	0.12	10	---

Museums (children's)	7.5	0.12	40	---
Museums/galleries	7.5	0.06	40	---
Retail stores, sales floors and showroom floors				
Sales (except as below)	7.5	0.12	15	---
Dressing rooms	---	---	---	0.25
Mall common areas	7.5	0.06	40	---
Shipping and receiving	---	0.12	---	---
Smoking lounges ^b	60	---	70	---
Storage rooms	---	0.12	---	---
Warehouses (see storage)	---	---	---	---
Specialty shops				
Automotive motor-fuel dispensing stations ^b	---	---	---	1.5
Barber	7.5	0.06	25	0.5
Beauty and nail salons ^{b, h}	20	0.12	25	0.6
Embalming room ^b	---	---	---	2.0
Pet shops (animal areas) ^b	7.5	0.18	10	0.9
Supermarkets	7.5	0.06	8	---
Sports and amusement				
Disco/dance floors	20	0.06	100	---
Bowling alleys (seating areas)	10	0.12	40	---
Game arcades	7.5	0.18	200	---
Ice arenas without combustion engines	---	0.30	---	0.5
Gym, stadium, arena (play area)	---	0.30	---	---
Spectator areas	7.5	0.06	150	---
Swimming pools (pool and deck area)	---	0.48	---	---
Health club/aerobics room	20	0.06	40	---
Health club/weight room	20	0.06	10	---
OCCUPANCY CLASSIFICATION	PEOPLE OUTDOOR AIRFLOW RATE IN SHEATHING ZONE, R_p CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN SHEATHING ZONE, R_a CFM/FT^{2a}	DEFAULT OCCUPANCY DENSITY #/1000 FT^{2a}	EXHAUST AIRFLOW RATE CFM/FT^{2a}
Storage				
Repair garages, enclosed parking garages ^{b, d}	---	---	---	0.75
Warehouses	---	0.06	---	---
Theaters				
Auditoriums (see education)	---	---	---	---
Lobbies	5	0.06	150	---
Stages, studios	10	0.06	70	---

Ticket booths	5	0.06	60	---
Transportation				
Platforms	7.5	0.06	100	---
Transportation waiting	7.5	0.06	100	---
Workrooms				
Bank vaults/safe deposit	5	0.06	5	---
Darkrooms	---	---	---	1.0
Copy, printing rooms	5	0.06	4	0.5
Meat processing ^c	15	---	10	---
Pharmacy (prep. Area)	5	0.18	10	---
Photo studios	5	0.12	10	---
Computer (without printing)	5	0.06	4	---

- Based upon net occupiable floor area.
- Mechanical exhaust required and the recirculation of air from such spaces is prohibited (see Section 403.2.1, Item 3)
- Spaces unheated or maintained below 50°F are not covered by these requirements unless the occupancy is continuous.
- Ventilation systems in enclosed parking garages shall comply with Section 404.
- Rates are per water closet or urinal. The higher rate shall be provided where periods of heavy use are expected to occur, such as toilets in theaters, schools and sports facilities. The lower rate shall be permitted where periods of heavy use are not expected.
- Rates are per room unless otherwise indicated. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted where the exhaust system is designed to operate continuously during normal hours of use.
- Mechanical exhaust is required and recirculation is prohibited except that recirculation shall be permitted where the result supply airstream consists of not more than 10 percent air recirculated from these spaces (see Section 403.2.1, Items 2 and 4).
- For nail salons, the required exhaust shall include ventilation tables or other systems that capture the contaminants and odors at their source and are capable of exhausting a minimum of 50cfm per station.

403.3.1.2 Zone air distribution effectiveness. The zone air distribution effectiveness (E_z) shall be determined using Table 403.3.1.2.

Table 403.3.1.2
ZONE AIR DISTRIBUTION EFFECTIVENESS^{a,b,c,d,e}

Air Distribution Effectiveness	E_z
Ceiling or floor supply of cool air	1.0 ^f
Ceiling or floor supply of warm air and floor return	1.0
Ceiling supply of warm air and ceiling return	0.8 ^g
Floor supply of warm air and ceiling return	0.7
Makeup air drawn in on the opposite side of the room	0.8

from the exhaust and/or return	
Makeup air drawn in near to the exhaust and/or return location	0.5

- "Cool air" is air cooler than space temperature.
- "Warm air" is air warmer than space temperature.
- "Ceiling" includes any point above the breathing zone.
- "Floor" includes any point below the breathing zone.
- "Makeup air" is air supplied or transferred to a zone to replace air removed from the zone by exhaust or return systems.
- Zone air distribution effectiveness of 1.2 shall be permitted for systems with a floor supply of cool air and ceiling return, provided that low-velocity displacement ventilation achieves unidirectional flow and thermal stratification.
- Zone air distribution effectiveness of 1.0 shall be permitted for systems with a ceiling supply of warm air, provided that supply air temperature is less than 15°F above space temperature and provided that the 150 foot-per-minute supply air jet reaches to within 4-1/2 feet of floor level.

403.3.1.3 Zone outdoor airflow. The zone outdoor airflow rate (V_{oz}), shall be determined in accordance with Equation 4-2.

$$V_{oz} = \frac{V_{bz}}{E_z} \quad (\text{Equation 4-2})$$

403.3.2 System outdoor airflow. The outdoor air required to be supplied by each ventilation system shall be determined in accordance with Sections 403.3.2.1 through 403.3.2.3 as a function of system type and zone outdoor airflow rates.

403.3.2.1 Single zone systems. Where an air handler supplies a mixture of outdoor air and recirculated return air to only one zone, the system outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Equation 4-3.

$$V_{ot} = V_{oz} \quad (\text{Equation 4-3})$$

403.3.2.2 100-percent outdoor air systems. Where one air handler supplies only outdoor air to one or more zones, the system outdoor air intake flow rate (V_{ot}) shall be determined using Equation 4-4.

$$V_{ot} = \sum_{\text{all zones}} V_{oz} \quad (\text{Equation 4-4})$$

403.3.2.3 Multiple zone recirculating systems. When one air handler supplies a mixture of outdoor air and recirculated return air to more than one zone, the system outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Sections 403.3.2.3.1 through 403.3.2.3.4.

403.3.2.3.1 Primary outdoor air fraction. The primary outdoor air fraction (Z_p) shall be determined for each zone in accordance with Equation 4-5.

$$Z_p = \frac{V_{oz}}{V_{pz}} \quad (\text{Equation 4-5})$$

where:

V_{pz} = Primary airflow: The airflow rate supplied to the zone from the air handling unit at which the outdoor air intake is located. It includes outdoor intake air and recirculated air from that air handling unit but does not include air transferred or air recirculated to the zone by other means. For design purposes, V_{pz} shall be the zone design primary airflow rate, except for zones with variable air volume supply and V_{pz} shall be the lowest expected primary airflow rate to the zone when it is fully occupied.

403.3.2.3.2 System ventilation efficiency. The system ventilation efficiency (E_v) shall be determined using Table 403.3.2.3.2 or Appendix A of ASHRAE 62.1.

Table 403.3.2.3.2
SYSTEM VENTILATION EFFICIENCY^{a,b}

Max (Z_p)	E_v
≤ 0.15	1
≤ 0.25	0.9
≤ 0.35	0.8
≤ 0.45	0.7
≤ 0.55	0.6
≤ 0.65	0.5
≤ 0.75	0.4
> 0.75	0.3

a. Max (Z_p) is the largest value of Z_p calculated using Equation 4-5 among all the zones served by the system.

b. Interpolating between values shall be permitted.

403.3.2.3.3 Uncorrected outdoor air intake. The uncorrected outdoor air intake flow rate (V_{ou}) shall be determined in accordance with Equation 4-6.

$$V_{ou} = D \sum_{\text{all zones}} R_p P_z + \sum_{\text{all zones}} R_a A_z \quad (\text{Equation 4-6})$$

where:

D = Occupant diversity: the ratio of the system population to the sum of the zone populations, determined in accordance with Equation 4-7.

$$D = \frac{P_s}{\sum \text{all zones } P_z} \quad (\text{Equation 4-7})$$

where:

P_s = System population: The total number of occupants in the area served by the system. For design purposes, P_s shall be the maximum number of occupants expected to be concurrently in all zones served by the system.

403.3.2.3.4 Outdoor air intake flow rate. The outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Equation 4-8.

$$(V_{ot}) = \frac{V_{ou}}{E_v} \quad (\text{Equation 4-8})$$

403.4 Exhaust ventilation. Exhaust airflow rate shall be provided in accordance with the requirements in Table 403.3. Exhaust *makeup air* shall be permitted to be any combination of outdoor air, recirculated air and transfer air, except as limited in accordance with Section 403.2.

403.5 System operation. The minimum flow rate of outdoor air that the ventilation system must be capable of supplying during its operation shall be permitted to be based on the rate per person indicated in Table 403.3 and the actual number of occupants present.

403.6 Variable air volume system control. Variable air volume air distribution systems, other than those designed to supply only 100-percent outdoor air, shall be provided with the controls to regulate the flow of outdoor air. Such control system shall be designed to maintain the flow rate of outdoor air at a rate of not less than that required by Section 403.3 over the entire range of supply air operating rates.

403.7 Balancing. The *ventilation air* distribution system shall be provided with means to adjust the system to achieve at least the minimum ventilation airflow rate as required by Sections 403.3 and 403.4. Ventilation systems shall be balanced by an *approved* method. Such balancing shall verify that the ventilation system is capable of supplying and exhausting the airflow rates required by Sections 403.3 and 403.4.

SECTION 404 ENCLOSED PARKING GARAGES

404.1 Enclosed parking garages. Mechanical ventilation systems for enclosed parking garages shall be permitted to operate intermittently where the system is arranged to operate automatically upon detection of vehicle operation or the presence of occupants by *approved* automatic detection devices.

404.2 Minimum ventilation. Automatic operation of the system shall not reduce the ventilation airflow rate below 0.05 cfm per square foot of the floor area and the system shall be capable of producing a ventilation airflow rate of 0.75 cfm per square foot of floor area.

404.3 Occupied spaces accessory to public garages. Connecting offices, waiting rooms, ticket booths and similar uses that are accessory to a public garage shall be maintained at a positive pressure and shall be provided with ventilation in accordance with Section 403.3.

SECTION 405 SYSTEMS CONTROL

405.1 General. Mechanical ventilation systems shall be provided with manual or automatic controls that will operate such systems whenever the spaces are occupied. Air-conditioning systems that supply required *ventilation air* shall be provided with controls designed to automatically maintain the required outdoor air supply rate during occupancy.

SECTION 406 VENTILATION OF UNINHABITED SPACES

406.1 General. Uninhabited spaces, such as crawl spaces and attics, shall be provided with *natural ventilation* openings as required by the *International Building Code* or shall be provided with a mechanical exhaust and supply air system. The mechanical exhaust rate shall be not less than 0.02 cfm per square foot of horizontal area and shall be automatically controlled to operate when the relative humidity in the space exceeds 60 percent.

504.6.1 Maximum Length. Amend to read in its entirety:

504.6.1 Maximum Length. The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet from the dryer location to the outlet terminal. The maximum length of the duct shall be reduced 2-1/2 feet for each 45 degree bend and 5 feet for each 90 degree bend. The maximum length of the exhaust duct does not include the transition duct.

Exception: Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for such dryer are provided to the code official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions.

Section 3. Section 5-79 of the Code is repealed in its entirety and reenacted to read as follows:

- (a) **Adoption.** The International Plumbing Code, 2006 Edition, is hereby adopted by reference and incorporated into this article as though fully set forth herein as the plumbing code of the City of Wheat Ridge. One copy of said International Plumbing Code shall be filed in the office of the city clerk and may be inspected during regular business hours. Except as otherwise provided hereafter, such code is adopted in full, including the outline of contents and index contained herein.
- (b) **Amendments.** The International Plumbing Code adopted by this section is amended as follows. Section numbers referred to herein refer to and correspond with the section numbers of the 2006 International Plumbing Code.

101.1 Title. Amend to read in its entirety:

101.1 Title. These regulations shall be known as the *Plumbing Code* of the City of Wheat Ridge hereinafter referred to as "this code."

105.4.4 Construction documents. Amend to read in its entirety:

105.4.4 Construction documents. The registered design professional shall submit to the code official three 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.

106.5.3 Expiration. Amend to read in its entirety:

106.5.3 Expiration. Every permit issued by the code official under the provisions of this code shall expire one year (365 days) after the date of issuance. The building official is authorized to grant, in writing, one or more extensions of time, for periods of not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

106.6.2 Fee Schedule. Amend to read in its entirety:

106.6.2 Fee Schedule. The fees for all plumbing work shall be established as set forth in Table 1-A.

106.6.3 Fee refunds. Amend to read in its entirety:

106.6.3 Fee refunds. The code official shall authorize the refunding of fees as follows:

1. The full amount any fee paid hereunder that was erroneously paid or collected.
2. Not more than 100 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 80 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.
4. Not more than 50 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 after initiation of any plan review effort.

Note: 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.

108.4 Violation penalties. Amend to read in its entirety:

108.4 Violation penalties. Any person or entity 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 or repair plumbing work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

108.5 Stop work orders. Amend to read in its entirety:

108.5 Stop work orders. Upon notice from the code official, work on any plumbing system that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or visibly posted at the work site. The notice shall state the conditions under which the work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than 60 dollars or not more than 1000 dollars.

109 Means of Appeal. Amend to read in its entirety:

109 Means of Appeal. Appeals of decisions and determinations made by the Building Official shall comply with the process and procedures set forth in City of Wheat Ridge Municipal Code Sections 2-59 and 5-25. An application for appeal shall be based on claim the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of the code do not fully apply, or an equally good or better form of construction is proposed.

403.1 Minimum number of fixtures. Delete the text of this section, while maintaining Table 403.1, and insert:

403.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Tables 403.1 and 403.1.1. Types of occupancies not shown in Tables 403.1 and 403.1.1 shall be considered individually by the code official. The number of occupants shall be determined by the International Building Code. Occupancy classification shall be determined in accordance with the International Building Code. Table 403.1.1 shall be as follows:

Table 403.1.1

Occupancy	Description	Separate Sex Facilities Required When Occupant Load Exceeds
A-1	Theaters and other buildings for the performing arts and Motion pictures	65
A-2	Nightclubs, bars, taverns, dance halls and buildings for similar purposes	40
	Restaurants, banquet halls and food courts	75
A-3	Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums	65

	Passenger terminals and transportation facilities	250
	Places of worship and other religious services	75
A-4	Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities	40
A-5	Stadiums, amusement parks, bleachers and grandstands for outdoor sporting events and activities	40
B	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	25
E	Educational facilities	50
F1 & F2	Structures in which occupants are engaged in work fabricating, assembly or processing of products or materials	100
I-1	Residential care	10
I-2	Hospitals, ambulatory nursing home patients	N/A
	Employees, other than residential care	25
	Visitors, other than residential care	75
I-3	Prisons	N/A
I-3	Reformatories, detention centers, and correctional centers	15
I-4	Adult day care and child care	15
M	Retail stores, service stations, shops, salesrooms, markets and shopping centers	250
R-1	Hotels, motels, boarding houses (transient)	N/A
R-2	Dormitories, fraternities, sororities and boarding houses (not transient)	10
R-2	Apartment house	N/A
R-3	One- and two-family dwellings	N/A
R-4	Residential care/assisted living facilities	10
S-1 S-2	Structures for the storage of goods, warehouses, storehouse and freight depots. Low and moderate hazard	100

904.1 Roof Extensions. Amend to read in its entirety:

904.1 Roof Extension. All open pipes that extend through a roof shall be terminated at least twelve inches above the roof, except that 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.

Appendix A: Plumbing Permit Fee Schedule. **Appendix A** is not adopted.

Section 4. Section 5-84 of the Code is repealed in its entirety and reenacted to read as follows:

- (a) *Adoption.* The International Energy Conservation Code, 2006 Edition, is hereby adopted by reference and incorporated into this article as though fully set forth herein as the plumbing code of the City of Wheat Ridge. One copy of said International Energy Conservation Code shall be filed in the office of the city clerk and may be inspected during regular business hours. Except as otherwise provided hereafter, such code is adopted in full, including the outline of contents and index contained herein.
- (b) *Amendments.* The International Energy Conservation Code adopted by this section is amended as follows. Section numbers referred to herein refer to and correspond with the section numbers of the 2006 International Energy Conservation Code.

101.1 Title. Amend to read in its entirety:

101.1 Title. These regulations shall be known as the *Energy Conservation Code* of the City of Wheat Ridge, and shall be cited as such. It is referred to herein as "this code."

104.1 General. Amend to read in its entirety:

104.1 General. Construction documents and other supporting data shall be submitted in three or more sets with each application for permit. The code official is authorized to require necessary construction documents to be prepared by a registered design professional.

Exception: The code official is authorized to waive the requirements for construction documents or other supporting data if the code official determines they are not necessary to confirm compliance with this code.

105.5 Violation penalties. Amend to read in its entirety:

105.5 Violation penalties. Any person or entity 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 or repair work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

105.6 Stop work orders. Amend to read in its entirety:

105.6 Stop work orders. Upon notice from the code official that work is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or visibly posted at the work site. The notice shall state the conditions under which the work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than 60 dollars or not more than 1000 dollars.

105.7 Means of Appeal. Amend to read in its entirety:

105.7 Means of Appeal. Appeals of decisions and determinations made by the Building Official shall comply with the process and procedures set forth in City of Wheat Ridge Municipal Code Sections 2-59 and 5-25. 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 the code do not fully apply, or an equally good or better form of construction is proposed.

Section 5. Section 5-85 of the Code is repealed in its entirety and reenacted to read as follows:

- (a) *Adoption.* The International Residential Code, 2006 Edition, is hereby adopted by reference and incorporated into this article as though fully set forth herein as the one- and two-family dwelling code of the City of Wheat Ridge. One copy of said International Residential Code shall be filed in the office of the city clerk and may be inspected during regular business hours. Except as otherwise provided hereafter, such code is adopted in full, including the outline of contents and index contained herein.
- (b) *Amendments.* The International Residential Code adopted by this section is amended as follows. Section numbers referred to herein refer to and correspond with the section numbers of the 2006 International Residential Code.

R101.1 Title. Amend to read in its entirety:

R101.1 Title. These provisions shall be known as the *Residential Code for One- and Two-family Dwellings* of the City of Wheat Ridge, and shall be cited as such and will be referred to herein as "this code."

R105.2 Work exempt from permit. Amend to read in its entirety:

R105.2 Work exempt from permit. Permits shall not be required for the following. Exemption 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.

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet.
2. Fences not over 6 feet high.
3. Retaining walls that are not over 4 feet in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.
4. Water tanks supported directly on grade if the capacity does not exceed 5,000 gallons and the ratio of height to diameter or width does not exceed 2 to 1.
5. Sidewalks and driveways.
6. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work that is not part of the scope of a larger permissible project.
7. Prefabricated swimming pools that are less than 24 inches deep.
8. Swings and other portable playground equipment.
9. Window awnings supported by an exterior wall which do not project more than 54 inches from the exterior wall and do not require additional support.
10. Exterior cladding for the purpose of maintenance when the work does not include the relocation of electrical or gas utilities.

Electrical:

Repairs and maintenance: A permit shall not be required for minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

Gas:

1. Portable heating, cooking or clothes drying appliances.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

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

Mechanical:

1. Portable heating appliances.
2. Portable ventilation appliances.
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 minor part that does not alter approval of equipment or make such equipment unsafe.
6. Portable evaporative cooler.
7. Self-contained refrigeration systems containing 10 pounds (4.54 kg) or less of refrigerant or that are 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.

The stopping of leaks in drains, water, soil, waste or vent pipe; provided, however, that if any concealed trap, drainpipe, 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.

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

R105.5 Expiration. Amend to read in its entirety:

R105.5 Expiration. Every permit issued by the code official under the provisions of this code shall expire one year (365 days) after the date of issuance. The building official is authorized to grant, in writing, one or more extensions of time, for periods of not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

R106.1 Submittal documents. Amend to read in its entirety:

R106.1 Submittal documents. Construction documents, special inspection and structural observation programs and other data shall be submitted in three or more sets with each application for permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. 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 reviewing of construction documents is not necessary to obtain compliance with this code.

R108.2 Schedule of permit fees. Amend to read in its entirety:

R108.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority. The permit fee shall be established as set forth in Table 1-A.

R108.3 Building permit valuations. Amend to read in its entirety:

R108.3 Building permit valuations. The applicant for a permit shall provide an estimated project valuation at the time of application. Permit valuations shall include the total value of all work, including foundation work, structural and non-structural building components, electrical, gas, plumbing, mechanical and interior finish materials. Project valuation shall be calculated by the Building Division based on data published on the City website, and the higher of the applicant stated valuation and the division calculated valuation shall be used to determine building permit fees. Final building permit valuation shall be set by the building official.

R108.5 Refunds. Amend to read in its entirety:

R108.5 Refunds. The code official shall authorize the refunding of fees as follows:

1. The full amount any fee paid hereunder that was erroneously paid or collected.
2. Not more than 100 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 80 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.

4. Not more than 50 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 after initiation of any plan review effort.

Note: 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.

R112 Means of Appeal. Amend to read in its entirety:

R112 Means of Appeal. Appeals of decisions and determinations made by the Building Official shall comply with the process and procedures set forth in City of Wheat Ridge Municipal Code Sections 2-59 and 5-25. 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 the code do not fully apply, or an equally good or better form of construction is proposed.

R113.4 Violation penalties. Amend to read in its entirety:

R113.4 Violation penalties. Any person or entity 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 or repair residential work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

R114.2 Unlawful continuance. Amend to read in its entirety:

R114.2 Unlawful continuance. Any person who shall continue any work in or about the structure 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 to a fine of not less than 60 dollars or not more than 1000 dollars and shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

R202 Definitions. Add the following text under the definition of "ROOF DECK":

Solidly sheathed deck shall be defined as decking consisting of APA approved wood structural panel sheathing.

Closely fitted deck shall be defined as decking consisted of APA approved wood structural panel sheathing or lumber sheathing conforming to the requirements of Table 503.2.1.1(1) in which no gap between members exceeds one-half of one inch.

Spaced decking shall be defined as lumber sheathing conforming to the requirements of Tables 2304.7(1) through 2304.7(5) in which any gap between members exceeds one-half of one inch.

Table R301.2(1): Climatic and Geographic Design Criteria. Table R301.2(1) shall apply as referenced in this code and is hereby completed as follows:

Table R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Ground Snow Load	Wind Speed (mph)	Seismic Design Category	Subject to damaging from frost line depth		Termite	Winter Design Temp	Ice Barrier Underlayment Required	Flood Hazards	Air Freezing Index	Mean Annual Temp
			Weathering	Depth						
30 psf	100	B	Severe	36"	Slight	0	Yes	1979 Firm 6/17/03	1500	45

R401.2 Requirements. Amend to read in its entirety:

R401.2 Requirements. Foundation construction shall be capable of accommodating all loads according to Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. Gravel fill used as footings for wood and precast concrete foundations shall comply with Section R403. With the exception of prescriptive monolithic slabs less than 1000 square feet in size for garages or similar non-habitable occupancies, foundation systems shall be designed, inspected and approved by a State of Colorado registered Structural Engineer.

R602.5 Interior nonbearing walls. Amend to read in its entirety:

R602.5 Interior nonbearing walls. Interior nonbearing walls shall be permitted to be constructed with 2-inch-by-3-inch (51 mm by 76 mm) studs spaced 24 inches on center. Interior nonbearing walls shall be capped with at least a single top plate. Interior nonbearing walls shall be fire blocked in accordance with Section R602.8.

R602.7.2 Nonbearing walls. Amend to read in its entirety:

R602.7.2 Nonbearing walls. In interior and exterior nonbearing walls, a header constructed of two(2) 2-inch-by-4-inch members placed on edge shall be required over all openings spanning less than eight(8) feet.

R703.6.1 Lath. Amend to read in its entirety:

R703.6.1 Lath. All lath and lath attachments shall be of corrosion-resistant materials. Expanded metal or woven wire lath shall be attached with 1 1/2-inch long, 11 gage nails having a 7/16-inch head, or 7/8-inch-long, 16 gage staples, spaced at no more than 6 inches, or as otherwise approved. Whenever the wall sheathing is of code approved material capable of receiving and sustaining fasteners, lath fasteners shall be spaced at no more than 6 inches on center both horizontally and vertically, or as otherwise approved.

R803.1 Lumber Sheathing. Amend to read in its entirety:

R803.1 Lumber Sheathing. Allowable spans for lumber used as roof sheathing shall conform to Table 803.1. Spaced lumber sheathing for wood shingle and shake roofing shall conform to the requirements of Section R905.7 and R905.8. Spaced lumber sheathing is not allowed in Seismic Design Category D2. Lumber sheathing with any gap exceeding one-half inch shall not be considered to be solid or closely-fitted sheathing, and shall be defined as spaced sheathing.

R807.1 Attic Access. Amend to read in its entirety:

R807.1 Attic Access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 square feet and have a vertical height of 30 inches or more.

The rough-framed opening shall not be less than 22 inches by 30 inches and shall be located in a hallway or other readily accessible location. A 30-inch minimum unobstructed headroom in the attic space shall be provided at all points directly above the access opening. The finish opening dimensions of attic accesses shall be a minimum of 20 inches by 30 inches. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

R905.2.6 Attachment. Amend to read in its entirety:

R905.2.6 Attachment. Asphalt shingles shall be attached with a minimum of 6 nails per shingle or as specified by the manufacturer, whichever is more restrictive. Where the roof slope exceeds 20 units vertical in 12 units horizontal (167 percent slope) special methods of fastening are required. Special fastening methods shall be tested in accordance with ASTM D 3161, Class F. Asphalt

shingle wrappers shall bear a label indicating compliance with ASTM D 3161, Class F.

905.2.7.1 Ice barrier. Delete this section and insert:

905.2.7.1 Ice barrier. In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier complying with ASTM D1970 shall be required in lieu of normal underlayment at roof eaves and shall extend from the eave edge to a point at least 24 inches inside the exterior wall line of the building.

Exception: Detached structures and attached garages that contain no conditioned floor area.

R905.2.8.5 Other Flashing. Amend to read in its entirety:

R905.2.8.5 Other Flashing. Flashing against a vertical front wall, as well as soil stack, vent pipe and chimney flashing, shall be applied according to the asphalt shingle manufacturer's printed instructions. A minimum 2-inch by 2-inch galvanized flashing shall be required at eaves of all roofs. Flashing shall be installed to as recommended by manufacturer or as necessary to seal gaps between roof sheathing and roof gutters.

M1305.1.4 Appliances under floors. Amend to read in its entirety:

M1305.1.4 Appliances under floors. Underfloor spaces containing appliances requiring access shall have an unobstructed passageway large enough to remove the largest appliance, but not less than 30 inches high and 22 inches wide, no more than 20 feet long when measured along the centerline of the passageway from the opening to the appliance. A level service space at least 30 inches deep and 30 inches wide shall be present at the front or service side of the appliance. If the depth of the passageway or the service space exceeds 12 inches below the adjoining grade, the walls of the passageway shall be lined with concrete or masonry extending 4 inches above the adjoining grade in accordance with Chapter 4. The rough-framed access opening dimensions shall be a minimum of 22 inches by 30 inches where the dimensions are large enough to remove the largest appliance. The finish opening dimensions of under floor accesses shall be a minimum of 20 inches by 30 inches.

M1502.6 Maximum Length. Amend to read in its entirety:

M1502.6 Maximum Length. The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet from the dryer location to the wall or roof termination. The maximum length of the duct shall be reduced 2.5 feet for each 45-degree bend and 5 feet for each 90-degree bend. The maximum length of the exhaust duct does not include the transition duct.

Exceptions:

1. Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for the dryer are provided to the building official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions.
2. Where large-radius 45-degree and 90-degree bends are installed, determination of the equivalent length of clothes dryer exhaust duct for each bend by engineering calculation in accordance with the ASHRAE Fundamentals Handbook shall be permitted.

P3103.1 Roof extension. Amend to read in its entirety:

P3103.1 Roof extension. All open pipes that extend through a roof shall be terminated at least twelve (12) inches above the roof, except that 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.

Appendices. The following appendices are adopted in their entirety:

Appendix A (IFGS): Sizing and Capacities of Gas Piping

Appendix B (IFGS): Sizing of Venting Systems Serving Appliances
Equipped with Draft Hoods, Category 1 Appliances, and
Appliances Listed for Use with Type B Vents

Appendix C (IFGS): Exit Terminals of Mechanical Draft and Direct-vent
Venting Systems

Appendix D (IFGS): Recommended Procedure for Safety Inspection of an
Existing Appliance Installation

Appendix G: Swimming Pools, Spas and Hot Tubs

Appendix H: Patio Covers

Section 6. Section 5-86 of the Code is repealed in its entirety and reenacted to read as follows:

- (a) *Adoption.* The International Fire Code, 2006 Edition, is hereby adopted by reference and incorporated into this article as though fully set forth herein as the fire code of the City of Wheat Ridge. One copy of said International Fire Code shall be filed in the office of the city clerk and may be inspected during regular business hours. Except as otherwise provided hereafter, such code is

code is adopted in full, including the outline of contents and index contained herein. Only Appendices B, D, E, F and G, published by the International Fire Code Council are hereby adopted by reference. The 2006 International Fire Code shall be known as the "I.F.C." or the "fire code" and may be cited and referred to as such.

- (b) *Amendments.* The International Fire Code adopted by this section is amended as follows. Section numbers referred to herein refer to and correspond with the section numbers of the 2006 International Fire Code.

104.1 General Authority and Responsibilities. Amend to read as follows:

104.1 General Authority and Responsibilities. The International Fire Code shall be administered and enforced by the Building Official of the City of Wheat Ridge and designated assistants, who shall perform the following functions:

1. Approval of plans for building new structures and remodeling of existing structures.
2. The inspection of all construction of new and remodeling of existing structures
3. The destruction of unsafe structures.
4. The International Fire Code shall be enforced by the Division of Fire Prevention of the Wheat Ridge Fire Protection District and the Division of Fire Prevention of all adjoining Fire Protection Districts, for the functions listed, pertaining to each jurisdictions respective amendments.
5. The Fire Marshal or his designated representative shall be responsible, as the designee of the Building Official of the City of Wheat Ridge, for the administration and enforcement of the code and shall enforce all ordinances of the jurisdiction.
6. Wherever this code refers to the Chief in the context of Code administration or enforcement, it shall refer to the Fire Marshal or designated representative of the Building Official.
7. Wherever the code refers to the Chief of fire suppression, it shall mean the Chief of the Wheat Ridge Fire Department and the Chiefs of the adjoining Fire Departments.

103.4.1 Legal Defense. Amend to read in its entirety:

103.4.1 Legal Defense. Any suit instituted against any office or employee of any fire protection district or any office or employee of the City of Wheat Ridge 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 the legal

representative of the fire protection district or City by which he or she is employed by the legal representative of the fire protection district or City by which he or she is employed until the final termination of the proceedings. he fire code official, city officer or employee or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code; and any officer or employee of the department of fire prevention or the City, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or reason of any acts or omission in the performance of official duties in connection therewith.

105.2.2 Inspection authorized. Amended by the addition of the following sentence to the end of the paragraph:

Twenty-four hours notice shall be provided to the division of fire prevention for required inspections and tests.

105.6 Required operational permits. Deleted in its entirety with the exception of the following sections:

105.6.42 Scraping of tires;

105.6.43 Temporary membrane structures, tents and canopies, which section 105.6.44 shall be adopted as written.

108 Board of appeals established. Amended to read in its entirety:

108 Board of Appeals. Appeals of decisions and determinations made by the Building Official or the fire code official shall comply with the process and procedures set forth in City of Wheat Ridge Municipal Code Sections 2-59 and 5-25. 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 the code do not fully apply, or an equally good or better form of construction is proposed.

108.3 Qualifications. Deleted in its entirety.

109.3 Violation penalties. Amended to read in its entirety:

109.3 Violation penalties. Any person or entity 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 or repair work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense. The denial, suspension, revocation, or restriction of any permit or other privilege conferred by this code shall not be regarded as a penalty for purposes of this chapter.

111.1 Order. Amended to read in its entirety:

111.1 Order. Whenever the fire code official finds any work regulated by this Code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the fire code official, with the concurrence of the building official, is authorized to issue a stop work order.

111.4 Failure to comply. Amend to read in its entirety:

111.4 Failure to comply. Upon notice from the code official that work is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or visibly posted at the work site. The notice shall state the conditions under which the work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than 60 dollars or not more than 1000 dollars.

304.2.1 Trash enclosures. Added to read as follows:

304.2.1 Trash enclosures. Trash enclosures, including doors, shall be of a non-combustible construction.

Exception: Trash enclosures for one- and two-family dwellings are permitted to be constructed of any materials approved in this code.

308.3.1 Open-flame cooking devices. Amended to read as follows:

308.3.1 Open-flame cooking devices. No open flame cooking devices shall be operated on combustible balconies or within 10 feet (3048 mm) of combustible construction.

Exceptions:

1. One and two family dwellings.
2. Liquefied-petroleum fueled cooking devices may be operated as set forth in section 308.1.1.1.

308.3.1.1 Liquefied-petroleum-gas fueled cooking devices. Amended to read in its entirety:

308.3.1.1 Liquefied-petroleum-gas fueled cooking devices. L-P gas burners having L-P gas container with a water capacity up to 20 pounds (9.1kg) l-p gas capacity may be used on combustible construction.

315.2 Marking maximum permitted storage height. Added to read as follows:

315.2.5 Marking maximum permitted storage. When storage areas are constructed that do not meet the requirements for high piled combustible storage or sprinkler system design densities, a minimum of a four (4) inch

(101.6 mm) stripe on a contrasting background shall be placed at twelve (12) feet (3657.6 mm) above the finished floor to designate the maximum permitted storage height, and clearly justified with the designation: 'No Storage Above This Line'.

503.2.1 Dimensions. Amended to read in its entirety:

503.2.1 Dimensions. Fire apparatus access roadways in other than residential streets shall have an unobstructed width of not less than twenty-four (24) feet (7315.2 mm) and an unobstructed vertical clearance of not less than thirteen (13) feet six (6) inches (4115 mm). Private streets shall not be less than twenty-six (26) feet (7924.8 mm) wide and shall have an unobstructed vertical clearance of not less than thirteen (13) feet six (6) inches (4115 mm).

Exception: the width of private streets may be reduced from the required twenty-six (26) feet (7935mm) if a specific access and parking design is approved by the fire code official.

503.2.3 Surface. Amended to read in its entirety:

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced with the first lift of asphalt as to provide all-weather driving capabilities.

Grass-crete, geo-tek, ritter rings or other similar landscape treatments that will prevent a fire apparatus access road from being maintainable as an all-weather surface and immediately discernable, shall be prohibited.

503.2.5.1 Group R, Division 3 occupancies. Added to read as follows:

503.2.5.1 Group R, Division 3 occupancies. Where a property is a Group R, Division 3 occupancy, the length of a dead end fire department access roadway may be increased to one-hundred seventy-five (175) feet (53,340 mm) without the provisions for the turning around of fire apparatus if approved by the fire code official.

503.2.8 Curbs. Added to read as follows:

503.2.8 Curbs. Vertical curbs shall not be placed at the entrance of or within fire access lanes and roads. Mountable curbs may be used if approved by the fire code official.

503.2.9 Gated communities. Added to read as follows:

503.2.9 Gated communities. Gated communities may be permitted, provided the community meets the requirements as detailed herein and subject to the approval of the fire code official. The access roadways within a gated community shall be a minimum of twenty-eight (28) feet (8534.4 mm) of unobstructed width and be maintained as an all-weather surface and maintained as needed to provide all-weather driving capabilities and requirements of section 503 of the fire code. Unobstructed vertical clearance shall not be less than thirteen (13) feet six (6) inches (4115 mm). Two separate means of ingress/egress shall be provided into the site. Gates shall be staffed on a twenty-four (24) hour basis or be equipped with an automatic and manual system approved by the fire code official.

Exception: Street widths may be reduced to 26 feet of unobstructed width and fire hydrant spacing may be increased to 500 feet when each individual dwelling unit within the gated community meeting the requirements of a Group R-3 Occupancy defined by the International Residential Code is provided with an approved NFPA 13-D Residential Sprinkler System as approved by the fire code official.

503.2.10 Fire protection in recreational vehicle, mobile home, and manufactures housing parks, sales lots, and storage lots. Added to read as follows:

503.2.10 Fire protection in 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 503.1 and 508. Fire hydrant locations and minimum required fire flows shall be approved by the fire code official.

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

506.3 Key box installation. Added to read as follows:

506.3 Key box installation. All buildings with a required fire alarm system or automatic fire extinguishing or standpipe system shall be provided with a key box in a location approved by the fire code official. The key box shall be of an approved type.

Exception: Individual units within retail and office units that do not contain sprinkler control valves, fire alarm panels, or fire protection equipment are not required to provide keys to gain access to other individual units.

508.5.1 Required Water Supply. Amended to read in its entirety:

508.5.1 Required water supply. The location, number, and type of fire hydrants connected to a water supply capable of delivering the minimum required fire flow shall be provided on the public street or on the site of the premises or both to be protected as required and approved. A fire hydrant shall be installed and maintained within one hundred fifty (150) feet (45,720 mm) of a fire department connection serving a sprinkler or standpipe system. When installation of fire protection including fire apparatus access roads and water supplies for fire protection, is required, such protection shall be made serviceable prior to the time of above grade construction.

Exceptions:

1. When the alternate means of protection, as approved by fire code official, are provided, the requirements of section 508.1 may be modified or waived.
2. For Group R-3 and Group U occupancies that distance requirement shall be 500 feet (152400 mm).

2.2 When street widths are reduced in Group R-3 and Group U occupancies to less than thirty two (32) feet (9753.6 mm), the distance requirement shall be three hundred (300) feet (91440 mm).

3. For all buildings with the exception of Group R-3 and Group U occupancies and buildings that are equipped throughout with an approved automatic sprinkler system installed in accordance with sections 903.1.1. the distance requirement shall be 300 feet (91440 mm).

508.5.7 Marking of fire protection equipment. Added to read as follows:

508.5.7 Marking of fire protection equipment. Fire protection equipment and fire hydrants shall be clearly identified in an approved manner to prevent obstruction by parking and other obstructions. See also sections 508.5 and 505.5.5. Fire hydrants shall be painted only colors that are approved by the Water District of jurisdiction.

603.9.1 Gas meter identification. Added to read as follows:

603.9.1 Gas meter identification. Gas meters shall be identified with the building address and/or unit number.

605.1, Abatement of electrical hazards. Amended by the addition of a second paragraph to read as follows:

Wiring systems, including covers, shall be maintained as required in the National Electrical Code for their original installation.

605.3.1.2, Main electrical disconnects labeling. Added to read as follows:

605.3.1.2 Main electrical disconnects labeling. Electrical rooms containing the main electric disconnect shall be identified with a permanently affixed sign with letters not less than one (1) inch (25 mm) in height on a contrasting background to read "MAIN ELECTRICAL DISCONNECT."

605.3.1.3, Labeling of address or unit disconnects. Added to read as follows:

605.3.1.3 Labeling of address or unit disconnects. Electrical disconnects shall be identified with the address and/or unit number in accordance with the electrical code.

903.1.2, Location of sprinkler control valves. Added to read as follows:

903.1.2 Location of sprinkler control valves. When automatic sprinkler systems are provided within a building and the system serves more than one tenant space, the main control valves shall be placed within an approved room that has access provided from the building exterior. The door to said room shall be not less than three (3) feet (914 mm) in width by six (6) feet eight (8) inches (203.2 mm) in height. The door shall be appropriately labeled with a permanent sign with letters having a principal stroke of not less than one inch (25 mm) in height on a contrasting background.

903.2.1.6 Group B. Created to read as follows:

Section 903.2.1.6 Group B. An automatic sprinkler system shall be installed in Group B occupancies where the fire area containing a Group B Occupancy exceeds 12,000 square feet (1115m²) or more or where the combined fire area on all floors including mezzanines exceeds 18,000 square feet (91937m²).

903.2.2.1 Group E Occupancies. Amended to read as follows:

903.2.2.1. Group E. An automatic sprinkler system shall be installed where the floor area containing a Group E Occupancy exceeds 12,000 square feet (1115m²) or more including all combined floors.

903.2.3.2 Group F-2 Occupancies. Created to read as follows:

903.2.3.2. Group F-2. An automatic sprinkler system shall be installed in Group F-2 Occupancies where the floor area exceeds 12,000 square feet (1115m²) or where the combined fire area on all floors including mezzanines exceeds 18,000 square feet (1937m²).

903.2.9.2 Group S-2 Occupancies. Created to read as follows:

903.2.3.9 Group S-2. An automatic sprinkler system shall be installed in Group S-2 Occupancies where the floor area exceeds 12,000 square feet (1115m²) or where the combined fire area on all floors including mezzanines exceeds 18,000 square feet (1937m²).

903.3.7.1 Hose connection locations. Added to read as follows:

903.3.7.1 Hose connection locations. The fire department hose connections for a sprinkler system shall be located within one hundred fifty (150) feet (45,720mm) of a fire hydrant. Hose connections shall be located a minimum height of three (3) feet (194mm) and a maximum height of four (4) feet (1219mm) above the finished grade.

903.4.2.1 Audible and visual signals. Added to read as follows:

903.4.2.1 Audible and visual signals. Audible and visual fire alarm signals shall be connected to every automatic sprinkler system. Such audible and visual signals shall be activated throughout the building upon water flow.

904.11 Commercial cooking systems. Amended by deleting referenced standard numbers: 1. Carbon dioxide extinguishing system, NFPA 12; and 2. Automatic sprinkler systems, NFPA 13. The remaining referenced standards 3, 4, and 5 shall remain unchanged.

904.11.3 Carbon dioxide systems. Deleted in its entirety.

904.11.4 Special provisions for automatic sprinkler systems. Deleted in its entirety.

904.11.7, Residential type cooking equipment. Added to read as follows:

904.11.7 Residential type cooking equipment. When residential type cooking equipment is installed within Group A, B, E, F, S, and R-4 occupancies, a residential fire extinguishing system may be used in lieu of

a commercial type fire extinguishing system with the approval of the fire code official and building code official.

905.1.1 Hose connection locations-standpipe systems. Added to read as follows:

905.1.1 Hose connection locations-standpipe systems. Fire department hose connections for a standpipe system shall be located within 150 feet (45720 mm) of a fire hydrant, and a minimum of three (3) feet (914 mm) and a maximum of four (4) feet (1219 mm) above finished grade. A minimum of a three-foot (914 mm) clear space shall be provided around the circumference of a fire department connection.

905.1.2 Main control valve. Added to read as follows:

905.1.2 Main control valve. When standpipe systems are provided within a building and it serves more than one tenant space, the main control valve shall be located within an approved room that has access provided from the building exterior with a door for fire department access. Said door shall not be less than three (3) feet (914mm) in a width by six (6) feet eight (8) inches (2030mm) in height and shall be appropriately labeled with a permanent sign with letters having a principal stroke of not less than one-inch (25mm) in height on a contrasting background.

906.3 Size and distribution. Amended to read in its entirety:

906.3 Size and distribution. Multipurpose dry chemical portable fire extinguishers shall be ten (10) pounds (4.5kg), shall have a minimum UL classification of 4-A, and shall be rated to fight Class A, B, or C fire hazards.

907.1.2.1. Remote Indicating Devices. Added to read as follows:

907.1.2.1. Remote indicating devices. Remote indicating devices shall be provided on all required duct detectors, elevator and electrical panel rooms, 120 volt detectors within multi-family dwelling units with access from interior corridors and where detection device activation is not readily visible to responding fire fighters.

907.2.3 Group E. Amended to read in its entirety:

907.2.3 Group E. An approved smoke and heat detection system and manual activation devices shall be installed in Group E occupancies having an occupant load of 20 or more. Group E occupancies having an occupant load of more than five but not more than 19 shall be equipped with an approved hard wired 120-volt smoke detection system, with

battery back-up, and which is interconnected in accordance with the International Residential Code.

907.2.10.1.2.1, Group R-4. Added to read as follows:

907.2.10.1.2.1 Group R-4. Group Homes classified as Group R-4 occupancies arranged for occupancy as residential care, assisted living facilities containing more than five (5) persons, including staff, shall be provided with an approved automatic fire alarm system. Group homes having four (4) or fewer persons, including staff, shall be provided with an approved hard wired one hundred twenty (120) volt smoke detection system, with battery back up, and interconnected in accordance with the International Residential Code.

907.2.10.1.2.2, Group R-4—Senior citizen care. Added to read as follows:

907.2.10.1.2.2 Group R-4 – Senior citizen care. Structures used to provide for the care or housing of six or more senior citizens shall be equipped with an approved automatic fire alarm system installed in accordance with NFPA 72." Senior care facilities housing containing five (5) or fewer persons including staff shall be provided with an approved hard-wired one-hundred-twenty (120) volt smoke detection system, with battery back-up that is interconnected in accordance with the International Residential Code.

912.3.1 Locking fire department connection caps. Amended to read in its entirety:

912.3.1 Locking fire department connection caps shall be installed on fire department connections on all new water-based fire protection systems. Existing fire department connections on water-based fire protection systems shall be required to install locking fire department connection caps, where the fire department connection caps are missing or where the fire department connection is being subject to interior obstructions.

1011.1.1, Additional exit signs. Added to read as follows:

1011.1.1 Additional exit signs. When exit signs are required by the building code, additional low-level exit signs, which are internally or externally illuminated, photo luminescent, or self-luminous shall be provided in corridors serving guest rooms in Group R, Division 1 occupancies and amusement buildings. The bottom of such sign shall not be less than six (6) inches (152 mm) nor more than eight (8) inches (203 mm) above the floor level and shall indicate the path of exit travel. For exit and exit-access doors, the sign shall be on the floor or adjacent to the

door with the closest edge of the sign within four (4) inches (102 mm) of the doorframe.

1027.3.1 Signs. Added to read as follows:

1027.3.1 Signs. Exit doors that could be obstructed from the outside shall be posted with a permanent sign on the exterior side of the door stating "EXIT DOOR – DO NOT BLOCK." The sign shall consist of letters having a principal stroke of not less than three-fourths (3/4) inch (19 mm) wide and at least six (6) inches (152 mm) high on a contrasting background.

1412.1 When required. Amended by addition a second paragraph to read as follows:

1412.1 When required. When inadequate fire flows and distribution of fire hydrants are present at the site prior to construction, an approved water supply system and additional fire hydrants shall be provided to meet the requirements of Appendix B Fire flow requirements for buildings, prior to additional construction commencing.

2204.3 Unattended self-service motor fuel-dispensing facilities. Amended to read in its entirety:

Unattended self-service motor fuel-dispensing facilities that dispense Class 1 flammable liquids shall not be permitted or operated.

Exception: Diesel and bio-diesel facilities that comply with Section 2204.3.1. through 2304.3.7

3308.2.2., Where allowed. Added to read as follows:

3308.2.2.1 Where allowed. Proximate audience displays may be conducted only within buildings that contain an approved automatic sprinkler system.

3406.6.1.2.1 Vapor recovery device. Added to read as follows:

3406.6.1.2.1 Vapor recovery device. It shall be unlawful for any driver, operator, or attendant to defeat or fail to use any vapor recovery device or system that has been provided for use with the vapor recovery device or system. All equipment shall be approved and maintained for use with the vapor recovery system provided at the site.

3804.2 Maximum capacity within established limits. Amended to read as follows:

3804.2 Maximum capacity within established limits. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons within the City of Wheat Ridge.

Chapter 45 Referenced standards. Amended by adding the following referenced standard on to the International Code Council Standard Reference list:

Insurance Service Office
545 Washington Boulevard
Jersey City, NJ 07310-1686

Insurance Service Office Guide for Determining Fire Flow, Fire
Suppression Rating Schedule February 2003.

Chapter 45 Referenced standards. Amended by deleting the following referenced standards from the National Fire Protection Association Standard's from the National Fire Protection Association's standard reference list: Standard 101, Life Safety Code.

Appendix B, Fire-flow requirements for buildings, Section B103.1 Decreases. Amended in its entirety to read as follows:

B103.1 Decreases. Decreases in the minimum required fire flow are permitted up to 50 percent, when the building is provided with an approved automatic sprinkler system installed throughout and in accordance with 903.3.1 standards. Section 903.3.1.2 NFPA 13R sprinkler systems are not permitted to be used for a reduction in minimum required fire flows.

In areas where the required fire flow cannot be obtained, Group R-1, R-2, R-3, or R-4 new or remodeled residential occupancies shall have sprinkler systems installed in accordance with section 903.3.1.1 of the building code, as amended. When it is determined that it is impractical to obtain the required fire flows as required herein for any other occupancy, a decrease shall not be granted without the approval of fire code official and building official. Any decrease in the required fire flows will require alternative means of fire protection and mitigation.

Section 7. Section 5-87 of the Code is repealed in its entirety and reenacted to read as follows:

- (a) *Adoption.* The International Fuel Gas Code, 2006 Edition, is hereby adopted by reference and incorporated into this article as though fully set

forth herein as the fuel gas code of the City of Wheat Ridge. One copy of said International Fuel Gas Code shall be filed in the office of the city clerk and may be inspected during regular business hours. Except as otherwise provided hereafter, such code is adopted in full, including the outline of contents and index contained herein.

- (b) *Amendments.* The International Fuel Gas Code adopted by this section is amended as follows. Section numbers referred to herein refer to and correspond with the section numbers of the 2006 International Fuel Gas Code.

101.1 Title. Amend to read in its entirety:

101.1 Title. These regulations shall be known as the *Fuel Gas Code* of the City of Wheat Ridge, hereinafter referred to as "this code."

106.4.3 Expiration. Amend to read in its entirety:

106.4.3 Expiration. Every permit issued by the code official under the provisions of this code shall expire one year (365 days) after the date of issuance. The building official is authorized to grant, in writing, one or more extensions of time, for periods of not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

106.5.2 Fee schedule. Amend to read in its entirety:

106.5.2 Fee Schedule. The fees for work done pursuant to this code shall be as set forth in Table 1-A.

106.5.3 Refunds. Amend to read in its entirety:

106.5.3 Refunds. The code official shall authorize the refunding of fees as follows:

1. The full amount any fee paid hereunder that was erroneously paid or collected.
2. Not more than 100 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 80 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.

4. Not more than 50 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 after initiation of any plan review effort.

Note: 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.

108.4 Violation penalties. Amend to read in its entirety:

108.4 Violation penalties. Any person or entity 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 or repair work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000.00 dollars or by imprisonment not exceeding 90 days, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

108.5 Stop work orders. Amend to read in its entirety:

108.5 Stop work orders. Upon notice from the code official that work is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or visibly posted at the work site. The notice shall state the conditions under which the work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than 60 dollars or not more than 1000 dollars.

109 Means of Appeal. Amend to read in its entirety:

109 Means of Appeal. Appeals of decisions and determinations made by the Building Official shall comply with the process and procedures set forth in City of Wheat Ridge Municipal Code Sections 2-59 and 5-25. 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 the code do not fully apply, or an equally good or better form of construction is proposed.

406.4 Test pressure measurement. Amend to read in its entirety:

406.4 Test pressure measurement. Test pressure shall be measured with a manometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. Mechanical gauges used to measure test pressure shall have a maximum pressure range of 150 psig,, except for one and two-family dwellings, which shall have a maximum range of 30 psig and shall display measurements in 1 psig increments.

406.4.1 Test Pressure. Amend to read in its entirety:

406.4.1 Test Pressure. The test pressure to be used shall be no less than 1-1/2 times the working proposed maximum working pressure, but not less than 20psig, irrespective of design. Where the test pressure exceeds 125 psig, the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.

406.4.2 Test duration. Amend to read in its entirety:

406.4.2 Test duration. Test duration shall be not less than one-half hour for each 500 cubic feet of pipe volume or fraction thereof, except for one and two-family dwellings, which shall a test duration of not less than 15 minutes. The maximum test duration shall not be required to exceed 24 hours.

614.6.1 Maximum length. Amend to read in its entirety:

614.6.1 Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet from the dryer location to the outlet terminal. The maximum length of the duct shall be reduced 2-1/2 feet for each 45 degree bend and 5 feet for each 90 degree bend. The maximum length of the exhaust duct does not include the transition duct.

Exception: Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for such dryer are provided to the code official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions.

Appendices. The following appendices are adopted in their entirety without amendment:

Appendix A (IFGS): Sizing and Capacities of Gas Piping

Appendix B (IFGS): Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category 1 Appliances, and Appliances Listed for Use with Type B Vents

Appendix C (IFGS): Terminals of Mechanical Draft and Direct-Vent Venting Systems

Appendix D (IFGS): Recommended Procedure for Safety Inspection of an Existing Appliance Installation

Section 9. Table 1-A concerning building permit fees and other related fees, attached hereto as **Attachment 1**, is hereby adopted; provided, however, the City Council may amend the same from time to time by motion or resolution.

Section 10. Section 5-83 of the Code is amended to read as follows:

EXCEPT AS OTHERWISE PROVIDED FOR IN THE AMENDMENTS FOR A CODE ADOPTED HEREIN BY REFERENCE, a person, firm, corporation, partnership or any other entity who violates any of the technical codes contained in this articles, as such violations are defined in each of the respective codes and its amendment(s), may be punished by a fine of not more than one thousand dollars (\$1,000.00), or by imprisonment for a period of not exceeding one year, or both such fine and imprisonment; provided, however, that no person under the age of eighteen (18) years shall be subjected to imprisonment for violation of any provision of a technical code contained in this article. Each day that a violation continues shall be deemed a separate offense. The penalties provided in this section are intended to apply exclusively and solely to the technical codes contained in this articulated and do not rescind, amend or otherwise affect any other penalty provisions of this chapter.

Section 11. Severability, Conflicting Ordinances Repealed. If any section, subsection or clause of this Ordinance shall be deemed to be unconstitutional or otherwise invalid, the validity of the remaining sections, subsections and clauses shall not be affected thereby. All other ordinances or parts of ordinances in conflict with the provisions of this Ordinance are hereby repealed.

Section 12. Effective Date. This Ordinance shall take effect August 1, 2010.

INTRODUCED, READ, AND ADOPTED on first reading by a vote of 7 to 1 on this 12th day of April , 2010, ordered published in full in a newspaper of general circulation in the City of Wheat Ridge, and Public Hearing and consideration on final passage set for **Monday, May 10, 2010** at 7:00 p.m., in the Council Chambers, 7500 West 29th Avenue, Wheat Ridge, Colorado.

READ, ADOPTED AND ORDERED PUBLISHED on second and final reading by a vote of 8 to 0, this 10th day of May, 2010.

SIGNED by the Mayor on this 10th day of May, 2010.

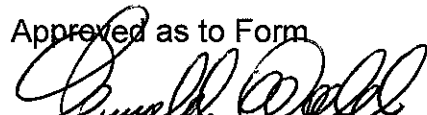

Jerry DiTullio, Mayor

ATTEST:



Michael Snow, City Clerk

Approved as to Form


Gerald E. Dahl, City Attorney

First Publication: April 15, 2010
Second Publication: April 30, 2010
3rd Publication: May 13, 2010
Wheat Ridge Transcript
Effective Date: August 1, 2010

Attachment 1

2006 Table 1-A - Building Permit Fees	
Total Valuation	Fee
\$1.00 to \$500.00	\$26.50
\$501.00 - \$2,000.00	\$26.50 for the first \$500.00 plus \$3.40 for each additional \$100.00, or fraction thereof, to and including \$2,000.00.
\$2,001 - \$25,000.00	\$77.50 for the first \$2,000 plus \$15.85 for each additional \$1,000.00, or fraction thereof, to and including \$25,000.00.
\$25,001.00 - \$50,000.00	\$442.05 for the first \$25,000.00 plus \$11.50 for each additional \$1,000.00, or fraction thereof, to and including \$50,000.00.
\$50,001.00 - \$100,000.00	\$729.55 for the first \$50,000 plus \$8.05 for each additional \$1,000.00, or fractions thereof, to and including \$100,000.00.
\$100,001.00 - \$500,000.00	\$1132.05 for the first \$100,000.00 plus \$6.45 for each additional \$1,000.00, or fraction thereof, to and including \$500,000.00.
\$500,001.00 - \$1,000,000.00	\$3712.05 for the first \$500,000.00 plus \$5.50 for each additional \$1,000.00, or fractional thereof, to and including \$1,000,000.00.
\$1,000,001.00 and up	\$6462.05 for the first \$1,000,000.00 plus \$4.10 for each additional \$1,000.00, or fraction thereof.
Other Inspections and Fees: 1. Inspections outside of normal business hours (two hour minimum) \$60.00 per hour (1) 2. Re-inspection fees \$60.00 per hour (1) 3. Inspections for which no fee is specifically indicated (one hour minimum) \$60.00 per hour (1) 4. Additional plan review required by changes, additions or revisions to plans \$60.00 per hour (1) * (two hour minimum) 5. For use of outside consultants for plan checking and inspections, or both Actual costs (2) 6. A fee equal to the permit fee shall be applied to all permits for work initiated prior to issuance of the required permit	
(1) Or the total hourly costs to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employee(s) involved.	

(2) Actual costs including administrative and overhead costs.

Fees for specific projects shall be as listed below, plus use taxes based on project valuation:

Residential Fences (Outside of designated flood areas)	\$35.00
Residential Furnace/Boiler Replacement	\$40.00
Residential Water heater replacement	\$40.00
Backflow device for Residential lawn irrigation	\$40.00
Residential Evaporative Coolers	\$40.00
Residential Window Replacement	\$50.00
Residential Hot Tubs and Above-Ground Pools	\$60.00
Residential Air-Conditioning	\$60.00
New Residential Furnace/Boiler installation (non-replacement)	\$100.00

*** Prices are exclusive of applicable use taxes based on valuation**