

ORDINANCE NO. 3814

AN ORDINANCE REPEALING CHAPTER 15.12 OF THE RAPID CITY MUNICIPAL CODE IN ITS ENTIRETY AND ADOPTING A NEW CHAPTER 15.12 OF THE RAPID CITY MUNICIPAL CODE ENTITLED UNIFORM CONSTRUCTION CODES ADOPTED.

WHEREAS the City of Rapid City has previously adopted portions of the 1994 Uniform Building Code in accordance with SDCL § 9-33-4.1 and SDCL § 11-10-5; and

WHEREAS the South Dakota Legislature has amended SDCL § 11-10-5 to require adoption of the 1997 version of the Uniform Building Code; and

WHEREAS the City finds it is in the public interest to adopt portions of the 1997 Uniform Building Code as published by the International Conference of Building Officials; and

WHEREAS the City finds it is in the interest of the City to make certain modifications to the 1997 Uniform Building Code as allowed by SDCL § 11-10-5; and

WHEREAS the City finds it is in the public interest to adopt 1997 Uniform Housing Code, as recommended by the International Conference of Building Officials; and

WHEREAS the City finds it is in the public interest to modify the 1997 Uniform Housing Code to meet the needs of the City of Rapid City; and

WHEREAS the City finds it is in the public interest to adopt the 1997 Uniform Code for the Abatement of Dangerous Buildings as recommended by the International Conference of Building Officials;

NOW THEREFORE, BE IT ORDAINED by the City of Rapid City that Chapter 15.12 of the Rapid City Municipal Code be and is hereby repealed in its entirety.

BE IT FURTHER ORDAINED by the City of Rapid City that a new Chapter 15.12 of the Rapid City Municipal Code, entitled Uniform Construction Codes Adopted, be and is hereby adopted as follows:

Article I. Building Code

15.12.010 Adoption.

There is adopted by the city that certain code known as the Uniform Building Code, Volumes 1 Chapters 1-26 and 30-35; 2 and 3, as recommended by the International Conference of Building Officials, specifically the ~~1994~~ 1997 edition thereof, and: Divisions I, II and IV of Chapter 3; Division 1 of Chapter 4; Chapter 9; Divisions I and II of Chapter 11; Divisions I and II of Chapter 12; Chapter 18; Divisions I and III of Chapter 31; Chapter 33; Division III of Chapter 34; of the Volume I appendix thereto and Division I of Chapter 16 of the Volume II appendix thereto. A copy of the same is on file in the office of the City Building Official.

15.12.020 Amendments.

The following amendments to the Uniform Building Code adopted by Section 15.12.005 are made and incorporated into the code.

15.12.030 UBC Section 106.2 amended – Work exempt from permit.

106.2 Work exempt from permit. A building permit shall not be required for the following:

1. One-story detached accessory buildings used as tool and storage shed, playhouses, and similar uses, provided the floor area does not exceed 120 square feet.
2. Fences not over 6 feet high.
3. Oil derricks.
4. Movable cases, counters and partitions not over 5 feet 9 inches high.
5. 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 or impounding Class I, II or III-A liquids.
~~Retaining walls which are not over 3 feet in height measured from the lowest finished grade to the top of the wall.~~
6. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons and the ratio of height to diameter or width does not exceed 2:1.
7. Platforms, walks and driveways not more than 30 inches above grade and not over any basement or story below.
8. Painting, papering and similar finish work.
9. Temporary motion picture, television and theater stage sets and scenery.
10. Window awnings supported by an exterior wall or Group R, Division 3, and Group U Occupancies when projecting not more than 54 inches.
11. Prefabricated swimming pools accessory to a Group R, Division 3 Occupancy in which the pool walls are entirely above the adjacent grade and if the capacity does not exceed 5,000 gallons.
12. Kitchen cabinets in R-3.
13. Replacement of siding on R-3.
14. Replacement of roofing of like materials on all occupancies.

Unless otherwise exempted, separate plumbing, electrical and mechanical permits will be required for the above-exempted items.

Exemption from the 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.

15.12.040 UBC Section 106.4.1 amended – Permits Issuance.

UBC Section 106.4.1 is amended by adding an additional statement to the first paragraph, changing the word “approved” to “reviewed” in the second and third paragraphs, and adding a new fourth paragraph thereto, to read as follows:

106.4.1 Issuance. The application, plans, specifications, computations and other data filed by an applicant for a permit shall be reviewed by the building official. Such plans may be reviewed by other departments of this jurisdiction to verify compliance with any applicable laws under their jurisdiction. If the building official finds that the work described in an application for a permit and the plans, specifications and other data filed therewith conform to the requirements of this code and other pertinent laws and ordinances, and that the fees specified in Section 107 have been paid, the building official shall issue a permit therefor to the applicant. ~~However, the building official, in his discretion, may refuse to issue a building permit for construction to be performed by any contractor if such contractor has failed to complete corrections required on three or more other construction projects. In the event the building official shall refuse to issue a permit, the applicant may appeal to the council; and the council may, in its discretion, sustain the decision of the building official or may order that the permit be issued.~~

When the building official issues the permit where plans are required, the building official shall endorse in writing or stamp the plans and specifications ~~APPROVED~~ REVIEWED. Such ~~approved~~ reviewed plans and specification shall not be changed, modified or altered without authorizations from the building official, and work regulated by this code shall be done in accordance with the ~~approved~~ reviewed plans.

The building official may issue a permit for the construction of part of a building or structure before the entire plans and specifications for the whole building or structure have been submitted or ~~approved~~ reviewed, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holder of a partial permit shall proceed without assurance that the permit for the entire building or structure will be granted.

At the owner or his representative’s option, an APPROVED set of plans may be provided by the City at a plan-check fee of 65% of the building permit fee, payable at the time of application. Plan checks for approved building plans may be done by a third party as designated by the building official. All work done in compliance with the APPROVED plan check and modifications thereof shall be deemed in compliance with this code. The building official may require the plan reviewer to certify the work is in compliance with approved plans and meets the currently adopted Uniform Building Code. Approved plans are subject to field changes or corrections as necessary to achieve compliance with other than building code ordinances and approved plans, but not subsequent UBC Code changes thereafter under the same approved plans above.

15.12.050 UBC Section 107.2 amended – Permit fees.

UBC Section 107.2 is amended to read as follows:

107.2 Permit Fees. The fee for each permit shall be as set forth in ~~Table 1-A~~ Table 3-A of the 1991 Uniform Building Code, except that the minimum fee shall be changed to \$25.00 for a valuation of \$1.00 to \$1,000. Separate electrical, mechanical, and plumbing fees are required on all building permits issued. Effective September 30, 1985, electrical fees are separate, and in addition to other building permit fees, are based on service size, number of circuits, etc., per the current edition of the “Wiring Bulletin of South Dakota”. For separate plumbing and mechanical permits, Table 3-A of the 1991 Uniform Building Code shall be used to determine the fee.

The determination of value or valuation under any of the provisions of this code shall be made by the building official. The value to be used in computing the building permit and building plan review fees shall be the total value of all construction work for which the permit is issued as well as all finish work, painting, roofing, electrical, plumbing, heating, air conditioning, elevators, fire extinguishing systems and any other permanent equipment. Valuation shall be based on contract valuation, or if there is no contract, the ICBO building valuation, if applicable, or other approved method, as determined by the building official. When separate plumbing and mechanical permits are issued, the valuation shall be determined by the building official using the same method.

15.12.060 UBC Section 107.3 amended – Plan review fees.

UBC Section 107.3 is amended to read as follows:

107.3 Plan Review Fees. When submittal documents are required by Section 106.3.2, a plan review fee shall be paid at the time of submitting the submittal documents for plan review. Said plan review fee shall be ~~65 percent of the building permit fee as shown in Table 1-A~~ 10 percent of the building permit fee for R-3 and U occupancies and 15 percent of the building permit fee for all other occupancies as shown on revised Table 3-A of the 1991 Uniform Building Code. With the exception to R-3 and U occupancies, the plan review fee, beginning in 1999, will be 25 percent of the building permit fee and will thereby increase 5 percent a year for the subsequent six years ending in the year 2004.

The plan review fees specified in this section are separate fees from the permit fees specified in Section 107.2 and in addition to the permit fees.

When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items as defined in Section 106.3.4.2, an additional plan review fee shall be charged at the rate shown in ~~Table 1-A~~ Table 3-A of the 1991 Uniform Building Code.

15.12.070 UBC Section 107.5.2 Amended – Fee.

UBC Section 107.5.2 under Section 107.5 Investigation Fees: Work without a Permit, is amended to read as follows:

107.5.2 Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by this code. The minimum investigation fee shall be the same as the minimum fee set forth in ~~Table 1-A~~ Table 3-A of the 1991 Uniform Building Code. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

15.12.080 UBC Section 305 amended – Requirements for Group E occupancies.

UBC Section 305, Requirements for Group E Occupancies, is amended by changing Section 305.1, Division 3 to read as follows:

305.1 Group E. Occupancies Defined. Group E Occupancies shall be:

Division 1. Any building used for educational purposes through the 12th grade by 50 or more persons for more than 12 hours per week or 4 hours in any one day.

Division 2. Any building used for educational purposes through the 12th grade by less than 50 persons for more than 12 hours per week or 4 hours in any one day.

Division 3. Any building or portion thereof used for day-care purposes for more than six persons, exclusive of family day care homes as defined by the Rapid City Municipal Code, Section 8.04.010.

15.12.090 UBC Section 310.4 amended – Access and ~~exit facilities~~ Means of Egress Facilities and Emergency Escapes.

UBC Section 310.4 is amended to read as follows:

310.4 Access and ~~Exit Facilities~~ Means of Egress Facilities and Emergency Escapes. ~~Exits~~ Means of egress shall be provided as specified in Chapter 10. (See also Section ~~4013~~ 1007.6.2 for exit markings.)

Access to and egress from, buildings required to be accessible shall be provided as specified in Chapter 11.

Basements in dwelling units and every sleeping room below the fourth story shall have at least one operable window or door approved for emergency escape or rescue that shall open directly into a public street, public alley, yard or exit court. The emergency door or window shall be operable from the inside to provide a full, clear opening without the use of separate tools.

Exception: The window or door may open into an atrium complying with Section 402 provided the window or door opens onto an exit balcony and the dwelling unit or guestroom has an exit, which does not open into the atrium.

Escape or rescue windows shall have a minimum net clear openable area of 5.7 square feet. The minimum net clear openable height dimension shall be 24 inches. The minimum net clear operable width dimension shall be 20 inches. When windows are provided as a means of escape or rescue, they shall have a finished sill height not more than 44 inches above the floor.

Exception: Group R-3 occupancies may have a finished sill height of 48 inches.

Escape and rescue windows with a finished sill height below the adjacent ground elevation shall have a window well. Window wells at escape or rescue windows shall comply with the following:

1. The clear horizontal dimensions shall allow the window to be fully opened and provide a minimum accessible net clear opening of 9 square feet with a minimum dimension of 36 inches. ~~Window wells required for escape or rescue windows shall have a minimum width of 36 inches. The window well length shall be the window depth plus an additional six inches on each side of the window.~~

2. Window wells with a vertical depth of more than ~~44 inches~~ 48 inches in Group R-3 occupancies and 44 inches in all other occupancies shall be equipped with an approved permanently affixed ladder or stairs that are accessible with the window in the full open position. The ladder or stairs shall not encroach into the required dimensions of the window well by more than 6 inches.

Bars, grilles, grates or similar devices may be installed on emergency escape or rescue windows, doors or window wells, provided:

1. The devices are equipped with approved release mechanisms that are openable from the inside without the use of a key or special knowledge or effort; and
2. The building is equipped with smoke detectors installed in accordance with Section 310.9.

15.12.100 UBC Section 310.10 amended – Fire alarm systems.

310.10 Fire Alarm Systems. Group R, Division 1 Occupancies shall be provided with a manual and automatic fire alarm system in apartment houses three or more stories in height or containing 16 or more dwelling units, in hotels three or more stories in height or contain 20 or more guest rooms and in congregate residences three or more stories in height or having an occupant load of ~~20~~ 17 or more. A fire alarm and communication system shall be provided in Group R, Division 1 Occupancies located in a high-rise building.

EXCEPTIONS: 1. A manual fire alarm system need not be provided in buildings not over two stories in height when all individual dwelling units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least one-hour fire resistive occupancy separations and each individual dwelling unit or guest room has an exit directly to a public way, exit court or yard.

2. A separate fire alarm system need not be provided in buildings that are protected throughout by an approved supervised fire sprinkler system having a local alarm to notify all occupants.

The alarm signal shall be a distinctive sound that is not used for any other purpose other than the fire alarm. Alarm-signaling devices shall produce a sound that exceeds the prevailing equivalent sound level in the room or space by 15 decibels minimum, or exceeds any maximum sound level with a duration of 30 seconds minimum by 5 decibels minimum, whichever is louder. Sound levels for alarm signals shall be 120 decibels maximum.

For the purposes of this section, area separation walls shall not define separate buildings.

15.12.110 UBC Section 708.3.1.1.1 amended – Single family dwellings.

UBC Section; 708.3.1.1.1, under Section 708, Fire Blocks and Draft Stops, is amended to read as follows:

708.3.1.1.1 Single -family Dwellings. When there is usable space above and below the concealed space of a floor-ceiling assembly in a single-family dwelling, draft stops shall be installed so that the area of the concealed space does not exceed ~~4,000~~ 1,500 square feet. Draft stopping shall divide the concealed space into approximately equal areas.

15.12.120 UBC Section 904.2.2 amended – All Occupancies except Group R, Division 3 and Group U occupancies.

UBC Section 904.2.2 is amended to read as follows:

904.2.2 All Occupancies except Group R, Division 3 and Group U Occupancies. Except for Group R, Division 3 and Group U Occupancies, an automatic sprinkler system shall be installed:

1. In every story or basement of all buildings when the floor area exceeds 1,500 square feet and there is not provided at least 20 square feet of opening entirely above the adjoining ground level in each 50

lineal feet or fraction thereof of exterior wall in the story or basement on at least one side of the building. Openings shall have a minimum dimension of not less than 30 inches. Such openings shall be accessible to the fire department from the exterior and shall not be obstructed in a manner that firefighting or rescue cannot be accomplished from the exterior.

When openings in a story are provided on only one side and the opposite wall of such story is more than 75 feet from such openings, the story shall be provided with an approved automatic sprinkler system, or openings as specified above shall be provided on a least two sides of an exterior wall of the story.

If any portion of a basement is located more than 75 feet from openings required in this section, the basement shall be provided with an approved automatic sprinkler system.

2. At the top of rubbish and linen chutes and in their terminal rooms. Chutes extending through three or more floors shall have additional sprinkler heads installed within such chutes at alternate floors. Sprinkler heads shall be accessible for servicing.

3. In rooms where nitrate film is stored or handled.

4. In protected combustible fiber storage vaults as defined in the Fire Code.

~~5. Throughout all buildings with a floor level with an occupant load of 30 or more that is located 55 feet or more above the lowest level of fire department vehicle access.~~

Exceptions: 1. Airport control towers.

2. Open parking structures.

3. Group F, Division 2 Occupancies.

5. In all occupancies, an automatic sprinkler system shall be installed throughout all buildings four (4) or more stories in height, or fifty-one (51) or more feet in height.

15.12.130 UBC Section 904.2.9 Group R, Division 1 Occupancies.

UBC Section 904.2.9 is amended to read as follows:

904.2.9 Group R, Division 1 Occupancies. An Automatic sprinkler system shall be installed throughout every apartment house three or more stories in height or containing 16 or more dwelling units, every congregate residence three or more stories in height or having an occupant load of ~~20~~ 17 or more, and every hotel three or more stories in height or containing 20 or more guest rooms. Residential or quick-response standard sprinklers shall be used in the dwelling units and guest room portions of the building.

15.12.140 UBC Section 1203.2 amended – Light

UBC Section 1203.2 of Section 1203, Light and Ventilation in Group R Occupancies, is amended as follows:

1203.2 Light ~~Guest rooms in habitable rooms within a dwelling unit or congregate residence shall be provided with natural light by means of exterior glazed openings with an area not less than one-twentieth of the floor area of such rooms with a minimum of 5 square feet.~~ Guest rooms and habitable rooms within a dwelling unit or congregate residence shall be provided with natural light by means of

exterior glazed openings with an area not less than ~~one-tenth~~ 8 percent of the floor area of such rooms with a minimum of 10 square feet.

EXCEPTION: Kitchens in Group R Occupancies may be provided with artificial light.

15.12.150 UBC Section 1203.3 amended – Ventilation

UBC Section 1203.3 of section 1203, Light and Ventilation in Group R Occupancies, is amended in the first paragraph to read as follows:

1203.3 Ventilation. ~~Guest rooms and habitable rooms within a dwelling unit or congregate residence shall be provided with natural ventilation by means of openable exterior openings with an area of not less than one fortieth of the floor area of such rooms with a minimum of 2½ square feet. Guest rooms and habitable rooms within a dwelling unit or congregate residence shall be provided with natural ventilation by means of openable exterior openings with an area of not less than 4/20 4 percent of the floor area of such rooms with a minimum of 5 square feet.~~

15.12.160 UBC Section ~~1806.2~~ 1806.3 amended – Bearing Walls.

UBC Section ~~1806.2~~ 1806.3, under Section 1806, Footings, is amended by adding a new exception to read as follows:

1806.3 Bearing Walls. Bearing walls shall be supported on masonry or concrete foundations or piles or other approved foundation system that shall be of sufficient size to support all loads. Where a design is not provided, the minimum foundation requirements for stud bearing walls shall be as set forth in Table ~~18-I-D~~ 18-I-C, ~~unless expansive soils of a severity to cause differential movement are known to exist.~~

EXCEPTIONS: 1. A one-story wood-or metal-frame building not used for human occupancy and not over ~~400~~ 600 square feet in floor area may be constructed with walls supported on a wood foundation plate when approved by the building official.

2. A one-story wood or metal frame building, not used for human occupancy and not over 1,000 square feet in floor area, when the clear span of the roof framing elements (bearing walls) do not exceed 24 feet may be supported on a concrete slab with thickened edge, as approved by the building official.

3. The support of buildings by posts embedded in earth shall be designed as specified in Section ~~1806.7~~ 1806.8. Wood posts or poles embedded in earth shall be pressure treated with an approved preservative. Steel posts or poles shall be protected as specified in Section 1807.9.

15.12.170 UBC Chapter 34 amended – Existing Structures

UBC Chapter 34, Existing Structures, is amended by adding Section 3406 and Section 3407 to read as follows:

Section 3406 Smoke Detectors

3406.1 General. Dwelling units and hotel or lodging house guest rooms that are used for sleeping purposes shall be provided with smoke detectors. Detectors shall be installed in accordance with the approved manufacturer's instructions.

3406.2 Power Source. Smoke detectors may be battery operated or may receive their primary power from the building wiring when such wiring is served from a commercial source. Wiring shall be permanent and without disconnecting switches other than those required for over-current protection.

3406.3 Location within Dwelling Units. In dwelling units, detectors shall be mounted on the ceiling or wall at a point centrally located in the corridor or area giving access to each separate sleeping area. Where sleeping rooms are on an upper level, the detector shall be placed at the center of the ceiling directly above the stairway. Detectors shall also be installed in the basements of dwelling units having stairways that open from the basement into the dwelling. Detectors shall sound an alarm audible in all sleeping areas of the dwelling unit in which they are located.

3406.4 Location in Efficiency Dwelling Units and Hotels. In efficiency dwelling units, hotel suites and in hotel sleeping rooms, detectors shall be located on the ceiling or wall of the main room or hotel sleeping room. When sleeping rooms within an efficiency dwelling unit or hotel suite are on an upper level, the detector shall be placed at the center of the ceiling directly above the stairway. When actuated, the detector shall sound an alarm audible within the sleeping area of the dwelling unit, hotel suite or sleeping room in which it is located.

Section 3407 Separation of Occupancies

Occupancy separations shall be provided as specified in section 302 of this code. When approved by the building official, existing wood lath and plaster in good condition or 1/2 inch gypsum wall board may be acceptable where one-hour occupancy separations are required.

15.12.180 UBC Appendix Chapter 31, Division I, amended – Flood-resistant construction.

UBC Appendix Chapter 31, special construction, Division I, Flood Resistant Construction, is amended to read as follows:

Section 3104 – General

3104.1 Purpose. The provisions of this division are intended to promote public safety and welfare by reducing the risk of flood damage in areas prone to flooding.

3104.2 Scope. Buildings and structures erected in areas prone to flooding shall be constructed as required by the provisions of this division. The base flood elevation shown on the approved flood hazard map is the minimum elevation used to define areas prone to flooding, unless records indicate a higher elevation is to be used. The flood-prone areas are defined in the jurisdiction's floodplain management ordinance.

The provisions of Chapter 15.32, FLOOD AREA CONSTRUCTION REGULATIONS, of the Rapid City Municipal Code shall apply in all cases where it imposes greater restrictions than are specified herein.

3104.3 Definitions. For the purposes of this division, certain terms are defined as follows:

BASE FLOOD ELEVATION is the depth or peak elevation for flooding, including wave height, having 1 percent chance of being equaled or exceeded in any given year.

~~**FLOOD HAZARD MAP** is a map published by an approved agency that defines the flood boundaries, elevations and insurance risk zones as determined by a detailed flood insurance study.~~

HAZARD ZONES are areas which have been determined to be prone to flooding and are classified as either flood hazard zones, A zones, or coastal high-hazard zones, V zones, in accordance with Sections 3107.1 and 3108.1.

~~SECTION 3105 – MANUFACTURED STRUCTURES~~

~~New or replacement manufactured structures located in any flood hazard zone shall be located in accordance with the applicable elevation requirements of Sections 3107.2 and 3108.2, and the anchor and tie down requirements of Section 3110.1.~~

SECTION 3106 – PROTECTION OF MECHANICAL AND ELECTRICAL SYSTEMS

New or replacement electrical equipment and heating, ventilating, air conditioning and other service facilities shall be either placed above the base flood elevation or protected to prevent water from entering or accumulating within the system components during floods up to the base flood elevation. Installation of Electrical wiring and outlets, switches, junction boxes and panels below the base flood elevation shall conform to the provisions of the Electrical Code for such items in wet locations.

SECTION 3107 – FLOOD HAZARD ZONES – A ZONES

3107.1 General. Areas which have been determined as prone to flooding but not subject to wave heights of more than 3 feet are designated as flood hazard zones. Buildings or structures erected in flood hazard zones shall be designated and constructed in accordance with this section.

3107.2 Elevation. Buildings or structures erected within a flood hazard zone shall have the lowest floor, including basement floors, located at or above the base flood elevation.

Exceptions: 1. Except for Group R Occupancies any occupancy may have floors below the base flood elevation in accordance with Section 3107.4

~~2. Floors of buildings or structures that are used only for building access, means of egress, foyers, storage and parking garages may be below the base flood elevation in accordance with Section 3107.3.~~

~~**3107.3 Enclosures below Base Flood Elevation.** Enclosed spaces below the base flood elevation shall not be used with the exception of building access, means of egress, foyers, storage and parking garages. Enclosed spaces shall be provided with vents, valves or other openings that will automatically equalize the lateral pressure of waters acting on the exterior wall surfaces. The bottom of the openings shall not be higher than 12 inches above finish grade. A minimum of two openings per building, or one opening for each enclosure below the base flood elevation, whichever is greater, shall be provided. The total net area of such openings shall not be less than 4 square feet or 1 square inch for every square foot of enclosed area, whichever is greater.~~

3107.4 Flood-resistant Construction. Buildings or structures of any occupancy other than Group R may, in lieu of meeting the elevation provisions of Section 3107.2, be erected with floors usable for human occupancy below the base flood elevation, provided the following conditions are met:

1. Space below the base flood elevation shall be constructed with exterior walls and floors that are impermeable to the passage of water.

2. Structural components subject to hydrostatic and hydrodynamic loads during the occurrence of flooding to base flood elevation shall be capable of resisting such forces, including the effect of buoyancy.

3. Openings below the base flood elevation shall be provided with watertight closures and shall have adequate structural capacity to support flood loads acting upon closure surfaces.

4. Floor and wall penetrations for plumbing, mechanical and electrical systems shall be watertight to prevent floodwater seepage through spaces between penetration and wall construction materials. Sanitary sewer and storm drainage systems that have openings below the base flood elevation shall be provided with closure devices to prevent backwater flow during conditions of flooding.

3107.5 Plan Requirements for Flood-Resistant Construction. When buildings or structures are to be constructed in accordance with Section 3107.4, an architect or engineer licensed by the state to practice as such shall prepare plans showing details of the floor wall and foundation support components. Calculations and approved technical data used to comply with the conditions of Section 3107.4 shall also be provided.

~~SECTION 3108 – COASTAL HIGH HAZARD ZONES – V ZONES~~

~~**3108.1 General.** Areas that have been determined to be subject to wave heights in excess of 3 feet or subject to high velocity wave run-up or wave induced erosion are designated as coastal high hazard zones. Buildings or structures erected in coastal high hazard zones shall be designed and constructed in accordance with this section.~~

~~**3108.2 Elevation.** Buildings or structures erected within a coastal high hazard zone shall be elevated so that the lowest portion of horizontal structural members, with the exception of footings, mat or raft foundations, piles, pile caps, columns grade beams and bracing, shall be located at or above the base flood elevation.~~

~~**3108.3 Enclosures below Base Flood Elevation.** Spaces below the base flood elevation in a coastal high hazard zone shall be free of obstruction.~~

~~**Exceptions:** 1. Footings, mat or raft foundations, piles, pile caps, columns, grade beams, and Bracing that provide structural stability for the building.~~

~~2. Structural systems of entrances and required exits.~~

~~3. Storage of portable or mobile items that can be moved in the event of a storm.~~

~~4. Walls or partitions may be used to enclose all or part of the space, provided they are not part of the structural support of the building and are designed to break away under high tides or wave action without causing damage to the structural system of the building (see Section 3110.76). Screening, lattice type arrangements or other materials that allow the passage of water may also be used.~~

SECTION 3109 – ELEVATION CERTIFICATION

A land surveyor, architect or engineer licensed by the state to practice as such shall certify that the actual elevation in relation to mean sea level of the lowest floor, if in a flood hazard zone, ~~or the bottom of the lowest horizontal structural member, if in a coastal high hazard zone,~~ are is at or above the minimum elevation when required by the provisions of Section 3107.2 and 3108.2.

SECTION 3110 – DESIGN REQUIREMENTS

3110.1 Structural Systems. Structural systems of buildings or structures shall be constructed, connected and anchored to resist flotation, collapse or permanent lateral movement due to loads from flooding equal to the base flood elevation.

3110.2 Design Loads. The structural system shall be designed in accordance with well-established engineering principles and with consideration of hydrodynamic and hydrostatic loads. The required loading shall be established by site-specific criteria or approved national standards. Impact loads shall be considered in the analysis of the structural system.

3110.3 Load combinations. Loading combinations shall be subject to approval by the building official. The structural system shall be designed to resist each combination of loading acting simultaneously. In lieu of site-specific loading requirements, load combinations from an approved national standard may be used.

3110.4 Stress Increases. Allowable stresses may be increased one-third for flood loads in combination with dead load or dead and live load combinations. When strength design is used, flood loads may be considered as dead loads when considering dead and live load conditions. Flood loads may be considered as wind loads in other load combinations.

3110.5 Overturning. Buildings and structures and parts or elements shall be designed to resist sliding or overturning by at least 1.5 times the lateral force or overturning moment caused by wind and flood loads acting simultaneously. For the purpose of providing stability, only the dead load shall be considered effective in resisting overturning.

~~**3110.6 Breakaway Walls.** When walls or partitions located below the base flood elevation are required to break away in accordance with Section 3108.3, such walls shall be designed for not less than 40 pounds per square foot or more than 20 psf on the vertical projected area.~~

15.12.061 UBC Appendix Chapter 33 amended – Excavation and Grading.

The following sections of UBC Appendix Chapter 33, Excavation and Grading, are amended to read as follows:

SECTION 3305 – SCOPE

The appendix sets forth rules and regulations to control dumping, excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading constructions.

The standards listed below are recognized standards and as such are not adopted as part of this code. (see Section ~~3502~~ 3503 and ~~3503~~ 3504.)

1. Testing.
 - 1.1 ASTM D 1557, Moisture-density Relations of/Soils and Soil Aggregate Mixtures.
 - 1.2. ASTM D 1556, In Place Density of Soils by the Sand-Cone Method.
 - 1.3 ASTM D 2167, In Place Density of Soils by the Rubber-Balloon Method.

1.4 ASTM D 2937, In Place Density of Soils by the Drive-Cylinder Method.

1.5 ASTM D 2922 and D 3017, In Place Moisture Content and Density of Soils by Nuclear Methods.

SECTION 3308 – DEFINITIONS

For the purposes of this appendix the definitions listed hereunder shall be constructed as specified in this section.

APPROVAL shall mean that the proposed work or completed work conforms to this chapter in the opinion of the building official.

AS-GRADED is the extent of surface conditions on completion of grading.

BEDROCK is in-place solid rock.

BENCH is a relatively level step excavated into earth material on which fill is to be placed.

BORROW is earth material acquired from an off-site location for use in grading on a site.

CIVIL ENGINEER is a professional engineer registered in the state to practice in the field of civil works.

CIVIL ENGINEERING is the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works.

COMPACTION is the densification of a fill by mechanical means.

DUMPING is an accumulation of refuse or other discarded materials not defined as “earth material” by this Section.

EARTH MATERIAL is any rock, natural soil or fill or any combination thereof.

ENGINEERING GEOLOGIST is a geologist experienced and knowledgeable in engineering geology.

ENGINEERING GEOLOGY is the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

EROSION is the wearing away of the ground surface as a result of the movement of wind, water or ice.

Excavation is the mechanical removal of earth material.

FILL is a deposit of earth material placed by artificial means.

GEOTECHNICAL ENGINEER. See “soils engineer”.

GRADE is the vertical location of the ground surface.

Existing Grade is the grade prior to grading.

Finish Grade is the final grade of the site which conforms to the approved plan.

Rough Grade is the stage at which the grade approximately conforms to the approved plan.

GRADING is any excavating or filling or combination thereof.

KEY is a designed compacted fill placed in a trench excavated in earth material beneath the toe of a proposed fill slope.

PROFESSIONAL INSPECTION is the inspection required by this code to be performed by the civil engineer, soils engineer or engineering geologist. Such inspections include that performed by persons supervised by such engineers or geologists and shall be sufficient to form an opinion relating to the conduct of the work.

SITE is any lot or parcel of land or continuous combination thereof, under the same ownership, where grading is performed or permitted.

SLOPE is an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SOIL is naturally occurring superficial deposits overlying bedrock.

SOILS ENGINEER (GEOTECHNICAL ENGINEER) is an engineer experienced and knowledgeable in the practice of soils engineering (geotechnical) engineering.

SOILS ENGINEERING (GEOTECHNICAL ENGINEERING) is the application of the principles of soils mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection of testing of the construction thereof.

TERRACE is a relatively level step constructed in the face of a graded sloped surface for drainage and maintenance purposes.

SECTION 3310 GRADING FEES

3310.1 General. Fees shall be assessed in accordance with the provision of this section or shall be as set forth in the fee schedule adopted by the jurisdiction.

3310.2 Plan Review Fees. When a plan or other data are required to be submitted, a plan review fee shall be paid ~~at the time of submitting plans and specifications for review~~ for review of submitted plans and specifications. Said plan review fee shall be as set forth in Table A-33-A. Separate plan review fees shall apply to retaining walls or major drainage structures as required elsewhere in this code. For excavation and fill on the same site, the fee shall be based on the volume of excavation or fill, whichever is greater.

3310.3 Grading Permit Fees. A fee for each grading permit shall be paid to the building official as set forth in Table A-33-B. Separate Permits and fees shall apply to retaining walls or major drainage structures as required elsewhere in this code. There shall be no separate charge for standard terrace drains and similar facilities.

TABLE A-33-A – GRADING PLAN REVIEW FEES

50 cubic yards (38.2m ³) or less.....	No Fee
51 to 100 cubic yards (40 m ³ to 76.5 m ³).....	\$23.50
101 to 1,000 cubic yards (77.2 m ³ to 764.6 m ³).....	37.00
1,001 to 10,000 cubic yards (765.3 m ³ to 7645.5 m ³).....	49.25
10,001 to 100,000 cubic yards (7646.3 m ³ to 76 455 m ³) – \$49.25 for the first 10,000 cubic yards (7645.5 m ³), plus 24.50 for each additional 10,000 yards (7645.5 m ³) or fraction thereof.	
100,001 to 200,000 cubic yards (76 456 m ³ to 152 911 m ³) – \$269.75 for the first 100,000 cubic yards (76 455 m ³), plus \$13.25 for each additional 10,000 cubic yards (7645.5 m ³) or fraction thereof.	
200,001 cubic yards (152 912 m ³) or more – \$402.25 for the first 200,000 cubic yards (152 911 m ³), plus \$7.25 for each additional 10,000 cubic yards (7645.5 m ³) or fraction thereof.	

Other Fees:

Additional plan review required by changes, additions or revisions to approved plans \$50.50 per hour* (minimum charge – one-half hour).

*Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

TABLE A-33-B – GRADING PERMIT FEES

50 cubic yards (38.2 m ³) or less	\$23.50
51 to 100 cubic yards (40 m ³ to 76.5 m ³).....	37.00
101 to 1,000 cubic yards (77.2 m ³ to 764.6 m ³) – \$37.00 for the first 100 cubic yards (76.5 m ³) plus \$17.50 for each additional 100 cubic yards (76.5 m ³) or fraction thereof.	
1,001 to 10,000 cubic yards (765.3 m ³) to 7645.5 m ³) – \$194.50 for the first 1,000 cubic yards (764.6 m ³), plus \$14.50 for each additional 1,000 cubic yards (764.6 m ³) or fraction thereof.	
10,001 to 100,000 cubic yards (7646.3 m ³ to 76 455 m ³) – \$325.0 for the first 10,000 cubic yards (7645.5 m ³), plus \$66.00 for each additional 10,000 cubic yards (7645.5 m ³) or fraction thereof.	
100,001 cubic yards (76 456 m ³) or more – \$919.00 for the first 100,000 cubic yards (76 455 m ³), plus \$36.50 for each additional 10,000 cubic yards (7645.5 m ³) or fraction thereof.	

Other Inspections and Fees:

1. Inspections outside of normal business hours..... \$50.50 per hour²
(minimum charge – 2 hours)
2. Re-inspection fees assessed under provisions of Section 108.8.....\$50.50 per hour²
3. Inspections for which no fee is specifically indicated.....\$50.50 per hour²
(minimum charge – one-half hour)

¹The fee for a grading permit authorizing additional work to that under a valid permit shall be the difference between the fee paid for the original permit and the fee shown for the entire project.

²Or the total hourly cost to the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

15.12.190 UBC, Volume 2, Chapter 16, Section 1614 – Snow Loads, amended.

Section 1614 – Snow Loads is amended by adding a new paragraph to read as follows:

Section 1614 – Snow Loads

Buildings and other structures and all portions thereof that are subject to snow loading shall be designed to resist the snow loads, as determined by the building official in accordance with the load combinations set forth in Section 1612.2 or 1612.3.

Potential unbalanced accumulation of snow at valleys, parapets, roof structures and offsets in roofs of uneven configuration shall be considered.

Snow loads in excess of 20 psf may be reduced for each degree of pitch over 20 degrees by R_s as determined by the formula:

$$\begin{aligned} R_s &= S/40 - 1/2 && (14-1) \\ \text{For SI:} \quad R_s &= S/40 - 0.024 \end{aligned}$$

WHERE:

R_s = snow load reduction in pounds per square foot (kN/m²) per degree of pitch over 20 degrees.
 S = total snow load in pounds per square foot (kN/m²).

For alternate design procedure, where specifically adopted, see Appendix Chapter 16, Division I.

The building official has determined the minimum snow load to be 30 pounds per square foot.

15.12.200 UBC, Volume 2, Chapter 16, Section 1618 – Basic Wind Speed amended.

Section 1618 – Basic Wind Speed is amended by adding a new paragraph to read as follows:

Section 1618 – Basic Wind Speed

The minimum basic wind speed at any site shall not be less than that shown in Figure 16-1. For those areas designated in figure 16-1 as special wind regions and other areas where local records or terrain indicate higher 50-year (mean recurrence interval) fastest mile wind speed, these higher values shall be the minimum basic wind speeds.

The building official has determined the wind speed of Rapid City to be 80 mph.

Article II. Housing Code

15.12.210 Adoption.

There is adopted by the city for the purpose of prescribing regulations for the practical safeguarding of persons and property from hazards arising from housing, and for the removal of blighted structures in population areas, that certain code known as the Uniform Housing Code, as recommended by the International Conference of Building Officials, specifically the ~~1994~~ 1997 edition thereof, Chapters 1 through 4 and 6 through 16. A copy of the same is on file in the office of the Building Official.

Article III. Abate ment of Dangerous Buildings

15.12.220 Adoption.

There is adopted by the City for the purpose of prescribing regulations for the practical safeguarding of persons and property from hazards arising from dangerous buildings and for providing additional limitations consistent with other legal remedies for the vacation and repair or demolition of buildings

adjudged to be dangerous that certain code known as the Uniform Code for the Abatement of Dangerous Buildings as recommended by the International Conference of Building Officials; specifically, the ~~1994~~ 1997 Edition thereof. A copy of same is on file in the office of the Building Official.

CITY OF RAPID CITY

Mayor

ATTEST:

Finance Officer

(Seal)

First Reading:
Second Reading
Published:
Effective: