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2006 International Residential Code

CITY AND BOROUGH OF JUNEAU TITLE 19

- Changes with green font color have been edited for the 2006 I codes adoption and remain the same as previously adopted with the 2003 International codes.
- Deletions are ~~in red/strike~~ through.
- New text is Blue.
- In addition the serial numbers at the end of the section are deleted when the review of the section is complete.
- **Please note** If text is still in black font that means the Building Code Advisory Committee has not completed it's review for recommend changes for that section of code.

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Edited from 19.04 Residential Code which last modified an effective 7-6-2006 and was based on the 2003 IRC.

Proposed modification of current adopted code (as of July 6, 2006) for adoption of 2006 models codes.

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Chapter 19.04

RESIDENTIAL CODE*

* **Editors Note:** Serial No. 2004-31, § 1, adopted Oct. 11, 2004 amended Title 19 in its entirety. Serial No. 2006-19, adopted May 23, 2006 further amended Title 19 to read as herein set out. See the editor's note at Tit. 19 and also the Code Comparative Table for a detailed analysis of inclusion.

Charter References: Technical code adoption, § 5.5.

Cross References: General right of entry for inspection, CBJ Code ch. 01.35; zoning districts, CBJ Code ch. 49.25.

19.04.R010 International Residential Code (IRC) adopted; other applicable codes.

19.04.R010.1 Adoption of residential code.

19.04.R010.2 Other codes applicable to one- and two-family dwellings.

19.04.R010.3 Applicability.

19.04.R010.4 Unfinished space.

19.04.R100 Accessibility.

19.04.R202 General building definitions.

19.04.Table_R301.2(1) Climatic and geographic design criteria.

19.04.Table_R301.5 Minimum uniformly distributed live loads.

19.04.R301.6 Roof load.

19.04.R301.9 Geophysical hazards.

19.04.R301.10 Impact loads.

19.04.R302.4.2 ~~Location on lot.~~ Exterior wall location; location on property.

19.04.R303.3 Kitchens, bathrooms, and laundry rooms.

19.04.R303.8 Required heating.

19.04.R307.1 Toilet, bath and shower spaces; space required.

19.04.R309.1 Garage; opening protection.

~~19.04.R309.2 Garage; separation required.~~

19.04.R310.1 Emergency escape and rescue openings.

~~19.04.R310.1.5 Replacement emergency escape and rescue windows.~~

19.04.R310.1.6 Replacement of existing nonconforming windows required for emergency escape and rescue.

19.04.R311.7 Ladders.

19.04.R313 Smoke alarms.

19.04.R313.1.2 ~~Smoke a~~ Alarms and detectors; location.

~~19.04.R313.1.1 Alterations, repairs and additions.~~

19.04.R313.4 Carbon monoxide detectors and alarms.

19.04.R318.1 Moisture vapor retarders; moisture control.

19.04.R319.1 Protection against decay; location required.

19.04.R319.3 Protection against decay; fasteners.

19.04.R322 Accessibility.

19.04.R323.1.6 Protection of water supply and sanitary sewage systems.

19.04.R323.1.8 Flood-resistant construction; general; manufactured ~~homes~~housing.

19.04.R323.2.1 Flood-resistant construction; flood hazard areas (including A Zones); elevation requirements.

19.04.R323.3.2 Flood-resistant construction; coastal high-hazard areas (including V Zones); ~~location and site preparation~~; elevation requirements.

19.04.R323.3.3 Flood-resistant construction; Coastal high-hazard areas (including V Zones); ~~location and site preparation~~; foundations.

~~19.04.R324.1 Carbon monoxide detectors.~~

19.04.R401.1 Foundations; application.

19.04.R401.3 Foundations; drainage.

19.04.R403.1.1 Footings; minimum size.

19.04.R403.1.4.1 Frost protection.

19.04.R403.2 Footings for wood foundations.

19.04.R403.3 Frost protected shallow foundations.

19.04.R403.4 Foundations bearing directly on the ground.

19.04.R404.1 Concrete and masonry foundation walls.

~~19.04.R404.1.4 Foundations walls; concrete and masonry foundation walls; seismic design categories D1 and D2.~~

~~19.04.R404.4.1 Foundation walls; insulating concrete form foundation walls; applicability limits.~~

19.04.R404.5 Retaining walls.

19.04.R406.1 Concrete and masonry foundation dampproofing.

19.04.R406.2 Concrete and masonry foundation waterproofing.
 19.04.R407.2 Steel column protection.
 19.04.R408.2.1 Reduced size of openings for under-floor ventilation.
 19.04.R408.3 Unvented crawl space.
 19.04.R408.45 Removal of debris.
 19.04.R408.56 Finished grade.
~~19.04.R502.5 Allowable girder spans.~~
~~19.04.Table_R502.5(1) Girder spans and header spans for exterior bearing walls.~~
~~19.04.Table_R502.5(3) Headers in bearing walls.~~
 19.04.R502.14 Floors; wood floor framing; rim joists.
 19.04.R502.15 Conventional light-frame construction; floor joists; vapor retarder.
 19.04.R602.3.1 Wood wall framing; stud size, height and spacing.
 19.04.Table_R602.3(5) Size, height and spacing of wood studs.
 19.04.R602.7 Headers.
 19.04.Figure_R602.7.2 Typical wood structural panel box header construction.
 19.04.Table_R602.7.2 Maximum spans for wood structural panel box headers.
~~19.04.R702.3.5 Gypsum board; application.~~
~~19.04.R702.4.2 Ceramic tile; gypsum backer.~~
 19.04.R703.2 Weather-resistant sheathing paper.
 19.04.R703.3.2 Horizontal siding.
 19.04.R801.4 Roof-ceiling construction.
 19.04.R802.3 Framing details.
 19.04.R802.10.2 Trusses.
 19.04.R802.11.1 Roof tie-down; uplift resistance.
~~19.04.R905.1 Roof covering application.~~
 19.04.R905.2.2 Asphalt shingles; slope.
 19.04.R905.7.1.1 Requirements for roof coverings; wood shingles; Solid sheathing required.
 19.04.R.905.8.1.1 Requirements for roof coverings; wood shakes; Solid sheathing required.
~~19.04.MR10056.2 Exterior air intake.~~
 19.04.N1101.1 Energy efficiency; general; scope.
 19.04.N1101.2 Compliance.
~~19.04.TABLE_N1102.1 Simplified prescriptive building envelope thermal component criteria minimum required thermal performance (u factor and r value).~~
 19.04.TABLE_N1102.1 Insulation and fenestration requirements by component.
 19.04.TABLE_N1102.1.2 Equivalent U-Factors.
~~19.04.N1102.1.1.2 Energy efficiency; building envelope; exterior walls; steel-frame walls.~~
~~19.04.N1102.1.2 Energy efficiency; building envelope; ceilings.~~
~~19.04.N1102.1.4 Energy efficiency; building envelope; floors.~~
 19.04.N1102.1.5 .2.6 Energy efficiency; building thermal envelope; basement walls.
 19.04.N1102.1.7 .2.8 Energy efficiency; building thermal envelope; crawl space walls.
 19.04.N1103.2.1 Energy efficiency; systems; ducts; insulation.
 19.04.N1103.57 Energy efficiency; ~~mechanical~~ systems; piping insulation.
 19.04.N11054 Energy efficiency; special standards.
 19.04.M1306.1 General mechanical system requirements; clearances to combustibles; appliance clearances.
 19.04.Table M1306.2.1 Standard installation clearances, in inches for certain unlisted heat-producing appliances.
 19.04.Table M1306.2.2 Clearances, in inches with specified forms of protection.
 19.04.M15012.1 Clothes dryer exhaust; general; outdoor discharge.
 19.04.M15023.1 Range hoods; general.
 19.04.M15056.2 Exhaust ducts; bathroom, laundry room, kitchen, HRV and listed exhaust ducts.
~~19.04.M1601.1 Duct construction; materials.~~
~~19.04.M1601.1.1 Above-ground duct systems.~~
 19.04.M1601.3.1 Duct construction; joints and seams.
~~19.04.M1701.1 Combustion air; air supply.~~
~~19.04.M1703.2.1 Combustion air; size of openings.~~
 19.04.M1801.1 Venting required.
 19.04.1804.2.5 Chimneys and vents; direct vent terminations.
 19.04.M2101.11 Hydronic piping systems installation; occupant protection.
 19.04.M2203.8 Special piping and storage systems; installation; return piping.
 19.04.M2204.5 Oil pumps and valves; oil safety valves.
 19.04.G2406.2 Appliance location; prohibited locations.
 19.04.G2406.4 Appliance location; liquefied petroleum gas facilities.
 19.04.G2407.11 Combustion air ducts.

19.04.G2413.3 Pipe sizing; sizing.
 19.04.G2414.10.1 Pipe joints.
 19.04.G2414.10.2 Tubing joints.
 19.04.G2414.10.4 Metallic fittings.
 19.04.G2415.4 Piping through foundation wall.
 19.04.G2415.9 Minimum burial depth.
 19.04.G2417.4.1 Test pressure.
 19.04.G2420.5 Equipment shutoff valve.
 19.04.G2425.8 Equipment not required to be vented.
 19.04.G2427.8 Venting system location.
 19.04.G2445 Unvented room heaters.
 19.04.Part 7 Plumbing.
 19.04.E3305.4 Equipment location and clearances; location of clear spaces.
 19.04.E3306.3 Minimum size of conductors.
 19.04.E3504.2.1 Overhead service-drop and service conductor installation; vertical clearances; above roofs.
 19.04.E3504.4 Overhead service-drop and service conductor installation; means of attachment.
 19.04.E3504.5 Overhead service-drop and service conductor installation; service masts as support.
 19.04.E3603.2 Required branch circuits; kitchen and dining room area receptacles.
 19.04.E3702.1 Above-ground installation requirements; installation and support requirements.
~~19.04.E3802.11 Ground fault and arc fault circuit interrupter protection, bedroom outlets.~~
 19.04. Appendix A (IFGC) (IFGS) Sizing and capacities of gas piping.
 19.04. Appendix B (IFGC) (IFGS) Sizing of venting systems serving appliances equipped with draft hoods, category I appliances, and appliances listed for use and type B vents.
 19.04. Appendix C (IFGC) (IFGS) Exit terminals of mechanical draft and direct-vent venting systems.
 19.04. Appendix D (IFGC) (IFGS) Recommended procedure for safety inspection of an existing appliance installation.
 19.04. Appendix E Manufactured housing used as dwellings.
 19.04. Appendix F Radon control methods.
 19.04. Appendix G Swimming pools, spas and hot tubs.
 19.04. Appendix H Patio covers.
 19.04. Appendix I Private Sewage Disposal.
 19.04. Appendix J Existing buildings and structures.
 19.04.AJ102.5 Appendix J Existing buildings and structures; compliance; flood hazard areas.
 19.04.AJ201.1 Appendix J Existing building and structures; definitions.
 19.04. Appendix K Sound transmission.
 19.04. Appendix L Permit Fees.
 19.04. Appendix M Home Day care R-3 occupancy.
 19.04. Appendix N Venting methods.
 19.04. Appendix O Gray water recycling systems.
 19.04. Appendix P Sprinkling.
 19.04. Appendix ~~L~~ Q ICC International residential electrical provisions/national electrical code cross reference.

19.04.R010 International Residential Code (IRC) adopted; other applicable codes.

19.04.R010.1 Adoption of residential code.

For the purpose of regulating the erection, construction, prefabrication, enlargement, alteration, repair, replacement, removal, demolition, conversion, occupancy, equipment, use, location and maintenance of all detached one- and two-family dwellings including up to five guestrooms and multiple single-family dwellings (townhouses), not more than three stories in height with a separate means of egress, and their accessory structures located within the City and Borough, there is adopted by reference as the residential code of the City and Borough that compilation of rules and regulations prepared and, published by the International Code Council, a nationally recognized technical trade organization, which compilation is entitled "International Residential Code, 2003 2006 Edition", and ~~five~~ four copies each of which have been filed in the office of the municipal clerk of the City and Borough or in such place designated by the municipal clerk for public use, inspection and examination and which compilation is made a part of this chapter as if

fully set forth in this section, subject only to the enumerated additions, deletions and changes in this chapter.

19.04.R010.2 Other codes applicable to one- and two-family dwellings.

In addition to the requirements of this chapter, one- and two-family dwellings shall comply with all other applicable codes of the City and Borough including the following codes as modified in Title 19 and where applicable:

Title 19.01, Building Codes Administrative Code;

Title 19.02, Board of Appeals;

Title 19.12, Excavation and Grading Code;

~~2003~~ 2006 IPMC, Property Maintenance Code;

~~2003~~ 2006 IEBC, Existing Building Code;

~~2003~~ 2006 IBC Chapter 32, Encroachments into the Public Right-of-Way;

~~2003~~ 2006 UPC, Uniform Plumbing Code and Title 19.06, Plumbing Code;

~~2003~~ 2006 IFC, International Fire Code, in particular, Section 503, Fire Department Access and Appendix D, Fire Apparatus Access Roads.

19.04.R010.3 Applicability.

One- and two-family dwellings are not required to meet the requirements of the building, electrical, mechanical or fuel gas codes except as specifically required in CBJ 19.04.

19.04.R010.4 Unfinished space.

Add the following section:

“Unfinished space equal to or greater than 70 sq ft accessed by a person-door and/or open doorway, other than garages and crawlspaces, shall be finished to habitable space standards excepting finish materials.

Exceptions:

1. Habitable space elements are not required for spaces accessed only by a 22” (559mm) x 30” (762mm) access hatch or only by a pull-down attic stair.

2. Habitable space elements are not required if a deed restriction is approved by the building official limiting the uses of the unfinished space to storage only and a copy of that recorded deed restriction is submitted to building official.

3. Finish material is not exempted where foam products are exposed to the room.”

19.04.R100 Accessibility.

Delete IRC Chapter 1, Administration, except as referred to elsewhere in this code, and add the following:

"R101 Accessibility. Where disabled access is provided but not otherwise required by the codes, either IBC Chapter 11, Accessibility, the Americans with Disabilities Act (ADA-AG) or the Fair Housing Accessibility Guidelines may be used as guidelines. Where disabled access is required, work shall comply with IBC Chapter 11, Accessibility and ICC/ANSI A117.1-2003."

19.04.R202 General building definitions.

Add the following definitions:

"Alley. An alley is a public space or thoroughfare, 20 feet or less, but not less than ten feet in width, which has been dedicated for public use."

"Flashing. Flashing is sheet material designed to lead water to the building exterior."

"Guestroom. Any room or rooms used for sleeping or living, but not for cooking purposes for compensation accessory to an owner occupied dwelling with not more than one dwelling unit. Guestrooms that are greater than 150 square feet (13.9m²) shall be considered as one guestroom for every 100 square feet (9.3m²) of superficial floor area or increment thereof used for lodging for compensation. Guest rooms may be in an accessory building having no kitchen facilities and not rented or otherwise used as a separate dwelling unit.”

"Minor additions means additions to a dwelling unit that result in an increase of less than 15 percent in the floor area."

"Remodeling means structural and nonstructural changes to a dwelling unit which do not result in an increase in the floor area."

"Semi-conditioned space means a room or other enclosed space within a structure which may be heated or cooled by the presence of components of a heating or cooling system or by thermal transmission from an adjoining conditioned space."

"Unconditioned space means a room or other space which is not provided by design with a source of heat or cooling."

"Zero-lot. A townhouse with only two dwelling units."

~~Delete~~ Add the following to the definition of "Grade Plane" ~~and substitute the following:~~

"Grade Plane. When fill or other construction is placed above the original ground level of a site, that fill or other construction shall not be considered in determining the grade plane of the building unless that fill extends at least 20 feet from the wall with no more than a uniform slope of two percent when either of the following two conditions exist:

1. The fill or construction is adjacent to an exterior wall of a building or
2. The fill was placed within the last 5 years and is excavated so that exterior walls are constructed below the finished grade of the fill."

Delete the definition of "Townhouse" and substitute the following:

"Townhouse. A single-family dwelling unit constructed in a group of two or more attached units with property lines running between the units in which each unit extends from foundation to roof and with open space on at least two sides."

19.04.Table_R301.2(1) Climatic and geographic design criteria.

Delete Table R301.2(1), Climatic and Geographic Design Criteria, retain the table notes and insert the following new table:

TABLE NO. R301.2(1)
CLIMATIC AND
GEOGRAPHIC DESIGN CRITERIA

Roof Snow load (lbs. per sq. ft.)	50
Wind Speed (mph)	110 105 or 120^{mm} 116 ^{k.l}
Seismic Condition by Zone	D₁ D ₁
Subject to Damage from:	
Weathering	Yes, severe
Frost Line Depth	32"
Termite	No
Decay	Yes
Winter Design Temperature	-10°F
Ice Shield Barrier	Yes
Underlayment Required	Yes
Flood Hazards	Yes
Air Freezing Index	2057
Mean Annual Temperature	40 °F

Change footnote ~~h~~ g to read as follows:

“~~h~~.g Flood hazard maps, studies and related supporting data along with revisions thereto as adopted under City and Borough of Juneau Land Use Code, Title 49, Article IV Flood Hazard Areas are hereby adopted by reference.”

Add Notes ~~l, m and n~~ k and l to read:

"~~l~~.k For elevations above 500 feet above MLLW, the wind speed shall be determined by the building official."

"~~m~~.l. Basic wind speed shall be determined by the building official using the Juneau 3 Second Gust Wind Speed Map, dated ~~12/18/01~~ 12/17/08."

~~"n. Seismic category D1 shall apply to all parts of this code except for Section R602.10, Wall Bracing, where seismic category D2 shall apply."~~

19.04.Table_R301.5 Minimum uniformly distributed live loads.

Change live load for decks to 50 psf.

19.04.R301.6 Roof load.

Add the following as the second sentence:

"For elevations more than 500 feet above MLLW, the snow load shall be determined by the building official."

19.04.R301.9 Geophysical hazards.

Add a new section as follows:

"*301.9 Geophysical hazards.* In Moderate and Severe geophysical hazard zones as shown in "Geophysical Hazards Investigation, Juneau, Alaska" dated 10/72 and on the "Landslide and Avalanche Area Maps", both adopted by ordinance serial no. 87-49, or when the building official determines that development is proposed in an area similar in nature to those studied in the above referenced documents but outside of the study area, an engineered structural analysis shall be submitted with the permit application. The building official may waive this requirement upon presentation of more specific studies showing the proposed site is not likely to be affected by geophysical hazards."

19.04.R301.10 Impact loads.

Add a new subsection as follows:

"*301.10 Impact loads.* Impact loads shall be considered in the design and construction of

any structure where impact loads may occur such as in moderate and severe geophysical hazard zones referred to in CBJ19.04.301.9 or snow shedding from upper roofs."

19.04.R302.4.2 ~~Location on lot.~~ Exterior wall location; location on property.

Add a new subsection to read as follows:

~~"R302.4~~ **R302.2** *Location on Property.* Buildings must adjoin or have access to a permanent public way or yard on not less than one side. Required yards must be permanently maintained."

19.04.R303.3 Kitchens, bathrooms, and laundry rooms.

Change title to: "Kitchens, bathrooms, and laundry rooms", delete the exception, delete the first sentence and replace with the following:

"All bathrooms, water closet compartments, laundry rooms with more than one clothes washer and one clothes dryer and similar rooms shall be provided with a mechanical exhaust system connected directly to the outside with a minimum rated exhaust capacity of 50 cubic feet per minute and 100 cubic feet per minute for kitchens. Continuous ventilation from intermittent increased capacity whole-house or heat-recovery ventilation systems may be used with reduced exhaust capacity as long as an exhaust intake is located in such rooms."

19.04.R303.8 Required heating.

Add the following to the first sentence:

" . . . without involving the combustion of a solid fuel."

19.04.R307.1 Toilet, bath, and shower spaces; space required. On Figure R307.21 Minimum Fixture Clearances delete "21 in." clearance on water closets and water bidet and replace with the following:

"24 in."

Delete both "30 in. min." on Shower figure and replace with the following:

"See 20036 Uniform Plumbing Code Section 4121.7 for shower dimension requirements."

19.04.R309.1 Garage; opening protection.

Add the following sentences:

"These openings shall be equipped with tight-fitting doors ~~with self-closing assemblies.~~

Attic or crawl space access shall meet the separation requirements of 309.2 as a minimum."

~~19.04.R309.2 Garage; separation required.~~

Add the following sentence:

~~"All joints and penetrations shall be sealed by methods approved for one-hour fire resistant construction."~~

19.04.R310.1 Emergency escape and rescue openings.

In the first sentence after ". . . sleeping room . . .," add the following:

"or other habitable room equal to or greater than 70 square feet and not used for cooking, eating, living room or other dedicated, non-sleeping uses."

~~19.04.R310.1.5 Replacement emergency escape and rescue windows.~~

Add a new subsection and new exceptions as follows:

~~"R310.5 Replacement emergency escape and rescue windows. Replacement windows for emergency escape and rescue shall meet full egress dimensions per IRC R310.1 through R310.1.3 where rough openings allow.~~

Exception:

- ~~1. Where the existing rough opening does not allow for a full emergency escape and rescue window per IRC R310.1 through R310.1.3, replacement windows shall have a minimum opening of 20 inches clear width, 22 inches clear minimum height, 4.0 square feet minimum of net opening and a finished sill height of not more than 48 inches to a permanent walkable surface. If the existing rough opening cannot accommodate these dimensions, the rough opening shall be enlarged or a new opening created to allow installation of a full emergency escape and rescue window per IRC R310.1 through R310.1.3.~~
- ~~2. Where the rough opening is not required to be enlarged to meet the minimum clear width, height or area, then the finished sill height restriction may be met with the installation of one or more permanently affixed steps. These steps shall extend the full width of the window and meet the current codes rise and run requirements so the top step is no greater than 44 inches to the top of the sill."~~

19.04.R310.1.6 Replacement of existing nonconforming windows required for emergency escape and rescue.

Add a new subsection and new exception as follows:

"R310.6 Replacement of existing nonconforming windows required for emergency escape and rescue. Replacement windows for emergency escape and rescue shall meet the dimensions of this subsection. Where the existing rough opening does not allow for replacement window dimensional requirements of this subsection the rough opening shall be enlarged and the replacement window shall meet the full emergency escape and rescue openings per IRC Section R310.1 through R310.5.

R310.6.1 Minimum opening area. All emergency escape and rescue openings shall have a minimum net clear opening of 4 square feet (0.372 m²).

R310.6.2 Minimum opening height. The minimum net clear opening height shall be 22 inches (559 mm).

R310.6.3 Minimum opening width. The minimum net clear opening width shall be 20 inches (508 mm).

R310.6.4 Minimum sill height. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 48 inches (1118 mm) above the floor.

Exception: Installation of one or more permanently affixed steps extending the full width of the window opening constructed to the current adopted International Residential codes rise and run requirements so the top step is no greater than 44 inches to the top of the sill."

19.04.R311.7 Ladders.

Add a new subsection to read:

"R311.7 Ladders. Stairs or ladders used only to attend equipment or to access unoccupied spaces are exempt from the requirements of this section.

Sleeping and other lofts or similar separate spaces of not over 250 square feet and not containing primary kitchens or bathrooms may be accessed by alternating tread stair with handrails on each side. Alternating tread stairs are defined in IBC Section 1009.10 9."

~~19.04.R313.1.1 Alterations, repairs and additions.~~

~~In the first sentence, delete "permit" and add "plan review" in its place.~~

19.04.R313 Smoke alarms.

Change the section heading from "Smoke Alarms" to "Alarms and Detectors".

19.04.R313.1 2 Smoke aAlarms and detectors; location.

Add the following item:

"4. In any habitable room equal to or greater than 70 square feet and not used for

cooking, eating, living room or other dedicated, non-sleeping uses."

19.04.R313.4 Carbon monoxide detectors and alarms.

Add a new section to read as follows:

"R313.4.1 Carbon Monoxide Detectors and Alarms. The provisions of this section shall apply to all dwelling units and guest rooms. At least one carbon monoxide detector or alarm shall be installed on each floor level. If a floor level contains bedrooms or sleeping rooms, at least one detector shall be located in the immediate vicinity of the sleeping area, outside of the bedrooms or sleeping rooms. Carbon monoxide detectors and alarms shall be installed in accordance with their listing. The alarm shall be clearly audible in all sleeping rooms, even if the intervening doors are closed.

Exceptions:

1. Carbon monoxide detectors and alarms are not required in dwelling units and structures that have no combustion appliances, attached garage, or other vehicle parking within 25 feet of any direct opening.
2. Carbon monoxide detectors and alarms are not required if all combustion equipment is located within a mechanical room separated from the rest of the building by construction capable of resisting the passage of smoke. If the structure has an attached and enclosed parking garage, the garage shall be ventilated by an approved automatic carbon monoxide exhaust system designed in accordance with the 2006 I.M.C.

R313.4.2 Interconnection. In new construction, all carbon monoxide detectors and alarms located within a single dwelling unit shall be interconnected in such a manner that actuation of one alarm shall activate all of the alarms within the individual dwelling unit.

R313.4.3 Power source. In new construction, carbon monoxide detectors and alarms shall receive their primary power from the building wiring if the wiring is served from a commercial source, and shall be equipped with a battery backup. Wiring shall be permanent and without a disconnecting switch other than what is required for overcurrent protection. In existing construction, carbon monoxide detectors and alarms may be powered by battery or a cord-and-plug with battery backup." (SFM)

19.04.R318.1 Moisture vapor retarders; moisture control.

Add the following after "ceilings":

"and under slabs"

Add the following sentence to the end of the paragraph:

"A vapor retarder at the inside of the wall or other closed envelope assembly shall have a permeability rating less than that of any other material in that assembly and in no case

have a permeability rating greater than one. Mechanical and electrical penetrations shall be sealed by approved methods."

Delete the exceptions.

19.04.R319.1 Protection against decay; location required.

~~Delete the words in the first sentence before "the following...".~~

~~And~~ In item 2, delete remainder of sentence after "exterior foundation walls".

19.04.R319.3 Protection against decay; fasteners.

Delete the first exception.

19.04.R322 Accessibility.

Delete this section in its entirety.

19.04.R3234.1.6 Protection of water supply and sanitary sewage systems.

Delete the following from the second sentence:

"...in accordance with the plumbing provisions of this code and Chapter 3 of the *International Private Sewage Disposal Code*."

19.04.R3234.1.8 Flood-resistant construction; general; manufactured ~~homes~~housing.

Delete the last sentence and replace with the following:

"Manufactured homes shall not be placed in identified flood ways."

19.04.R3234.2.1 Flood-resistant construction; flood hazard areas (including A Zones); elevation requirements.

Replace item 2 with the following:

"2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated at least as high above the highest adjacent grade as the depth number specified in feet (mm) on the FIRM. Where elevation is unspecified on FIRM or from another authoritative source, the elevation may be determined by reasonable local judgment based on historical data, high water marks, photographs of past flooding, or other similar or relevant data. Failure to elevate construction at least 2 feet (610 mm) above grade in these areas may result in higher insurance rates."

19.04.R3234.3.2 Flood-resistant construction; coastal high-hazard areas (including V Zones); ~~location and site preparation~~; elevation requirements.

Replace requirement number 3 with the following:

“3. The use of fill for structural support of buildings within V Zones may be allowed only when certified by an engineer licensed to practice in the State of Alaska that the fill, foundation and structure attached thereto is adequately anchored to resist floatation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on any and all building structural components. The use of fill for structural support shall not be permitted where soil investigations that are required in accordance with Section R401.4 indicate that soil material under the proposed fill is subject to scour or erosion from wave-velocity flow conditions. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrent interval).”

Replace requirement number 4 and its exception with the following:

“4. Walls and partitions enclosing areas below the design flood elevation shall meet the requirements of Sections R3234.3.4 and R3234.3.5.”

19.04.R3234.3.3 Flood-resistant construction; Coastal high-hazard areas (including V Zones); ~~location and site preparation~~; foundations.

Delete the words “shall be” from the first sentence.

~~19.04.R324.1 Carbon monoxide detectors, carbon monoxide detectors.~~

~~—Add the following section:~~

~~“R324.1 Carbon monoxid ed detectors. Effective January 1, 2005, carbon monoxide detection devices shall be installed in: (a) all dwelling units containing or serviced by a carbon-based fueled appliance or device that produces by products of combustion; (b) dwelling units having an attached garage or carport; and (c) dwelling units adjacent to a parking space. Carbon monoxide detection devices must have an alarm and shall be installed and maintained according to manufacturers' recommendations.”~~

19.04.R401.1 Foundations; application.

Add the following exceptions:

"3. Foundations for unroofed exterior decks, landings, and platforms not rigidly attached to a building or structure, and not greater than 30 inches above finish grade may bear directly on the ground.

4. Foundations for one-story wood- or metal-frame buildings not used for human

occupancy and not over 400 square feet (37.2 m²) in floor area may be constructed with walls supported on a wood foundation plate when approved by the building official."

19.04.R401.3 Foundations; drainage.

Delete the last sentence and add the following:

"The grade away from foundation walls shall be a minimum of two percent positive grade within the first five feet."

And, in the exception, change "six inches (152 mm) of fall within ten feet (3,048 mm)" to read "two percent slope within five feet (1,524 mm)."

And, in the exception, change, change "5 percent" to read "2 percent" in the first sentence.

19.04.R403.1.1 Footings; minimum size.

Delete the subsection and add the following:

"Minimum standards for concrete and masonry footings shall be as set out in the City and Borough "Standard CBJ Foundations" dated July 1, 2005. The building official may approve a stamped, engineered foundation in lieu of the City and Borough standard."

Also delete Table R403.1 and Figure R403.1(1).

19.04.R403.1.4.1 Frost protection.

Delete the third exception.

19.04.R403.2 Footings for wood foundations.

Delete the section and add the following:

"*R403.2 Footings for Wood Foundations.* Wood foundations shall have a minimum 10-inch thick by 16-inch wide concrete footing."

19.04.R403.3 Frost protected shallow foundations.

Add the following as the last sentence of this section:

"For purposes of this section only, the air freezing index for Juneau is 3,000."

19.04.R403.4 Foundations bearing directly on the ground.

Add a new section as follows:

"403.4 Foundations bearing directly on the ground. Unroofed exterior decks, landings, and platforms not rigidly attached to a building and not greater than 30 inches above grade; and uninhabited one-story wood-framed, metal-framed and membrane buildings not over 400 square feet (37.2 m) in floor area may bear directly on the ground. Bearing materials shall meet other portions of this code."

19.04.R404.1 Concrete and masonry foundation walls.

~~Delete section and add the following:~~ Add the following paragraph to section R404.1:

~~"R404.1 Concrete and masonry foundation walls.~~ Concrete and masonry foundation walls may be designed per City and Borough "Standard CBJ Foundations" handout dated July 1, 2005 and available in the office of the building official."

~~19.04.R404.1.4 Foundation walls; concrete and masonry foundation walls; seismic design categories D1 and D2.~~

~~Delete the last paragraph and replace with the following:~~

~~"Foundations walls located in Seismic Design Categories D1 and D2, as established in Table R301.2(1), supporting more than 4 feet (1219 mm) of unbalanced backfill or exceeding 8 feet (2438 mm) in height shall be constructed in accordance with Table R404.1.1(2), R404.1.1(3) or R404.1.1(4). Insulating concrete form foundation walls shall be reinforced as required in Table R404.4 (1), R404.4(2), R404.4(3), R404.4(4), or R404.4(5). Where no vertical reinforcement is required by Table R404.4(2), R404.4(3) or R404.4(4) there shall be a minimum of one No. 4 (No. 13) bar at 48 inches (1220 mm) on center. All concrete and masonry foundation walls shall have two No. 4 (No. 13) horizontal bars located in the upper 12 inches (305 mm) at the wall."~~

~~19.04.R404.4.1 Foundation walls; insulating concrete form foundation walls; applicability limits.~~

~~Add the following to the end of the paragraph:~~

~~"In Seismic Design Categories D1 and D2 foundation walls shall comply with R404.1.4. Insulating concrete form foundation walls supporting above grade concrete walls shall be reinforced as required for the above grade wall immediately above or the requirements in Tables R404.4 (1), R404.4(2), R404.4(3), R404.4(4), or R404.4(5) whichever is greater."~~

19.04.R404.5 Retaining walls.

~~Delete section R404.5 in its entirety.~~

19.04.R406.1 Concrete and masonry foundation dampproofing.

Delete section R406.1.

19.04.R406.2 Concrete and masonry foundation waterproofing.

Delete the first sentence and add the following:

~~"R406.2 Concrete and masonry foundation waterproofing.~~ Exterior foundation walls that retain earth and enclose habitable or usable spaces located below grade shall be waterproofed ~~with a membrane extending~~ from the top of the footing to the finished grade."

And add the following sentences at the end of the paragraph:

"A treated lumber or plywood strip shall be attached to the wall to cover the top edge of the approved waterproofing. The wood strip shall extend at least two inches above and five inches below finish grade level to protect the approved waterproofing from exposure to light and from mechanical damage at or near grade. The joint between the strip and the wall shall be caulked full length prior to fastening the strip to the wall. Alternatively, brick, stucco, or other covering appropriate to the architectural treatment may be used in place of the wood strip."

19.04.R407.2 Steel column protection.

Add "Exterior" to the title and delete the words "inside and outside."

19.04.R408.2.1 Reduced size of openings for under-floor ventilation.

Add a new subsection to read as follows:

"R408.2.1 Reduced size of openings for under-floor ventilation. The installation of operable louvers shall not be prohibited. The total area of ventilation openings may be reduced to no less than 1/1500 of the under-floor area where:

1. The ground surface is treated with an approved vapor retarder material per 19.04.R502.15.
2. The required openings are placed so as to provide cross-ventilation of the space.
3. The exterior footing and stem walls are dampproofed per R406.1 Concrete and masonry foundation dampproofing.
4. All exposed cold water piping be insulated with approved materials that are a minimum of R-3 with a vapor barrier."

19.04.R408.3 Unvented crawl space.

Delete subsections 2.2 and 2.3 under item number 2 in this section.

19.04.R408.45 Removal of debris.

Add the following sentence:

"For skirted buildings placed over muskeg, muskeg may remain but shall be covered with minimum six mil ground cloth of polyethylene sheeting."

19.04.R408.56 Finished grade.

Add the following at the end of the sentence:

"including sump pumps in the crawl space."

~~**19.04.R502.5 Allowable girder spans.**~~

~~Delete the words "Tables R502.5(1) and" and add the words "and R502.5(3), attached" to the end of the sentence.~~

~~**19.04.Table_R502.5(1) Girder spans and header spans for exterior bearing walls.**~~

~~Delete Table R502.5(1).~~

19.04.Table_R502.5(3) Headers in bearing walls.

TABLE R502.5(3)

SIZE OF HEADER	HEADER SPANS IN BEARING WALLS—In feet, supporting:			HEADER SPANS IN NON-BEARING PARTITION WALLS
	Roof and Ceiling	One Floor, Roof and Ceiling	Two Floors, Roof and Ceiling	
2×4	—	—	—	3
2×6	—	—	—	5
2×8	—	—	—	6
2×10	3	—	—	8
2×12	4	—	—	9
2-2×4	—	—	—	5
2-2×6	3	—	—	8
2-2×8	4	—	—	10
2-2×10	5	3	—	13
2-2×12	6	3	3	15
3-2×4	—	—	—	7
3-2×6	4	—	—	10
3-2×8	5	3	—	13
3-2×10	7	4	3	16
3-2×12	8	5	4	18

Footnotes:

- ~~(1) Nominal 4 inch thick single headers may be substituted for double members.~~
- ~~(2) Spans are based on hem fir no. 2 material; roof trusses spanning 32 feet with two-foot overhangs, 20 psf dead load, 50 psf snow load and 100 psf snow load on eaves; floors with tributary widths of 10 feet, 20 psf dead loads and 40 psf live loads.~~

19.04.R502.14 Floors; wood floor framing; rim joists.

Add the following subsection:

"R502.14 Rim joists. Rim joists adjacent to unconditioned interior spaces shall be constructed of pressure preservative treated wood or other decay resistant or synthetic products approved for such use.

~~Exception:~~s. Decay resistant rim joists are not required when:

- ~~1. A minimum of two inches of foam insulation is applied inside or outside the rim joist.~~
- ~~2. The rim joist is placed a minimum of 12 inches above grade.~~
Decay resistant rim joists are not required when a minimum of two inches of foam

insulation is applied inside or outside the rim joist. Insulation is to be well sealed. Fiberglass insulation shall not be placed in direct contact with untreated rim joists in crawl spaces."

19.04.R502.15 Conventional light-frame construction; floor joists; vapor retarder.

Add the following subsection:

"R502.15 Vapor retarder. Under floor spaces and crawlspaces shall have a vapor retarder that is a minimum of 6 mil thick (0.15 mm) polyethylene film installed such that all edges are lapped a minimum of 6 inches (152 mm) and sealed with a permanent compatible sealing compound or adhesive. Such vapor retarder shall extend vertically up the foundation wall a minimum of 6 inches (152 mm) and be attached and sealed with a permanent compatible sealing compound or adhesive to the foundation wall. Vapor retarder shall not be attached to wood other than pressure preservative treated wood. Vapor retarder is to be contoured so as to avoid damage from walking upon it. All penetrations of vapor retarder shall be well sealed. Comparable substitutions of materials and or installation methods may be used as approved by the building official."

19.04.R602.3.1 Wood wall framing; stud size, height and spacing.

Delete the words "Table R602.3(5)" and add "Tables R602.3~~(6)~~(5) and R602.3~~(7)~~(6)".

19.04.Table_R602.3(5) Size, height and spacing of wood studs.

Delete Table R602.3(5), and replace with the attached tables: Table R602.3~~(6)~~(5), Maximum Stud Spacing - ~~120~~ 116 mph and Table R602.3~~(7)~~(6), Maximum Stud Spacing - ~~110~~ 105 mph.

19.04.R602.7 Headers.

~~Delete the words "Tables R502.5(1) and R502.5(2)" and add "Tables R502.5(2) and R502.5(3), attached"~~

~~And d~~Delete IRC Section R602.7.1, Wood structural panel box headers.

Table R602.3(6)(5)

MAXIMUM STUD SPACING (Inches)

~~120~~ **116 MPH WIND SPEED**

Wall Height	Stud Size and Minimum Grade	EXPOSURE D Supporting			EXPOSURE C Supporting			EXPOSURE B Supporting		
		Roof and Floor & Ceiling	One Floor, Roof & Ceiling	Two Floors, Roof & Ceiling	Roof and Floor & Ceiling	One Floor, Roof & Ceiling	Two Floors, Roof & Ceiling	Roof and Floor & Ceiling	One Floor, Roof & Ceiling	Two Floors, Roof & Ceiling
8 FT	2 X 6 SPF STUD	24	16	16	24	16	16	24	16	16
	2 X 6 HEM FIR STUD	16	16	16	24	24 16	16	24	24	24 16
	2 X 6 HEM FIR NO. 2	24	16 24	16	24	24	16	24	24	24 16
9 FT	2 X 6 SPF STUD	16	16	12	24	16	12	24	16	16
	2 X 6 HEM FIR STUD	16	16	12	16	16	12	24	24 16	16
	2 X 6 HEM FIR NO. 2	16	16	12 16	24	16 24	16	24	24	16
10 FT	2 X 6 SPF STUD	16	12	12	16	16	12	24	16	16
	2 X 6 HEM FIR STUD	12	12	--	16	12	12	24 16	16	16 12
	2 X 6 HEM FIR NO. 2	16	12 16	12 16	16 24	16	12 16	24	16	16

Footnotes:

- (1) Roof and ceiling loads represent trusses spanning 32 feet with 20 psf dead load, 50 psf snow load and ~~double snow load on a~~ two-foot eaves.
- (2) Each floor load represents ten-foot tributary area with a 20 psf dead load and 40 psf live load.
- (3) Wind loads determined per ~~2003~~ 2006 International Building Code.
- (4) Studs supporting two floors, roof and ceiling are limited to 16-inch spacing due to plate crushing.
- (5) Alternate stud sizes, grades, spacing and heights are allowed if sealed by an engineer registered in the State of Alaska.

Table R602.3(7)(6)

MAXIMUM STUD SPACING (Inches)

~~110~~ 105 MPH WIND SPEED

Wall Height	Stud Size and Minimum Grade	EXPOSURE D Supporting			EXPOSURE C Supporting			EXPOSURE B Supporting		
		Roof and Floor & Ceiling	One Floor, Roof & Ceiling	Two Floors, Roof & Ceiling	Roof and Floor & Ceiling	One Floor, Roof & Ceiling	Two Floors, Roof & Ceiling	Roof and Floor & Ceiling	One Floor, Roof & Ceiling	Two Floors, Roof & Ceiling
8 FT	2 X 6 SPF STUD	24	16	16	16	16	16	24	16	16
	2 X 4 HEM FIR No. 2	--	--	--	--	--	--	16	12	--
	2 X 6 HEM FIR STUD	24	16	16	16 24	24	16	24	24	16
	2 X 6 HEM FIR NO. 2	24	24	16	16 24	24	16	24	24	16
9 FT	2 X 6 SPF STUD	24	16	16	24	16	16	24	16	16
	2 X 4 HEM FIR No. 2	--	--	--	--	--	--	12	--	--
	2 X 6 HEM FIR STUD	24 16	16	16	24 16	16	16	24	24 16	16
	2 X 6 HEM FIR NO. 2	24	24	16	24	24	16	24	24	16
10 FT	2 X 6 SPF STUD	16	16	12	16	16	12	24	24	16
	2 X 6 HEM FIR STUD	16	16 12	12	16	16	12	24 16	24 16	16
	2 X 6 HEM FIR NO. 2	24	16	16	24	16	16	24	24	16

Footnotes:

- (1) Roof and ceiling loads represent trusses spanning 32 feet with 20 psf dead load, 50 psf snow load and ~~double-snow load on a two-foot eaves~~.
- (2) Each floor load represents ten-foot tributary area with a 20 psf dead load and 40 psf live load.
- (3) Wind loads determined per ~~2003~~ 2006 International Building Code.
- (4) Studs supporting two floors, roof and ceiling are limited to 16-inch spacing due to plate crushing.

- (5) Alternate stud sizes, grades, spacing and heights are allowed if sealed by an engineer registered in the State of Alaska.

19.04.Figure_R602.7.2 Typical wood structural panel box header construction.

Delete Figure R602.7.2.

19.04.Table_R602.7.2 Maximum spans for wood structural panel box headers.

Delete Table R602.7.2.

~~19.04.R702.3.5 Gypsum board; application.~~

~~Add a sentence at the end of the paragraph as follows:~~

~~"Gypsum board shall not be used on exterior walls in shower and bathtub spaces as a backer for noncontinuous waterproof surfaces such as tile or seamed waterproof panels."~~

~~19.04.R702.4.2 Ceramic tile; gypsum backer.~~

~~Add "Water resistant" to beginning of the section.~~

19.04.R703.2 Weather-resistant sheathing paper.

Delete exceptions 2 through 4.

19.04.R703.3.2 Horizontal siding.

Add the following:

"Exterior type plywood siding with a grooved pattern shall not be installed horizontally as the weather resistant siding."

19.04.R801.4 Roof-ceiling construction.

Add a new section as follows:

"*801.4 Sliding snow and ice.* Roofs shall be designed to incorporate features to prevent snow from being discharged onto public ways, onto adjoining property, onto or against other buildings or in a manner that blocks any required exit from any building excepting yards. Snow cleats or other devices may be approved where there are practical difficulties in complying with this section."

19.04.R802.3 Framing details.

Add a paragraph as follows:

"Minimum depth from roof sheathing to wall plate at exterior walls to be nine inches for habitable spaces."

19.04.R802.10.2 Trusses.

Add the following sentence to the end of the a paragraph as follows:

"Minimum depth of truss at exterior wall plate to be nine inches for habitable spaces."

19.04.R802.11.1 Roof tie-down; uplift resistance.

Add the following sentence to the second paragraph:

"Such ties shall be spaced no farther than 48 inches apart."

~~19.04R905.1 Roof covering application.~~

~~Add a paragraph as follows:~~

~~"Throughout all subsections within Section 905, Requirements of Roof Coverings, the installation of all types of roofing materials shall meet or exceed the minimum requirements as set out in R905.2, Asphalt Shingles. Additional requirements specific to roofing material types shall apply as long as they meet or exceed the requirements in R905.2."~~

19.04.R905.2.2 Asphalt shingles; slope.

Delete the words "two units" and substitute "three units" throughout.

19.04.R905.7.1.1 Requirements for roof coverings; wood shingles; Solid sheathing required.

Delete section 905.7.1.1.

19.04R.905.8.1.1 Requirements for roof coverings; wood shakes; Solid sheathing required.

Delete section 905.8.1.1.

19.04.MR10056.2 Exterior air intake.

Delete the last sentence and add the following:

"The exterior air intake shall be covered with a corrosion-resistant screen of 1/4-inch to 1/2-inch mesh."

19.04.N1101.1 Energy efficiency; general; scope.

Add the following sentence:

"This chapter of the IRC contains several references to the International Energy Conservation Code (IECC). The IECC is not adopted by the CBJ and is used herein as a reference only. A copy of the IECC is kept at the Juneau Permit Center and may be reviewed there or a copy may be obtained from the International Code Council."

And number the existing exception as "1."

And add the following exceptions:

"2. Cabins as defined in 19.01.202.

3. Remodeling.

4. Minor additions.

5. Restoration and rehabilitation work on a dwelling designated as a historic building under Title 19.01.202, Historic Buildings, where adherence to the thermal code would substantially detract from significant historic features of the building."

19.04.N1101.2 Compliance.

Delete this section in its entirety and replace with the following:

"For the purpose of this chapter the City and Borough of Juneau shall be classified as being located in Climate Zone 6."

19.04.TABLE_N1102.1 Simplified prescriptive building envelope thermal component criteria minimum required thermal performance (u-factor and r-value).

Change the values in the table for HDD 8,500–8,999 to read as follows:

HDD	MAXIMUM GLAZING U-FACTOR [Btu/(hr-ft ² -degrees-F)]	MINIMUM INSULATION R-VALUE [(hr-ft ² -degrees-F)/Btu]					
		Ceilings	Walls	Floors	Basement Walls	Slab perimeter R-value and depth	Crawl Space walls
8,500–8,999	0.35	R-38	R-19	R-19	R-19	R-14, 4 ft.	R-19

19.04.TABLE_N1102.1 Insulation and fenestration requirements by component^a

Change the values in the table for Climate Zone 6 to read as follows:

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC	CEILING ^h R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE AND DEPTH	CRAWL SPACE WALL R-VALUE
6	0.33	0.33	NR	49 or 38	20 or 13+5 ^g	15	30 ^f	15/19	15, 4 ft	15/19

And add the following footnote:

“h. The smaller value may be used with a properly sized, raised-heel truss.”

19.04.TABLE_N1102.1.2 Equivalent U-Factors

Change the values in the table for Climate Zone 6 to read as follows:

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
6	0.33	0.33	0.020	0.053	0.06	0.033	0.067/0.053	0.067

And add the following footnote:

“b. The first U-factor applies to continuous insulations, the second to framing cavity insulation; either meets the requirement.”

~~19.04.N1102.1.1.2~~ Energy efficiency; building envelope; exterior walls; steel-frame walls.

Add a new sentence as follows:

~~"Steel-framed walls shall have a thermal break."~~

~~19.04.N1102.1.2~~ Energy efficiency; building envelope; ceilings.

Delete the last sentence and add the following sentence and new paragraph:

~~"Mechanical and electrical penetrations shall be sealed by approved methods.~~

~~In pitched roof construction, compression of insulation at the outside building walls is permitted to allow for a minimum 1-inch ventilation space under the roof sheathing. Insulation shall be separated from chimneys and light fixtures by distance or barriers in accordance with the International Residential Code."~~

~~19.04.N1102.1.4~~ Energy efficiency; building envelope; floors.

Delete the subsection and add the following:

~~"The required R-value in Table N1102.1 shall apply to all floors exposed to unconditioned space.~~

~~*Exception:* Any floor area exposed directly to outside air shall meet the R-value requirement in Table N1102.1 for "Ceilings."" (JEC)~~

19.04.N1102.1.5 .2.6 Energy efficiency; building thermal envelope; basement walls.

Add the following sentence at the end of the paragraph:

"Insulation installed on the exterior of basement walls shall be of waterproof materials."

19.04.N1102.1.7 .2.8 Energy efficiency; building thermal envelope; crawl space walls.

In the first sentence, delete the words "when the crawl space is not vented to outside ~~air~~."

And add the following as the last sentence:

"Any openings provided for ventilation or access shall be capable of being positively closed to prevent winter air infiltration. The closure shall provide nominal R-10 minimum thermal performance. Insulation installed on the exterior of crawlspace walls shall be of waterproof materials."

19.04.N1103.2.1 Energy efficiency; systems; ducts; insulation.

Add the following sentence to the end of the paragraph:

"Exhaust ducts in attics shall be insulated to a minimum of R-4."

19.04.N1103.57 Energy efficiency; mechanical systems; piping insulation.

Add the following ~~sentence to the end of the paragraph~~ subsection:

"*N1103.7 Piping insulation.* All piping subject to damage from freezing shall be protected from freezing."

19.04.N11054 Energy efficiency; special standards.

Add a new IRC section as follows:

~~"19.04.N11054~~ *Special standards.* Unusual housing designs such as earth shelters or domes, or designs using solar energy as a principal heat source may be approved by the building official even though not in compliance with IRC Sections N1101-N11043 if the applicant makes a clear showing based on accepted engineering standards that it is not feasible to apply IRC Sections N1101-N11043 and that the structure is as thermally efficient as those which do comply with those sections."

19.04.M1306.1 General mechanical system requirements; clearances to combustibles; appliance clearances.

Add the following to the end of the paragraph:

"Such clearances shall be reduced only in accordance with Section M1306.2. Certain unlisted, heat-producing equipment shall be allowed provided it is installed in a manner so as to maintain the clearances to combustible construction specified in Tables M1306.2.1 and M1306.2.2. Clearances to combustibles shall include such considerations as door swing, drawer pull, overhead projections or shelving and window swing, shutters, coverings and drapes. Devices such as doorstops or limits, closers, drapery ties or guards shall not be used to provide the required clearances." (SFM)

19.04.Table M1306.2.1 Standard installation clearances, in inches for certain unlisted heat-producing appliances.

Insert table as follows: (SFM)

Table M1306.2.1 STANDARD INSTALLATION CLEARANCES, IN INCHES FOR CERTAIN UNLISTED HEAT-PRODUCING APPLIANCES

Appliances	Fuel	Above Top Of Casing Or Appliance	From Top and Sides of Warm-air Bonnet or Plenum	From Front (1)	From Back (6)	From Sides (6)
Residential - Type						
Furnaces - Floor For mounting on Combustible floors.	Solid	18(2)	18(2)	48	18	18
	Automatic Oil or comb. Gas-oil	36		12	12	12
Room Heaters(3) Circulating type.	Oil or Solid	36		24	12	12
Radiant or Other type.	Oil or Solid	36		36	36	36
Fireplace stove	Solid	48(4)		54	48(4)	48(4)
Incinerators Domestic types		36(5)		48	36	36
Appliances	Fuel	Above Top Of Casing Or Appliance	From Top and Sides of Warm-air Bonnet or Plenum	From Front (1)	From Back (6)	From Sides (6)
Woodstove (7)	Solid	36		36	36	36

Footnotes:

- (1) The minimum dimension shall be that necessary for servicing the appliance, including access for cleaning and normal care, tube removal, and similar items.
- (2) The dimension may be six inches (152mm) for an automatically stoker-fired forced-warm-air furnace equipped with 250 degree Fahrenheit limit control and with barometric draft control operated by draft intensity and permanently set to limit draft to a maximum intensity of 0.13-inch water gauge (32Pa).
- (3) Approved appliances must be installed on non-combustible floors and may be installed on protected combustible floors. Heating appliances approved for installation on protected combustible flooring shall be so constructed that flame and hot gases do not come in contact with the appliance base. Protection for combustible floors shall consist of four inch (102mm) hollow masonry covered with sheet metal at least 0.021 inch (0.5mm) thick (N0. 24 manufacturer's standard gauge). Masonry must be permanently fastened in place in an approved manner with the ends unsealed and joints matched so as to provide free circulation of air through the masonry. Floor protection shall extend 12 inches (305mm) at the sides and rear of the appliance, except that at least 18 inches (457mm) shall be required on the appliance-opening side or sides measured horizontally from the edges of the opening.
- (4) The 48 -inch (1219mm) clearance may be reduced to 36 inches (914mm) when protection equivalent to that provided by items 1 through 6 of Table M1306.2.2 (see below) is applied to the combustible construction.
- (5) Clearance above the charging door must be at least 48 inches (1219mm).
- (6) If the appliance is encased in brick, the 18-inch (457mm) clearance above and at sides and rear may be reduced to 12 inches (305mm).
- (7) Floor protection shall extend a minimum of 18 inches (457mm) from fire box opening and extending 12 inches (305mm) horizontally from each side of the firebox opening. Floor protection shall be not less than 3/8 inch (9.5mm) thick concrete, hollow metal, stone, tile or other approved non-combustible material.

19.04.Table M1306.2.2 Clearances, in inches with specified forms of protection.

Insert the following table: (SFM)

TABLE M1306.2.2 CLEARANCES, IN INCHES WITH SPECIFIED FORMS OF PROTECTION. (1,2)

TYPE OF PROTECTION		Where the standard clearance in Table M1306.2.1 with no protection is											
		36 Inches			18 Inches			12 Inches			6 Inches		
Applied to the Combustible Material Unless Otherwise Specified and Covering All Surfaces within the Distance Specified as the Required Clearance with No Protection (Thicknesses Are Minimum)		(X 25.4 for mm)											
		(X 25.4 for mm)		Above	Sides And Rear	Chimney or Vent Connector	Above	Sides and Rear	Chimney or Vent Connector	Above	Sides and Rear	Chimney or Vent Connector	Above
1.	1/4" in insulating mill board spaced out 1" (3)	30	18	30	15	9	12	9	6	6	3	2	3
2.	0.013" (No. 28 manufacturer's standard gage) steel sheet on 1/4" insulating millboard	24	18	24	12	9	12	9	6	4	3	2	2
3.	0.013" (No. 28 manufacturer's standard gage) steel sheet spaced out 1" (3)	18	12	18	9	6	9	6	4	4	2	2	2
4.	0.013" (No. 28 manufacturer's standard gage) steel sheet on 1/8" insulating mill board spaced out 1" (3)	18	12	18	9	6	9	6	4	4	2	2	2
5.	1 1/2" insulating cement covering on heating appliance	18	12	36	9	6	18	6	4	9	2	1	6
6.	1/4" insulating millboard on 1" mineral fiber batts reinforced with wire mesh or equivalent	18	12	18	6	6	6	4	4	4	2	2	2

1. For appliances complying with 2006 IMC Sections 304.2 and 304.3.
 2. Except for the protection described in Item 5, all clearances shall be measured from the outer surface of the appliance to the combustible material, disregarding any intervening protection applied to the combustible material.
 3. Spacers shall be of noncombustible material.

NOTE: Insulating millboard is a factory-made product formed of noncombustible materials, normally fibers, and having a thermal conductivity of I Btu -inch per square foot per degree Fahrenheit [1.73W/(m K)] or less.

19.04.M150~~12~~.1 Clothes dryer exhaust; general; outdoor discharge.

Delete the exception and add the following sentence:

"Condensing (ductless) clothes dryers shall not be used."

19.04.M150~~23~~.1 Range hoods; general.

Delete Exception.

19.04.M150~~56~~.2 Exhaust ducts; bathroom, laundry room, kitchen, HRV and listed exhaust ducts.

Add a new **IRC** subsection as follows:

"M15056.2 Bathroom, laundry room, kitchen, HRV and listed exhaust ducts. Bathroom, laundry room and kitchen room exhaust ducting and HRV ducting may be of smooth plastic, smooth metal or flexible metal. Corrugated ducting including metal corrugated or expandable type shall not be used. Ducting included as a part of a listed appliance may also be used as listed with that appliance. ~~Kitchen hood exhaust shall be of smooth metal.~~"

19.04.M1601.1 Duct construction; materials.

Add the following sentence to the end of this section:

~~"Environmental air and ventilation ducts shall comply with this chapter."~~

19.04.M1601.1.1 Above-ground duct systems.

In item 5, Add the following sentence:

~~"Gypsum products may not be used for bathroom, laundry room, clothes dryer, and kitchen room exhaust and HRV ducting."~~

19.04.M1601.3.1 Duct construction; joints and seams.

Add the following as the last sentence:

"No cloth tape, mesh or similar tapes are allowed. The use of foil tape is approved."

19.04.M1701.1 Combustion air; air supply.

Add a new sentence at the end of the section as follows:

~~"Garages with at least two single or one double car garage doors shall be assumed to meet the combustion air requirement unless the doors are unusually tight fitting."~~

19.04.M1703.2.1 Combustion air; size of openings.

Change "4,000 Btu/h" to "5,000 Btu/h" and "2,000 Btu/h" to "2,500 Btu/h".

19.04.M1801.1 Venting required.

Delete the words "except appliances listed and labeled for unvented use" from the first sentence.

19.04.1804.2.5 Chimneys and vents; direct vent terminations.

Add the following sentences:

"If such instructions do not specify the minimum dimension to air openings into the building, then that dimension shall be not less than 24 inches. An anticipated snow depth of 12 inches shall be used when determining the manufacturer's minimum vent termination height. Measurements shall be made to the bottom of the vent outlet."

19.04.M2101.11 Hydronic piping systems installation; occupant protection.

Add a new subsection to read as follows:

"*M2101.11 Occupant protection.* The surface temperature of piping located within normal reach of building occupants shall not exceed 120 degrees F."

19.04.M2203.8 Special piping and storage systems; installation; return piping.

Add a new subsection as follows:

"*M2203.8 Return piping.* Return piping shall terminate at the top of the fuel oil tank. Valves shall not be installed on return piping."

19.04.M2204.5 Oil pumps and valves; oil safety valves.

Add a new subsection as follows:

"*M2204.5 Oil safety valves.* On all oil-burning applications where the top of the oil storage tank is above the level of the oil burner, an oil safety device shall be installed at the burner to preclude oil siphoning."

19.04.G2406.2 Appliance location; prohibited locations.

~~Add a new exception as follows:~~ In the first sentence after "toilet rooms," add the following:

~~"5. Underfloor crawl spaces."~~

Also delete items 3 and 4.

19.04.G2406.4 Appliance location; liquefied petroleum gas facilities.

Add a new subsection as follows:

"*G2406.4 Liquefied Petroleum Gas Facilities.* Liquefied petroleum gas facilities shall not be located in any pit, basement, crawlspace, or interior stairways, in boiler, heater, or electric meter rooms. LPG facilities means appliances, tanks, containers, container valves, regulating equipment, meters, and/or appurtenances for the storage and supply of

LPG for any building structure or premises."

19.04.G2407.11 Combustion air ducts.

Delete Exception in Item 1 in its entirety.

And add new items to read as follows:

"9. Heating appliances using LPG shall have two combustion air openings. The lower opening shall be at floor level or below and shall be sloped down toward the exterior.

These systems shall be continuously ducted to outside the building."

"10. Use of underfloor areas for supply of combustion air to LPG burning appliances is prohibited."

19.04.G2413.3 Pipe sizing; sizing.

Add the following item:

"4. Sections 1216 and ~~1218~~ 1217 in the ~~2003~~ 2006 Uniform Plumbing Code shall be considered an acceptable method of sizing gas piping."

19.04.G2414.10.1 Pipe joints.

Add the following sentence to the end of the paragraph:

"All joints in underground ferrous piping shall be welded when any of the following conditions apply:

1. The nominal pipe diameter is 2 1/2 inch or larger.
2. The pipe is installed under a driveway.
3. Medium pressure systems."

19.04.G2414.10.2 Tubing joints.

Add the following sentence to the end of the paragraph:

"All joints in underground copper shall be brazed with wrought copper fittings. No underground joints shall be permitted unless the underground length of run exceeds 60 feet (18.3 m). All pipe to tubing transitions shall be made above ground."

19.04.G2414.10.4 Metallic fittings.

Delete the words "..or cast iron" from item 1.

19.04.G2415.4 Piping through foundation wall.

Delete this section in its entirety and replace with the following:

"All building fuel gas piping entrances and exits shall be located above grade or in an approved vented vault."

19.04.G2415.9 Minimum burial depth.

Add the following sentences to the end of the paragraph:

"Plastic and copper gas piping shall have at least 18 inches of earth cover or other equivalent protection. Warning tape shall be installed six inches above pipe for entire length of pipe."

19.04.G2417.4.1 Test pressure.

Replace the minimum test pressure of "3 psig" with "10 psig" and add the following sentence at the end of the paragraph:

"Required pressure tests of 10 psig shall be performed with gauges of 1/10 pound incrementation or less."

19.04.G2420.5 Equipment shutoff valve.

Delete the exception.

19.04.G2425.8 Equipment not required to be vented.

Delete Item 7.

19.04.G2427.8 Venting system location.

Change Item 3 to read:

"3. The vent terminal of a direct-vent appliance shall be as required in the manufacturer's installation instructions. If such instructions do not specify the minimum dimension to air openings into the building, then that dimension shall be not less than 24 inches."

Also add a new item 5 to read as follows:

"5. An anticipated snow depth of 12 inches shall be used when determining the manufacturer's minimum vent termination height. Measurements shall be made to the bottom of the vent outlet."

19.04.G2445 Unvented room heaters.

Delete the entire section and add the following:

"G2445 *Unvented Room Heaters*. Unvented room heaters shall not be used."

19.04.Part 7 Plumbing.

Delete IRC Part 7, Chapters 25 through 32, and refer to Title 19.06 for adoption of the Uniform Plumbing Code.

19.04.E3305.4 Equipment location and clearances; location of clear spaces.

Add the following within the second sentence, after the word "located" and before the word "in":

"on stairways, "

19.04.E3306.3 Minimum size of conductors.

Add the following as the second paragraph:

"Branch-circuit conductors supplying loads other than cooking appliances shall have an ampacity sufficient for loads served and shall not be smaller than AWG No. 10 copper for each storage-type electric water heater and AWG No. 12 copper for other uses; ~~provided that this requirement shall not apply to structures manufactured and wired outside the City and Borough if such structures have been inspected in the state of manufacture under a state approved inspection system and are certified as meeting the requirements of Chapters 33 through 42 of this code or NEC Section 210-19(A)(3).~~"

19.04.E3504.2.1 Overhead service-drop and service conductor installation; vertical clearances; above roofs.

Delete exception number 3.

19.04.E3504.4 Overhead service-drop and service conductor installation; means of attachment.

Add a new sentence to the end of the paragraph to read as follows:

"Where, in the opinion of the building official, conditions of terrain make it impractical to comply with this requirement, the building official may authorize the use of live trees for support of overhead conductor spans or other electric equipment."

19.04.E3504.5 Overhead service-drop and service conductor installation; service masts as

supports.

Add a new paragraph as follows:

"Exterior service equipment shall be protected from roof drainage and snow from roof eaves. Masts for aerial services shall be a minimum of two-inch rigid steel conduit."

19.04.E3603.2 Required branch circuits; kitchen and dining room area receptacles.

Delete the exception and ~~A~~add a new sentence as follows:

"A separate 20 ampere circuit shall be installed for each dishwasher and garbage disposal."

19.04.E3702.1 Above-ground installation requirements; installation and support requirements.

Add a new sentence as follows:

"Non-metallic sheathed cable shall not be installed when the temperature in the building or work area is below 20 degrees Fahrenheit (-7 C)."

~~**19.04.E3802.11 Ground-fault and arc-fault circuit interrupter protection, bedroom outlets.**~~

~~Delete subsection and add the following:~~

~~"E3802.11 Bedroom and smoke detection circuits. All branch circuits, including the interconnected smoke detector circuit, that supply 125-volt, single-phase, 15- and 20-ampere outlets or fixtures in dwelling unit bedrooms shall be protected by an arc-fault circuit interrupter listed to provide protection of the entire branch circuit."~~

19.04.Appendix A (IFGC) (IFGS) Sizing and capacities of gas piping.

IRC Appendix A (IFGC) (IFGS) Sizing and Capacities of Gas Piping is hereby adopted.

19.04.Appendix B (IFGC) (IFGS) Sizing of venting systems serving appliances equipped with draft hoods, category I appliances, and appliances listed for use and type B vents.

IRC Appendix B, (IFGC) (IFGS) Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I Appliances, and Appliances Listed for Use and Type B Vents is hereby adopted.

19.04.Appendix C (IFGC) (IFGS) Exit terminals of mechanical draft and direct-vent venting systems.

IRC Appendix C, (IFGC) (IFGS) Exit Terminals of Mechanical Draft and Direct-Vent

Venting Systems is hereby adopted. ~~with the following modification:~~

~~Delete the table under "DIRECT VENT TERMINAL" and retain the reference to Section G2427.8, Item 3.~~

19.04.Appendix D ~~(IFGC)~~ (IFGS) Recommended procedure for safety inspection of an existing appliance installation.

IRC Appendix D, ~~(IFGC)~~ (IFGS) Recommended Procedure for Safety Inspection of an Existing Appliance Installation is hereby adopted.

19.04.Appendix E Manufactured housing used as dwellings.

IRC Appendix E, Manufactured Housing used as Dwellings is hereby adopted.

19.04.Appendix F Radon control methods.

IRC Appendix F, Radon Control Methods is not adopted.

19.04.Appendix G Swimming pools, spas and hot tubs.

IRC Appendix G, Swimming Pools, Spas and Hot Tubs is hereby adopted.

19.04.Appendix H Patio covers.

IRC Appendix H, Patio Covers is hereby adopted.

19.04.Appendix I Private Sewage Disposal.

IRC Appendix I, Private Sewage Disposal is not adopted.

19.04.Appendix J Existing buildings and structures.

IRC Appendix J, Existing Buildings and Structures is hereby adopted.

19.04.AJ102.5 Appendix J Existing building and structures; compliance; flood hazard areas.

Delete this section and replace with the following:

“AJ102.5 Flood Hazard areas. Work performed in existing buildings that are determined to be substantial improvement or substantial damage, located in a flood hazard area as established by Table R301.2(1), shall meet the requirements of Section R323.”

19.04.AJ201.1 Appendix J Existing building and structures; definitions.

Add the following definitions:

“SUBSTANTIAL DAMAGE. Damage of any origin sustained by a structure for which the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the City and Borough of Juneau assessed value or 50 percent of appraised market value, supplied by owner or applicant, of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT. Any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the City and Borough of Juneau assessed value or 50 percent of appraised market value, supplied by owner or applicant, of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not include any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.”

19.04.Appendix K Sound transmission.

IRC Appendix K, Sound Transmission is hereby adopted.

19.04.Appendix L Permit Fees.

IRC Appendix L, Permit Fees is not adopted.

19.04.Appendix M Home Day care R-3 occupancy.

IRC Appendix M, Home Day care R-3 occupancy is not adopted.

19.04.Appendix N Venting methods.

IRC Appendix N Venting methods is not adopted.

19.04.Appendix O Gray water recycling systems.

IRC Appendix O Gray water recycling systems is not adopted.

19.04.Appendix P Sprinkling.

IRC Appendix P, Sprinkling is not adopted.

19.04.Appendix ~~L~~ Q ICC International residential electrical provisions/national electrical code cross reference.

IRC Appendix **L** **Q**, ICC International residential electrical provisions/national electrical code cross reference is hereby adopted.