

Presented by: The Manager  
Introduced: 05/15/2017  
Drafted by: A. G. Mead

## ORDINANCE OF THE CITY AND BOROUGH OF JUNEAU, ALASKA

Serial No. 2017-01

### An Ordinance Amending the Building Regulations Code.

BE IT ENACTED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF JUNEAU, ALASKA:

**Section 1. Classification.** This ordinance is of a general and permanent nature and shall become a part of the City and Borough of Juneau Municipal Code.

**Section 2. Amendment of Chapter.** The following sections of Chapter 19.01 Administrative Code, are amended to read:

#### **19.01.105.1.5 Fire code permits required.**

No person shall engage in the maintenance, storage, use or handling of any of the following materials or activities in the City and Borough or cause the same to be done without first obtaining a separate permit as specified in IFC Section 105, Permits, from the fire chief; provided, the fire chief may issue a single permit for a group of activities at a single location. Note that not all of the permits identified in IFC 105.6 and IFC 105.7 are required.

...

*19.01.105.1.5.11* Flammable and combustible liquids shall be subject to the permit requirements of IFC Section 105.7.7, items 1 and 2 when modifying a pipeline, tank, tank vehicle, or other flammable or combustible liquids equipment.

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#### **19.01.105.2.1 Exempt building work.**

A building permit shall not be required for the work described in subsections 1 through 16 of this section if only the provisions of the exempted code apply. Unless otherwise exempted, a permit shall be obtained for work associated with the exempt uses under subsections 1 through 16 of this section if any of the provisions of the plumbing, electrical, mechanical or fire codes apply:

1. One-story detached accessory buildings regulated under the residential code and used as tool and storage sheds, greenhouses, gazebos, saunas, hot tub enclosures, playhouses and similar uses, provided the floor area does not exceed 200 square feet (18.58 m) the building is not used for habitation, and no utilities are provided;
2. Fences as well as sign support structures and similar free-standing structures not over seven feet (2134 mm) high other than fences required for protection of swimming pools and hot tubs which are regulated by IRC Appendix AG105 or IBC Section 3109;
- ...
11. Swings, and other playground equipment, except as required under IBC 424;
- ...
16. Temporary event booths in place for no more than 72 hours, for the sole purpose of a sale or event and no utilities provided. (Fire Permits are still required.)

**19.01.105.2.7.1 Ordinary maintenance and replacement work.**

Permits shall not be required and shall not be issued for ordinary maintenance, repair or direct replacement work in a building or structure for work of a value of \$15,000.00 or less unless 1. electrical service equipment or electrical circuits are replaced or modified or 2. the structural system is modified or 3. the means of egress is altered or 4. Fuel appliances are replaced or installed. Individual structural elements may be directly replaced without a permit, however, replacement of structures requires a permit.

Permits may be issued for major remodels and/or renovation work that includes exempt finish work listed under 19.01.105.2.1 Exempt building work, item 7, if the work also includes other non-exempt work, and the valuation of all the work is greater than \$100,000.00.

...

**19.01.108.2 Schedule of building permit fees.**

The fee for each building permit shall be as set forth in section 19.01.108.8.

The fees for temporary structures will be based on the valuation of single wide pre-manufactured buildings.

**19.01.108.3 Building permit valuations.**

...

The building official may use the building valuation data provided by the model building code agency to assist in determining the value of the construction for which a permit is sought. The floor area used in conjunction with building valuation data shall mean the total area of all floors, measured from the interior face, interior dimensions or interior column line of a building, including basements, mezzanines and balconies, but not including unexcavated areas. The valuation shall be based on the highest type of construction to which the proposed structure most nearly conforms, as determined by the building official.

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**19.01.202 Definitions.**

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*Cabin* means a structure which is inhabited only occasionally for noncommercial hunting, fishing, or other recreational purposes, is without available public utility services, and is located outside of the urban service area.

...

**Section 3. Amendment of Chapter.** The following sections of Chapter 19.03 Building Code, are amended to read:

**19.03.010 International Building Code (IBC) adopted.**

For the purpose of regulating the erection, site construction, enlargement, alteration, repair, removal, demolition, conversion, occupancy, equipment, use, height, area and maintenance of all buildings and structures or portions thereof in the City and Borough, there is adopted by reference, as the building code of the City and Borough, that certain compilation of rules and regulations prepared by the International Code Council, a nationally recognized technical trade organization, which compilation is entitled "International Building Code, 2012 Edition," (IBC) and one copy which has been filed in the office of the municipal clerk of the City and Borough, or

places 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.

**19.03.305.2 Day care.**

At the end of the paragraph, add "including children related to the staff,"

**19.03.308.3 Group I-1.**

Add a new paragraph between the first and second paragraphs to read:

"Facilities within this occupancy classification that have occupants needing physical assistance to respond in emergency situations must comply with 19.03.426." (SFM)

**19.03.308.4 Group I-2.**

Change the last sentence to read:

"A facility such as the above with five or fewer persons, including persons related to the staff, shall be classified as a Group R-3" (SFM)

**19.03.308.4.1 Child care facility.**

Revise to read:

"A child care facility that provides care on a 24-hour basis to more than five children two and one-half years of age or less, including children related to the staff, shall be classified as Group I-2." (SFM)

**19.03.308.6 Group I-4; day care facilities.**

Amend the second sentence to read:

"A facility such as the above with five or fewer persons, including persons related to the staff, shall be classified as a Group R-3." (SFM)

**19.03.308.6.1 Adult care facility.**

Delete the exception. (SFM)

**19.03.310.1 Residential Group R.**

Add the following after the first sentence:

"For facilities within this occupancy classification that have occupants needing physical assistance to respond in emergency situations, see Section 19.03.427." (SFM)

**19.03.310.5 Residential Group: R-3.**

Add the following paragraph to the end of this section:

"Owner occupied bed and breakfast facilities or boarding houses that are within a single-family home and do not contain more than five guest rooms are permitted to comply with the International Residential Code in accordance with CBJ 19.01.101.4.2."

**19.03.310.6 Residential group R; R-4.**

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

"Foster Homes: Once a provider take in six or more (non-related) children, the occupancy is defined as an R-4, otherwise the occupancy if R-3." (SFM)

**19.03.406.3.4 Motor-vehicle-related occupancies; private garages and carports; separation.**

Revise paragraph 1 by deleting the words "½ inch (12.7 mm) gypsum board " and replacing it with " 5/8 inch (15.88 mm) Type X gypsum board". (SFM)

**19.03.425 Special security requirements for elevated buildings.**

Add a new section to read as follows:

"All elevated buildings with the lower floor level above grade and open on the sides must be fenced around the building exterior or have skirting below the exterior walls to prevent unauthorized access, if the building is higher than two foot to the underside of floor framing.

Exceptions:

1. Normally unoccupied buildings;

Buildings with F, H, S, and U occupancies."

3. All occupancies within an industrial area that is secured and there is no public access. (SFM)

**19.03.426 Carbon monoxide detectors and alarms.**

Add a new section to read as follows:

*426.1 Carbon Monoxide Detectors and Alarms.* The provisions of this section shall apply to Groups I-1, I-2, and all R occupancies. 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 all of the following
  - A. no combustion appliances
  - B. no attached garage, and
  - C. no vehicle parking within 25 feet of any direct air intake 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 2012 I.M.C.

*426.2 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.

*426.3 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 back-up.

#### **19.03.427 Occupants needing physical assistance.**

Add new sections to read as follows:

*427.1 Applicability.* The provisions of this section apply to all Groups I-1 and R-4 occupancies where the occupants need physical assistance from staff or others to respond to emergencies.

*427.2 Definitions.* In this section:

...

*427.3 Fire Drills and Evacuation Capability Determination.* The initial determination of evacuation capability will be determined by a fire drill conducted by a fire code official or by an employee of the Department of Health and Social Services responsible for licensing the facility. Changes to the evacuation capability will be made by a fire code official, based on a record of fire drills conducted by the facility staff. The drills will be conducted six times a year on a bimonthly basis, with at least two drills conducted during the night when residents are sleeping. Records must indicate the time taken to reach a point of safety, date and time of the drill, location of simulated fire origin, escape paths used, and comments relating to residents who resisted or failed to participate in the drills.

*427.4 Evacuation Capability and Fire Protection Requirements.* Fire protection requirements of a facility under this section are as follows:

*427.4.1 Prompt Evacuation Capability.* Evacuation capability of three minutes or less indicates prompt evacuation capability. In facilities maintaining prompt evacuation capability, the requirements of the code for Groups I-1 or R-4 occupancies must be followed.

*427.4.2 Slow Evacuation Capability.* Evacuation capability of more than three but less than 14 minutes indicates slow evacuation capability. In facilities maintaining slow evacuation capability, the facility must be protected by (a) an automatic smoke detection system, using addressable smoke detectors, designed and installed in accordance with the provisions of this code and N.F.P.A. 72-2007; and (b) an automatic sprinkler system, with quick-response or residential sprinklers, installed in accordance with section 903.3.1.2 (N.F.P.A. 13R-2007 "Sprinkler Systems") or 903.3.1.3 "N.F.P.A. 13D-2007 (Sprinkler Systems)".

*427.4.3 Impractical Evacuation Capability.* Evacuation capability of 14 minutes or more indicates impractical evacuation capability. In facilities maintaining impractical evacuation capability, the facility must be protected by (a) the protections for a facility with slow evacuation capability under Section 423.4.2; (b) one-half hour fire-resistive construction throughout the facility; and (c) direct egress from sleeping rooms for occupants needing evacuation assistance either (I) to the exterior at grade level, to an exterior porch or landing via a three feet six inch wide door; or (ii) if the sleeping rooms are separated from the rest of the building by smoke partitions installed in accordance with Section 710, by egress windows conforming to the provisions of Section 1029." (SFM)

#### **19.03.428 Unfinished space.**

Add a new section to read as follows:

*428.1 Unfinished space.* R occupancies containing unfinished space equal to or greater than 70 square feet 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-inch (559mm) × 30-inch (762mm) access hatch or only by a pull-down attic stair.



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 the building official.

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

**19.03.Table 509 Incidental uses.**

Revise by changing the wording in the first block under the left column to read:

"Furnace rooms in E, I and R-1, R-2 and R-4 occupancies regardless of Btu input, and furnace rooms of all other occupancies where the largest piece of fuel fired equipment is over 400,000 Btu per hour input." (SFM partial)

**19.03.Table 602 Fire-resistance rating requirements for exterior walls based on fire separation distance.**

Add footnote i. to read:

Combination shops related to an educational facility shall be considered an F-1 occupancy and shall be separated from the E occupancy according to this table. (SFM)

**19.03.718.4.2 Concealed spaces; draft-stopping in attics; Groups R-1 and R-2.**

Add a third sentence to read as follows:

"The intervening space between any two draft stops or walls shall be designed for adequate cross ventilation in accordance with Section 1203.2." (SFM)

**19.03.903.2.8 Automatic sprinkler systems; Group R.**

Delete entire existing section and subsections 903.2.8.1, 903.2.8.2 and 902.2.8.3 and replace with:

“903.2.8 An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout buildings containing Group R occupancies in this section.”  
(SFM)

#### **19.03.903.2.8.1 Group R-1.**

Add a new subsection as follows:

“An automatic sprinkler system shall be provided throughout all buildings that contain an R-1 occupancy.

Exceptions:

1. Five or fewer rental cabins.
2. Rental cabins without potable water.
3. Health clinics with transient quarters may utilize an NFPA 13R sprinkler system throughout the building.
4. Health clinics may utilize an NFPA 13D sprinkler system in the sleeping unit only, if the sleeping unit is separated from the building with a two hour fire barrier.” (SFM)

#### **19.03.903.2.8.2 Group R-2.**

Add a new subsection to read:

An automatic sprinkler system shall be provided throughout all buildings that contain an R-2 occupancy.

Exceptions:

1. Buildings that are no more than two stories in height, including basements and contain four or fewer dwelling units.
2. Buildings that are no more than two stories in height, including basements and contain 16 or fewer sleeping rooms.

For the purpose of this section, fire walls may be used to create up to three separate attached buildings. Any additional buildings must be physically separated in accordance with Table 602. (SFM)

**19.03.903.2.11.1 Automatic sprinkler systems; Specific building areas and hazards; stories without openings.**

In the first sentence, delete the words: "where the floor area exceeds 1,500 square feet (139.4 m<sup>2</sup>) and".

**19.03.907.2.3 Fire alarm and detection systems; Group E.**

Add a second paragraph to read as follows:

"Rooms used for sleeping or napping purposes within a day care use of a Group E occupancy must be provided with smoke alarms that comply with the requirements of section 907.2.11.2." (SFM)

**19.03.1009.4 Stairways; stairway width.**

Add the following exception:

5. Private Stairways may be 32 inches wide."

**19.03.1009.7.2 Stairways; stair treads and risers.**

Delete Exception 5 and add the following:

5. Private Stairways shall have stair riser heights of eight inches maximum and stair tread depths of nine inches minimum."

**19.03.1009.8 Stairway landings.**

Add the following exception:

"Landings are not required at the top or bottom of stairways accessing non-habitable building equipment rooms."

**19.03.1009.9.1 Stairway construction; stairway walking surface.**

Change the second exception to read as follows:

In Group R-3 and U occupancies, other than areas of parking structures accessible to the public, openings in treads and landings shall not be prohibited provided a sphere with a diameter of 1 1/8 inches (29 mm) cannot pass through the opening.

**19.03.1009.9.2 Stairway construction; outdoor conditions.**

Add the following sentence:

"In occupancies other than Group R-3 and Group U occupancies that are accessory to Group R-3 occupancies, surfaces and landings which are part of exterior stairs in climates with snow or ice shall be designed to minimize the accumulation of the snow or ice."

**19.03.1010.8.2 Ramp construction; outdoor conditions.**

Add the following sentence:

"In occupancies other than Group R-3 and Group U occupancies that are accessory to Group R-3 occupancies, surfaces and landings that are part of exterior ramps in climates with snow or ice shall be designed to minimize the accumulation of the snow or ice."

**19.03.1015.2.2 Three or more exits or exit access doorways.**

Add the following exception:

"Exception: Where access to three or more exits is required, the separation distance of the third exit door or exit access doorway shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served."

**19.03.1018.1 Corridors; construction.**

At the end of the paragraph add:

"R occupancies shall be permitted to have a one hour rated corridor without a sprinkler system when the corridor:

1. serves less than four dwelling units or 16 sleeping rooms; and  
is less than three stories in height.

**19.03.1021.2 Number of exits and exit configuration; Exits from stories.**

Add an exception to read:

Exception 8. Basements or the first level below the first story in all occupancies except R-3, used exclusively for the service of the building may have access to only one exit. Any other use of the basement or first level below the first story must have at least two exits arranged in accordance with Section 1015.2. For purposes of this exception, storage rooms, laundry rooms, maintenance offices and similar uses may not be considered as providing service to the building." (SFM)

**19.03.1029.1 Emergency escape and rescue; general.**

In the second sentence after "...sleeping rooms...", add the following:

"or other habitable room of 70 square feet or more and not used for cooking, eating or living room uses".

and delete exceptions 1 and 3 (SFM, deletions only)

**19.03.1029.6 Replacement emergency escape and rescue windows.**

Add a new subsection and new exceptions as follows:

"1026.6 Replacement emergency escape and rescue windows. Replacement windows for emergency escape and rescue shall meet full egress dimensions per IBC Sections 1029.1 through 1029.3 where rough openings allow.

Exceptions:

1. Where the existing rough opening does not allow for full emergency escape and rescue per IBC Sections 1029.1 through 1029.3, replacement windows shall have a minimum opening of 20 inches clear width, 22 inches clear minimum height, four 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 IBC Sections 1029.1 through 1029.3.

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/run requirements so the top step is no greater than 44 inches to the top of the sill."

#### **19.03.1607.9.3 Live loads; Geophysical hazard and snow impact loads.**

Add a new subsection as follows:

"1607.9.3 Geophysical hazard and snow 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."

#### **19.03.1607.12.2.1 Roof Loads; Ordinary roof, awnings, and canopies.**

Delete the second paragraph.

#### **19.03.1805.1 Dampproofing and waterproofing; general.**

Delete the first paragraph and add the following:

*"1805.1 Where required.* Walls or portions thereof that retain earth and enclose interior spaces and floors below grade shall be waterproofed and dampproofed in accordance with this section. All crawlspace walls below exterior grade shall be dampproofed."

**19.03.2901.1 Plumbing systems; general; scope.**

Delete the section and add the following:

*"2901.1 Scope.* The provisions of this chapter and the Uniform Plumbing Code adopted at section 19.06.1.010 and section 1210 of the IBC shall govern the installation, alterations, repairs, additions, and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and/or appurtenances, and where connected to a water or sewage and all aspects of a medical gas system. All references to the International Plumbing Code shall mean corresponding references in the Uniform Plumbing Code."

**19.03.2902.6 Plumbing systems; unoccupied storage occupancies.**

Add a new section as follows:

*"2902.6 Unoccupied storage occupancies.* Plumbing fixtures shall not be required in buildings which are primarily S occupancies where there are no employees and no owner-operated businesses such as mini-storage units, and private storage condominiums."

**19.03.3401.7 Existing structures; general; fire hazard in existing non-high rise structures.**

Add a new subsection as follows:

*"Section 3401.7 Fire hazard.* An existing building, regardless of occupancy, that exceeds the areas and heights allowed by Chapter 5 of this code or that does not conform to the requirements of Section 704, Fire resistive rated construction, Exterior walls, and in the building official's opinion presents a serious fire threat to adjacent property, will be required to have installed an approved automatic sprinkler system, fire walls, a combination of both, or other approved means intended to reduce the fire threat."

**19.03.3410.1 Moved structures.**

Delete section and add the following:

"3410.1 Buildings, structures and their building service equipment moved into or within the jurisdiction shall comply with the provisions of the International Existing Building Code."

**19.03.3411.1 Accessibility for existing buildings; scope.**

Add an exception as follows:

- "1. For existing R-3 buildings in residential zoned neighborhoods, disabled access requirements are not required for converting an R-3 to a mixed-use, R-3 and commercial-use building, as long as the owner of the commercial use both lives and works in the building. Presence of employees or public use does not reinstate disabled access requirements for this type of Home Occupation R-3 mixed use. Disabled access for the commercial use is required when the Home Occupation's commercial use is an E occupancy."

**Section 4. Amendment of Chapter.** Chapter 19.03 Building Code, is amended by deleting the following sections:

- |                   |   |
|-------------------|---|
| 19.03.310.2       | Definitions.  |
| 19.03.502.1       | Definitions.  |
| 19.03.603.1.3     | Combustible material in Type I and II construction: electrical.                     |
| 19.03.705.2       | Fire walls; projections.  |
| 19.03.804.4.1     | Combustible materials in Type I and II construction; minimum critical radiant flux. |
| 19.03.903.3.1.1.2 | Automatic sprinkler systems; Elevator hoistways and machine rooms.                  |
| 19.03.903.3.1.1.3 | Automatic sprinkler systems; Inspectors test valve.                                 |
| 19.03.907.1.2     | Fire alarm and detection systems; Fire alarm shop drawings.                         |
| 19.03.907.2.4     | Fire alarm and detection systems; Group F.  |
| 19.03.907.2.6.1   | Fire alarm and detection systems; Group I-1.  |



- 19.03.907.2.7 Fire alarm and detection system; Group M.
- 19.03.907.2.8.1 Fire alarm and detection system; Group R-1; manual fire alarm system.
- 19.03.907.2.9.1 Fire alarm and detection system; Group R-2; manual fire alarm system.
- 19.03.907.2.10.1 Fire alarm and detection system; Group R-4; manual fire alarm system.
- 19.03.1002 Definition of "private stairway."

**Section 5. Amendment of Chapter.** Chapter 19.03 Building Code, is amended by adding the following sections:

**19.03.305.2.4 Family child care homes.**

Add a new section to read: Section 305.2.4 Family Child Care Homes. Family child care homes occupied as their primary residence (Group R-3) operating between the hours of 6:00 a.m. and 10:00 p.m. may accommodate a total of 12 children of any age without conforming to the requirements of this regulation for Group E occupancy, except for fire extinguishers as required by Section 906, smoke alarms as required by Section 907.211.2, carbon monoxide alarms as required by Section 908, means of egress requirements of Section 1003, and emergency escape and rescue openings, as required by *International Fire Code*, including children related to the staff. All stories that are not at grade plane shall have access to two exits. (SFM)

**19.03.903.2.8.3 Group R-4.**

Add a new subsection to read:

“An automatic sprinkler system shall be provided throughout all buildings that contain an R-4 occupancy.”

**19.03.903.5 Automatic Sprinkler Systems; Testing and maintenance.**

Revise by adding a new sentence at the end of the paragraph to read: “A copy of the acceptance test certificate must be forwarded to the Division of Fire and Life Safety or the deferred authority having jurisdiction by the firm conducting the test within 30 days of the completion of installation.”

**19.03.903.6 Automatic sprinkler systems; Existing buildings; Group E.**

Add a new section as follows:

“An approved automatic fire extinguishing system must be installed in Group E occupancy in accordance with Section 903.2.3, as revised, whenever alterations, or additions are made to an existing structure containing a Group E occupancy.”

**19.03.904.1 Alternative automatic fire-extinguishing systems; General.**

Add a new sentence at the end of the paragraph to read: “A copy of the acceptance test certificate must be forwarded to the Division of Fire and Life Safety or the deferred authority having jurisdiction by the firm conducting the test within 30 days of the completion of the installation.”

**19.03.904.12 Alternative automatic fire-extinguishing systems; Water mist systems.**

Add a new section as follows:

“Water-mist fire-extinguishing systems shall be installed, maintained, periodically inspected and tested in accordance with NFPA 750 and their listing.”

**19.03.907.2.11.3 Fire alarm and detection systems; Interconnection.**

Add a new paragraph to read: “If more than 12 smoke alarms are interconnected the interconnecting means must be supervised in accordance with NFPA 72.”

**19.03.909.18 Acceptance tests.**

Add a new sentence at the end of paragraph to read: “A copy of the acceptance test certificate must be forwarded to the Division of Fire and Life Safety or the deferred authority having jurisdiction by the firm conducting the test within 30 days of the completion of the installation.”

**19.03.2902.2.1 Plumbing systems; Separate facilities; Family or assisted-use toilet facilities serving as separate facilities.**

In the first sentence after “family/assisted-use” add “/unisex.”

**Section 6. Amendment of Section.** Section 19.03.202 Definitions, is amended by adding the following definitions in alphabetical order:

*Bed and Breakfast* means an owner-occupied dwelling with not more than one dwelling unit and not more than five guest rooms used for lodging for compensation on a transient basis.

*Grade Plane* means a reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line, or where the lot line is more than six feet from the building, between the building and a point six feet from the building. 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  
The fill was placed within the last five years and is excavated so that exterior walls are constructed below the finished grade of the fill.

*Stairways, Private* means stairways within commercial occupancies serving one tenant only and not used by the public.

**Section 7. Amendment of Section.** Section 19.03.202 Definitions, is amended to read:

**19.03.202 Definitions.**

...

"Building, existing, is a building that:

- (A) was erected before December 5, 1956; or

(B) was erected before June 5, 2017 and complies with the building code regulations in effect at the time of construction." (SFM)

...

**Section 8. Amendment of Chapter.** The following sections of Chapter 19.04 Residential Code, are amended to read:

**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, 2012 Edition", and one copy which has 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;

2012 IPMC, Property Maintenance Code;

2012 IEBC, Existing Building Code;

2012 IBC Chapter 32, Encroachments into the Public Right-of-Way;

2012 UPC, Uniform Plumbing Code and Title 19.06, Plumbing Code;

2012 IFC, International Fire Code, in particular, Section 503, Fire Department Access and Appendix D, Fire Apparatus Access Roads.

**19.04.R302.1.1 Fire-Resistant Construction; Exterior walls.**

Add a new subsection to read as follows:

“302.1.1 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.R303.9 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 R307.1 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 2012 Uniform Plumbing Code Section 411.7 for shower dimension requirements."

**19.04.R310.6 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 m<sup>2</sup>).

*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.R311.9 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 202."

#### **19.04.R314.3 Smoke alarms; 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.R315 Carbon monoxide alarms.**

R315.1 Carbon monoxide alarms.

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.

*R315.4.1 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.

*R315.4.2 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.R317.1 Protection of wood and wood based products against decay; location required.**

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

**19.04.R320 Accessibility.**

Delete this section in its entirety.

**19.04.R322.1.7 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.R322.1.9 Flood-resistant construction; general; manufactured homes.**

Delete the last sentence and replace with the following:

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

**19.04.R322.2.1 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 two feet (610 mm) above grade in these areas may result in higher insurance rates."

**19.04.R322.3.2 Flood-resistant construction; coastal high-hazard areas (including V Zones); 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 R324.3.4 and R324.3.5."

**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 (3048 mm)" to read "two percent slope within five feet (1524 mm)."

**19.04.R404.1 Concrete and masonry foundation walls.**

Add the following paragraph to section R404.1:

"Concrete and masonry foundation walls may be designed per City and Borough "Standard CBJ Foundations" handout dated January 2016 and available in the office of the building official."

**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) class 1 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.R703.2 Water resistive barrier.**

Delete exception 2.

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

Add the following sentence to the second paragraph:

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

**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 add the following exceptions:

1. Cabins as defined in 19.01.202.
2. 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.N1101.10 Climate Zones.**

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.N1102.2.8 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.N1102.10 Energy efficiency; building thermal envelope; crawl space walls.**

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

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.N1103.3 Energy efficiency; Mechanical system.**

Add the following subsection:

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

**19.04.N1106 Energy efficiency; special standards.**

Add a new IRC section as follows:

" *N1104 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-N1103 if the applicant makes a clear showing based on accepted engineering standards that it is not feasible to apply IRC Sections N1101-N1103 and that the structure is as thermally efficient as those which do comply with those sections."

**19.04.M1601.4.1 Duct construction; Installation; Joints, seams, and connections.**

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.G2415.12 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.Part VII Plumbing.**

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

**Section 9. Amendment of Chapter.** Chapter 19.04 Residential Code, is amended by the deletion of the following sections:

- 19.04.R303.3           Kitchens, bathrooms, and laundry rooms.
- 19.04.R309.1           Garage; opening protection.
- 19.04.R313             Smoke alarms.
- 19.04.R318.1           Moisture vapor retarders; moisture control.

19.04.R324.3.3	Flood-resistant construction; Coastal high-hazard areas (including V Zones); foundations.
19.04.R403.1.4.1	Frost protection.
19.04.R404.5	Retaining walls.
19.04.R407.2	Steel column protection.
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.Table N1102.1	Insulation and fenestration requirements by component. <sup>a</sup>
19.04.Table N1102.1.2	Equivalent <i>U</i> -Factors
19.04.N1103.2.1	Energy efficiency; systems; ducts; insulation.
19.04.G2406.4	Appliance location; liquefied petroleum gas facilities.
19.04.G2415.4	Piping through foundation wall.
19.04.G2420.5	Equipment shutoff valve.
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 supports.
19.04.R602.7	Headers.
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.

**Section 10. Amendment of Chapter.** Chapter 19.04 Residential Code, is amended by the addition of the following sections:

**19.04.R302.2 Fire-Resistant Construction; Townhouses.**

Change the Exception to read: “A common 2-hour fire-resistance-rated wall assembly is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. Electrical installations shall be installed in accordance with Chapters 34 through 43. Penetrations of electrical outlet boxes shall be in accordance with Section R302.4.”

**19.04.R602.10 Wall bracing**

Delete Section 602.10 of the 2012 International Residential Code and refer to Section 602.10 of the 2006 International Residential Code.

**19.04.R602.11 Wall anchorage.**

Delete Section 602.11 of the 2012 International Residential Code and refer to Section 602.11 of the 2006 International Residential Code.

**19.04.Part VIII Electrical**

Delete IRC Part VIII, Chapters 34 through 41, and refer to Title 19.08 for adoption of the National Electrical Code.

**Section 11. Amendment of Chapter.** The following sections of Chapter 19.05 Existing Building Code, are amended to read:

**19.05.010 International Existing Building Code (IEBC) adopted.**

For the purpose of providing an alternative method of regulating the enlargement, alteration, repair, moving, conversion, occupancy, and use of existing buildings and structures or portions thereof in the City and Borough, there is adopted by reference, as the existing Building

Code of the City and Borough, that certain compilation of rules and regulations prepared by the International Code Council, a nationally recognized technical trade organization, which compilation is entitled "International Existing Building Code, 2012 Edition," (IEBC) and one copy which has been filed in the office of the municipal clerk of the City and Borough, or places 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.

**19.05.202 Definitions.**

Delete the definition of "Existing Building" and add the following:

"Existing Building is a building that:

- (A) was erected before December 5, 1956; or
- (B) was erected before June 5, 2017 and complies with the building code regulations in effect at the time of construction."

...

**19.05.702.4 Alterations - level 1; materials and methods.**

Delete reference to "International Energy Conservation Code"

**19.05.707 Alterations-level 1; energy conservation.**

Delete this section in its entirety.

**19.05.810.1 Alterations - level 2; plumbing; minimum fixtures.**

Delete reference to "International Plumbing Code" and replace with "International Building Code" or "International Residential Code" as applicable.

**19.05.811 Alterations - level 2; energy conservation.**

Delete this section in its entirety.

**19.05.908 Alterations - level 3; energy conservation.**

Delete this section in its entirety.

**19.05.1010.1 Change of occupancy; plumbing; increased demand.**

Delete reference to "International Plumbing Code" and replace with "International Building Code" or "International Residential Code" or "Uniform Plumbing Code" as applicable.

**19.05.1012.8 Change of occupancy; change of occupancy classification; accessibility.**

Add an exception as follows:

For existing R-3 buildings in residential zoned neighborhoods, disabled access requirements are not required for converting an R-3 to a mixed-use, R-3 and commercial-use building, as long as the owner of the commercial use both lives and works in the building. Presence of employees or public use does not reinstate disabled access requirements for this type of Home Occupation R-3 mixed use. This exception does not apply when Home Occupation is combined with an E occupancy serving more than 12 children.

**19.05.1401.2 Performance compliance methods; applicability.**

Delete the phrase starting with "[Date to be inserted by the jurisdiction?" and insert the following: "the date specified in the definition of Existing Building in section 202, Definitions."



**Section 12. Amendment of Chapter.** The following sections of Chapter 19.06 Plumbing Code, are amended to read:

**19.06.1.010 Uniform Plumbing Code (UPC) adopted.**

For the purpose of regulating the erection, construction, reconstruction, addition, enlargement, conversion, equipment, use and maintenance of all plumbing within and without all buildings and structures or portions thereof within the City and Borough, there is adopted by reference as the plumbing code of the City and Borough, that certain compilation of rules and regulations prepared and published by the International Association of Plumbing and Mechanical Officials, a nationally recognized technical trade organization, which compilation is entitled "Uniform Plumbing Code, 2012 Edition," (UPC) and one copy which has been filed in the office of the municipal clerk of the City and Borough or at such places as 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.

**19.06.1.312.1 Protection of piping, materials, and structures.**

Add the following sentence to the end of the paragraph:

"Sleeve to have an internal diameter 2" larger than the pipe the sleeve is protecting when penetrating a foundation wall. Pipe to be centered in sleeve to allow 1" of annular space around the pipe."

**19.06.1.312.7 Protection of piping, materials and structures.**

Delete remainder of sentence after Table 14-1.

**19.06.1.422.0 Minimum number of required fixtures.**

Delete section and refer to IBC Section 2902.1, Table 2902.1, Minimum Number of Plumbing Facilities except that for assembly areas containing auditoriums, convention halls, stadiums, and casinos, the ratios of fixtures shall be as follows:

1. the number of water closets required for females are changed to provide
  - a. four water closets for 1—50 females;

- b. six water closets for 51—100 females;
  - c. 10 water closets for 101—200 females;
  - d. 14 water closets for 201—400 females; and
  - e. one additional water closet for each 100 females over 400 females; and
2. the number of lavatories required for females and males are changed to
- a. one lavatory for each water closet up to four water closets; and
  - b. one additional lavatory for each two additional water closets beyond four water closets. (DOL)

**19.06.1.504.1.3 Water heater requirements; location.**

Add a new paragraph as follows:

"Installation of gas water heaters in crawl spaces is prohibited."

**19.06.1.507.5 Relief valve discharge.**

Delete section 508.5.

**19.06.1.603.1 Cross-connection control; General.**

Add the following to the end of the first sentence:

". . . and with provisions of section 19.06.2."

**19.06.1.Table 604.1.**

Delete "Asbestos-Cement" from the table.

**19.06.1.604.2 Materials; Copper Tube.**

Delete the exception.

**19.06.1.609.3.2 Installation; Under Concrete Slab.**

Add the following as the first sentence:

"Copper pipe and tubing shall be protected from direct contact with concrete or cinder blocks by a minimum of 0.025 inch (0.64mm) approved sheathing or wrapping ."

**19.06.1.701.1.2 Drainage Piping.**

Delete the words "Chapter 15 "Firestop Protection and replace with the words "the building code".

**19.06.1.701.1.7 Drainage Piping.**

Add a new exception as follows:

"701.1.7 ABS, PVC, and cast iron shall not be used underground where it passes underneath the foundation within one foot of building walls or footings unless adequately sleeved with schedule 40 steel or ductile iron with a minimum one inch annular space to a point two feet on each side of the wall or footing."

**19.06.1.710.3.3 Sanitary drainage; drainage of fixtures located below the next upstream manhole or below the main sewer level; Sewage Ejector Pumps.**

Delete the words "three (3) inches (80 mm)" and replace with the words "two (2) inches (50mm)".

**19.06.1.903.1.2 Vents; materials; Applicable Standards.**

Delete reference to "Chapter 15 Firestop Protection " and replace with "the Building Code."

**19.06.1.1002.2 Horizontal lengths of trap arms.**

Add footnote \*\* after the words "Horizontal Lengths of Trap Arm" and below Table 1002.2 add the following:

\*\*\* Trap arms for residential floor drains may be extended beyond the limits of Table 1002.2 to where they pass under the nearest wall before installing the required vent."

**19.06.1.1101.5.1 Subsoil drains; Discharge.**

Add the following to the beginning of the paragraph:

"When required by the administrative authority..."

**19.06.1.1101.11.2.2.2 Combined systems.**

Delete this section in its entirety.

**19.06.1.Chapter 12 Fuel gas piping.**

In addition to the fuel gas pipe sizing requirements in this chapter, the fuel gas pipe sizing methods in the International Fuel Gas Code shall be considered acceptable methods of sizing fuel gas piping.

**19.06.1.Chapter 15 Firestop protection.**

Delete UPC Chapter 15 in its entirety. Refer to Chapter 7 of the International Building Code.

**19.06.1.Chapter 16 Gray water systems.**

Delete UPC Chapter 16 in its entirety.

**APPENDICES**

If a specific appendix is not listed as adopted it is deleted.

**19.06.1.UPC Appendix C Alternate plumbing systems.**

UPC Appendix C is adopted.

**Section 13. Amendment of Chapter.** The following sections of Chapter 19.06 Plumbing Code, are deleted in their entirety.

**19.06.1.1101.5.6 Subsoil drains.**

**19.06.1.UPC Appendix L Alternate plumbing systems.**

**Section 14. Amendment of Chapter.** The following sections of Chapter 19.07 Mechanical Code, are amended to read:

**19.07.010 International Mechanical Code (IMC) adopted.**

For the purpose of regulating the erection, installation, alterations, repair, relocation, replacement, addition to, use, design, quality of materials, location and maintenance of heating, ventilating, cooling and refrigeration systems, incinerators, and other miscellaneous heat-producing appliances within and without all buildings and structures and portions thereof within the City and Borough, there is adopted by reference as the mechanical 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 Mechanical Code, 2012 Edition," (IMC) and one copy which has been filed in the office of the municipal clerk of the City and Borough or at such other places 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.

**19.07.Table 304.8 Standard installation clearances, in inches for certain unlisted heat-producing appliances.**

Insert table as follows: (SFM)

Table 304.8 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
Commercial - Type Low Heat Appliances						

Unit Heaters Floor mounted any size.	All fuels	18		48	18	18
Other low-heat Industrial Appliances. Floor mounted or suspended.	All fuels	18	18	48	18	18
Commercial Industrial - Type Medium Heat Appliances						
Incinerators All sizes.		48		96	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 (No. 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 304.8 (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).

**19.07.Table 304.9 Clearances, in inches with specified forms of protection.**

Insert the following table: (SFM)

Table 304.9 Clearances, in inches with specified forms of protection. (1,2)

TYPE OF PROTECTION	Where the standard clearance in Table 304.8 with no protection is												
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)	36 Inches			18 Inches			12 Inches			6 Inches			
	(× 25.4 for mm)												
(× 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	Sides and Rear	Chimney or Vent Connector	
1.	¼" 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 ¼" insulating millboard	24	18	24	12	9	12	9	6	4	3	2	2
3.	0.013" (No. 28 manufacturer's	18	12	18	9	6	9	6	4	4	2	2	2



	standard gage) steel sheet spaced out 1" (3)												
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.	1½" insulating cement covering on heating appliance	18	12	36	9	6	18	6	4	9	2	1	6
6.	¼" 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 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.

**19.07.304.13 Installation; aircraft servicing and storage areas.**

Add a new subsection as follows:

"304.13 Aircraft servicing and storage areas. Overhead heaters installed in aircraft storage or servicing areas shall be at least ten feet (3048 mm) above or away from the upper surface of wings or engine enclosures of the tallest aircraft which may be housed in the hangar."

**19.07.501.3 Exhaust discharge.**

Delete the exceptions and add the following to the second sentence:

"unless it is part of an engineered ventilation system."

**19.07.504.1 Clothes dryer exhaust; installation.**

Delete the exception and add the following sentence:

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

**19.07.603.1 Duct construction and installation; general.**

Add the following sentence:

"Bathroom, laundry room and kitchen room exhaust ducting and HRV ducting may be of smooth plastic, or smooth metal. Ducting included as a part of a listed appliance may also be used as listed with that appliance."

**19.07.604.1 Duct systems; insulation; general.**

Delete the words "and the International Energy Conservation Code." (SFM)

Add to the end of the paragraph:

All supply and return air ducts and plenums shall be insulated with a minimum of R-5 insulation when located in unconditioned spaces and with a minimum of R-8 insulation when located outside the building envelope. When located within a building envelope assembly, the duct or plenum shall be separated from the building exterior or unconditioned or exempt spaces by a minimum of R-8 insulation.

Exceptions:

1. When located within equipment.
2. When the design temperature difference between the interior and exterior of the duct or plenum does not exceed 15°F (8°C).

**19.07.929.1 Unvented room heaters.**

Add a new section as follows:

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

**19.07.1105.3 Machinery room, general requirements; Refrigerant detector.**

Add a second sentence to read as follows:

"Refrigerant detectors shall alarm both inside and outside the machinery room."

**Section 15. Amendment of Chapter.** The following sections of Chapter 19.07 Mechanical Code, are deleted in their entirety.

**19.07.601.4 Contamination prevention.**

**19.07.709.1 Combustion air; opening obstructions; general.**

**19.07.1105.6.2 Refrigeration; makeup air.**

**Section 16. Amendment of Chapter.** The following sections of Chapter 19.09 Fuel Gas Code, are amended to read:

**19.09.010 International Fuel Gas Code (IFGC) adopted.**

For the purpose of regulating the installation, alterations, repair, relocation, replacement, addition to, use, design, quality of materials, location and maintenance of fuel gas piping systems, fuel gas utilization equipment and related accessories within and without all buildings and structures and portions thereof within the City and Borough, there is adopted by reference as the Mechanical 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 Fuel Gas Code, 2012 Edition," and one copy which has been filed in the office of the clerk of the City and Borough or at such other places designated by the 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 following enumerated additions, deletions and changes.

**19.09.101.2 Administration, general, scope.**

Add an Exception as follows:

"2. As an alternative to the provisions of this code, fuel gas piping systems and fuel gas water heaters shall be permitted to comply with the appropriate provisions of the 2012 Uniform Plumbing Code."

**19.09.202 General definitions.**

Add the following definitions:

"ICC Electrical Code shall mean appropriate corresponding references in the 2014 National Electrical Code adopted at CBJ 19.08.010."

**19.09.305.13 Installation; aircraft servicing and storage areas.**

Add a new section as follows:

*305.9 Aircraft Servicing and Storage Areas.* Overhead heaters installed in aircraft storage or servicing areas shall be at least 10 feet (3048 mm) above or away from the upper surface of wings or engine enclosures of the tallest aircraft which may be housed in the hangar.

**19.09.404.20 Piping system installation; frost heave.**

Add a new subsection as follows:

*404.20 Frost heave.* At all points where fuel gas piping enters or leaves the ground there shall be installed, above ground, a connection capable of absorbing relative motion due to frost heave action. Such connectors shall be of a type approved by the building official and installed in such a manner to absorb a 6-inch (152 mm) displacement in any direction. A wire braided kink-proof flexible connection with woven jacket and oil proof synthetic tube and cover and neoprene liner may be used. Supporting wire shall run the full length of hose. Hose-to-pipe connectors are to be of the removable metal compression type.

Temperature range shall be -40 degrees F (-40C) to +250 degrees F (121C). (Aeroquip #1503 medium-pressure single-wire braid hose equipped with non-swivel male pipe fittings is an example of a suitable connector.)

**19.09.404.21 Piping system installation; flex connectors.**

Add a new subsection as follows:

*404.21 Flex connectors.* Flex connectors listed for outdoor use may be used between meter and house main. No flex connector may pass through any wall, partition, panel or other barrier. Solid fittings shall be used on each end."

**19.09.404.22 Piping system installation; mobile homes.**

Add a new subsection as follows:

*404.22 Mobile homes.* Pounds to inches water-column regulators serving mobile homes and connected to copper tubing shall be attached directly to the inlet connection on the exterior of the mobile home, and shall not be located under the mobile home. An approved gas valve shall be installed immediately preceding the regulator."

**Section 17. Amendment of Chapter.** Chapter 19.09 Fuel Gas Code, is amended by repealing the following sections in their entirety:

**19.09.404.4 Piping through foundation wall.**

**Section 18. Amendment of Chapter.** The following sections of Chapter 19.10 Fire Code, are amended to read:

**19.10.010 International Fire Code (IFC) adopted.**

For the purpose of regulating the storage, handling and use of hazardous substances, materials and devices and other conditions hazardous to life or property in the use or occupancy of buildings or premises or portions thereof in the City and Borough, there is adopted by reference as the fire code of the City and Borough that certain compilation of rules and regulations jointly prepared and published by the International Code Council, a nationally recognized professional and trade organization, which compilation is entitled "International Fire Code, 2012 Edition," (IFC) and once copy which has been filed in the office of the municipal clerk of the City and Borough or such other places as 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.

...

**19.10.202 Definitions.**

The first sentence of the definition of "Airport" is revised to delete the words "with an overall length greater than 39 feet (11887 mm) and an overall exterior fuselage width greater than 6.6 feet (2012 mm)". (SFM)

...

And add an exception under the definition "Educational Group E, Day care" to read:

"Exception. Family child care homes (Group R-3) operating between the hours of 6:00 a.m. and 10:00 p.m. may accommodate a total of 12 children of any age without conforming to the requirements of this regulation (E occupancy) except for smoke detectors and alarms as described in Subsection 907.2.10; carbon monoxide detectors and alarms as specified in 19.03.425; means of egress requirements of Section 1003, including emergency escape and rescue openings, as required by Section 1029, in napping or sleeping rooms; and portable fire extinguisher requirements as described in Section 906." (SFM)

Add a new paragraph between the first and second paragraphs of the definition of "Institutional Group I-1" in "Occupancy Classification" to read:

"A facility in this occupancy classification that has occupants who need physical assistance to respond in emergency situations must comply with the International Fire Code, Section 405." (SFM)

...

Add a new paragraph to the definition for R-4 in "Residential Group R" of "Occupancy Classification between the first and second paragraphs to read: "Facilities within this occupancy classification that have occupants needing physical assistance to respond in emergency situations must comply with the International Fire Code, Section 405."

And add the following definitions:

"Service is the annual test, maintenance or service defined and required by applicable fire protection system maintenance standards set out in Table 901.6.1." (SFM)

"STAIRWAYS, PRIVATE" are stairways within commercial occupancies serving one tenant only and not used by the public."

#### **19.10.308.1 Open flame.**

Delete IFC Section 308.1 and add the following:

*"308.1 Open flame.* The use of open flame in connection with a public meeting or gathering for the purposes of deliberation, worship, entertainment, amusement, instruction, education, recreation, awaiting transportation or similar purposes in assembly or educational occupancies shall be done in consultation with the fire department." (SFM)

#### **19.10.501.3 Fire service features; general; construction documents.**

Add a second paragraph to read:

"The fire chief of the registered department may require fire apparatus access roads, premises identification, key boxes, fire protection water supplies, fire protection and utility equipment identification and access, and emergency responder radio coverage in accordance with this chapter. Documentation shall be provided indicating that the fire chief has been involved in discussion regarding fire apparatus access roads, premises identification, key boxes, fire protection water supplies, fire protection and utility equipment identification and access, and emergency responder radio coverage."

**19.10.507.3 Fire flow.**

Delete IFC Section 507.3 and add the following:

*"508.3 Water supplies for the fire flow requirements for buildings or portions of buildings and facilities shall be calculated using the provisions of Appendix B and Table B105.1."*

**19.10.703.2.3.1 Door operation; operation.**

Add a new subsection as follows:

*" 703.2.3.1 Operation. Fire assemblies shall not be obstructed or otherwise impaired from their proper operation at any time. When two or more self-closing fire assemblies within a building have been documented as having been obstructed or impaired during three or more inspections, the fire code official may order the installation of automatic closing devices meeting the requirements of Subsection 1008.1.9.9 and item 5 of the IBC." (SFM)*

**19.10.901.4.7 Fire protection systems; installation; marking of fire protection equipment and fire hydrants.**

Add a new subsection as follows:

*" 901.4.5 Marking of fire protection equipment and fire hydrants. Fire Department connection devices for building sprinkler systems in new and existing buildings shall be identified by the installation of approved reflective markers or signs installed above the device in an unobstructed location at approximately 7 feet above grade."*

**19.10.903.2.3 Automatic sprinkler systems; Group E.**

Delete IFC Section 903.2.3, and add the following:

*"903.2.3 Group E. An automatic sprinkler system shall be provided throughout all buildings in Group E occupancies and for every portion of educational buildings below the level of exit discharge. The use of a firewall does not constitute a separate building for the purposes of this section."*



Exception: Buildings with E occupancies having an occupant load of 49 or less.

Day care uses that are licensed to care for more than 5 persons between the hours of 10:00 p.m. and 6:00 a.m. shall be equipped with an automatic sprinkler system designed and installed in accordance with Subsection 903.3.1.3, or an approved equivalent system." (SFM)

**19.10.903.2.8 Automatic sprinkler systems; Group R.**

Revise 903.2.8 as follows:

An automatic sprinkler system must be installed in Group R occupancies except as required in 903.2.8.1 through 903.2.8.4.

**19.10.903.2.8.3 Automatic sprinkler systems; Group R-1.**

Add a new subsection as follows:

Health Clinics with Transient Quarters may utilize a 13D sprinkler system throughout the building; a fire barrier can be utilized to separate the building and utilize a 13R. In addition, a rental cabin with potable water with stays less than 30 days will be considered R-1 and will be required to follow this section.

**19.10.903.2.8.4 Automatic sprinkler systems; Group R-2.**

A new subsection as follows:

An automatic sprinkler system or a residential sprinkler system installed in accordance with Section 903.3.1.2 must be provided throughout all buildings with a Group R-2 fire area that are more than two stories in height, including basements, or that have more than four dwelling units or 16 sleeping rooms.";

**19.10.903.2.11.3 Automatic sprinkler systems; Buildings 55 feet or more in height.**

Delete subsection 903.2.11.3, and the Exceptions and add the following:

*"903.2.11.3 Buildings over three stories or more than 35 feet in height. An automatic fire sprinkler system shall be installed throughout all buildings more than three stories in height or where any portion is more than 35 feet above or below fire department vehicle access. This requirement shall not affect the sprinkler substitutions in IBC Chapter 5, General Building Heights and Areas and IBC Chapter 7, Fire Resistance-Rated Construction."*

**19.10.903.6.1 Automatic sprinkler systems; existing buildings; educational occupancies.**

Add a new subsection as follows:

*"903.6.1 Educational occupancies. An approved automatic fire extinguishing system shall be installed in an E Occupancy in accordance with Section 903.2.2, as revised, whenever alterations, repairs or additions are made to an existing structure containing an E Occupancy." (SFM)*

**19.10.907.2.3 Fire alarm and detection systems; Group E.**

Add a second paragraph as follows:

*"Rooms used for sleeping or napping purposes within a day care use of a Group E occupancy must be provided with smoke alarms that comply with the requirements of section 907.2.12.2." (SFM)*

And delete exception 3. (SFM)

**19.10.1009.4 Stairway width.**

Add the following exception:

*"5. Private Stairways, as defined in Chapter 2, may be 32 inches wide."*

**19.10.1009.7.2 Stairways; stair treads and risers; Riser height and tread depth.**

Add the following:

"8. Private Stairways, as defined in Chapter 2, shall have stair riser heights of 8 inches maximum and stair tread depths of 9 inches minimum."

**19.10.1009.8 Stairway landings.**

Add the following exception:

"2. Landings are not required at the top or bottom of stairways accessing non-habitable building equipment rooms."

**19.10.1009.9.2 Stairway construction; outdoor conditions.**

Insert ", snow or ice" after the word "water". (SFM)

**19.10.1009.13 Alternating tread devices.**

Insert the following to the last line of the first paragraph between the words "in area" and the words "and for access to unoccupied roofs."

"; in buildings covered by the IRC and Group R-3 sleeping and other lofts or similar separate spaces of not over 250 square feet and not containing kitchens"

**19.10.1010.8.2 Ramp construction; outdoor conditions.**

Insert ", snow or ice" after the word "water". (SFM)

**19.10.3201.2 High-piled combustible storage; permits.**

Delete IFC Section 2301.2 and replace with the following:

"A permit shall be required as set forth in 19.01.108.15.1."

**19.10.5001.5 Hazardous materials - general provisions; permits.**

Add a new paragraph at the end of the subsection as follows:

"For purposes of storage and transport of hazardous materials at, through or near marine facilities, NFPA 307-1995, Standard for the Construction and Fire Protection of Marine Terminals, Piers and Wharves, shall apply."

**19.10.5601.1.3 Explosives and fireworks; general; fireworks.**

Section 5601.1.3 is revised, with the exceptions remaining, to read: "The storage, use, and handling of fireworks is prohibited except as allowed in this section and AS 18.72."; (SFM)

**19.10.5608.2 Firework display; permit application.**

Delete and add the following:

" *Permit application.* A license or permit must be obtained from the State Fire Marshal's office to conduct fireworks activities as described in Section 105.6 of the IFC including:

- (1) a Wholesaler's License, as described in AS 18.72, to sell, or possess for sale, 1.4G or 1.3G fireworks at wholesale;
- (2) a Retailer's Permit, as described in AS 18.72, for each location where the applicant intends to sell, or possess for sale, 1.4G fireworks at retail;
- (3) a Pyrotechnic Operator's Permit to conduct a fireworks display or non-routine testing of 1.3G fireworks, or to possess fireworks for display or non-routine testing of 1.3G fireworks;
- (4) a Fireworks Event Permit for each event involving public or private display of any amount of 1.3G fireworks or 250 gross pounds (113.4 kg) of salable fireworks;  
or
- (5) an Annual Permit for routine testing of 1.3G fireworks.

A permit under (5) of this subsection may be obtained from the State Fire Marshal's office or, on a form approved by the State Fire Marshal, from the fire chief.

An applicant for a Fireworks Event Permit under item (4) of this subsection or for testing under item (5) of this subsection must hold a valid Pyrotechnic Operator's Permit under item (3) of this subsection." (SFM, partial)

**19.10.5608.2.3 Fireworks display; permit application; delivery of fireworks.**

Add a new subsection as follows:

*"5608.2.3 Delivery of fireworks.* The delivery of fireworks to locations within this jurisdiction is prohibited unless the vendor first obtains a license or permit from the state fire marshal and operates in a manner consistent with AS 18.72 and this section."

**19.10.5608.6.1 Fireworks display; installation of mortars; mortar construction.**

Add a new subsection to read:

*"5608.6.1 Mortar construction.* Mortars must be constructed of paper, high density plastic pipe, or metal other than cast iron." (SFM)

**19.10.5701.4 Flammable and combustible liquids; permits.**

Delete subsection 5701.4 Permits.

**19.10.5703.4 Flammable and combustible liquids; storage; spill control and secondary containment.**

Add the following sentence to the end of the paragraph:

"Dikes shall be constructed as per NFPA Standard 30, Section 2-3.4.3"

**19.10.5704.2.13.1.4 Flammable and combustible liquids; tanks abandoned in place.**

Delete item 5;

And add the following to the end of item 3:

"such as sand or concrete."

**19.10.5704.3.5.1 Flammable and combustible liquids; storage; basement storage.**

Delete IFC Section 5704.3.5.1 in its entirety.

**19.10.5801.3 Flammable gases; general; plan review.**

Add a new subsection to read:

*"5801.3 Plan Review.* Where a single container or the aggregate capacity of all containers at a site is over 500-gallon (1892.7 L) water capacity, the installer shall submit plans for review before installation in accordance with 13 AAC 50.027." (SFM)

**19.10.6101.2 Liquefied petroleum gases; permits.**

Delete IFC subsection 6101.2 in its entirety.

**19.10.Chapter 80 Referenced standards; NFPA.**

In IFC Chapter 80, NFPA, add the following standards to those listed and delete listings for other years' editions of the same standards:

NFPA 10, 2010, NFPA 13, 2010, NFPA 13D, 2010, NFPA 13R, 2010, NFPA 14, 2010, NFPA 72, 2010, NFPA 750, 2010. (SFM partial)

**Section 19. Amendment of Chapter.** The following sections of Chapter 19.10 Fire Code, are deleted in their entirety:

**19.10.401.3 Emergency responder notification.**

**19.10.903.2.11.1 Automatic sprinkler systems; stories and basements without openings.**

- 19.10.1013.3**            **Guards; opening limitations.**
- 19.10.1021.2**            **Number of exits and continuity; single exits.**
- 19.10.1102.1**            **Aviation facilities; definitions. 19.10.Section 202; Definitions; airport.**
- 19.10.1103.5**            **Aviation facilities; dispensing of flammable and combustible liquids.**
- 19.10.1105.8**            **Portable fire extinguishers; reporting use.**
- 19.10.1106.1**            **Aircraft motor vehicle fuel-dispensing facilities.**
- 19.10.2211.2.3**            **Repair garages; drainage and disposal of liquids and oil-soaked waste.**
- 19.10.3301.1.6**            **Explosives and fireworks; scope; transportation.**
- 19.10.3301.2**            **Explosives and fireworks; permit required.**
- 19.10.3302.1**            **Definitions; Fireworks; fireworks 1.4G.**
- 19.10.Appendix E**        **Hazard categories.**
- 19.10.Appendix F**        **Hazard ranking.**
- 19.10.Appendix G**        **Cryogenic fluids - weight and volume equivalents.**

**Section 20. Amendment of Chapter.** The following sections of Chapter 19.11 Property Maintenance Code, are amended to read:

**19.11.202 Definitions; general definitions.**

Add the following definitions:

"Existing Building is a building that:

- (A)    was erected before December 5, 1956; or
- (B)    was erected before June 5, 2017 and complies with the building code regulations in effect at the time of construction."

...

**19.11 Appendix A Boarding Standard**

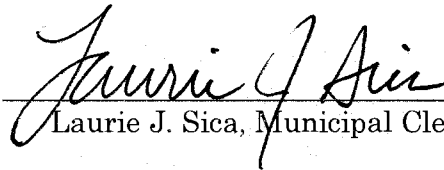
Adopted in its entirety.

**Section 21. Effective Date.** This ordinance shall be effective 30 days after its adoption.

Adopted this 5<sup>th</sup> day of June, 2017.

  
Kendell D. Koelsch, Mayor

Attest:

  
Laurie J. Sica, Municipal Clerk