Submitted by: Chair of the Assembly at the Request of the Mayor
Prepared by: Dept. of Law
For reading: August 11, 2020

ANCHORAGE, ALASKA
AO No. 2020-85, As Amended

AN ORDINANCE REPEALING AND REENACTING ANCHORAGE MUNICIPAL CODE TITLE 23 TO ADOPT THE FOLLOWING CODES AND LOCAL AMENDMENTS: 2018 ANCHORAGE ADMINISTRATIVE CODE; 2018 INTERNATIONAL BUILDING CODE; 2018 INTERNATIONAL MECHANICAL CODE; 2018 UNIFORM PLUMBING CODE; 2017 NATIONAL ELECTRICAL CODE; 2018 INTERNATIONAL FIRE CODE; 2018 INTERNATIONAL ENERGY CONSERVATION CODE; 2018 INTERNATIONAL EXISTING BUILDING CODE; 2018 ABATEMENT OF DANGEROUS BUILDINGS CODE; 2016 ANSI/ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS; 2017 ANSI/ASME A18.1 SAFETY STANDARD FOR PLATFORM LIFTS AND STAIRWAY CHAIRLIFTS; 2018 INTERNATIONAL RESIDENTIAL CODE; 1997 RELOCATABLE ANCILLARY BUILDINGS; 1997 MOBILE AIRCRAFT SHELTERS; 2018 GRADING, EXCAVATION, FILL AND LANDSCAPING; AND 2018 INTERNATIONAL FUEL GAS CODE.

WHEREAS, the Municipality's current Title 23, Building Code, adopts several national codes which have been updated;

WHEREAS, the Municipality's code should also be updated to adopt and incorporate these updated versions, along with proposed amendments;

WHEREAS, the proposed amendments to these national standards were created through meetings with stake holders from the public consisting of contractors and design professionals;

WHEREAS, the Anchorage Building Board of Examiners and Appeals recommends adoption; now, therefore,

THE ANCHORAGE ASSEMBLY ORDAINS:

Section 1: Anchorage Municipal Code Title 23 – Building Codes – is hereby repealed in its entirety and replaced with the following:

TITLE 23 - BUILDING CODES

Chapter 23.05 BUILDING REGULATIONS

23.05.010 - Adoption of codes.

The Municipality of Anchorage, pursuant to Charter Section 10.04, adopts and incorporates by reference the following codes of technical regulation.

23.05	Building Regulations

23.10	Anchorage Administrative Code, 2018 Edition
23.15	International Building Code, 2018 Edition
23.20	International Mechanical Code, 2018 Edition
23.25	Uniform Plumbing Code, 2018 Edition
23.30	National Electrical Code, 2017 Edition
23.45	International Fire Code, 2018 Edition
23.60	International Energy Conservation Code, 2018 Edition
23.65	International Existing Building Code, 2018 Edition
23.70	Abatement of Dangerous Buildings Code, 2018 Edition
23.75	American National Standards Institute/American Society of Mechanical Engineers ANSI/ASME A17.1, 2016 Safety Code for Elevators and Escalators
23.76	American National Standards Institute/American Society of Mechanical Engineers ANSI/ASME A18.1, 2017 Safety Standard for Platform Lifts and Stairway Chairlifts
23.85	International Residential Code, 2018 Edition, Chapters 1 through 11
23.95	Relocatable Ancillary Buildings, 1997 Edition
23.100	Mobile Aircraft Shelters, 1997 Edition
23.105	Grading, Excavation, Fill, and Landscaping, 2018 Edition
23.110	International Fuel Gas Code, 2018 Edition

23.05.020 - Copies on file.
At least one copy of each code of technical regulation adopted by reference in section 23.05.010 shall be kept in the office of the municipal clerk.

23.05.030 - Applicability to service areas.
Except as otherwise expressly provided, all provisions of title 23 shall apply throughout the municipality, with the exception that the requirements to apply for and complete the building permit, plan review, and building inspection processes shall be optional in areas outside the Anchorage Building Safety Service Area (ABSSA). The ABSSA is defined in AMC 27.30.040. The boundaries of the ABSSA are outlined on a map located in AMC 27.30.700. If any portion of a property is located within the ABSSA, the property shall be considered in the ABSSA and the requirements of this Title apply.

23.05.040 - Local amendments.
The various codes adopted by section 23.05.010 are amended by the local amendments set forth in chapters 23.15 through 23.110 inclusive. The last digits of the section numbers (after the title and chapter digits) are the section of the codes to which the amendment refers; i.e., section 23.20.303.3 refers to amendments to Section 303.3 of the International Mechanical Code.

Chapter 23.10 ANCHORAGE ADMINISTRATIVE CODE 2018 EDITION

Section 101 General.

23.10.101.1 Title.

These regulations shall be known as the Anchorage Administrative Code, may be cited as such and referred to herein as "this code."

23.10.101.2 Scope of this code.

The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures. It shall also serve as the administrative, organizational and enforcement rules and regulations for the technical codes related to all work types listed above within the municipality.

Exception: This code does not apply to marine structures such as wharves and piers; however, the provisions of this code apply to buildings constructed on wharves and piers.

23.10.101.3 Use of building safety services revenue.

All revenues received by the municipality for building safety services within the scope of this title described in this section shall be expended only for services provided under, and administration and enforcement of, this title.

23.10.101.4 Intent.

The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment.

23.10.101.5 Other laws.

The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

23.10.101.6 Referenced codes.

Title 23 adopts numerous codes. Throughout the International Codes and other codes as adopted in Title 23, there are references to other codes. In all places where the International Codes make reference to the International Plumbing Code, it shall mean the Uniform Plumbing Code as adopted by the Municipality. In all places where the International Codes and other codes refer to the Electrical, Elevator, Property Maintenance, Sign, or Security codes, it shall mean those codes as adopted by the Municipality.

23.10.101.7 Conflicting provisions.

The following shall resolve all conflicting provisions of this code:

A. When conflicting provisions or requirements occur between this code, the technical codes, reference standards and other codes or laws, the

most restrictive shall govern.

B. When conflicts occur between the technical codes, those provisions providing the greater safety to life shall govern. In other conflicts where sanitation, life safety or fire safety are not involved, the most restrictive provision shall govern.

C. Where, in a specific case, different sections of the technical codes specify different materials, methods of construction or other requirements, the most restrictive shall govern. When there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

D. When conflicts occur between specific provisions of this code, those provisions becoming the law most recently shall prevail.

23.10.101.8 Application to existing buildings and building service equipment.

Buildings, structures and the building service equipment to which additions, alterations or repairs are made shall comply with all the requirements of the technical codes for new facilities, except as specifically provided in this section or the International Existing Buildings Code.

23.10.101.9 Relocated or moved buildings.

23.10.101.9.1 Buildings moved into the Municipality.

Buildings or structures moved into the Anchorage Building Safety Service area shall comply with the provisions of this code for new buildings and structures.

23.10.101.9.2 Buildings moved within the Municipality.

Buildings and structures moved within the Anchorage Building Safety Service Area shall comply with the provisions of this code for new or existing buildings and structures and shall have a code compliance inspection by the Municipality for fire and life safety evaluation prior to the move. The burden of proof to demonstrate compliance with the code rests with the applicant. The building official may require supplemental information, including but not limited to as-built drawings and engineers' reports, prior to issuing a permit for the move.

Exception: One- and two-family dwellings not over two stories in height, moved within the Anchorage Building Safety Service Area and not changed from the existing as-built condition, do not require lateral analysis or lateral upgrades.

Section 102 Definitions.

23.10.102.1 Definitions.

For the purpose of this code, certain terms, phrases, words and derivatives shall be construed as specified in this section. Where terms are not defined, the definition shall be in accordance with the International Codes, National Electrical Code and the Uniform Plumbing Code adopted by the MOA. Terms not found in adopted codes shall be the ordinary accepted meanings within the context in which the term is used in Webster's Dictionary, and shall be

considered as providing ordinarily accepted meanings. Words used in the singular include the plural and the plural the singular. Words used in the masculine gender include the feminine and the feminine the masculine.

Addition is an extension or increase in floor area, number of stories or height of a building or structure.

Alter or **alteration** is a change or modification in construction or building service equipment.

Approved, as to materials, types of construction, equipment and systems, refers to approval by the building official as the result of investigation and tests conducted by the building official, or by reason of accepted principles or tests by recognized authorities, technical or scientific organizations.

Approved agency is an established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when the agency has been approved by the building official.

Authorized agent is a person designated by an owner in writing to interact on their behalf with the municipality during the course of the building permit application, plan review and inspection process. An authorized agent may secure permits in the name of the owner, advise the owner on the purchasing of equipment, materials and labor, and advise the owner on the coordination, scheduling and administration of work. An authorized agent may not coordinate, schedule, or administer work, pay for labor, equipment or materials, engage in contractual relationships with or supervise subcontractors, or hire or supervise employees.

Building is a structure used or intended for supporting or sheltering a use or occupancy.

Building Code is the International Building Code, as adopted by the Municipality.

Building official is the officer or other designated authority charged with the administration and enforcement of this code, or a regularly authorized deputy.

Building permit is a general permit to perform work regulated by title 23, excluding electrical, mechanical, and plumbing work. Electrical, mechanical, and plumbing work is performed under either a trade permit or retrofit permit, further defined elsewhere in this section.

Building service equipment refers to the plumbing, mechanical, electrical and elevator equipment including piping, ductwork, wiring, fixtures and other accessories providing sanitation, lighting, heating, ventilation, cooling, refrigeration, firefighting and transportation facilities essential to the occupancy of the building or structure for its designated use.

Change order refers to the documentation required to support a design change that is significant enough to warrant approval by the plan reviewer prior to commencement of work involving the change.

Commercial Construction is construction of a structure of a non-residential nature or a residential structure comprised of 3 or more contiguous dwelling units.

Contractor means a person who, in the pursuit of an independent business, undertakes or offers to perform, or claims to have the capacity to perform, or submits a bid for a project to construct, alter, repair, move or demolish a building, highway, road, railroad, or any type of fixed structure, including excavation and site development and the erection of scaffolding, electric signs, marquees, or other similar structures for which a condition, rule, regulation, or standard is prescribed by this code. This term includes general contractor, builder, mechanical contractor, specialty contractor and subcontractors. This term does not include regular employees of a contractor licensed under this code or a person who, as owner of a building or structure, performs work on the building or structure for the owner's use and benefit that would otherwise subject the owner to the licensing requirement of this section.

Dangerous Building Code is the Abatement of Dangerous Buildings Code, as adopted by the Municipality.

Electrical Code is the National Electrical Code, as adopted by the Municipality.

Electrical contractor means a contractor licensed by the state and municipality as an electrical contractor who installs electrical wiring and equipment in industrial, commercial or residential categories. An electrical contractor, unless specifically exempted in AS 08.40.190, must be registered as, or employ, an electrical administrator licensed under AS 08.40, and may only submit bids for, or work on, projects for which it has a licensed electrical administrator.

Electrical journeyman is a person who installs electrical systems subject to the standards of the adopted electrical codes. An electrical journeyman shall possess a Journeyman Electrician Certificate of Fitness issued by the State of Alaska when performing electrical work and shall be employed by an electrical contractor licensed in the Municipality. A journeyman electrician may perform electrical work in all occupancies and supervise up to two trainees.

Electrical residential wireman is a person who installs residential wiring subject to the standards of the adopted electrical codes. An electrical residential wireman shall possess a residential wireman certificate of fitness issued by the State of Alaska and shall be employed by an electrical contractor licensed in the Municipality. A residential wireman is limited to residential buildings having no more than four dwelling units on a common

foundation and may supervise up to two trainees.

Electrical trainee is a person possessing an Electrician Trainee Certificate of Fitness issued by the State of Alaska and employed by an electrical contractor to learn the electrical trade. Trainees may work only when under the direct supervision of a journeyman or wireman, and no more than two trainees may be assigned to a journeyman or wireman.

Elevator Code is the American National Standards Institute/American Society of Mechanical Engineers ANSI/ASME A17.1 Safety Code for Elevators and Escalators as adopted by the Municipality.

Existing Building is a building erected prior to the date of adoption of this code, or one for which a legal certificate of occupancy has been issued.

Existing Building Code is the International Existing Building Code, as adopted by the Municipality.

Field change order refers to the documentation required to support a minor field change to the approved plans. Field change orders may be reviewed by the inspector or plan reviewer, concurrent with or subsequent to, the commencement of work involving the change.

Fire Code is the International Fire Code, as adopted by the Municipality.

Fuel Gas Code is the International Fuel Gas Code, as adopted by the Municipality.

Gas fitter, journeyman is a person issued a certificate of qualification by the municipality to install, repair and maintain gas piping and gas-fired equipment regulated by the adopted plumbing and fuel gas codes as an employee of a licensed gas piping, plumbing or sheet metal contractor. A journeyman gas fitter shall hold a State of Alaska certificate of fitness card.

Gas piping contractor means a contractor whose business operations consist of the repair and installation of gas piping and equipment regulated by the adopted plumbing and fuel gas codes. A gas piping contractor is required to be licensed by the state as a mechanical contractor, licensed by the municipality as a gas piping contractor and must possess a certificate of qualification issued by the municipality. A gas piping contractor is required to be registered as, or employ, a mechanical administrator licensed under AS 08.40, and may only submit bids for, or work on, projects for which it has a licensed mechanical administrator.

General contractor, or builder means a contractor licensed by the state and municipality whose business operations require the use of more than three trades or the use of mechanical or specialty contractors and subcontractors who are under the supervision of the contractor.

Listed and listing are terms referring to equipment and materials included

in a list published by an approved testing laboratory, inspection agency, or other organization concerned with product evaluation and maintaining periodic inspection of current productions of listed equipment or materials. The published list shall state the material or equipment complies with approved nationally recognized codes, standards or tests and has been tested or evaluated and found suitable for use in a specified manner.

Mechanical Code is the International Mechanical Code, as adopted by the Municipality.

Municipality means Municipality of Anchorage.

Occupancy is the purpose for which a building, or part thereof, is used or intended to be used.

Owner is any person, agent, firm or corporation with a legal or ownership interest in the property.

Permit is an official document or certificate issued by the building official authorizing performance of a specified activity.

Person is a natural person, heir, executor, administrator or assign, and also includes a firm, partnership or corporation, its or their successor or assign, or agent of any of the aforesaid.

Plumbing Code is the Uniform Plumbing Code, as adopted by the Municipality.

Plumbing contractor means a contractor whose business operations consist of plumbing work regulated by the adopted plumbing code. A plumbing contractor is required to be licensed by the state as a mechanical contractor, licensed by the municipality as a plumbing contractor and must be issued a certificate of qualification issued by the municipality. A plumbing contractor is required to be registered as, or employ, a mechanical administrator licensed under AS 08.40, and may only submit bids for, or work on, projects for which it has a licensed mechanical administrator.

Plumber journeyman is a person issued a certificate of qualification by the municipality to labor at the trade of plumbing as an employee of a licensed plumbing contractor installing and repairing plumbing and gas piping systems and equipment. A journeyman plumber shall hold a State of Alaska certificate of fitness card.

Plumber trainee is a person, other than a contractor or journeyman, who labors at the trade of plumbing as an employee of a licensed plumbing contractor. The trainee shall be under the direct supervision and in the immediate presence of a plumbing contractor or journeyman. The trainee shall hold a State of Alaska certificate of fitness card and a Municipality of Anchorage certificate of qualification trainee card.

Repair is the reconstruction or renewal of any part of an existing building, structure or building service equipment for the purpose of its maintenance.

Residential construction, for the purposes of issuance of a residential permit, means construction associated with a building having no more than two dwelling units and having no other uses or occupancies other than a private garage or carport.

Residential electrical contractor means a contractor licensed by the state and municipality as an electrical contractor who installs electrical wiring and equipment in residential buildings having up to four dwelling units on a single foundation.

Retrofit permit is an official document or certificate issued by the building official for limited electrical, plumbing, mechanical or fire system work regulated by this code.

Shall means mandatory.

Sheet metal contractor means a contractor whose business operations consist of the repair and installation of heating, ventilation and air-conditioning equipment, systems and ductwork regulated by the adopted mechanical code. A sheet metal contractor is required to be licensed by the state as a mechanical contractor, licensed by the municipality as a sheet metal contractor and issued a certificate of qualification by the municipality. A sheetmetal contractor is required to be registered as, or employ, a mechanical administrator licensed under AS 08.40, and may only submit bids for, or work on, projects for which it has a licensed mechanical administrator.

Sheet metal journeyman is a certificate of qualification holder who labors at the trade of sheet metal as an employee of a licensed sheet metal contractor. A sheet metal journeyman may install and repair mechanical equipment, i.e., HVAC equipment, duct work, and venting of appliances.

Sheet metal trainee is person, other than a contractor or journeyman, who labors at the trade of sheet metal as an employee of a licensed sheet metal contractor. The trainee shall be under the direct supervision and in the immediate presence of a sheet metal contractor or journeyman. The trainee shall hold a certificate of qualification trainee card issued by the municipality.

Specialty contractor means a contractor licensed by the State of Alaska to perform a specialty trade. Specialty contractors performing work regulated by this code are required to be licensed by the municipality.

Structural observation means the visual observation of the structural system, for general conformance to the approved plans and specifications, at significant construction stages and at completion of the structural system. Structural observation does not include or waive the responsibility for the inspections required by this code.

Structure is that which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

Technical Codes refer to those codes adopted by the Municipality containing the provisions for design, construction, alteration, addition, repair, removal, demolition, use, location, occupancy and maintenance of buildings and structures and building service equipment as herein defined.

Trade Permit is an official document or certificate issued by the building official to permit performance of electrical, mechanical, or plumbing work. Trade permits may require electrical, mechanical, plumbing, structural, fire prevention and land use plan review.

Valuation or value shall be determined in accordance with this code.

Section 103 Organization and Enforcement.

23.10.103.1 Creation of enforcement agency.

There is hereby established a code enforcement agency under the administrative and operational control of the building official.

23.10.103.2 General.

Whenever the term or the title "administrative authority," "responsible official," "building official," "chief inspector," "code enforcement officer," or similar designation is used herein or in any of the technical codes, it shall mean the building official designated by the appointing authority.

23.10.103.3 Powers and duties of the building official.

23.10.103.3.1 General.

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

23.10.103.3.2 Applications and permits.

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

23.10.103.3.2.1

The Internal Auditor shall develop a performance measure and customer satisfaction survey mechanism that audits users' experiences with the Development Services Department.

23.10.103.3.3 Notices and orders.

The building official shall issue all necessary notices and orders to ensure compliance with this code. The person to whom a notice or order is directed shall have 30 days to appeal to the board of building regulation examiners and appeals, except as provided in Chapter 23.70, limiting the appeal period to 10 days for notices to vacate. If no timely appeal is filed, the notice and order is final and binding and not subject to any further appeal. The building official may withdraw a notice or order at any time.

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

23.10.103.3.5 Identification (ID badges – Code Abatement).
The building official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

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

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

23.10.103.3.8 Liability.
The building official, member of the building board or employee charged with the enforcement of this code, while acting for the Municipality in good faith and without malice in the discharge of duties required by this code or other pertinent law or ordinance, shall not be liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by the officer or employee in the lawful

discharge of duties and under the provisions of this code shall be defended by the municipal attorney until the final termination of the proceedings. Neither the building official nor any subordinate shall be liable for cost in any action, suit or proceeding instituted in pursuance of the provisions of this code.

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

23.10.103.3.9.1 Used materials and equipment.
The use of used materials meeting the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the building official.

23.10.103.3.10 Modifications.
Whenever there are practical difficulties involved in carrying out the provisions of this code, the building official has the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the building official shall first find a special individual reason making the strict letter of this code impractical, the modification is in compliance with the intent and purpose of this code, and such modification does not lessen health, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the Development Services Department.

23.10.103.3.11 Alternative materials, design, and methods of construction and equipment.
The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds the proposed design is satisfactory and complies with the intent of the provisions of this code, and the material, method or work offered is, for the purpose intended, at least the equivalent prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

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

23.10.103.3.11.2 Tests.
Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official is authorized to require tests as evidence of compliance, to be made at no expense to the Municipality. Test methods shall be as specified in this code or by other recognized test

standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency, and reports of such tests shall be required for retention of public records.

23.10.103.3.12 Cooperation of other officials and officers.
The building official may request and shall receive the assistance and cooperation of other officials of the Municipality as required in the discharge of the duties required by this code or other pertinent laws or ordinance.

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

23.10.103.3.14 Temporary connection.
The building official has authority to authorize the temporary connection of the building or system to the utility source of energy, fuel, or power.

23.10.103.3.15 Authority to disconnect service utilities.
The building official has authority to authorize disconnection of utility service to the building, structure, or system regulated by this code and the codes referenced in case of emergency where necessary to eliminate an immediate hazard to life or property. The building official shall notify the serving utility and, whenever possible, the owner and occupant of the building, structure, or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure, or service system shall be notified in writing as soon as practical thereafter.

23.10.103.3.16 Post-earthquake safety evaluation of buildings.
General: Should the municipality experience a seismic event causing widespread damage to buildings, the building official may conduct the Applied Technology Council ATC-20 Post-Earthquake Safety Evaluation of Buildings process. Where there is reason to believe that a building has sustained structural damage, the building official may require the building undergo a detailed structural evaluation performed by a licensed structural engineer.
Volunteer structural engineers: The department shall maintain a list of volunteer licensed structural engineers familiar with the ATC-20 process. When deemed necessary, the building official will solicit their assistance to perform ATC-20 rapid and detailed evaluations. The building official shall deputize volunteer structural engineers conducting ATC-20 evaluations. All building evaluations shall be submitted to the building department.

23.10.103.4 Power and duties of the Board of Building Regulation Examiners and Appeals.

23.10.103.4.1 General.
In order to hear and decide appeals of orders, decisions or determinations

made by the building or fire code official relative to the application and interpretation of this code, there shall be and is hereby created a board of building regulation examiners and appeals (hereafter "building board"). The building board may, in its discretion, offer comment or recommendation concerning amendments to this code. The building board shall be appointed by the governing body and shall hold office at its pleasure. The building board shall follow rules of procedure approved by the Assembly for conducting business. All decisions and findings in an appeal shall be rendered in writing to the appellant, with a duplicate copy to the building official.

23.10.103.4.2 Appeal pools and three-member hearing panels.

The building board shall establish pools from which three-member hearing panels may be selected. The pools shall be comprised of building board members qualified by experience and training to pass upon matters pertaining to the appeal.

A. Up to five pools shall be established the first meeting of each calendar year.
B. The secretary to the board and the board chair shall assign members from the most relevant pool to a specific appeal.
C. At least two members of a three-member hearing panel shall be actively engaged in disciplines, trades, or professions relevant to the appeal.
D. In the discretion of the building board, a decision rendered by a three-member hearing panel may be accepted for de novo review.

23.10.103.4.3 Limitations of authority.

An application for appeal shall be based on a claim that the true intent of this code, or the rules legally adopted hereunder, have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The building board, including three-member hearing panels, shall have no authority to waive requirements of this code.

23.10.103.4.4 Members, voting and hearings before the building board.

A. The building board, as described in Section 4.40.030, and this title shall consist of no fewer than 11 and up to 15 members appointed by the mayor, subject to confirmation by the Assembly, qualified by experience or training to pass on matters pertaining to building construction, as follows:
    1. Two (2) members shall be Architects registered in the State of Alaska.
    2. Two (2) members shall be Professional Engineers registered as Civil Engineers in the State of Alaska.
    3. One (1) member shall be a Professional Engineer, registered as a Mechanical Engineer in the State of Alaska.
    4. One (1) member shall be a Professional Engineer, registered as an Electrical Engineer in the State of Alaska.
    5. Two (2) to four (4) members shall be licensed General Contractors actively engaged in general building construction

and at least one of the members shall be actively engaged in home building in the State of Alaska.

6. One (1) member shall be a licensed Electrical Contractor actively engaged in the electrical trade in the State of Alaska.
7. One (1) member shall be a licensed Plumbing Contractor actively engaged in the plumbing trade in the State of Alaska.
8. One (1) member shall be a licensed Mechanical Contractor actively engaged in the mechanical trade in the State of Alaska.
9. Up to two (2) additional members, qualified by experience or training and actively engaged in any of the above listed disciplines, trades, or professions in the State of Alaska.

B. Building board quorum and voting.

1. Quorum. The majority of the appointed members shall constitute a quorum.
2. Voting. Action by the building board, including affirmative action on quasi-judicial matters, requires an affirmative vote of the greater of 6 or a majority of members in attendance who are not disqualified by conflict of interest.

C. Three-member hearing panels. A building board three-member hearing panel shall hear and decide appeals from decisions of administrative officials and other enforcement orders relating to code regulations under Title 23. Except for appeals filed under section 23.70.706, appeals will be scheduled within 3 to 5 business days of the receipt of application for appeal. A person with the right to appeal has 30 days from the date of the action of an administrative official to file an appeal with the secretary to the building board, with the exception noted in section 23.70.706.1, limiting the appeal period to 10 days for notices to vacate, unless a longer time period is stated in writing by the building official. If no appeal is filed within these time periods, the action of the administrative official is deemed final and binding and not subject to any further appeal.

D. Three-member hearing panel quorum and voting.

1. Quorum. A quorum for a hearing panel shall be three panel members.
2. Voting. The granting of any appeal or part thereof by a hearing panel shall require the concurring vote of two members of the panel. Any appeal or part thereof which is not granted by the panel shall be considered denied.
3. Reconsideration. Hearing panel decisions shall not be subject to reconsideration but may be appealed under subsection E. of this section.

E. Discretionary de novo re-hearing. In its sole discretion as determined by majority vote of the members in attendance not disqualified from voting by conflict of interest or under this subsection as provided below, the building board may accept an appeal decided by a three-member hearing panel, in whole or in part, for de novo re-hearing by the full building board.

F. Application for de novo re-hearing by the full board may be made by any party or by any member of the building board.

G. Application for de novo re-hearing by the full building board must be

filed with the secretary to the board within 5 business days from publication of the hearing panel's written decision.

H. On the question of whether the building board shall exercise its discretion to re-hear a matter as a full board, members of the hearing panel shall not participate in the vote.

I. If de novo re-hearing is accepted by the building board, members of the hearing panel first hearing the appeal may participate in the re-hearing as members of the full board.

23.10.103.4.5 Secretary to the building board.

The building official or designee shall be an ex-officio member without vote and shall act as secretary to the building board, shall prepare all correspondence, send out all required notices within 5 business days, keep minutes of all meetings, and maintain a file on each case coming before the building board. The secretary will provide timely electronic notice and copies of hearing panel decisions to the full building board.

23.15.103.4.6 Supplementing the hearing packet.

When the building board panel requires data and documents not in the current possession of the building official, the secretary to the building board shall act timely on the request to ensure the hearing packet is supplemented with the requested information prior to hearing. If the Notice of Appeal relies on, but does not provide, data, documents, or other information, the secretary shall request or provide the supplemental information within 5 days of receipt of the Notice of Appeal. Failure to request or receive supplemental information timely shall be a valid reason to reschedule the hearing to a time when the supplemental information is available.

23.10.103.4.7 Appeal filing fee.

The cost of filing an appeal to the building board is $500 and shall accompany the filing of the appeal. If a three-member hearing panel denies an appeal, the appellant may request a de novo hearing by the full building board for an additional filing fee of $500. The fee shall accompany the de novo hearing request. There is no fee for a de novo hearing request when a three-member hearing panel grants an appeal.

23.10.103.5 Violations.

23.10.103.5.1 Unlawful acts.

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

23.10.103.5.2 Notice of violation.

The building official or fire code official is authorized to serve a notice of violation or order on the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition or occupancy of a building or structure in violation of the provisions of this code, or in violation of a permit or certificate issued under the provisions of this code. Such order

shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

23.10.103.5.3 Investigation.
Whenever work for which a permit is required by this code is commenced without first obtaining a permit, a code compliance inspection for one or more disciplines may be required before a permit is issued for such work.

23.10.103.5.4 Prosecution of violation.
If a person does not comply with a notice of violation or order, the building official is authorized to request the municipal attorney of the Municipality to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

23.10.103.6 Stop work order.

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

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

23.10.103.6.3 Unlawful continuance.
Any person continuing any work after being served with a stop work order, except such work as the person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law.

23.10.103.7 Penalties and remedies.

23.10.103.7.1 Violation penalties.
Any person violating a provision of this code or failing to comply with the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law including but not limited to those in Table 3-O of this code.

When work is begun without proper permits, a fine at a rate shown in Table 3-O shall be assessed. The payment of the fine shall not exempt an applicant from compliance with all other provisions of this code nor from the penalty prescribed by law. The building official may waive the fine for a first offense.

23.10.103.7.2 Contractor license suspension or revocation.
The building official may cancel, suspend, or revoke the license of a contractor who displays incompetence or lack of knowledge in matters relevant to such license, seeks to obtain a building permit or pass an inspection by fraudulent methods, or knowingly performs work multiple times without first obtaining the required permit(s) or if such license was obtained by fraudulent measures. If the license of any person is so cancelled or revoked, another such license shall not be granted to such person within 12 months after the date of such cancellation or revocation. When a contractor accumulates five violations for not obtaining building permits before performing work or other violations within a five-year period, the building official shall revoke the license of the contractor. Notice of the revocation shall be sent to the Alaska Department of Commerce, Community and Economic Development.

23.10.103.7.3 Civil Penalties.
In addition to any other remedy or penalty provided by this title, any person violating any provision of this title, or any code of technical regulation adopted pursuant to this title, shall be subject to the civil penalties or injunctive relief, or both, as provided by Section 1.45.010 B., or fines may be assessed according to the schedule provided in Title 14.

23.10.103.7.4 Civil Actions.
Any person aggrieved by the act or omission of another person constituting a violation of the provisions of this title or the codes of technical regulation adopted herein may, following 30 days written notice to the municipal official or department empowered to enforce the provision, commence and maintain a civil action for injunctive relief authorized by Section 1.45.010 B. The court, in issuing a final order in any action brought by a private person under this section may, in its discretion, award costs of litigation to any party. In any action under this section, the municipality, if not a party, may intervene as a matter of right.

Section 104 Permit requirements.

23.10.104.1 Permits required.
Any owner or authorized agent intending to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building, structure or portion thereof, or to erect, install, enlarge, alter, repair, remove, convert or replace any fire, electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit unless work is specifically exempted by this code.

23.10.104.1.1 Emergency repairs.
Where equipment replacements and repairs must be performed after hours in an emergency situation, the contractor shall call the Building Safety Hotline (343-7500) before commencing the work. The permit application shall be submitted within the next working business day to the building official.

23.10.104.1.2 Parcels with multiple structures.
Each independent structure on a parcel with multiple structures requires a separate building permit unless otherwise approved by the Building Official.

23.10.104.2 Work exempt from permit.
Exemptions from permit requirements of this code shall not be deemed to grant authorization for work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of the Municipality. Exemptions from the requirement for a permit shall not constitute an exemption from the licensing requirements in section 23.10.105.

23.10.104.2.1 Building permit exemptions.
A building permit shall not be required for the following:

A. One-story detached accessory buildings used as tool and storage sheds, playhouses, and similar uses, provided the floor area does not exceed 200 square feet.
B. Fences of light-frame construction not over eight feet high.
C. Oil derricks.
D. An isolated retaining wall where the retained height measured from the bottom of the footing to the top of the retained soil at the face of the wall is not more than 4 feet and the top of the wall above the retained soil is not more than one foot. Multiple walls, separated by terraces to form an aggregate wall height greater than 4 feet are also exempt where the clear distance between the back face of the lower wall and the front face of the upper wall is greater than two times the retained height of soil of the lower wall.
E. Water tanks supported directly upon grade, if the capacity does not exceed 5,000 gallons and the ratio of height to diameter or width does not exceed 2:1.
F. Platforms, walks, stairs, ramps and driveways not more than 30 inches above grade, not over any basement or story below and are not part of an accessible route.
G. Stairs and decks serving a manufactured home installed on a non-permanent foundation.
H. Painting, papering, tiling, carpeting, cabinets, countertops and similar finish work.
I. Temporary motion picture, television and theater stage sets and scenery.
J. Prefabricated swimming pools accessory to a Group R, Division 3 Occupancy, less than 24 inches deep, do not exceed 5,000 gallons and installed entirely above ground.
K. Window awnings in Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches from the exterior wall and do not require additional support.
L. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches in height.
M. Shade cloth structures constructed for nursery or agricultural purposes and not including service systems.
N. Swings and playground equipment.

O. Construction site job shacks and fences on legal permitted construction sites.
P. Storage racks not over six feet high.
Q. Artwork six feet or less tall, where the center of gravity of the structure falls below the mid-height of the structure.
R. Grave markers.
S. Roof antennas not mechanically anchored where the existing roof structure and antenna stability under design wind loads are checked by a civil or structural engineer licensed in the State of Alaska.
T. Replacement of windows and doors where the rough opening is not enlarged.
U. Repair or replacement of exterior wall and roof coverings where the total cost of the repair or replacement using fair market value of materials and labor does not exceed $5,000.
V. Repair or replacement of gypsum wall board wall and ceiling finish material where the total cost of the repair and replacement using fair market value of materials and labor does not exceed $5,000. This exception does not apply to code required fire resistive construction.
W. Temporary structures erected for less than 15 days.

Unless otherwise exempted by this code, separate plumbing, electrical and mechanical permits shall be required for the above exempted items.

23.10.104.2.2 Electrical permit exemptions.

An electrical permit shall not be required for the following:

A. Portable motors or other portable appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved receptacle when the cord or cable is permitted by the Electrical Code.
B. Repair or replacement of fixed motors, transformers or fixed approved appliances of the same type and rating in the same location.
C. Temporary decorative lighting.
D. Repair or replacement of current-carrying parts of any switch, contactor or control device.
E. Reinstallation of attachment plug receptacles, but not the outlets.
F. Repair or replacement of any overcurrent device of the required capacity in the same location.
G. Repair or replacement of electrodes or transformers of the same size and capacity in the same location.
H. Removal of electrical wiring.
I. Temporary wiring for experimental purposes in suitable experimental laboratories.
J. Wiring for temporary theater, motion picture or television stage sets.
K. Low-energy power, controls and signal circuits of Class II and Class III as defined in the Electrical Code.
L. Installation, alteration or repair of electrical wiring, apparatus or equipment for the generation, transmission, distribution or metering of electrical energy or in the operation of signals or the transmission of intelligence by a public or private utility in the exercise of its function as a serving utility.

M. The provisions of this code shall not apply to electrical equipment used for radio and television transmissions but shall apply to equipment and wiring for power supply, the installations of towers and antennas.
N. Installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

23.10.104.2.3 Mechanical permit exemptions.

A mechanical permit shall not be required for the following:

A. A portable heating appliance.
B. Portable ventilation appliances and equipment.
C. A portable cooling unit.
D. A portable evaporative cooler.
E. Steam, hot water or chilled water piping within any heating or cooling equipment or appliance regulated by the Mechanical Code.
F. The replacement of any minor part that does not alter the approval of equipment or appliance or make such equipment or appliance unsafe.
G. Self-contained refrigeration system containing 10 pounds or less of refrigerant or that are actuated by motors of one horsepower or less.
H. Portable fuel cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

23.10.104.2.4 Plumbing permit exemptions.

A plumbing permit shall not be required for the following:

A. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.
B. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.
C. The replacement of a hose bibb, drinking fountain, wash fountain, sink or lavatory, including the faucet, provided such replacement does not involve or require the replacement or rearrangement of piping other than a trap or trap arm.
D. The replacement of a water closet, bidet or urinal, including the flushometer valve, provided such replacement does not involve or require the replacement or rearrangement of piping.
E. The replacement of an electric water heater in a single-family or duplex dwelling unit, provided such replacement does not involve or require the replacement or rearrangement of piping.

23.10.104.2.5 Fire permit exemptions.

A fire system permit shall not be required as regulated by the International Fire Code.

23.10.104.3 Temporary and seasonal use structures.

23.10.104.3.1 Temporary structures.

Buildings, structures, sheds, canopies, fences, reviewing stands and other structures of a temporary nature, intended to be occupied more than 14 days, may be erected and occupied by permit from the building official. Temporary uses and structures shall comply with AMC 21.05.080. Temporary structures may be erected without meeting all requirements for permanent structures provided they meet the following conditions:

A. Temporary structures shall be limited to Group A, Group B, Group M, and Group U occupancies;

B. The size of the structure shall not exceed 1,500 square feet nor be more than one story in height unless otherwise approved by the building official;

C. The structure shall meet the required setbacks and separation from adjacent buildings as provided by municipal land use regulations, but in no case less than ten feet;

D. Temporary structures for public use shall comply with the building code for accessibility.

E. Temporary structures shall meet structural requirements in regard to type of materials, spans, and stresses as determined to be safe by the building official;

F. Mobile homes and trailers intended for temporary use shall be of manufactured design. Homemade mobile homes or trailers shall not be allowed;

G. The structure and all associated materials shall be removed from the approved location on or before the expiration date of the permit;

H. Permits for temporary structures located in nonresidential districts may be extended on a one-time basis for 180 days, upon application to the building official with a payment per Table 3-A;

I. After a temporary structure is removed from a lot, parcel or tract of land, no temporary structure may be placed at the same location for a period of at least 180 days;

J. Normally occupied temporary structures shall be provided with toilet facilities having sufficient capacity for the occupant load in accordance with the building code.

23.10.104.3.2 Seasonal use structures.

Temporary structures occupied for 180 days or less per calendar year may be occupied on a seasonal basis and be considered a seasonal use structure. Seasonal use structures are subject to the same limitations and requirements as temporary structures, except as follows:

A. An annual permit shall be obtained, and an annual code compliance inspection performed prior to the establishment of the use or occupancy for each calendar year;

B. The annual code compliance inspection shall certify there are no hazards to health, life, or safety and proper maintenance of the structure or installations has been performed prior to re-occupancy;

C. Continued occupancy of seasonal use structures shall be allowed only if permitted and occupied within 360 days of the last occupancy, use or vacation. If not, the structure shall be removed from the premises so as to leave it in a clean, level, nuisance-free condition.

23.10.104.3.3 Temporary and seasonal use permit applications.

The application for a temporary or seasonal use permit shall include:

A. Property owner's name and mailing address;

B. Legal description of the proposed site with a plot plan showing the proposed location of the structure on the premises, location of any existing structures, and the location of any existing or proposed parking areas;

C. Length of use of the proposed structure. A permit is not required if the use is 14 days or less. However, exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this section or any other laws or ordinances of the Municipality;

D. Description of the proposed use and a justification of temporary or seasonal occupancy;

E. All required fees and cash bonds.

23.10.104.3.4 Temporary and seasonal use permit fees.

A nonrefundable fee shall accompany applications for temporary or seasonal use structures. See Table 3-A of this code for applicable fee. Applications for the annual code compliance inspection for seasonal use structures shall be accompanied by the renewal fee.

23.10.104.4 Mobile food units.

Mobile food units, including coffee carts, coffee huts, and pushcarts, (hereafter referred to as units) may be set up without obtaining a building permit and certificate of occupancy under the following restrictions:

A. The unit shall not exceed 8 feet 6 inches in width, 48 feet in length or 15 feet in height, including overhangs.

B. The unit shall be readily moveable daily and either:

1. Currently titled and licensed by the State of Alaska as a:
    i. Motor vehicle, or
    ii. Trailer having a tow hitch, chassis, axles, wheels and trailer lamps and reflectors required by AMC chapter 9.44; or
2. A pushcart as defined in AMC 16.60.050 and that satisfies the requirements of AMC 16.60.230E.
3. A factory built, readily moveable, intermodal shipping container repurposed to function as a mobile food unit which can be lifted or dragged onto a trailer or vehicle within one calendar day for transport.

C. The unit shall obtain approval by the Department of Health and Human Services.

D. Approval and a permit, where applicable, shall be obtained from a public utility prior to connecting to the utility’s services.

E. If the unit is to be connected to a public utility’s water supply or wastewater system, a licensed plumbing contractor shall obtain a retrofit permit and perform the work. The water supply shall be isolated by a reduced pressure backflow assembly.

F. If the unit is to be connected to a natural gas supply, a retrofit permit

shall be obtained by one of the following:

1. A Licensed plumbing contractor, or
2. A licensed mechanical contractor that employs a licensed plumber or gas fitter.

G. A licensed electrical contractor shall obtain a permit to provide electrical service and/or connection to the unit. The electrical connection shall consist of an approved flexible cord, attachment cap and receptacle approved for the location.

H. The unit shall comply with the National Electrical Code as noted by NEC 550.4 (A). A code compliance inspection shall be performed, and necessary corrections made before power is connected. A licensed electrical contractor shall obtain a permit and make the corrections. The permit for providing electrical service and/or connection may include the corrections when performed by the same contractor.

I. Service equipment located adjacent to vehicle lanes or the unit shall be provided with bollards or other substantial protective barriers.

J. The unit shall not reduce the required number of parking spaces at existing facilities.

K. Mobile food units shall be an allowable use in the zoning district where the unit is proposed to be located.

L. Units shall comply with fire plan review and operational processes as determined by the fire marshal. These include, but are not limited to:

1. An Anchorage Fire Department (AFD) approved, currently serviced fire extinguisher shall be located inside the unit.
2. Propane tanks shall be protected from vehicle impact and shall be located in accordance with the fire code.
3. The unit location shall not impact fire lanes or emergency vehicle access to nearby structures.

M. The unit location is subject to approval by traffic engineering.

N. Public occupancy for consumption of food or beverages shall not be allowed inside the unit. The unit may only be occupied by the owner and employees and entered by members of the public only for ordering and take out of food and beverages for consumption outside the unit.

Units that do not meet all restrictions and requirements listed in items A. through N. shall be considered a structure and require a building permit in accordance with this code.

23.10.104.4.1 Application requirements.

The following items are required at the time of the permit application:

A. A completed commercial permit application.

B. A site plan showing the unit location.

C. Approval from the Department of Health and Human Services for compliance with requirements of AMC 16.60.

D. A current copy of the State of Alaska vehicle or trailer registration, if the structure is not a pushcart or a repurposed factory-built, readily movable, intermodal shipping container.

23.10.104.5 Retrofit permits.

Retrofit permits are limited to projects involving fire, electrical, plumbing and

mechanical installations where engineering is not required by state law. Retrofit permits shall not be used on projects involving work requiring a building permit or projects requiring a change of use permit. Electrical, plumbing and mechanical retrofit permits may be used on the same project. Plan review is not required. Retrofit permits are limited in scope-of-work as follows:

A. One new 20 amp circuit having no more than six general purpose receptacles or light fixtures.
B. No more than six general purpose receptacles or light fixtures added to one or more existing 20 ampere circuits.
C. One 20 amp circuit for a sign.
D. An electrical, plumbing or mechanical alteration to a residential building containing 4 or fewer dwelling units.
E. An electrical, plumbing or mechanical alteration to a commercial building or a residential building containing more than 4 dwelling units where the scope of work is sufficiently minor to allow a determination that engineering is not required. Pre-approval by a plan review engineer is required.
F. The like for like replacement of plumbing, mechanical and electrical equipment, fixtures and appliances.
G. Fire systems regulated by the International Fire Code as amended under AMC 23.45.

Mechanical, plumbing and electrical installations exceeding the above listed parameters generally require engineering in accordance with state law. A commercial trade permit is required in lieu of a retrofit permit when engineering is required.

23.10.104.6 Public service utilities.

A permit shall not be required for the installation, alteration, or repair of generation, transmission, distribution or metering or other related equipment under the ownership and control of public service utilities by established right.

23.10.104.7 Permit application requirements.

To obtain a permit, the applicant shall first file an application on a form furnished by the department. The application shall:

A. Identify and describe the work covered by the permit for which application is made.
B. Describe the land on which the proposed work is to be done by legal description, tax parcel number, or street address to readily identify and definitely locate the proposed building or work.
C. Indicate the use or occupancy for which the proposed work is intended.
D. Be accompanied by plans, diagrams, computations and specifications, and other data as required in this code.
E. State the valuation of the proposed work. Valuation shall be as defined in sections 23.10.102.1 and 23.10.104.15.1.
F. Be signed by the owner, contractor, Architectural or Engineering licensed professional, or the owner's authorized agent. If authorized agent will be signing, a notarized statement from the owner, naming authorized agent to be acting on the owners' behalf shall be submitted.

G. Be accompanied by other data and information as may be required by the building official.

H. Be accompanied by proof of a residential contractor endorsement issued by the State of Alaska if the work under application is an alteration exceeding 25 percent of the value of a residential structure of one to four units, or construction of a residential structure of one to four units. This requirement does not apply to an individual administering or performing work on their own residence.

I. Include an estimate of the number of inspections required to complete the project for the following permit types, which are charged on a fee-per-inspection basis:
   1. Change of Use;
   2. Residential Construction valued at forty thousand dollars ($40,000) or less;
   3. Demolition;
   4. Relocatable Set-up;
   5. Mobile Food Units; and
   6. Trade Permits involving mechanical, electrical, or plumbing work but no structural work.

(AO No. 2019-116(S), § 3, 10-22-19)

23.10.104.8 Design professional in responsible charge.

When it is required that documents be prepared by a registered design professional, the building official shall be authorized to require the owner to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible charge. If the circumstances require, the owner shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original registered professional in responsible charge. The building official shall be notified in writing by the owner if the registered design professional in responsible charge is changed or is unable to continue to perform the duties. Any changes to design documents following designation of a new design professional in responsible charge shall be done in strict accordance with State of Alaska statutes and regulations governing architects, engineers, and land surveyors. The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building. Where structural observation is required by the building code, the inspection program shall name the individual or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur (see also Special Inspection Program).

23.10.104.9 Optional residential single-family and two-family plan review.

For residential single-family or two-family permit applications, the permit applicant shall have the qualified option for independent reviewing professionals, as described in subsection B below, to accept responsibility

for plan review and building code compliance for the permit. For permit applications submitted under this provision, it shall not be the responsibility of the building official to review the application for compliance with applicable building codes. The building official shall conduct or cause to be conducted reviews for zoning, address, flood, NPDES, storm water and any other reviews necessary for the project.

A. The applicant's exercise of the option and the identity of the independent reviewing professionals shall be designated on the building permit application in accordance with this section.

B. Plan review shall be conducted by independent reviewing professionals as follows:

1. Review of the structural plans and calculations shall be conducted by a professional engineer currently registered by the State of Alaska Board of Registration for Architects, Engineers and Land Surveyors as either a structural engineer or a civil engineer. A reviewing civil engineer must be able to demonstrate experience in structural engineering.
2. Review of the plans for fire code compliance and building safety shall be conducted by either (i) an individual certified as a Building Plans Examiner or Residential Plans Examiner by the International Code Council (ICC), or (ii) a professional architect registered by the State of Alaska Board of Registration for Architects, Engineers and Land Surveyors.
3. The structural review and the review for fire code compliance and building safety may be conducted by a single individual if that individual meets the certification requirements set forth in both subsections B.1 and B.2, above.
4. No application will be accepted where an independent reviewing professional has also served as the designer or builder of the project.

C. A complete building permit application reviewed pursuant to this section shall include:

1. Complete building plans and structural calculations;
2. Plot plan;
3. Completed storm water discharge permit application;
4. Letter of review signed by the appropriate independent reviewing professional demonstrating experience in structural engineering certifying structural plans, calculations, fire code compliance, building safety, accepting responsibility for plan review, as required by this section;
5. Signed release of liability, as required by this section; and
6. Any geotechnical reports required by Titles 21 and 23 of the Anchorage Municipal Code.

D. The plans, calculations and all documents required under this section **<u>may</u>** [~~**shall**~~] be submitted electronically via the department's electronic plan review software known as eplans.

E. The building official shall confirm the application includes the materials required by sections 23.10.104.9 and 23.10.104.10. If complete and compliant with Title 21 regulations, the application shall be accepted, and the building official shall issue the permit provided that:

1. The permit application demonstrates the plans and specifications for residential single-family and/or two-family dwellings have been reviewed by independent reviewing professionals. Each reviewing professional must submit a signed letter of review with the plans describing the scope of their review and including the details of their credentials to conduct such review. Each reviewing professional must include their registration number and the related expiration date.
2. The permit applicant and the independent reviewing professionals confirm in writing that the independent reviewing professionals accept responsibility for the plan review.
3. Each independent reviewing professional either:
    a. Submits to the building official, in concert with the letter of review, a waiver of claims against the Municipality of Anchorage for all damages, losses and expenses, arising out of or resulting from the performance of the review, to the fullest extent permitted by law and on a form satisfactory to the Municipality of Anchorage Office of Risk Management, executed by (i) the reviewing professional; (ii) the building construction contractor; and (iii) the current owner of the property and any party under contract to purchase the property within a year of its completion; or
    b. Provides proof that they maintain professional liability insurance meeting each of the following requirements:
        i. Plan review and building code compliance review under Anchorage Municipal Code are within the scope of the professional liability insurance coverage.
        ii. The professional liability insurance provides a minimum of $250,000 in coverage.
        iii. Coverage extends for no less than two years from completion of the project construction. If the existing policy does not extend for the duration of this period, the independent reviewing professional must specify in his or her reviewing letter when the policy expires and that it will be renewed to ensure continuous coverage for no less than two years from the date of completion.
4. Each independent reviewing professional indemnifies, holds harmless and states they shall defend the Municipality of Anchorage from and against all claims, damages, losses and expenses, including but not limited to attorney fees and costs, arising out of or resulting from the performance of the review, to the fullest extent permitted by law.

F. Reviewing professionals do not have authority to approve code modifications or alternative materials, designs, and methods of construction and equipment as defined in this code. Any request for consideration of code modifications or alternative materials, designs, and methods of construction and equipment shall be submitted to the

building official for approval prior to or along with the permit application under the optional process.

G. The building official may revoke the privilege afforded by this section of any individual who displays incompetence or lack of knowledge in matters relevant to the design and construction of one- and two-family dwellings, or who commits fraudulent acts.

H. The building official may audit **up to 8% of the** reviews conducted by independent reviewing professionals as necessary to enforce the provisions of this code.

23.10.104.10 Submittal documents.

Construction documents, statement of special inspections, structural observation programs, geotechnical reports and other data shall be submitted in accordance with the policies prescribed by the building official. The construction documents shall be prepared by a registered design professional where required by state statute. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

A. Exceptions:

1. The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this code.
2. Only one copy of specifications and calculations are required.

23.10.104.10.1 Information on construction documents.

Construction documents shall be legible, dimensioned and drawn upon suitable material. The text on the field set of plans shall be a minimum of 3/32 inch in height. Information on plans shall be organized in a logical manner to be readily understandable by contractors, plan reviewers and inspectors. Electronic media documents are permitted to be submitted when approved by the building official. Construction documents shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed and show in detail that the work will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official. Extraneous details or other information not related to the project shall not be included on the drawings.

Plans for buildings of other than a detached dwelling unit or accessory structure regulated by the IRC, or a single story Group U occupancy shall indicate how required structural and fire-resistive integrity will be maintained where penetrations are made for electrical, mechanical, plumbing and communication conduits, pipes and similar systems.

23.10.104.10.2 Fire protection system shop drawings.

Shop drawings for the fire protection system(s) shall be submitted to indicate conformance with the fire code. The construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain

all information as required by the fire code.

23.10.104.10.3 Means of egress.
The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress in compliance with the provisions of this code. In other than detached single family dwelling units, the construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

23.10.104.10.4 Exterior envelope.
Construction documents for all buildings shall describe the exterior wall and roof envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane and details around openings.

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

23.10.104.10.5 Site plan.
The construction documents submitted with the permit application shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades, proposed finish grades and elevations at all lot corners, based on ties to a recovered benchmark identified in the MOA Benchmark Network. Assumed elevations shall only be allowed with prior written consent of the department. The site plan shall also show existing and proposed drainage patterns, identifying any location where drainage is proposed to be transported off-site; and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished, and the location and size of existing structures and construction to remain on the site or plot. Any changes to existing topography must also conform to the requirements of Chapter 23.105, Grading, Excavation and Fill, and Landscaping. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

23.10.104.11 Deferred submittals.
For the purposes of this section, deferred submittals are defined as those portions of the design not submitted at the time of the application.

Deferral of any submittal items shall have the prior approval of the building official. The registered design professional in responsible charge shall list the

deferred submittals on the construction documents for review by the building official.

Documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review and forward them to the building official with a notation indicating the deferred submittal documents have been reviewed and been found to be in general conformance with the design of the building. The notation must be clearly outlined on the documents and must be accompanied by the signature of the registered design professional in responsible charge. The deferred submittal items shall not be installed until the design and submittal documents are approved by the building official. Copies of the approved deferred submittal documents shall be kept on site for reference by inspectors.

23.10.104.12 Amended construction documents.

Work shall be installed in accordance with the approved construction documents, and any changes made prior to or during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents through a change order. Changes of a minor nature may utilize the field change order process.

23.10.104.13 Retention of construction documents.

The building official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. One set of approved plans, specifications and computations shall be retained in the official records for the period required for retention of public records, and one set of approved plans and specifications shall be returned to the applicant and shall be kept on the site of the building or work at all times while the work authorized thereby is in progress. The building official will provide digital long-term retention documentation as per approved retention plan adopted by the Assembly including but not limited to the following items: Applications, permits, certificates issued, fees collected, reports of final inspections, and all notice and orders.

23.10.104.14 Document approval and permit issuance.

23.10.104.14.1 Document examination and approval.

The application, plans, specifications, computations and other data filed for permit shall be reviewed by the building official. Such plans may be reviewed by other departments of the Municipality to verify compliance with any applicable laws under their jurisdiction. Once all documents are reviewed and approved by all departments of the Municipality, the building official shall stamp the approved plans "Reviewed for Code Compliance". Such approved plans shall not be changed, modified or altered without authorization from the building official, and all work regulated by this code shall be done in accordance with the approved plans. Once documents are approved, all changes made shall require a change order or field change order.

It shall be the building official's option to require an express plan review for one or more plan review disciplines following two or more unsuccessful attempts to resolve plan review comments.

For applications submitted under section 23.10.104.9, when the building official finds the application complete in meeting the requirements for acceptance of plan review and building code compliance responsibilities by the independent reviewing professional(s), the building official shall stamp the accepted plans "Accepted". Once documents are accepted, all changes made shall require documentation of the changes by change order or field change order, showing review and approval by the independent reviewing professional and acceptance by the building official. One set of construction documents so reviewed or accepted shall be retained by the building official, and one set shall be kept at the site of work and shall be open to inspection by the building official or a duly authorized representative.

23.10.104.14.2 Express plan review.

Express plan review is an option exercised by the permit applicant or building official to expeditiously resolve plan review comments.

A. Limitation: The permit applicant may request an express plan review any time after the initial plan review is completed.

B. Eligible Projects and Applicable Reviews: Any permit or plan review discipline, including architectural, structural, plumbing, mechanical, electrical, fire, land use, traffic engineering, NPDES, right of way, flood hazard and Project Management and Engineering (PM&E) reviews. In addition, express plan review may be used for change orders and deferred submittals. Express plan review may be used on phased projects. For example, the structural, architectural and civil plans may be submitted for review prior to the plumbing, mechanical and electrical plans, and partial permits such as a footing and foundation permit may be issued.

C. Submittal Requirements: Complete the express plan review application and schedule the plan review meeting as described below.

D. Plan Review Meeting:

1. The plan review meeting is the basis of the express plan review process.
2. The permit applicant schedules the plan review meeting through the Development Services secretary at 343-8301. The applicant specifies which disciplines are required to attend the meeting. All applicable design professionals and municipal plan reviewers are required to attend the meeting.
3. The municipality reviews plans and supporting documentation during the meeting.
4. The meeting is intended to be a collaborative process between the design professionals and plan reviewers. The objective will be approval of code compliant construction documents.
5. Required corrections of a minor nature can be made to the plans and/or supporting documentation during the meeting. The design professional may either mark-up the plans by hand or submit new plans at a later time with the appropriate

revisions. Changes made by hand shall be bubbled, initialed and dated by the design professional.

6. Corrections requiring redesign and/or substantial plan revisions shall be made outside the scope of the meeting.
7. Additional plan review meetings may be scheduled at the applicant's discretion as necessary to review revisions and obtain approval.

E. Fee: The express plan review fee is listed in Table 3-B. The fee is in addition to all other applicable permit fees. The fee applies to plan review meeting time and does not apply to plan review conducted outside the scope of the meeting. Payment is due prior to obtaining a permit.

F. Express Plan Review Availability. Express Plan Review is based on the availability of the plan review staff as determined by the building Official.

23.10.104.14.3 Previous approvals.

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

23.10.104.14.4 Expiration of plan review.

Applications for which no permit is issued within 360 days following the date of application shall expire by limitation and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the building official. The building official may extend the time for action by the applicant for a period not exceeding 180 days, on written request by the applicant showing circumstances beyond the control of the applicant prevented action from being taken. An application shall not be extended if this code or any other pertinent laws or ordinances are amended subsequent to the date of application. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee.

23.10.104.14.5 Phased permit approval.

The building official may issue a permit for the construction of part of a building, structure or building service equipment before the entire plans and specifications for the whole building, structure or building service equipment are submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of the technical codes. The holder of such permit shall proceed with the approved work at the holder's risk, without assurance the permit for the entire building, structure or building service will be granted. This approval must be approved by the building official and shall require written documentation prior to any work being done.

23.10.104.14.6 Permit issuance.

If the building official finds the work described in an application for a permit and the plans, specifications and other data filed conform to the requirements

of this code, the technical codes, and other pertinent laws and ordinances, and all permit fees have been paid, the building official shall issue a permit to the owner, contractor or authorized agent. If a contractor is performing the work, the permit shall be issued in the name of the contractor.

Exceptions:

1. The Building Official may require a permit applicant to obtain a Certificate of Occupancy for a previous permit with an expired Conditional Certificate of Occupancy.
2. The Building Official may require a permit applicant to reopen an expired permit and obtain a Certificate of Occupancy or Certificate of Completion for said expired permit before issuance of another permit.
3. The Building Official may require a permit applicant to remedy a stop work order, notice of violation, or notice of permit requirement on the applicant's other projects or permits prior to accepting a permit application.

23.10.104.14.7 Validity of permit.

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

23.10.104.14.8 Expiration of permit.

1. Permits (other than fire protection and life safety system permits).
   Every permit issued by the building official under the provisions of the technical codes shall expire by limitation and become null and void, if the building or work authorized by the permit is not commenced within 360 days from the date of the permit issuance, or if the building or work authorized by the permit is suspended or abandoned at any time after the work is commenced for a period of 360 days. For the purposes of this section, work shall be deemed suspended or abandoned if no inspections have occurred within 360 days. If the suspension or abandonment has not exceeded 18 months, the work may be recommenced upon application for reactivation of the permit. For reactivation, the building official shall have the option to either extend the previous plan approval at no additional charge or, if a code change has ensued in the interim, require the applicant to revise the drawings accordingly and pay a new plan review fee. For reactivation, the permit fee shall be one of half the amount required for a new permit for such work. In order to renew action on a permit abandoned or suspended more than 18 months, the building official may exercise the same option described above regarding plan review, but the permittee shall pay a new full permit fee.
   Exception: When it can be demonstrated that a substantial amount of

the previously permitted work has been inspected and approved, the building official may allow the permit to be reopened and final inspections be conducted to close the permit. The permittee shall pay any outstanding fees, including fees for time required to review the project file and any inspections required to close the permit. This exception will only be granted after review of the permit history by the building official. The decision to grant this exception is solely at the building official's discretion.

A permittee holding an unexpired permit may apply for an extension when the permittee is unable to commence work within the time required by this section for good and satisfactory reasons. The building official may extend the time for action by the permittee for a period not exceeding 360 days upon written request by the permittee showing circumstances beyond the control of the permittee prevented action from being taken. Permits shall not be extended more than one 360-day period, unless otherwise approved by the building official.

Unless the property has a valid Conditional Use approved by the Planning and Zoning Commission which sets a longer period-of-time for completion, grading permits in residential zoned areas shall be completed within two years of permit issuance. Once a grading permit expires, a stop work order shall be issued, investigative fees shall be paid to reactivate the permit, and a bond posted. The bond shall be no less than the valuation to complete the work. The bond shall be forfeited if work is not completed within 180 days from the permit reactivation date.

2. Fire protection and life safety system permits.
All work under a permit to install, upgrade or replace a fire protection or life safety system regulated by the International Fire Code shall be complete and a certificate of completion obtained within one year following the date of permit issuance. For failure to timely close a permit, see the fines schedule in 23.10 Table O.
Exceptions:
   1. Upon written request, signed by all applicable parties, explaining why an extension is required, and stating the new completion date, the fire marshal may grant an extension of up to one-year.
   2. Fire system permits associated with open building permits issued under AMC 23.10.104 are subject to the building permit expiration provisions of this section.

23.10.104.14.9 Suspension or revocation.
The building official may, in writing, suspend or revoke a permit issued under the provisions of this code and the technical codes when the permit is issued in error or on the basis of incorrect information supplied, or in violation of an ordinance or regulation or the provisions of these codes.

23.10.104.14.10 Revising application (removing permittee).

In order to remove the permittee on a specific permit from responsibility of completing the project and obtaining a certificate of occupancy, the "Formal Transfer of Responsibilities" form shall be completed and signed by the Owner and permittee being removed.

23.10.104.14.11 Securing suspended work.

If activity associated with a permit is suspended for a prolonged period the site shall be secured against casual public access.

23.10.104.15 Fees.

Fees shall be assessed in accordance with the provisions of this section or shall be as set forth in the fee schedule adopted by the Municipality.

23.10.104.15.1 Valuation.

Valuation is determined as follows:

A. The valuation used to compute fees for new construction shall be based on the Building Valuation Data Chart in the most recent August issue of the Building Safety Journal as published by the International Code Council. The regional multiplier shall be 1.3. The rates in the August issue shall become effective on the following January 1st and continue to January 1st of the following year. The valuation shall be calculated using the dollar per square foot method. The area of the building shall be the gross floor area; the total horizontal area of all floors of a building, measured between exterior faces of exterior walls, including interior balconies, mezzanines, stairwells, elevator shafts, ventilation shafts, etc., but excluding area without floor structure in atria.

1. The specific features listed below require a valuation calculation as described:
    a. The area located under canopies, eaves and overhangs extending more than 4 feet from the building perimeter shall be included in the building area. The area under free-standing canopies along with the occupancy classification, shall be used to determine valuation.
    b. The valuation used to compute fees for finished basements in single-family homes and duplexes shall be calculated as 0.67 multiplied by the valuation for new construction calculated under subsection A.
    c. The valuation used to compute fees for partially finished basements in single family homes and duplexes shall be calculated at 0.40 multiplied by the valuation for new construction calculated under subsection A.
    d. The valuation used to compute fees for permanent fabric structures shall be calculated as 0.50 multiplied by the valuation for new construction calculated under subsection A.

B. The valuation used to compute fees for projects other than new construction calculated under item 23.10.104.15.1A. shall be provided by the permit applicant and verified by the building official. The valuation shall be the total cost required to complete the project

presuming all labor will be compensated and all materials will be purchased at fair market value. Where volunteer labor or donated materials are contributed, the valuation shall nevertheless include the fair market value of donated labor and materials. The building official reserves the right to require a copy of the signed construction contract to verify valuation.

If an applicant prefers not to provide a copy of the signed construction contract when questioned about the stated valuation, the Building Official will calculate valuation using the Building Valuation Data Chart as described in 23.10.104.15.1 A. to compute the valuation as if the project were new construction, and then scale this valuation by multiplying by the appropriate percentage identified in the following table for minor, medium, major or full alterations. The building official's determination of a project as being minor, medium, major or full shall be final and not appealable.

Extent of Alteration	Valuation % of New Construction	Definition of the Extent of Alteration[1]
Minor	20%	Primarily cosmetic work (refinishing walls, ceilings, floors) with minor mechanical, electrical and plumbing work, and incidental structural work. No reconfiguration of space.
Medium	40%	Reconfiguration of less than 50% of the tenant space involving the addition/removal of walls/partitions and associated plumbing, mechanical and electrical work; modification/repair of ceiling systems; replacement of portions of glazing systems; medium projects may include minor changes to the exterior envelope or structural systems.
Major	60%	Reconfiguration of more than 50% of a tenant space involving the addition/removal of walls/partitions and associated plumbing, mechanical and electrical work; installation of new glazing systems and/or ceiling systems; upgrading of structural systems in limited areas to receive increased loads. Significant upgrades to mechanical, electrical or plumbing systems.
Full	80%	Near complete reconfiguration of space involving the demolition of

		nearly all non-load-bearing walls/partitions (leaving a structural shell) and the installation of new walls/partitions; replacement of electrical, mechanical and plumbing systems; structural upgrades to meet seismic provisions, or other substantial structural renovation, extensive structural repair.

[1] The extent of alteration includes one or more of the elements in the definition. The floor area affected shall be calculated on the entire areas of the rooms where alterations are proposed. If a project has areas for which it is reasonable to distinguish as being of different categories, it is appropriate to calculate the area separately to develop the value.

23.10.104.15.2 Plan review fees.

A. Plan review fees shall be calculated in accordance with Table 3-B and paid at the time of document submittal.
B. Plan review fees are in addition to permit fees.
C. Other than driveway review fees which are assessed on a case-by-case basis, a Fire Department Plan Review fee is not required for detached one- and two-family dwellings.
D. Plan review fees calculated as a percentage of the permit fee on fee-per-inspection permits shall be adjusted accordingly based on actual number of inspections used.
E. Where plans are incomplete or changed so-as-to require additional plan review, an additional plan review fee shall be charged at the rate shown in Table 3-B of this code.
F. Structures that are identical to a previously approved and permitted structure may qualify for "pre-approved" status for purposes of the plan review fee assessment. The plans must be submitted within the same code cycle. Each identical structure shall be issued a separate building permit.
G. Plan review fees for projects submitted under the optional process described in section 23.10.104.9 qualify for a reduced fee, as noted in Table 3-B.

23.10.104.15.3 Permit fees.

Permit fees depend on the type and extent of construction. Some projects may require more than one type of permit fee, e.g., a building containing an elevator will require a general building permit and an elevator permit. Where a technical code is adopted by the Municipality for which no fee schedule is shown in this code, the fee required shall be in accordance with the schedule established by the Assembly. Permit fees shall be assessed as follows:

1. Permit fees for new construction, additions, alterations to existing buildings and repairs shall be based on valuation determined per 23.10.104.15.1 and calculated in accordance with Table 3-A.

Exception: Permit fees for residential projects valued at forty thousand dollars ($40,000) or less shall be assessed on a fee-per-inspection basis in accordance with Tables 3-A and 3-C.

2. Permit fees for stand-alone plumbing, mechanical and/or electrical work that does not involve structural or alteration work and that does not qualify as a retrofit permit shall be assessed on a fee-per-inspection basis in accordance with Table 3-C.
3. Permit fees for change of use and/or occupancy classification that do not involve alteration work shall be assessed a fee-per-inspection basis in accordance with Table 3-C.
4. Permit fees for a temporary gas or electrical service that is not associated with a building permit shall be assessed in accordance with Table 3-D.
5. Permit fees for retrofit permits shall be assessed in accordance with Table 3-E.
6. Elevator, escalator, moving walk, dumbwaiter, platform-lift and stairway chairlift permit and inspection fees shall be assessed in accordance with Table 3-F.
7. Grading, excavation and fill permit fees shall be assessed in accordance with Table 3-G.
8. Residential re-roof permit fees shall be assessed in accordance with Table 3-H.
9. Manufactured (mobile) home set-up permit fees shall be assessed in accordance with Table 3-I.
10. Sign permit fees shall be assessed in accordance with Table 3-J.
11. Fire systems permit fees shall be assessed in accordance with Table 3-M.

For permit fees assessed on the number of inspections, the applicant shall estimate the number of inspections by discipline. The building official will assist the permit applicant with the initial estimate. The building official reserves the right to correct the estimate based on historic information for similar projects. A refund will be granted for inspections not used. Additional fees are required for inspections exceeding the estimated number.

23.10.104.15.4 Fee refunds.

A. The building official shall refund a fee that is paid or collected in error.
B. The building official may refund up to eighty percent (80%) of the permit fee paid when a permit is cancelled.
Exception: The building official may grant a full refund of the permit fee if no work has been done by the Municipality, and the permittee shows the cancellation of the permit was beyond the permittee's control.
C. The building official may refund the full plan review fee if the permit is cancelled before any review has begun.
D. The building official shall not refund any fee unless it is requested in writing by the original permittee.
E. Permits expired by more than 360 days are not entitled to a refund.

Section 105 Licensing requirements.

23.10.105.1 General provisions.

A. General. Except as allowed under subsections B. and C., no person shall administer or perform work regulated by this code except a person holding a valid, unexpired, and unrevoked contractor's license and/or a certificate of qualification as required by this code and state law.

B. Contractor Required: All work regulated by this code shall be administered by contractors licensed by the State of Alaska and the municipality in the relevant trade. This licensing requirement applies regardless of whether the work is exempt from the requirement for a permit.

Exceptions:

1. A property owner may act as a contractor as follows:
    a. An owner may construct a maximum of one structure every two years. The start date of the two-year time limitation shall be the date of the certificate of occupancy. A permit to construct an additional structure cannot be issued during the two-year time limitation.
    b. An owner may administer alterations, including additions, to an existing structure.
    c. An owner of an individual dwelling unit located in a multi-dwelling unit structure may administer alterations within their dwelling unit.
2. A tenant may administer alterations within their lease space.

C. Performing Work: All work regulated by this code shall be performed by individuals appropriately licensed in the relevant trade in accordance with state law and this code.

Exceptions:

1. A property owner may perform work as follows:
    a. The owner of a detached single-family home may perform any type of work regulated by this code on the structure as long as they reside in the home.
    b. The owner of a detached duplex (two dwelling units) may perform any type of work regulated by this code on the structure as long as they reside in one of the units.
    c. The owner of a commercial building and their employees may perform maintenance, repair and alteration work (excluding electrical, mechanical and plumbing work that requires a permit in accordance with this code) on said structure.

D. It shall be unlawful for any person to conduct, carry on or engage in the business of, or act in the capacity of a contractor in a trade covered by this code without first being issued a valid municipal contractor's license, and when required, a certificate of qualification.

E. An applicant for a building construction contractor's license may be requested to provide a copy of the construction contractor's bond required by state law with the application and shall show proof the bond is current and in effect.

F. It shall be unlawful for any person to labor in the capacity of a plumber, gas fitter or sheetmetal journeyman without first being issued a valid journeyman certificate of qualification by the municipality.

G. Any contractor or journeyman doing gas piping, plumbing or sheet metal work covered by this code shall be tested and licensed by the Municipality.

H. It shall be unlawful to labor as a plumber or sheet metal trainee without first being issued a valid trainee certificate of qualification by the Municipality.

I. It shall be unlawful for any person acting in the capacity of a contractor in a trade covered by this code, or as the responsible agent, manager, supervisor, superintendent or foreman, to knowingly or willfully order, instruct or permit an employee, agent or person under supervision or control to do an act violating the certificate of qualification requirements set forth in subsections F. or H.

J. The ratio of individuals holding sheet metal or plumber trainee certificate of qualification cards shall not be more than two for every certified journeyman on a job site.

23.10.105.2 Certificate of qualification.

23.10.105.2.1 Application for certificate of qualification, gas piping, plumbing and sheet metal.

A. Every person applying for a gas piping, plumbing or sheet metal contractor certificate of qualification shall complete the application form, pass the required test and pay the required fee. If a certificate is not obtained within 90 days of passing the exam, the applicant may be required to retest.

B. Every person applying for a gas fitter, plumber or sheet metal journeyman certificate of qualification shall complete the application form, pass the required test and pay the required fee. If a certificate is not obtained within 90 days of passing the exam, the applicant may be required to retest.

C. Every person applying for a plumber or sheet metal trainee certificate of qualification shall complete the application form and pay the required fee.

D. In accordance with state law, no person shall qualify as administrator under more than one license. If the relationship of the administrator with the firm or corporation applicant is terminated, the license shall become void within 60 days unless another administrator is qualified by proper authority. Licenses issued to applicants are nontransferable.

E. Applicants for a plumbing or sheetmetal contractor certificate of qualification shall provide evidence of at least six years or 12,000 hours minimum of previous practical experience. Applicants for a gas piping contractor certificate of qualification shall provide evidence of at least four years or 8,000 hours minimum of previous practical experience. Only hours accrued while properly licensed and working for a legally licensed contractor for the relevant trade will be credited towards the required hours. In lieu of previous practical experience (at

the discretion of the Building Board, Mechanical Subcommittee) credit may be allowed for each year, and fraction thereof, of attendance at a recognized school, if the course taken by the applicant was primarily mechanical and directly related to the particular skill or trade being applied for. No credit shall be allowed any applicant for experience gained while doing any mechanical work ordinarily incidental to or associated with non-mechanical occupations, as determined by the building official.

F. Applicants for a plumbing contractor or plumber journeyman certificate of qualification shall provide a copy of a current Alaska Department of Labor Certificate of Fitness Plumber Journeyman card. Applicants for a plumber trainee certificate of qualification shall provide a current copy of an Alaska Department of Labor Certificate of Fitness card.

G. Applicants for a plumber or sheet metal journeyman certificate of qualification shall provide evidence of at least four years or 8,000 hours minimum of previous experience personally installing, fabricating, altering and repairing work covered by the particular skill or trade being applied for. Only hours accrued while properly licensed and working for a legally licensed contractor in the relevant trade will be credited towards the required hours. In lieu of previous practical experience, (at the discretion of the Building Board, Mechanical Subcommittee) credit may be allowed for each year, and fraction thereof, of attendance at a recognized school if the course taken by the applicant was primarily mechanical and directly related to the skill or trade being applied for. No credit shall be allowed any applicant for experience gained while doing any work ordinarily incidental to or associated with non-mechanical occupations as determined by the building official. In lieu of the above qualifications, an applicant may submit proof of successful completion of at least a four-year or 8,000 hours minimum apprenticeship program registered and approved by the U. S. Department of Labor, Bureau of Apprenticeship and Training, as acceptable qualifications. Journeyman and trainee plumbers shall have a state license.

H. Applicants for a plumber or sheet metal trainee certificate of qualification are not required to have prior experience but shall provide evidence of working for a properly certified contractor and be enrolled in an approved apprenticeship program.

I. Applicants for a journeyman gas fitter certificate of qualification shall provide evidence of two years or 4,000 hours minimum previous experience in the gas piping field and shall provide a current copy of an Alaska Department of Labor Certificate of Fitness Gas Fitter card. Only hours accrued while properly licensed and working for a legally licensed contractor in the relevant trade will be credited towards the required hours.

23.10.105.2.2 Issuance of certificate of qualification, gas piping, plumbing and sheet metal.

A. A sheet metal, plumbing, or gas piping contractor certificate of qualification shall be issued to a person who makes application for such

certificate, provides evidence of the required experience and training, successfully passes the examination and pays the required fee.

B. A sheet metal, plumber, or gas fitter journeyman certificate of qualification shall be issued to a person who makes application for such certificate, provides evidence of the required experience and training, successfully passes the examination, and pays the required fee.

C. A plumber or sheet metal trainee certificate of qualification shall be issued to a person who meets the application requirements for such certificate and pays the required fee.

D. Every person required to have a certificate of qualification shall obtain such certificate either:

1. Within 90 days of passing the required test; or
2. Within 30 days of the expiration date shown on the certificate, except if the certificate has been suspended or revoked.

E. Certificates of qualification issued under this title are valid for a maximum of two years and expire on February 14 of even calendar years.

23.10.105.2.3 Certificate of qualification, re-examination, gas piping, plumbing and sheet metal.

A. Any person who fails to pass the examination may apply for re-examination on the next available test date.

B. Fees for re-examination will be the same as initial examination fees.

23.10.105.2.4 Expiration of certificate of qualification, gas piping, plumbing and sheet metal.

A. Every certificate of qualification shall remain in force and effect until its expiration date, unless canceled or revoked.

B. Certificates of qualification expired beyond 30 days, but less than two years may be renewed by paying the prescribed fee. This fee shall be retroactive to the expiration date of the last certificate issued. In addition, an administrative late fee shall be charged.

C. Certificates of qualification expired by two or more years shall not be renewed, and the person shall be required to re-take the test required for new applicants.

23.10.105.2.5 Backflow assembly tester certificate of qualification.

A. A backflow assembly tester certificate of qualification shall be issued to a person who makes application for such certificate, attends the four-day Backflow Assembly Certification class sponsored by the Municipality, successfully passes both the written and the hands-on examination, and pays the required fee. The certification is valid for three (3) years and may be extended for one additional year with approval of the building official. An applicant may submit proof of attendance of a similar class and of successfully passing the required examination(s) of the similar class, provided further the similar class is recognized as equal to the aforesaid requirement(s), as determined by the building official.

B. A person who wishes to maintain a valid certificate of qualification as a Backflow Assembly Tester shall - every three (3) years from the date of original issuance - attend an 8-hour re-certification class administered by the department or a nationally recognized agency approved by the building official, successfully pass both written and hands-on examinations and pay the required fee. Individuals recertified by agencies other than the department shall provide proof they have successfully passed the written and hands-on examinations prior to receiving a new Backflow Assembly Tester certificate of qualification.

23.10.105.2.6 Revocation of certificate of qualification.

A. The building official may cancel or revoke any certificate of qualification issued to any person, if such person later shows incompetence or lack of knowledge in matters relevant to such certificate or if such certificate was obtained by fraud. If the certificate of qualification of any person is canceled or revoked, another certificate shall not be granted to the person within 12 months after the date of cancellation or revocation.

B. Certificates of qualification are not transferable from one person to another, and the lending of any certificate or the obtaining of permits there under for any other person shall be cause for revocation.

C. The building official may require retesting of any certificate of qualification holder if such person shows incompetence or lack of knowledge in matters relevant to such certificate. Failure to pass a retesting shall result in revocation of the certificate. The person may apply for retesting after 30 days have elapsed.

23.10.105.2.7 Right to inspection, certificate of qualification or fitness.

Municipal inspectors may contact any worker performing work for which a certificate of fitness is required (under AS 18.62.010) or a certificate of qualification is required under this code and request the person to exhibit the person's certificate. The inspector may immediately serve upon the person a notice to cease any work in that occupation until a State of Alaska certificate of fitness and/or a municipal certificate of qualification is displayed.

Section 106 Inspection requirements.

23.10.106.1 General.

A. Construction or work for which a permit is required shall be subject to inspection by the building official and the construction or work shall remain accessible and exposed for inspection until approved by the building official. In addition, certain types of construction shall have special inspection, as specified in Section 106.7, which is a requirement of the owner and paid for by the owner. Note: The special inspector shall not receive compensation from the contractor of record.

B. Approval, as a result of an inspection, shall not be construed as an approval of a violation of the provisions of this code or other ordinances of the Municipality. Inspections presuming to give authority to violate or cancel the provisions of this code or other ordinances shall not

be valid.

C. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the building official nor the Municipality shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

D. An as-built survey may be required by the building official prior to completion of a development to verify a structure is located in accordance with this code, land use regulations and the approved plans.

E. The building official may require a survey showing as-built contours of a fill or excavation to verify the work conforms to this code, land use regulations and the approved plans.

23.10.106.2 Inspection requests.

A. It shall be the duty of the person doing the work authorized by the permit to notify the building official such work is ready for inspection. The building official may require every request for inspection be filed at least one working day before such inspection is desired. Such request may be via Building Safety online services, in writing or by telephone.

B. It shall be the duty of the person requesting any inspections required either by this code, or the technical codes, to provide safe access to and means for inspection of the work.

23.10.106.3 Approval required.

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

B. There shall be a final inspection and approval for each relevant discipline associated with the permitted building or structure before the building or structure shall be declared completed and ready for occupancy and use.

C. Retrofit permits are completed and closed when the inspector issues an approved final inspection report. A Certificate of Completion is not required but can be provided upon request.

23.10.106.4 Required inspections.

The building official shall publish and keep current an "Inspection Schedule" for required inspections for various types of construction. This schedule shall be available on the department website and by hard copy at the Development Services public counter.

23.10.106.5 Other inspections.

In addition to the inspections specified above, the building official may make or require other inspections of construction work to ascertain compliance with

the code provisions of this code or technical codes and other laws enforced by the enforcement agency.

23.10.106.6 Re-inspections.

A. A re-inspection fee may be assessed for each inspection when such portion of work for which the inspection is requested is not complete. Fees shall be in accordance with Table 3-C of this code, including re-inspection fees for subsequent inspections of the same code issue noted in a prior inspection report. This section is not to be interpreted as requiring re-inspection fees the first time a job is rejected for failure to comply with the requirements of the technical codes, but as controlling the practice of calling for inspections before the job is ready for such inspection or re-inspection.

B. Re-inspection fees may be assessed when the approved plans are not readily available to the inspector or for failure to provide access on the date inspection is requested.

23.10.106.7 Special inspections and structural observation.

Special inspection and structural observation requirements shall be in accordance with the International Building Code, Chapter 17 and the adopted Special Inspection Program.

Section 107 Certificates of Occupancy and Completion.

23.10.107.1 Use or occupancy.

A. Buildings or structures shall not be used or occupied nor shall a change in the existing use or occupancy classification of a building or structure or portion thereof be made until the building official issues a Certificate of Occupancy as provided herein.

B. Issuance of a Certificate of Occupancy shall not be construed as an approval of a violation of the provisions of this code or other ordinances of the Municipality. Certificates presuming to give authority to violate or cancel the provisions of this code or other ordinance shall not be valid.

23.10.107.2 Change in use.

Changes in the character or use of a building or portion of a building shall not be made except as specified in this code.

23.10.107.3 As-built survey.

Unless otherwise approved by the building official, an as-built survey shall be provided for new structures, moved structures and additions to existing structures.

23.10.107.4 Certificate of Occupancy issuance.

A. After the building official and other authorized municipal code enforcement authorities inspect the building, structure and associated land use and find no violations of the provisions of this title or other laws enforced by municipal code enforcement agencies, and upon

approval of an as-built survey, the building official shall issue a Certificate of Occupancy containing the following:

1. The building permit number;
2. The address of the building;
3. The name and address of the owner;
4. A description of the portion of the building for which the certificate is issued; and
5. A statement that the described portion of the building has been inspected for compliance with the requirements of this code for the group and division of occupancy and the use for which the proposed occupancy is classified.

23.10.107.5 Conditional Certificate of Occupancy issuance.

A. If the building official finds substantial hazard will not result from occupancy of a building or portion thereof before the same is completed, a Conditional Certificate of Occupancy for the use of a portion or portions of a building or structure may be issued prior to the completion of the entire building or structure.

B. Conditional Certificates of Occupancy for exterior work not completed because of weather shall have an expiration date of **September [AUGUST]** 15 of the following year.

C. Expired conditional certificates may prevent the same permittee from receiving additional permits as outlined in this code.

23.10.107.6 Certificate of Completion.

A Certificate of Completion may be issued in lieu of a certificate of occupancy for permits that do not involve the construction of occupiable space or a change in occupancy classification, including but not limited to retrofit, reroof, repair, renovation, sign, grading/excavation/fill, elevator and fire system permits.

23.10.107.7 Failure to obtain a Certificate of Occupancy.

In addition to other penalties and remedies prescribed by this code, the building official may file in the Anchorage District Recorder's Office a certificate describing the property and noncompliance with this code. Failure to obtain a Certificate of Occupancy includes, but is not limited to, the following:

A. A Conditional Certificate of Occupancy that is expired by more than 180 days; or

B. A permit under which work has been performed that is expired by more than 180 days; or

C. Work regulated by this code performed without obtaining the required permit(s).

The responsibility and cost to remedy any conditions necessary to achieve compliance with this code shall not be borne by the Municipality.

23.10.107.8 Fees.

All permit fees and fines shall be paid prior to obtaining a Certificate of Occupancy, Conditional Certificate of Occupancy or a Certificate of

Completion.

23.10.107.9 Revocation.
The building official may, in writing, suspend or revoke a Certificate of Occupancy issued under the provisions of this title when the certificate is issued in error, or on the basis of incorrect information, or when it is determined the building, structure, land use or portion thereof is in violation of an ordinance, regulation or the provisions of municipal code or state law.

Section 108 Unsafe buildings, structures, and building service equipment.

23.10.108.1 General.
See chapter 23.70, Abatement of Dangerous Buildings Code.

Fee Tables

23.10. Table 3-A - Building/structure permit fees.

1. Commercial Construction (new construction, additions, alterations and repairs)	Building Permit Fee
$1.00 to $500,000.	$0.015 * Valuation, minimum fee of $525
$500,001 to $1,000,000	$0.010 * Valuation
$1,000,001 to $5,000,000	$0.008 * Valuation
$5,000,001 and up	$0.006 * Valuation
Permit fee reduction for affordable housing	For affordable housing projects, building permit fee shall be discounted seventy-five percent (75%) when fifty percent (50%) or more of the residential units constructed or renovated will be rented to households earning eighty percent (80%) or less of the federal Housing and Urban Development (HUD's) median household income for the Anchorage area.
2. Residential Construction (new construction, additions, alterations and repairs)	
Projects valued at $40,000 or less	$175 per inspection
Projects valued over $40,000	$0.009 * Valuation. The permit applicant receives 23 inspections plus 2 additional inspections for each $100,000 in valuation above $500,000 valuation. Additional inspections are charged on a per inspection basis.
3. Trade Permits (Plumbing, mechanical, or electrical work but no structural or alteration work)	$175 per inspection

4. Miscellaneous Building Permits	
A. Temporary/seasonal building (new)	$1,175
B. Temporary/seasonal building (extension/yearly renewal)	$587.50
C. Change of Use	$175 per inspection
D. Demolition	$175 per inspection
E. Relocatable set-up permits	$175 per inspection
F. Mobile food unit	$175 per inspection

23.10. Table 3-B - Plan review fees.

1. Commercial Plan Review Fees	
A. Building Safety	
(1) Plan review	$0.0031 valuation with a minimum of $75
(2) Pre-approved plan review for new buildings	$0.0017 * Valuation with a minimum of $75 (In lieu of item A. (1))
B. Land Use Plan Review	15% of the permit fee under Table A with a $75 minimum fee
C. Fire Department	$0.0011 * Valuation with a minimum of $75
2. Residential Plan Review Fees	
A. Building Safety	
(1) Plan Review	$0.005 * Valuation with a minimum of $75
(2) Pre-Approved Plan Review	$0.003 * Valuation with a minimum of $75
(3) Optional single-family and two-family reviewed by independent reviewing professionals	$0.003 * Valuation with a minimum of $75
B. Land Use Plan Review	15% of the permit fee under Table 3-A with a minimum of $75
C. Fire Department optional residential fire plan review for Wildland Urban Interface	$0.002 * Valuation with a minimum of $75
3. Architectural, fire and land use review for change of Use permits involving no alteration work; Structural, fire and land use review of relocatable classroom set-up permits; Land use review for mobile food units.	$175 per plan review discipline per hour with a half hour minimum per discipline
4. Expedited Plan Review	60% of the permit fee under Table 3-A in addition to the applicable fee in Table 3-B
5. Owner-requested out-sourcing plan review	25% of the permit fee under Table 3-A in addition to the applicable fee

	in Table 3-B
6. Express Plan Review	$270 per hour per discipline with a half hour minimum per discipline, in addition to all applicable fees including the base plan review fee
7. Code research, change orders, alternate materials and methods requests, product/fabricator review, misc. review.	$175 per plan review discipline per hour with a quarter hour minimum per discipline

23.10. Table 3-C - Inspection fees.

1. Inspection or first re-inspection for any inspections not already covered by a permitting fee under Table 3-A (such as residential inspection in excess of allotted quantity.)	$175
2. Second and subsequent re-inspections of same code correction issue. Such inspections are not covered by permitting fee paid under Table 3-A.	$350 (First re-inspection at no additional cost)
3. Inspection or re-inspection, unscheduled. Unscheduled inspections are not covered by the permitting fees paid under Table 3-A.	$265
4. Inspection or re-inspection, outside normal business hours, per hour, per inspector. Inspections outside of normal hours are not covered by the permitting fees paid under Table 3-A.	$350
5. Inspection, Sundays and holidays, per hour, per inspector. Inspections on Sundays or holidays are not covered by the permitting fees paid under Table 3-A.	$400
6. Code compliance inspection, per inspection.	$175
7. Secure Facilities Surcharge (in addition to the applicable inspection fee(s) under Tables 3-A or 3-C at any facility where an inspector must wait for an escort).	25% Surcharge

23.10. Table 3-D - Temporary electric and gas permit fees.

1. Temporary Electric, without building permit. No fee if tied to a building permit.	$175 per inspection
2. Temporary gas, without building permit. No fee if tied to a building permit.	$175 per inspection

23.10. Table 3-E - Retrofit permit fees.

1. Retrofit permits limited in scope as follows:	$95 per inspection
A. One new 20 amp circuit having no more than six general purpose receptacles or light fixtures.	
B. No more than six general purpose	

receptacles or light fixtures added to one or more existing 20 ampere circuits.	
C. One 20 amp circuit for a sign.	
D. The like for like replacement of a water heater in a residential building containing 4 or fewer dwelling units.	
2. Retrofit permits limited in scope as follows that do not qualify under item 1. above:	$175 per inspection
A. The like for like replacement of plumbing, mechanical and electrical equipment, fixtures and appliances in commercial and residential buildings.	
B. The like for like replacement of a water heater in a commercial building or a residential building containing more than 4 dwelling units.	
C. Electrical, plumbing or mechanical alterations to a residential building containing 4 or fewer dwelling units.	
D. Minor plumbing, mechanical and electrical alterations to commercial buildings where the requirement for engineering can be waived (requires pre-approval by plan review).	
3. Test backflow preventer	$175 per inspection
4. Fire Retrofit Permits – see Table 3-M	

23.10. Table 3-F - Elevator, escalator, dumbwaiter, and other lift permit fees.

NOTES:

1. Each separately powered unit shall be considered a separate conveyance; applications and permits shall be issued accordingly.
2. Load side wiring associated with the conveyance and installed by the elevator contractor shall not require additional permits.
3. Fees include elevator inspection section plan review time, travel time, inspection time, report preparation time and administrative time.
4. Elevator inspector time is billed in hour increments.

1. New Installations, Modernizations and Relocations	
A. Hydraulic elevators	$2,400
B. Electric geared and gearless elevators	$3,090
C. Residential elevators	$2,060
D. Dumbwaiters	$1,375
E. Escalators and moving walks	$3,090
F. Accessibility Equipment covered by	

A18.1:	
1. Vertical Platform Lift	$1,375
2. Inclined Platform Lift	$1,030
3. Inclined Stairway Chairlifts	$340
Accessibility equipment installed in a single-family home or duplex	Permitting fee shall be reduced by fifty percent (50%)
G. Vertical Reciprocating Conveyor (VRC)	$1,375
H. Roped hydraulic elevators	$2,750
2. Minor Alterations	
Building Safety will use 3 hours as the base amount to charge at the time of application. Additional time required to complete the project will be billed at the end of the project.	$525 base plus $175 per hour for inspector time beyond 3 hours
3. Biennial Certificate of Inspection	
A. Electric geared and gearless elevators	$1,400 base plus $175 per hour for inspector time exceeding 8 hours.
B. Hydraulic elevators	$875 base plus $175 per hour for inspector time exceeding 5 hours.
C. Accessibility Equipment covered in the A18.1	
1. Vertical platform lift	$350 base plus $175 per hour for inspector time exceeding 2 hours.
2. Inclined platform lift	$350 base plus $175 per hour for inspector time exceeding 2 hours
3. Inclined stairway chair lift	$175 base plus $175 per hour for inspector time exceeding 1 hour.
D. Dumbwaiters	$525 base plus $175 per hour for inspector time exceeding 4 hours.
E. Vertical Reciprocating Conveyor (VRC)	$525 base plus $175 per hour for inspector time exceeding 4 hours.
4. Annual certificate of Inspection	
Escalators and moving walks	$1,575 base plus $175 per hour for inspector time exceeding 9 hours.

23.10. Table 3-G - Grading, excavation and fill permit fees.

1. There is no additional permit fee when grading is done as part of a building permit.	
2. Permit fees are required for stand-alone grading permits as follows:	
A. 1 to 50 cubic yards	$87.50
B. 51 to 5,000 cubic yards	$625

C. 5,001 to 100,000 cubic yards	$1,140
D. Over 100,000 cubic yards	$2,100
3. Plan review fees are required for grading work as follows:	
A. 1 to 50 cubic yards	$87.50
B. 51 to 5,000 cubic yards	$625
C. 5,001 to 100,000 cubic yards	$1,140
D. Over 100,000 cubic yards	$2,100

23.10. Table 3-H - Residential Re-roof permit fees.

Note: Commercial re-roof permit and plan review fees are calculated based on valuation in accordance with (Tables A and B).

1. Up to 1,500 sq. ft.	$287.50
2. 1,501 to 3,000 sq. ft.	$350
3. Greater than 3,000 sq. ft.	$600

23.10. Table 3-I - Manufactured (mobile) home set-up permit fees.

1. Set-up fee	$265
2. Land use plan review fee	$45

23.10. Table 3-J - Sign permit fees.

1. Sign permit fee – all signs require zoning and structural inspections; electrical signs also require an electrical inspection.	$175 per inspection
2. Sign plan review fee - land use, structural and electrical review as applicable, with half-hour increments, one-half hour minimum.	$175 per hour

23.10. Table 3-K - Licenses and testing fees.

1. Test Fees	
A. Contractor testing fee	$90
B. Journeyman testing fee	$60
2. Issuance or Renewal Fees	
A. Contractor license, 2 years	$400
B. Journeyman license, 2 years	$140
C. Trainee license, 2 years	$85
D. Special Inspector License, 2 years	$140
E. Administrative late fee	$70
3. License Requirements	
Backflow Assembly Tester, renewal fee (one-day recertification training required)	$120

23.10. Table 3-L - On-site service fees.

1. Certificate of on-site systems approval, (COSA) single family	
A. Existing System	$550
B. Existing System with active upgrade permit	$280
C. Well-only	$280

D. New Installation	$75
2. On-site conditional COSA approval	$290
3. On-site wastewater disposal system construction permit, includes drain field replacement	$595
4. Water well construction permit	$225
5. Septic tank/Holding tank replacement	$225
6. Water storage tank permit	$160
7. Renewal for on-site permit or COSA	$145
8. On-site water/wastewater expedited review	Additional 60% of the applicable fees
9. On-site wastewater permit change order review, per hour, half-hour minimum	$145
10. On-site code compliance re-inspection, per inspection, per hour, one hour minimum	$145
11. Separation distance variance/waivers:	
A. Variance/Waiver, lot line	$225
B. Variance/Waiver, well to tank	$1,180
C. Variance/Waiver, well to field	$1,180

23.10. Table 3-M - Fire systems permit fees.

1. Combined Plan Review and Permitting Fees	
A. Access Control System (Permit required if system delays egress or electronically locks egress doors)	$450
B. Energy system – if legally required by IFC section 1203.2	$2,100
C. Special Hazard Fire System (CO2, clean agent, halon, halon alternatives, or dry chemical system)	$700
D. Fire Pump	$700
E. Fire Sprinkler/Alarm/Foam-water Sprinklers	
0—25 devices	$450
26—50 devices	$575
51—75 devices	$700
76—100 devices	$825
Each lot of 50 devices beyond 100	$450
F. Fire Standpipe System	$875
G. Fire protection or life safety system not otherwise listed (reviewed and inspected per hour) (Some examples are low- and high expansion foam systems or water spray fixed systems)	$175 per hour, minimum $450 charge
H. Gas Detection System	$450
I. Kitchen Hood Fire System	$450
J. Digital Alarm Communicator System, Radio System, or other equipment installation for transmission of Off-Premises	$275

Signals to a location providing supervising station service. (Fee applies if installing or modifying monitoring equipment for an existing fire or life safety system. If installed as part of a new system installation, fee does not apply.)	
K. Smoke Control or Smoke Exhaust System	$2,100
l. Demolition Permit for a Fire or Life Safety System	$175
2. Change Order, per hour, quarter hour minimum	$175
3. Retrofit to a Fire or Life Safety System (Limited to fire alarm, fire sprinkler, and kitchen fire systems under International Fire Code 105.7.28.2.4.14 and must be replacing an existing system with a like system of similar capacity/functionality)	$275

23.10. Table 3-N - Miscellaneous fees.

1. Code books and publications	at cost
2. Records research and retrieval	$75 per hour for staff time plus actual box retrieval fees
3. Recording documents on behalf of customers with State of Alaska's District Recorder's Office	$30 for staff time plus actual recording fees
4. Copies, standard 8½"×11" page, each	$0.35
5. Copies printed using a plotter, per page	$5.00
6. Training, per person, per class, when applicable	$60
7. Code abatement fee, per hour, one hour minimum	$175

23.10. Table 3-O - Fines.

1. Fine, building code violation, civil penalty	$100 to $500 per day per violation
2. Fine for failure to perform required special inspection	$425 per incident
3. Investigation fee and fine for work begun without proper permit(s), in addition to all permit fees required by this code.	
a. First Offense: $1,000 investigation fee. The fee may be waived by the building official if required permit is obtained within reasonable amount of time agreed to by building official.	
b. Subsequent Offenses: $1,000 investigative fee plus a $1,000 fine applied incrementally for each additional offense occurring within five years of the original offense.	

Example: The third offense would be $3,000 ($1,000 investigative fee plus $2,000 fine).
4. Fine (Contractor), working without a required contractor's license:
a. First Offense: $1,000 fine which may be waived by the building official if required license is obtained within 30 days.
b. Subsequent Offense: $1,000 fine and an additional $1,000 applied incrementally for each additional offense occurring within five years of original offense. Example: The third offense within 5 years would be a $3,000 fine.
5. Fine (Journeyman), working without a required Certificate of Qualification:
a. First Offense: $250 fine (which may be waived by the building official if the individual registers for the journeyman test within 72 hours).
b. Subsequent Offense: $250 fine and an additional $250 applied incrementally for each additional offense occurring within five years of original offense. Example: A third offense within 5 years would be a $750 fine.
c. The contractor for whom the violator is working shall be subject to the same fine as the violator.
6. Fine (Trainee), working without a required trainee card:
a. First Offense: $60 fine (waived if trainee card is obtained within 72 hours).
b. Subsequent Offense: $60 and an additional $60 applied incrementally for each additional offense occurring within 5 years of the first offense. Example: A second offense within 5 years would be a $120 fine.
c. The contractor for whom the violator is working shall be subject to the same fine as the violator.
7. Fine, failure to obtain a certificate of completion prior to expiration for a fire systems permit:
Fine for the failure to obtain a certificate of completion for a system regulated by the International Fire Code, Section 105.7, prior to expiration of the permit shall be $1,000. An additional fine of $2,500 shall apply if the permit is not closed-out within 2 years. Additional fines shall apply at the rate of $5,000 per year for a third and each subsequent year.

Chapter 23.15 - LOCAL AMENDMENTS TO THE INTERNATIONAL BUILDING CODE 2018 EDITION

23.15.100 Local amendments to the International Building Code 2018 Edition.

The amendments to the 2018 Edition of the International Building Code (IBC) are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the sections of the International Building Code to which the amendments refer.

23.15.103 through 23.15.116 - Delete.

Delete IBC sections 103 through 116. Refer to the Anchorage Administrative Code.

23.15.202 Definitions.
Revise Section 202 by adding the following definitions:

COLD FOUNDATION. Any foundation where the temperature of the bearing soil is normally subject to freezing.

CONVENTIONAL INDUSTRY TOLERANCES. In reference to ICC A117.1-2009, section 104.2 Dimensions, convention industry tolerances shall be one percent or one-half inch, whichever results in the lesser tolerance.

REGISTERED DESIGN PROFESSIONAL. For purposes of Chapter 17, a civil engineer licensed in the State of Alaska.

SEISMICALLY-INDUCED GROUND FAILURE ZONES. For the various mapped ground failure zones, see the Anchorage Coastal Resource Atlas, Vol. 1: The Anchorage Bowl. For the purposes of these amendments the following numbers are assigned to the various mapped areas:

Zone 1 - "Lowest ground failure susceptibility."
Zone 2 - "Moderately low ground failure susceptibility."
Zone 3 - "Moderate ground failure susceptibility."
Zone 4 - "High ground failure susceptibility."
Zone 5 - "Very high ground failure susceptibility."

USABLE SPACE. Space in a structure used for utility or equipment placement, storage, or building service, such as laundry and maintenance areas, and not defined as habitable space. Space used for ducts, water and sewer lines, and electrical wiring is not considered usable space.

WARM FOUNDATION. Any foundation where the temperature of the bearing soil is normally maintained.

23.15.406.3.2.1 Dwelling unit separation.
Amend by changing all references to "½ - inch" to " 5/8 - inch Type X".

23.15.412.3.1 Exterior walls.
Revise section 412.3.1 by adding the following exception:
Exception: Group III hangars.

23.15.429 Special security requirements for group E buildings.
Amend Chapter 4 by adding the following section:

SECTION 429

SPECIAL SECURITY REQUIREMENTS FOR GROUP E BUILDINGS
429.1 General. All Group E buildings with the lower floor level above grade and open on the sides shall be fenced around the building exterior or have skirting below the exterior walls to prevent unauthorized access.

23.15.430 Licensed residential care/assisted living facilities.
Amend Chapter 4 by adding the following section:

SECTION 430

LICENSED RESIDENTIAL CARE/ASSISTED LIVING FACILITIES

430.1 Scope. The provisions of this section apply to licensed residential care/assisted living facilities providing accommodations for 3 to 16 residents.

430.2 Multiple facilities within a single structure. Where more than one licensed residential care/assisted living facility is located within a single structure, the combined occupant load of all facilities shall be used to determine the occupancy classification.

Exceptions:

1. Facilities separated by fire barriers constructed in accordance with section 707 and horizontal assemblies constructed in accordance with section 711, or both, having a minimum two hour fire resistance rating so as to completely separate the facility from adjacent occupancies and facilities.
2. Townhouses where each townhouse is separated from adjacent dwelling units with either (two) one hour fire resistance rated walls or (one) two hour fire resistance rated wall, constructed in accordance with the IRC.

430.3 Facilities in new buildings and additions. Facilities located in new buildings and additions shall comply with this code.

430.3.1 Mixed use and occupancy. Residential care/assisted living facilities shall be separated from other occupancies and uses by fire barriers constructed in accordance with section 707 or horizontal assemblies constructed in accordance with section 711, or both, having a minimum 2 hour fire resistive rating, so as to completely separate adjacent occupancies. Egress from residential care/assisted living facilities shall not pass through other occupancies.

430.4 Existing facilities. Existing facilities shall comply with the International Fire Code as amended under AMC 23.45.

430.4.1 Issuance of a new license. An existing facility issued a new license shall be protected by an automatic sprinkler system in accordance with section 903.

430.4.2 Increase in the number of residents. An increase in the number of residents that results in a change of occupancy classification requires a change of use permit in accordance with this code.

430.4.3 Modification of license for facilities housing 6 to 16 residents. A license modification from individuals receiving custodial care who are capable of responding to an emergency to complete building

evacuation (Group R-4, Condition 1) to individuals who require limited verbal or physical assistance while responding to an emergency to complete building evacuation (Group R-4, Condition 2), or to individuals who may be incapable of self-preservation (Group I-2), requires a change of use permit in accordance with this code.

430.5 Change of use. Conversion of an existing building or portion thereof to a residential care/assisted living facility shall comply with sections 430.5.1 through 430.5.10.

430.5.1 Permit required. Conversion of an existing building or portion thereof to a residential care/assisted living facility shall require a change of use permit in accordance with the Anchorage Administrative Code, AMC 23.10.

430.5.2 Occupancy classification. Facilities shall be classified in accordance with this code. Residents who require more than limited verbal or physical assistance while responding to an emergency situation to complete building evacuation are considered incapable of self-preservation.

430.5.3 Automatic sprinkler system. An automatic sprinkler system shall be provided in accordance with section 903. NFPA 13D systems require a minimum 30 minute water supply, or minimum 20 minute supply with a fire department connection.

430.5.4 Fire and smoke alarms. Fire and smoke alarms shall be installed in accordance with section 907 based on the occupancy classification.

430.5.5 Fire resistive construction. All walls and partitions shall qualify as ½ hour fire resistive construction. Floor assemblies, excluding floors over unusable crawl spaces, shall be protected on the underside with ½ inch thick gypsum wall board, or equivalent. All structural elements shall be separated from the interior of the building by ½ inch thick gypsum wall board, or equivalent, or shall qualify as ½ hour fire resistive structural elements in accordance with chapter 7.

430.5.6 Sleeping rooms. Sleeping rooms shall be separated from adjacent spaces by construction capable of resisting the passage of smoke. Air transfer openings and louvers between sleeping rooms and adjacent spaces are prohibited. Sleeping rooms may be served by HVAC metallic duct systems constructed in accordance with the International Mechanical Code. Sleeping room doors shall be 1¾ solid wood core or 20 minute fire rated, and shall be provided with latches suitable for keeping the doors closed.

430.5.7 Interior egress stairs. Interior egress stairs serving sleeping rooms and living areas located above or below the level of exit discharge shall comply with sections 430.5.7.1 through 430.5.7.3.

430.5.7.1 Stairs serving a maximum of two stories shall be permitted to be unenclosed.

430.5.7.2 Stairs serving a maximum of three stories shall be enclosed with ½ hour rated fire partitions and/or horizontal assemblies. Doors shall be self or automatic closing and shall be 20 minute rated.

430.5.7.3 Stairs serving more than three stories shall be enclosed in accordance with this code.

430.5.8 Protection of vertical openings. A maximum of 2 stories may communicate through unprotected openings. Additional stories shall be separated from communicating stories by ½ hour fire resistive assemblies constructed to resist the passage of smoke. Openings, other than metallic HVAC ducts and vents, shall be protected with 20 minute fire rated self or automatic closing doors.

430.5.9 Accessibility. Accessibility shall be provided in accordance with Chapter 11.

430.5.10 Mixed use and occupancy. Residential care/assisted living facilities shall be separated from other occupancies and uses by fire barriers constructed in accordance with section 707 or horizontal assemblies constructed in accordance with section 711, or both, having a minimum 2 hour fire resistive rating, so as to completely separate adjacent occupancies. Egress from residential care/assisted living facilities shall not pass through other occupancies.

23.15.431 Childcare facilities.
Amend Chapter 4 by adding the following section:

SECTION 431 CHILDCARE FACILITIES

431.1 Scope. Childcare facilities shall comply with this code.
Exception: Childcare facilities are permitted to comply with the International Residential Code provided all of the following requirements are met:

1. The facility is located in a detached one- or two- family dwelling or townhouse (as defined in the International Residential Code).
2. Day care: The facility is limited to a maximum of eight (8) children of any age, including children related to staff, between the hours of 6:00 a.m. and 10:00 p.m.
3. Night care: The facility is limited to a maximum of five (5) children of any age, including children related to staff, between the hours of 10:00 p.m. and 6:00 a.m.
4. The facility shall comply with AMC Chapter 16.55 Child Care and Education Facilities - Centers and Homes.
5. Smoke alarms and carbon monoxide detectors are provided in accordance with the International Residential code.
6. Means of egress and emergency escape and rescue openings comply with the International Residential code.

7. Fire extinguishers are provided in accordance with the International Fire Code as required for a group E occupancy.
8. Childcare is limited to the basement, first and second stories.
9. Childcare facilities located in a basement or second story shall have access to not less than two means of egress separated by a minimum of ½ the maximum overall diagonal of the area served. One of the required means of egress may consist of a code compliant emergency escape and rescue opening. When childcare facilities are located in a basement, at least one exit or emergency escape and rescue opening shall discharge directly to the exterior of the building at or near grade.

23.15.901.6.1 Automatic sprinkler systems.
Amend exception number 1 by adding the following to the end of the sentence: “not used as an assisted living or custodial care facility.”

23.15.901.6.3 Fire alarm systems.
Amend exception number 3 by adding the following to the end of the sentence: “not used as an assisted living or custodial care facility.”

23.15.903.2.3 Group E.
Revise 903.2.3 to read as follows:
An automatic sprinkler system shall be provided throughout all buildings that contain a Group E occupancy and for every portion of educational buildings below the level of exit discharge. The use of a fire wall does not establish a separate building for purposes of this section.
Exception: Buildings having an occupant load of 49 or less.
Daycare uses licensed to care for more than five persons between the hours of 10 p.m. and 6 a.m. shall be equipped with an automatic sprinkler system designed and installed in accordance with subsection 903.3.1 or an approved equivalent system.

23.15.903.2.11 Specific building areas and hazards.
Amend Section 903.2.11 by changing “903.2.11.6” to “903.2.11.7”.

Amend Section 903.2.11 by adding the following section:
903.2.11.7 Sprinkler systems shall not be allowed in elevator machine rooms/spaces or control room/spaces and at the tops of hoistways, except as required by NFPA 13.

23.15.903.3 Installation requirements.
Amend 903.3 by changing “903.3.8” to “903.3.9”.

23.15.903.3.1.3 NFPA 13D sprinkler systems.
Amend section 903.3.1.3 by adding the following section:
903.3.1.3.1 Group R-3 care facilities and Group R-4, Condition 1 occupancies. An automatic sprinkler system serving a Group R-3 care facility or Group R-4, Condition 1 occupancy shall have a minimum 30 minute water supply or a minimum 20 minute water supply with fire department connection (FDC). Fire sprinkler protection shall be provided in attached garages.

23.15.903.3.5 Water supplies.
Amend by adding new Section 903.3.5.3 as follows:

903.3.5.3 Fire sprinkler hydraulic water flow design. Fire sprinkler hydraulic water flow design shall be by one of the following methods:

1. Preferred method. Fire sprinkler hydraulic design water supply shall be from AWWU computer model Max Day demand.
2. Alternate method. Can only be used if AWWU computer model cannot be obtained. Fire sprinkler system being designed with water supply data from a hydrant flow test shall have a 10 percent minimum flow rate and pressure safety factor at the water source. Hydrant flow test shall be witnessed by the fire code official or their designee.

23.15.903.3.9 Seismic Design
Add a new Section 903.3.9 as follows:

903.3.9 Seismic Design. Fire sprinkler systems shall have a minimum seismic design coefficient Cp of 0.72 or greater as by NFPA 13.

23.15.903.4 Sprinkler system supervision and alarm.
Amend exception number 1 by adding the following to the end of the sentence: “not used as an assisted living or custodial care facility.”

23.15.907.2 Where required-new buildings and structures.
Amend Section 907.2 by replacing “907.2.23” with “907.2.24”.

23.15.907.2.1 Group A.
Delete Exception.

23.15.907.2.2 Group B.
Delete Exception.

23.15.907.2.3 Group E.
Amend 907.2.3 (Group E) by adding a second paragraph to read:
Rooms used for sleeping or napping within a Group E day care shall be provided with smoke alarms that comply with Section 907.2.10.2.

Delete Exceptions 3 and 4.

23.15.907.2.4 Group F.
Delete Exception.

23.15.907.2.7 Group M.
Delete Exception 2.

23.15.907.2.8.1 Group R-1: Manual fire alarm system.
Delete Exception 2.

23.15.907.2.9.1 Group R-2: Manual fire alarm system.
Amend section 907.2.9.1 by deleting the first sentence and replacing it with:

A manual fire alarm system and an automatic fire detection system with smoke detection in the public and common use areas shall be installed in Group R-2 occupancies where any of the following conditions apply:

Delete Exception 2.

23.15.907.2 Fire Alarm and Detection Systems – Where Required – New Buildings and Structures

Add the following section:

907.2.24 - Group R-4: Manual and Automatic Fire Alarm System. Fire alarm systems and smoke alarms shall be installed in Group R-4 assisted living or custodial care occupancies as required in Sections 907.2.24.1 through
907.2.24.3.

907.2.24.1 Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-4 assisted living or custodial care facilities.

Exceptions:

1. A manual fire alarm system is not required in buildings not more than two stories in height where all individual sleeping units and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by at least 1-hour fire partitions and each individual sleeping unit has an exit directly to a public way, egress court or yard.
2. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at exits where located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.2.1 are not exceeded.

907.2.24.2 Automatic smoke detection system. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens.

Exceptions:

1. Smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

907.2.24.3 Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.10.

23.15.907.5.2.1 Audible alarms.
Amend Section 907.5.2.1 by adding the following section:
907.5.2.1.3 Minimum sound pressure. The minimum sound pressure level in every occupiable space shall be 75 dBA in Group I-1 and R occupancies and 60 dBA in all other occupancies.

23.15.907.5.2.3 Visible alarms.
Amend section 907.5.2.3 by adding the following to Exception No. 1:
An upgrade shall be the replacement of a fire alarm panel, or fire system components providing improved functional performance or capabilities. (A software upgrade is exempt from this requirement.)

23.15.907.6.1 Wiring.
Amend Section 907.6.1 by adding the following:
Exposed wiring, transformers and equipment installed below 7 feet above finished floor shall be protected from physical damage by an enclosure, raceway or metallic cable.

23.15.907.6.2 Power supply.
Amend 907.6.2 by adding the following:
Exposed wiring, transformers and equipment installed below 7 feet above finished floor shall be protected from physical damage by an enclosure, raceway or metallic cable.

23.15.907.6.6 Monitoring.
Amend exception number 3 by adding the following to the end of the sentence: “not used as an assisted living or custodial care facility”

23.15.915 Carbon Monoxide Detection.
Amend Section 915.1 as follows:
915.1 General. Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6 and NFPA 72. Carbon monoxide detection shall be installed in existing buildings in accordance with IFC Section 1103.9 and NFPA 72.

23.15.915.5.1 General.
Amend Section 915.5.1 by replacing NFPA 720 with NFPA 72.

23.15.915.5.2 Locations.
Amend Section 915.5.2 by replacing NFPA 720 with NFPA 72.

23.15.915.6 Maintenance.
Amend Section 915.6 by replacing NFPA 720 with NFPA 72.

23.15.1007.1.2 Three or more exits or exit access doorways.
Amend Section 1007.1.2 to read as follows:
1007.1.2 - Three or more exits or exit access doorways. Where access to three or more exits is required, not less than two exit or exit access doorways shall be arranged in accordance with the provisions of Section 1007.1.1. Three exits or exit access doorways shall be separated from each other by a

minimum distance of one-third the maximum overall diagonal dimension of the area served. Additional required exit or exit access doorways shall be arranged a reasonable distance apart so that if one becomes blocked, the others will be available.

23.15.1010.1.9.12 Stairway doors.
Amend Section 1010.1.9.12 by adding the following:
Where a building is protected by an automatic sprinkler system in accordance with Section 903 or a fire alarm system in accordance with Section 907, including automatic smoke detection located at the top and every other landing in stairways, doors are permitted to be locked opposite the egress side, provided they are openable from the egress side and shall be unlocked simultaneously without unlatching upon sprinkler waterflow or activation of occupant notification devices.

23.15.1010.1.9 Door operations.
Amend by adding Section 1010.1.9.13 as follows:
1010.1.9.13 Electrically locked egress doors from elevator lobbies. For elevator lobbies not having direct access to an egress stair, the lobby doors may be electrically locked to secure all or part of a floor. In addition to the requirements of Section 1010.1.9.9 or 1010.1.9.10, a manual unlocking device listed in accordance with UL 294 shall be provided within 12 inches of the door frame and is clearly labeled “Pull handle (or push button) to release door”.

23.15.1106 Parking and passenger loading facilities.
Parking and passenger loading facilities are regulated by AMC Title 21.

23.15.1111.1 Signs.
Delete Items 1 through 3. Signage for accessible parking and passenger loading facilities is regulated by AMC Title 21.

23.15.1202.2.1 Ventilated attics and rafter spaces.
Amend section 1202.2.1 as follows:
In the first sentence, add the words "insulation and" before the word "ceilings".
Amend the third sentence by changing "1 inch" to "1½ inch".
Delete the exception.

23.15.1208.2 Attic spaces.
Add the following sentence:
Attic access shall not be located in a room containing bathing facilities.

23.15.1210 Moisture control in insulated assemblies.
Amend Chapter 12 by adding the following section:
SECTION 1210
MOISTURE CONTROL IN INSULATED ASSEMBLIES

1210.1 Moisture control strategies. The building design shall incorporate both interior and exterior moisture control strategies to prevent the

accumulation of moisture within insulated assemblies. Exterior moisture control shall comply with Chapters 14 and 15. Interior moisture control shall comply with section 1210.1.1. Should insulated assemblies become wet or start out wet, the design strategy shall allow the assembly to dry to either the exterior or interior. Materials shall be allowed to dry prior to enclosure.

1210.1.1 Interior moisture control in insulated assemblies. Methods to control moisture accumulation within insulated assemblies from the building interior shall address both vapor diffusion and air leakage. Vapor diffusion shall be controlled by the installation of a class I vapor retarder on the warm-in-winter side of the insulation. The vapor retarder shall be continuous and seams shall be lapped 6 inches minimum. Penetrations and seams shall be sealed with approved tape or sealant to control air leakage.

Exceptions:

1. A vapor retarder is not required in construction where moisture or its freezing will not damage materials.
2. A vapor retarder is not required on crawlspace walls designed to dry to the interior.
3. A vapor retarder is not required on basement walls designed to dry to the interior. Such walls shall be insulated as follows:
   a. Two inches minimum of EPS or XPS foam plastic insulation applied directly against the exterior of the foundation wall, and one inch of EPS, XPS or polyisocyanurate (PIR) applied between the interior surface of the foundation wall and framing. The framing cavity may be insulated with any type of approved insulation.
   b. Three inches minimum of two pound density closed cell foam plastic insulation applied to the interior side of the foundation wall with one inch minimum of insulation between any wall framing and the foundation wall.
   c. Equivalent moisture resistant system approved by the building official.
4. A vapor retarder is not required at cantilevered floor assemblies where the floor decking consists of nominal ¾ inch OSB or other approved material having a perm rating of less than one. Joints shall be sealed in an approved manner. Joint sealing is not required where the deck is covered with concrete or a gypsum based floor topping.
5. The rim joist does not require a vapor retarder when insulated to a minimum value of R-21 with air-impermeable expanding spray foam.
6. A class III vapor retarder may be used on walls and roof insulated to a minimum value of R-21 with air-impermeable expanding spray foam.
7. Up to one-third of the total installed insulation R-value may be installed on the warm side of the vapor retarder. This exception applies only when the daily average indoor relative humidity is maintained below 35 percent during the heating months of November through March.
8. Factory manufactured insulated panels consisting of a metal skin encapsulating and bonded to a foam plastic core do not require a vapor retarder.
9. Unvented attic and enclosed rafter assemblies in accordance with section 1202.3.

23.15.1402.2 Weather protection.
Amend third sentence by adding the words "vapor permeable" after "water-resistive."

23.15.1503 Weather protection.
Add the following section:
1503.6 Protection from falling ice and snow. Buildings and structures shall be designed and constructed to minimize a hazardous accumulation of snow and ice on downward sloped eaves, roof surfaces and architectural projections. Where the accumulation of snow and/or ice creates a hazardous condition, the areas below the accumulation shall be protected from falling snow and/or ice. These areas include (but are not limited to) building entrances and exits, pedestrian areas, parking lots, driveways, public right-of-way, children's play areas and utility locations for fire department connections, gas meters, and electrical meters, services and disconnects.

23.15.Table 1507.1.1(1) Underlayment Types
Revise Table 1507.1.1(1) as follows:
Change the title of the third column to “Underlayment Type”.
Delete the fourth column.
Add “ASTM D1970” to each roof covering in column three.

23.15.Table 1507.1.1(2)
Replace Table 1507.1.1(2) with the following:

Table 1507.1.1(2)
UNDERLAYMENT APPLICATION

Roof Covering	Section	Underlayment Application
Asphalt shingles	1507.2	For roof slopes from two units vertical in 12 units horizontal (2:12), up to, but not including four units vertical in 12 units horizontal (4:12), underlayment shall be of self-adhering polymer-modified bitumen sheet complying with ASTM D 1970. Apply a 19-inch strip of underlayment parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping previous sheets 19-inches. End laps shall be 4 inches and shall be offset 6 feet. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be one layer applied as follows: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches. Distortions in

		the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.
Clay and concrete tile	1507.3	Underlayment shall be self-adhering polymer modified bitumen sheet complying with ASTM D1970. The underlayment shall cover the entire roof. Apply a 36-inch strip of underlayment parallel to and starting at the eaves. Apply 36-inch-wide sheets of underlayment, overlapping previous sheets 2-inches. End laps shall be 4 inches and shall be offset 6 feet.
Metal roof panels	1507.4	Apply in accordance with the manufacturer's installation instructions.
Metal roof shingles	1507.5	For roof slopes from three units vertical in 12 units horizontal (3:12) up to, but not including four units vertical in 12 units horizontal (4:12), underlayment shall consist of self-adhering polymer-modified bitumen sheet complying with ASTM D 1970. For roof slopes four units vertical in 12 units horizontal (4:12) and greater, apply in accordance with the manufacturer's installation instructions.
Mineral surface roll roofing	1507.6	For roof slopes from one unit vertical in 12 units horizontal (1:12) up to, but not including four units vertical in 12 units horizontal, underlayment shall consist of self-adhering polymer-modified bitumen sheet complying with ASTM D 1970. For roof slopes one unit vertical in 12 units horizontal (1:12) and greater, apply in accordance with the manufacturer's installation instructions.
Slate shingles	1507.7	Underlayment shall be self-adhering polymer modified bitumen sheet complying with ASTM D1970. The underlayment shall cover the entire roof surface installed in accordance with the manufacturer's recommendations.
Wood shakes	1507.8	For roof slopes from three units vertical in 12 units horizontal (3:12) up to, but not including four units vertical in 12 units horizontal (4:12), underlayment shall consist of self-adhering polymer-modified bitumen sheet complying with ASTM D 1970. For roof slopes four units vertical in 12 (4:12) units horizontal and greater, apply in accordance with the manufacturer's installation instructions.

Wood shingles	1507.9	For roof slopes from three units vertical in 12 units horizontal (3:12) up to, but not including four units vertical in 12 units horizontal (4:12), underlayment shall consist of self-adhering polymer-modified bitumen sheet complying with ASTM D 1970. For roof slopes four units vertical in 12 units horizontal (4:12) and greater, apply in accordance with the manufacturer's installation instructions.
Photovoltaic shingles	1507.17	For roof slopes from three units vertical in 12 units horizontal (3:12), up to four units vertical in 12 units horizontal (4:12), underlayment shall be two layers applied as follows: Apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. End laps shall be 4 inches and shall be offset by 6 feet. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be one layer applied as follows: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.

23.15.Table 1507.1.1(3)
Delete Table 1507.1.1(3) in its entirety.

23.15.1508.3 Vapor retarders.
Amend section 1508 by adding the following subsection:
1508.3 Vapor retarders. Refer to section 23.15.1210.

23.15.1511.1 Reroofing - General.
Modify the Exceptions as follows:
In Exception number 1, delete "Roof replacement or".
In Exception number 2, delete "or replacing".
Add Exception number 3 as follows:

3. Minimum roof slope requirements shall not be required when positive drainage is provided and headwall flashings of existing openings or drainable cavity wall assemblies other than open rainscreen systems

restrict the available flashing heights.

23.15.1603.1.10 Live loads posted.

Add a new section to read as follows:

1603.1.10 - Live loads posted. Where the design live load is unusual and is located on a floor not directly supported by ground, the design live load shall be posted in a conspicuous location.

23.15.1604.4 Analysis.

Add the following paragraph at the end of the section:

Exterior walls and cladding of building and interior partitions shall accommodate gravity system deflections or be capable of resisting loads imposed by vertical movement of the gravity system.

23.15.1608.1 General.

Add the following sentence at the end of the paragraph:

Greenhouses heated year round may be designed for 10 psf roof live load without considering roof snow loads.

23.15.Table 1608.2 Ground Snow Load Table for Alaskan Locations

Replace the Anchorage entry in the table with the following:

Anchorage	50 for elevations up to 500-ft For higher elevations, a 7 lbs/ft^2 every 100-ft above 500-ft

Add the following entry:

Girdwood	140 lbs/ft^2 for elevations up to 300-ft. Higher elevations require site-specify case study.

23.15.1608.4 Flat roof snow loads.

Add the following section 1608.4:

1608.4 Flat roof snow loads. The minimum flat roof snow load, Pf, shall be 40 psf.

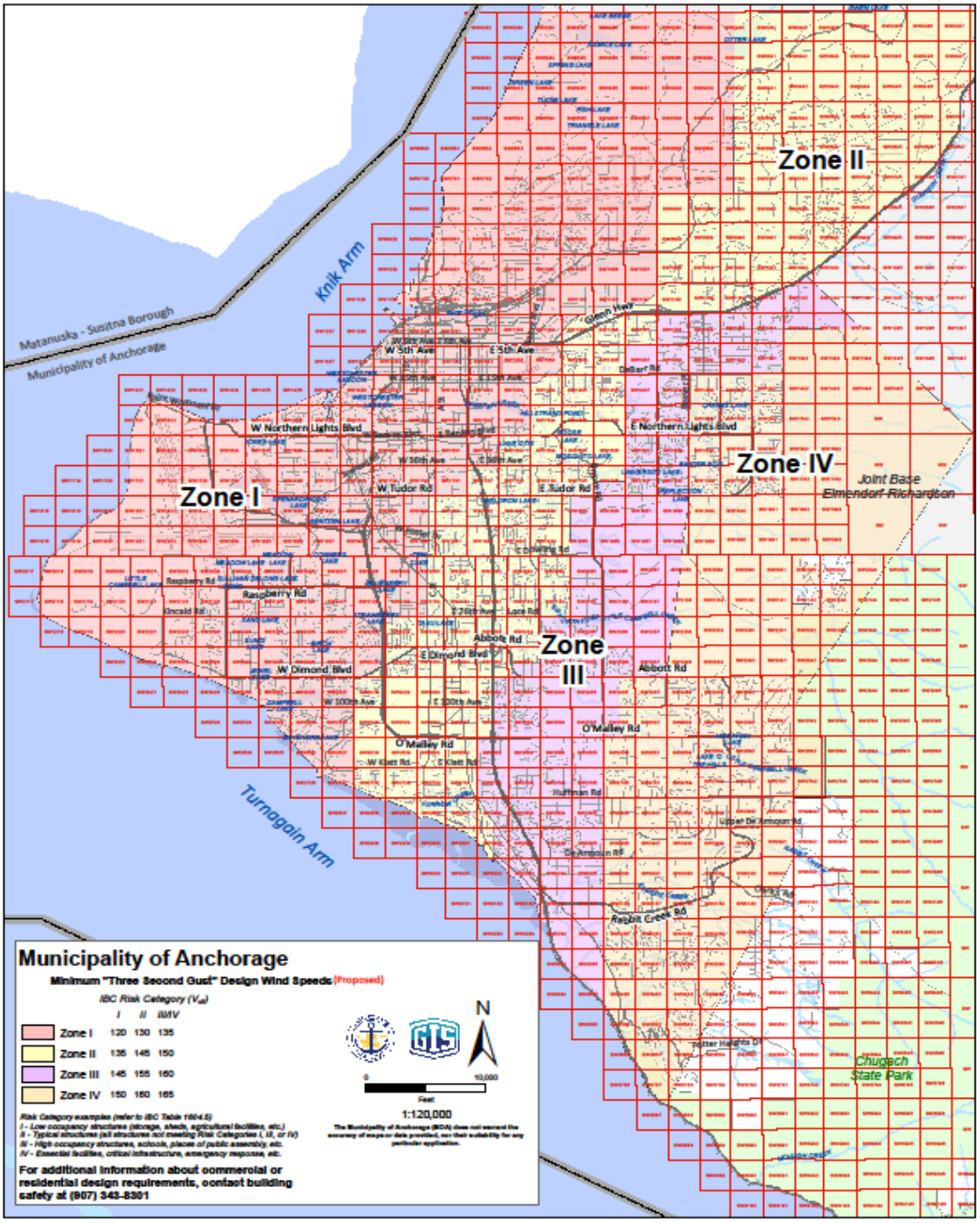
23.15.1609.3 Basic design wind speed.

Replace the first paragraph with the following:

The ultimate design wind speed, V_{ult} , in mph, for the determination of the wind loads shall be determined in accordance with the 2013 Anchorage "Three Second Gust" Wind Zone Map and associated tables.

23.15. Figure 1609.3 Anchorage "Three Second Gust" Wind Zone Map.

Replace Figures 1609.3(1), 1609.3(2), 1609.3(3) and 1609.3(4) with the following:



23.15.1609.4.3 Exposure categories.
Add the following definitions to Exposure D:

SHORELINE. The high tide line, as indicated by the edge of vegetation on the most recent Municipality base aerial photograph set.

UNOBSTRUCTED. Any site not sheltered from the shoreline by vegetation or other impediments at least 4 feet high and covering a minimum of 60 percent of an area extending a minimum of 30 feet perpendicular to a line connecting the building to any point of the shoreline.

23.15.1610.1 Soil lateral loads - General.
Add the following sentence at the end of the paragraph:
Design lateral pressure shall consider the effects of seasonal frost penetration.

23.15.1613.4 Modifications to ASCE 7
Amend section 1613 by adding the following subsection:
1613.4 Modifications to ASCE 7

1613.4.1 ASCE 7, Section 12.2.5.6.1a. Modify Section 12.2.5.6.1a by adding an exception to the end of the section as follows:
Exception: Mezzanines meeting the definition in the IBC where the weight of the mezzanines do not exceed 25% of the total building weight of the structure shall be permitted.

1613.4.2 ASCE 7, Section 12.2.5.6.1b. Modify Section 12.2.5.6.1b by revising the first sentence to read as follows: “Steel ordinary moment frames in structures assigned to Seismic Design Categories D or E not meeting the limitations set forth in Section 12.2.5.6.1a are permitted within light-framed construction (light-framed construction shall have seismic systems mostly made up of systems that meet Table 12.2-1A systems 12, 1 or 18 or Table 12.2-1B systems 22, 23 or 24 or Table 12.14-1A systems 14, 15, or 16 or Table 12.14-1B systems 22, 23 or 24)…”

23.15.1703.7 Special inspector pre-approval program.
Add the following section:

1703.7 - Special inspector pre-approval program. Unless otherwise approved by the building official, special inspectors shall be pre-qualified and approved by the building official before performing special inspection activities on any project within the Municipality. Special inspectors shall obtain pre-approval for each category of inspection they wish to perform.

1703.7.1 - Special inspector intern program. The Special Inspection firm proposing to use an intern for part of a Special Inspection shall submit to the building official a written Special Inspector Intern Program for approval. The program shall define:

1. Minimum pre-qualifying experience required for the proposed intern to participate as a Special Inspector Intern. Minimum qualifications to begin the Special Inspector Program shall be defined by the building official.
2. The Special Inspection Intern shall be supervised as described by the written Special Inspector Intern Program. Individuals designated as supervisors shall be preapproved Special Inspectors in the discipline the Intern is training for. Special Inspection reports and documents shall be signed by the intern and countersigned by the supervisor prior to being submitted to the Contractor, the Engineer of Record, and the building official.
3. Completion of Special Inspector Intern training in a particular category of Inspection shall be demonstrated by application for pre-approval as a Special Inspector and acceptance by the building official.

4. Should an Intern fail to perform, the building official may require additional training, additional supervision, or removal from the project.

1703.7.2 - Application. Applicants for pre-approval as special inspectors shall submit an application describing documentable qualifications for each category of inspection(s) to be performed, with years of experience, project references, certifications where appropriate, and references with contact information. Once qualifications are accepted by the building official, an applicant special inspector shall be issued a unique special inspector number. Provisions may be made for pre-qualification of special inspector interns not meeting the basic requirements of a special inspector in a certain category, but who are supervised by a pre-qualified special inspector or design professional.

1703.7.3 - Special inspector approval. Approval shall be by letter from the Municipality and shall include a pocket or wallet card defining special inspector's information and the categories the special inspector has been pre-approved. Special inspectors shall carry the wallet card on their person when performing inspections and show the card upon request of building official's representative or designated design professional. Special inspector approvals shall be renewed every two (2) years by reapplication of the special inspector.

1703.7.3.1 - Approval suspension. The building official may suspend an individual's approval as a special inspector for a project where the special inspector demonstrates a lack of knowledge, neglects duties due to the special inspector's own fault or falsifies documents. The special inspector shall be provided written notification and shall be afforded the opportunity by the building official to be heard. Decisions may be appealed to the Building Board of Examiners and Appeals.

1703.7.3.2 - Removal of pre-approval status. The building official may revoke or suspend an individual's pre-approval status when a special inspector neglects duties, demonstrates a lack of knowledge, falsifies documents or misrepresents qualifications. Pre-approved status may be reinstated on recommendation of the Special Inspector Peer Committee or after 365 days and upon submission of proof of additional training or certifications. The special inspector shall be provided written notification and shall be afforded the opportunity by the building official to be heard. Pre-approval status decisions may be appealed to the Building Board of Examiners and Appeals.

23.15.1703.8 Ad hoc special inspector peer committee.
Add the following section:

1703.8 Ad hoc special inspector peer committee. An advisory committee of special inspection peers may meet to provide guidance on special inspection matters including but not necessarily limited to, special inspector qualifications, special inspection related code issues, special inspection

requirements, remedies to disputes regarding special inspection duties and procedures, and special inspector approval program issues. The Ad Hoc Special Inspection Committee shall be comprised of a balanced membership of peers and shall include a balanced representation of the special inspection profession, design professionals, and public officials. The committee shall meet as required and shall be chaired by the building official or designee. Decisions by the building official may be appealed to the Building Board of Examiners and Appeals. For a quorum, a peer committee requires attendance of individuals from four (4) businesses performing similar special inspections, and the building official.

23.15.1704.2.1 Special inspector qualifications.

Replace the second paragraph with the following:

The registered design professional in responsible charge and other licensed engineers involved in the design of the project are deemed qualified for special inspections on any material except that on welding they are only qualified to perform visual inspections unless the person is licensed by the jurisdiction for welding inspections. Other personnel not involved with the design of the project under the registered design professional in responsible charge must be licensed by the jurisdiction to perform special inspections.

23.15.1704.2.4 Report requirement.

Delete the fourth and fifth sentence and replace with the following:

All discrepancies shall be brought to the immediate attention of the contractor for correction and shall be documented in a Special Inspection Report. If action is not taken immediately or within an agreed time frame to correct the nonconformance, the Special Inspector shall promptly inform the registered design professional and the building official, verbally and in writing through a Special Inspection Report. Discrepancies discovered by the special inspector after the fact shall be reported to the registered design professional and the building official in writing. Copies of inspection reports shall be available at the construction site for review by Municipal Building Safety Personnel.

23.15.1705.2.1 Structural steel.

Add a second exception as follows:

2. Special inspection of welds under this section shall not be required where $Ru \leq 0.5\Phi Rn$ for LRFD or $Ra \leq 0.5Rn/\Omega$ for ASD, and where welds are placed by AWS certified welders. The registered design professional in responsible charge shall indicate on the drawings which welds do not require special inspection under this chapter.

23.15.1705.3 Concrete construction.

Add a sixth exception as follows:

6. Shotcrete work not of a structural nature or not for water retention structures, are fully supported on earth, are for minor repairs, or when no special hazard exist, where approved by the building official.

23.15.1705.3.1 Welding of reinforcing bars.

Add the following exception:

Exception: Special inspection of welds under this section shall not be

required
where $R_u \leq 0.5\Phi Rn$ for LRFD or $R_a \leq 0.5\ Rn/\Omega$ for ASD, and where welds are
placed by AWS certified welders. The registered design professional in responsible charge shall indicate on the drawings which welds do not require special inspection under this chapter.

23.15.1705.5.3 Small wood buildings.
Amend section 1705.5 by adding the following subsection:
23.15.1705.5.3 Small wood buildings. Wood lateral-force-resisting systems in buildings that satisfy all of the following criteria do not require special inspections:

A) Building is categorized as Risk Category I or II.
B) Building height is equal to or less than 2 stories.
C) Building total square footage is less than or equal to 6,000 square feet.

Where Special Inspections are not required (A, B & C above are all satisfied), it shall be specifically stated on the approved drawings.

23.15.Table 1705.8
Add line item 4 as follows:
4. For helical piles, verify the torque is recorded every 1 foot.

23.15.1705.19 Post-installed concrete and masonry anchors.
Add the following section:
1705.19 - Post-installed concrete and masonry anchors. Post-installed concrete and masonry anchors (includes screw, expansion, adhesive, undercut, carbon steel, stainless steel, rebar, etc.) do not require special inspection where all of the following criteria are satisfied:
1. The building Risk Category is I, II, or III.
2. The building is not classified as a high-rise.
3. The anchor is not installed at an inclined angle or overhead under direct sustained tension.
4. Either A or B is satisfied:
   A: Usage on Nonstructural (consistent with the definition used in Chapter 13 of ASCE 7).
      1. The Nonstructural Component Importance Factor (Ip) is 1.0.
      2. The maximum tension/shear interaction ratio (considering all applicable gravity and lateral load combinations) is less than 0.5.
   B: Usage on Building and Non-Building Structures (consistent with the definition used in Chapter 12 and 15 of ASCE 7).
      1. The maximum tension/shear interaction ratio (considering all applicable gravity and lateral load combinations) is less than 0.25.

Where Special Inspection is not required for post-installed anchors (Items No. 1 through 4 are satisfied), it shall be specifically stated on the approved drawings.

23.15.1803.5.4 Groundwater table.
Revise the section to read as follows:
Any subsurface soil investigation completed in accordance with this chapter shall identify the location and elevation of any ground water found within the limits explored.

23.15.1803.5.10 Alternate setback and clearance.
Revise the section to read as follows:
A geotechnical investigation shall be conducted to demonstrate the stability of any slope supporting or adjacent to a foundation. The investigation shall include consideration of the geotechnical conditions, slope geometry, load intensity, erosion characteristics of the materials, and potential reduction in soil strength due to cyclic loading or liquefaction. Evaluation of the slope stability shall be performed by a registered design professional in accordance with Section 23.15.1803.5.12.

23.15.1803.5.12 Seismic Design Categories D through F.
Add the following items:

5. A slope shall be considered stable if, based on a limit equilibrium analysis, the minimum factor of safety:
   a. Equals or exceeds 1.50 under static and post-earthquake loading conditions, and;
   b. Equals or exceeds 1.10 under earthquake loading conditions using a horizontal seismic coefficient of 0.30 in Seismically-Induced Ground Failure Zones 1, 2, and 3; and 0.20 in Seismically-Induced Ground Failure Zones 4 and 5.

   For slopes that do not satisfy all of the above criteria, the building official may approve an evaluation of the slope performance using a displacement-based method, including methods derived from the Newmark sliding block model, or more advanced numerical modeling. Evaluations of slopes using any displacement-based method shall be based on site-specific probabilistic or deterministic ground motions predicted in accordance with Section 21.1 of ASCE 7, with a 2 percent probability of exceedance within a 50-year period.
6. It may be necessary to extend the geotechnical investigation beyond the immediate site boundaries in order to evaluate the applicable hazard.
7. For Risk Category I and II structures that are located in Seismically-Induced Ground Failure Zones 1, 2, or 3, it is permitted to evaluate the potential for, and consequences of, liquefaction and soil strength loss described above using simplified screening methods based on historic records, surficial geology, a minimum peak ground acceleration of 0.4 times the design short period spectral acceleration (S^{DS}), and magnitudes of the characteristic earthquakes on all known active faults with the site region.

23.15.1803.5.13 Permafrost.
Add the following subsection:
1803.5.13 Permafrost. A subsurface investigation shall be performed to

evaluate whether permafrost exists at any building site located within areas delineated on the Mass Wasting map (Anchorage Coastal Resources Atlas, Vol. 1: The Anchorage Bowl, 1980) as having a high potential for isolated permafrost conditions.

23.15.1803.6 Reporting.
Add the following to the end of Item 5:
"…, and mitigation of the effects of seasonal freezing and thawing, and permafrost."

23.15.1804.4 Site grading.
Add the following paragraph at the end of the section:
There shall not be an increase in surface drainage to adjacent properties. Approved drainage locations shall conform to Title 21 requirements for stormwater treatment and discharge.

23.15.1804.6 Compacted fill material.
Replace "90 percent" in the exception with "95 percent".

23.15.1805.1.3 Ground-water control.
Add the following sentence at the end of the paragraph:
The space between the side of a basement excavation and the exterior of a basement wall shall be backfilled for half the height of the excavation with the same material (Type GW, GP, SW, or SP soils) on which the footing is placed.

23.15.1805.3 Waterproofing.
Add the following paragraph to the end of the section:
All exterior below grade walls enclosing habitable spaces shall be waterproofed in accordance with Section 1805.3.2.

23.15.1807.1.4 Permanent wood foundation systems.
Add the following sentence to the beginning of the first paragraph:
All footings shall be concrete. Permanent wood foundation systems may only be installed in Type GW, GP, SW, or SP soils unless a complete geotechnical investigation and foundation design, prepared by a registered design professional, is submitted for review.

Add the following paragraph at the end of the section:
Hot dipped zinc-coated fasteners may not be used for basement or crawlspace construction. Fasteners and anchor bolts used in concrete footings shall be stainless steel. Anchor bolts shall be a minimum of 10 inch length by 5/8 inch nominal diameter with a minimum embedment of 7 inches into the concrete. Treated wood foundation plates and sills shall be installed in accordance with Section 2308.3.1.

23.15.1807.3.1 Embedded posts and poles - Limitations.
Add the following item at the end of the section:
The embedment depth to least dimension ratio shall be less than or equal to 12.

23.15.1808.7 Foundations on or adjacent to slopes.
Add the following to the end of the first sentence:
"…, and shall be 15 feet beyond the surface projection of the most critical theoretical failure surface plane determined from the slope stability analysis in accordance with Section 23.15.1803.5.10."

23.15.1809.5 Frost protection.
Replace the first sentence with the following:
Foundations and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

Replace Item 2 with the following:
Designing in accordance with ASCE 32, using a Design Air-Freeze Index (F100) of 3,340 F-Days.

Add the following at the end of the section:
Minimum footing depths shall be as indicated in Table 23.15.1809.5. Footings shall bear on undisturbed natural inorganic soil, or suitably compacted fill.
Add the following table:

Table 23.15.1809.5 Minimum Footing Depths.

Foundation Type	Minimum Footing Depth (inches)[6]	
	Warm Foundation	Cold Foundation[3,4]
Perimeter footing[1]	42	60
Interior continuous or isolated spread footing[2]	8	60
Cast-in-place concrete pier	42	120[5]
Exterior isolated foundation	N/A	120[5]

Notes:
1. Dimension indicated is from bottom of footing to adjacent exterior grade. Required depth to bottom of footing within a crawlspace shall not be less than 8 inches. Basements or crawl space walls supporting more than 5 feet of differential fill on opposite faces shall be restrained as necessary against lateral movement.
2. Dimension indicated is from bottom of footing to nearest adjacent grade.
3. Exterior decks, landings, and platforms attached to the building and not greater than 72 inches above grade may bear directly on ground. Bearing material shall meet other provisions of this code. The potential for and the effects of seasonal freeze and thaw shall be considered.
4. The minimum footing depths may not be adequate for frost susceptible soils. Cold footings shall be founded below the frost line or be protected from freezing with insulation or appropriate means. The effects of seasonal freeze and thaw shall be considered.
5. The minimum footing depth for foundations installed in non-frost susceptible soils may be 60 inches.
6. Non-load bearing site structures not attached to the building, such as

fences, light poles, and signposts, shall have a footing depth based on analysis of the vertical and lateral loads on the structure, and shall consider the effects of seasonal freeze and thaw.

23.15.1810.3.1 Design conditions.
Add the following at the end of the sentence:
"…, with consideration of the effects of seasonal freeze and thaw."

23.15.1810.3.2.3 Structural steel.
Add the following exception:
The building official may approve alternate material specifications where documentation is provided showing the specified material meets or exceeds the requirements for stress, ductility, weldability, and corrosion resistance of any of the listed specifications.

23.15.1810.3.5.3.4 Steel pipes and tubes.
Add the following exception:
The building official may permit smaller diameter piles provided that an analysis is submitted indicating that the piles have sufficient capacity to transfer the required axial and lateral loads.

23.15.1810.3.11 Pile caps.
Add the following Exception at the end of the section:
Exception: Pile caps and grade beams of material other than concrete are permitted where the connection of the pile to the pile cap has been assumed to be a pinned connection.

23.15.1905 Modifications to ACI 318.
Replace the section in its entirety with the following:
1905.1 General. The text of ACI 318 shall be modified as indicated in Sections
1905.1.1 through 1905.1.3.

1905.1.1 ACI 318, Section 2.2. Add the following definition to ACI 318, Section 2.2:
FREEZING/NEAR FREEZING WEATHER. A period when, for more than 3 consecutive days, the following conditions exist: (1) the average daily air temperature is less than 40 degrees F; and (2) the air temperature is not greater than 50 degrees F for more than one-half of any 24-hour period. The average daily air temperature is the average of the highest and lowest temperatures occurring during the period from midnight to midnight.

1905.1.2 ACI 318, Section 20.7.
Add section 20.7.6 as follows:
20.7.6. Except where approved by the registered design professional, anchors shall be tied in place prior to placing concrete.
Exception: Anchors for light-framed construction having a required embedment length of 7 inches or less may be field placed while the concrete is in a plastic condition.

1905.1.3 ACI, Section 22.9.5.
Add section 22.9.5.2 as follows:

22.9.5.2. Where the geometry of the member does not permit the full hooked development length, it is permissible to extend the hook the full development length to meet this provision. The development length shall be measured from the end of the hook bend.

23.15.2002.2 Modifications to AA ADM 1.
Add section 2002.2 as follows:
2002.2 Modifications to AA ADM 1. Add the following to the end of AA ADM 1, Section A3.3.7 Screws:
Other screw type fasteners are permitted for non-structural components, non-building structures, window wall, and curtain wall systems per American Architecture Manufactures Association Technical Information Report AAMA TIR-A9-14 section 4.0.

23.15.2104 Masonry (Construction).
Add a new subsection as follows:
2104.2 Installation of anchors. Except where approved by the registered design professional, anchors shall be tied in place prior to grouting.
Exception: Anchors for light-framed construction having a required embedment of 13 inches or less may be field placed while grout is in plastic condition.

23.15.2106 Seismic design.
Add the following sections:

23.15.2106.2 - ASCE 7 Section 13.4.2.2 modification. Amend ASCE 7 Section 13.4.2.2 by deleting the second sentence and the exception.

23.15.2106.3 - ASCE 7 Section 15.4.9.2 modification. Amend ASCE 7 Section 15.4.9.2 by deleting the second sentence and the exception.

23.15.2209.1 Storage racks.
Add the following exception:
Exception: The building official may waive the design requirement for storage racks less than or equal to 8 feet in height.

23.15.2303.4.5 Alterations to trusses.
Revise the last sentence to read as follows.
Alterations resulting in the addition of loads to any member (e.g., HVAC equipment, piping, additional roofing or insulation, etc.) shall be evaluated in accordance with the International Existing Building Code.

23.15.2304.12.1.2 Wood supported by exterior foundation walls.
Replace "8 inches" in the sentence with "6 inches".

23.15.2305 General Design Requirements for Lateral Force-Resisting Systems.
Add the following sections:

2305.4 Anchorage at shear wall ends. 1,000 lbs. (ASD) net uplift at shear wall boundaries for upper story walls and 1,500 lbs (ASD) net uplift for shear walls directly connected to concrete or masonry foundations may be neglected when determining overturning restraint. Where overturning forces exceed these limits, the full calculated force shall be used to design the anchorage.

2305.5 Modifications to NDS SDPWS.
Add the following to NDS SDPWS Section 4.3.6.4.3:
The edge of plate washers shall be installed ½ inch from the inside face of the rim joist for shear walls constructed on top of platform framed floors.

Add the following exceptions to NDS SDPWS Section 4.3.6.4.3:

d. A 3× nominal sill plate may be used in lieu of extending the washer to within ½ inch of the edge of the plate on the side(s) with sheathing.
e. Where required nominal capacity does not exceed 1,200 plf, a 2× nominal sill plate may be used where the sill plate is anchored using two times the number of anchors required by design and 0.229-inch by 3-inch by 3-inch plate washers are used.

Add the following to NDS SDPWS section 4.4.1.6a:
The edge of plate washers shall be installed ½ inch from the inside face of the rim joist for shear walls constructed on top of platform framed floors.

23.15.2308.5.8 Pipes in walls.
Add the following paragraph at the end of the section:
All studs in exterior plumbing walls shall be a minimum 6-inch nominal width unless otherwise approved.

23.15. Table 2902.1 Minimum Number of Required Plumbing Fixtures.
Amend Table 2902.1 as follows:
Under the WATER CLOSETS column: Replace “URINALS SEE SECTION 424.2 OF THE INTERNATIONAL PLUMBING CODE” with “In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets.”

Under the DRINKING FOUNTAINS column: Replace “SEE SECTION 410 OF THE INTERNATIONAL PLUMBING CODE” with “Where water is serviced in restaurants, drinking fountains shall not be required. In other occupancies where drinking fountains are required, bottle water dispensers shall be permitted to be substituted for required drinking fountains. Drinking fountains shall not be required in Group B, F, or S occupancies containing break rooms with sinks.

23.15.3001.2 Emergency Elevator Communication Systems for the Deaf, Hard of Hearing and Speech Impaired:
Delete this section in its entirety.

23.15.3004.3 Conveyors
Add a new subsection as follows:

3004.3.3 Plan review, acceptance inspection and periodic inspections. Plan review and acceptance inspections and tests of vertical reciprocating conveyors shall be in accordance with ASME-B20.1 Safety Standard for Conveyors and Related Equipment. Periodic inspection shall be performed on vertical reciprocating conveyors, in accordance with ASME-B20.1, Section I-7. Periodic inspections shall be performed at intervals not to exceed 2 years.

23.15.3004.4 Personnel and Material Hoists

Add the following subsections:

23.15.3004.4.1 Construction and demolition sites. Personnel hoists and employee elevators on construction and demolition sites shall meet the requirements of ANSI A10.4.

23.15.3004.4.1.1 Inspection, testing and certification. Inspections, testing, and certification shall be conducted by the conveyance manufacturer or by an independent inspector certified to inspect and certify this type of equipment prior to the conveyance being placed into service. All inspections and testing shall be in accordance with ANSI A10.4 and the requirements of the manufacturer of the conveyance. Copies of all inspection reports and certification letters shall be submitted to the Municipality of Anchorage Building Safety Division, Elevator Inspection Section for review within 72 hours following the completion of the inspections.

Periodic inspections shall be performed as required by ANSI A10.4 and manufacturer's recommendations. Inspection reports shall be submitted to the Municipality of Anchorage Building Safety Division, Elevator Inspection for review within 72 hours following the completion of the inspections.

23.15.3005.1 Access

Replace section with the following:

3005.1 Access. Access to elevator machine/control rooms and machine/control spaces shall be from the inside of the building or shall be by an enclosed, ventilated, and well lighted access protected from the weather.

23.15 Chapter 35 Referenced Standards.

Amend the Reference Standards as follows:

Change NFPA 13-16 to NFPA 13-19: Standard for the Installation of Sprinkler Systems.

Change NFPA 13D-16 to NFPA 13D-19: Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes.

Change NFPA 13R-16 to NFPA 13R-19: Standard for the Installation of Sprinkler Systems in Low-rise Residential Occupancies.

Change NFPA 20-16 to NFPA 20-19: Standard for the Installation of Stationary Pumps for Fire Protection.

Change NFPA 72-16 to NFPA 72-19: National Fire alarm and Signaling Code.
Change NFPA 2001-15 to NFPA 2001-18 Stand on Clean Agent Fire Extinguishing Systems.

23.15 - Appendices.
Adopt Appendices A, C and H.

23.15.H.101.2 Signs exempt from permits.
Delete subsection in its entirety and substitute the following:

A. The following signs shall not require a permit under this chapter. An exemption shall not affect the requirement that a sign be installed and maintained so as to conform with the new requirements of this code and any other applicable law.
   1. The changing of the advertising copy or message on a painted or printed sign only. Except for theater marquees or similar signs specifically designed for the use of replaceable copy, electric signs shall not be included in this exemption.
   2. Painting, repainting or cleaning of an advertising structure or the changing of advertising copy or message thereon shall not be considered an erection or alteration requiring a sign permit, unless structural change is made.
   3. Official signs erected by a federal, state or municipal agency.
   4. Signs not exceeding six (6) square feet in area on any one of its faces.
   5. Signs affixed to or painted on a currently operable and licensed vehicle.
   6. Printed messages carried on any surface not attached to or supported from the ground or from a structure. (OA 88-30S).

23.15.H.101.3 Permits required.
Add a new section H.101.3 to read as follows:
A sign permit shall be required before any sign is erected. No permit shall be issued unless the proposed sign fully conforms to all requirements of this chapter and of Anchorage Municipal Code title 21.

23.15.H.101.4 Application for permit.
Add a new section H.101.4 as follows:

A. An application for a sign permit shall be made in writing on forms prescribed by the building official and shall be complete only if accompanied by:
   1. The location by street and number of the proposed sign structure;
   2. The name, address, and telephone number of owner of the property on which the sign is to be erected;
   3. The name, address, and telephone number of the sign contractor or erector;
   4. A drawing to scale showing the design of the sign, including dimensions, sign size, method of attachment, structural specifications, source of illumination and showing the

relationship to any building or structure to which it is or is proposed to be installed or affixed to which it relates;

5. For permanent, freestanding signs only, a plot plan to scale, indicating location of the sign relative to property lines, streets and sidewalks, utility easements, buildings, driveways, parking spaces, existing signs, and structures identified by their principal use; and
6. Such other information as the building official determines is reasonably necessary to an evaluation of the proposed sign's compliance with this code.

Chapter 23.20 - LOCAL AMENDMENTS TO THE INTERNATIONAL MECHANICAL CODE 2018 EDITION

23.20.100 Local amendments to the International Mechanical Code, 2018 Edition.

The amendments to the International Mechanical Code (IMC) are listed hereafter by section. The last digits of the section number (after the title and chapter digits) are the section of the International Mechanical Code to which the amendment refers, i.e., 23.20.303 refers to amendments to section 303 of the International Mechanical Code.

23.20.101.2 Scope.
Delete the exception.

23.20.103 through 110.
Delete sections 103 through 110. Refer to the Anchorage Administrative Code.

23.20.202 General definitions.
Add the following definition:

Commercial clothes dryer. Factory built package, multiple production. Used in business with direct intercourse of the function with the public. Not designed for use in individual family living environment.

Add to the end of the definition of “Clothes dryer” a new sentence:
Also see “Commercial clothes dryer”.

23.20.302 Protection of structure.
Add the following section:

302.6 Roof penetrations. For roof construction regulated by the IRC:

1. No penetrations shall be located in the required valley ice barrier.
2. All roof penetrations, excluding attic ventilation, shall be located a minimum of six feet from valley centerline and four feet from the exterior wall line measured on a horizontal plane.
3. All roof penetrations, except those for attic ventilation, shall

extend above the roof surface a minimum of 24 inches.

23.20.303 Equipment and Appliance Location.
Add the following section:

303.4 Appliances subject to vehicle impact. Appliances, including their associated piping and ductwork, subject to vehicle impact shall be protected by one or more of the following methods:

1. Install the appliance on a platform a minimum of 24 inches high. The appliance shall not extend beyond the face of the platform. Piping and ductwork shall not be surface mounted to the platform in a location subject to vehicle impact.
2. Protect the appliance with a barrier. The barrier shall be a minimum of 30” high and be constructed of a minimum 2” diameter schedule 40 steel pipe. The barrier must have a minimum 6” setback from the platform or appliance. The maximum unprotected distance shall not exceed five (5) feet. The barrier shall be installed per one of the following methods:
   a. Buried a minimum of 2’0” deep in compacted soil and imbedded in concrete slab
   b. Set in a minimum 1’0” x 1’0” square by 1’0” deep block of concrete (slab not included).
   c. Secured to the wood framed garage floor with flange and stainless-steel bolts and imbedded in concrete slab.
   d. Secured to the concrete slab using a floor flange with a minimum of four 3/8” diameter by 3 ½” long galvanized or stainless anchor bolts.
3. Mount appliance and associated piping and ductwork to wall and/or suspend from the ceiling in a location clear of any potential vehicle interference.

In all cases the minimum clear width and depth of the garage shall be maintained in accordance with Title 21.

23.20.304.3 Elevation of ignition source.
Amend section 304.3 by adding the following to the end of the paragraph:

Rooms and spaces that are not part of the living space of a dwelling unit shall include but are not limited to utility, storage, mud, laundry, toilet and bathing rooms.

Group F, M and S occupancies with open spaces less than 5,000 square feet that include overhead doors providing access to vehicles and equipment containing combustible fuel shall comply with this section. Communicating spaces separated by a door are not considered part of this space.

23.20.304.11 Guards.
Delete the exception.

23.20.304 Installation.
Amend by adding a new section as follows:

304.13 Aircraft hangars. Overhead appliances installed in aircraft storage areas shall be located at least 10' vertically above the upper surface of the wings or engine enclosure of the tallest aircraft which may be housed in the hangar.
Exception. Where a 10' vertical separation cannot be maintained in an NFPA 409 Class III hangar, a sealed combustion appliance may be used. The appliance shall be located as high and as far away from the wings and engine enclosure as possible. This exception shall not apply to NFPA 409 Class I and Class II hangars.

23.20.306.3 Appliances in attics.
Add exception #3 as follows:
3. The passageway and level surface are not required for replacement of horizontal furnaces located above drop ceilings in strip malls. All other code requirements apply.

23.20.306.4 Appliances under floors.
Amend by adding the following as the first sentence:
Installation of fuel burning appliances in under-floor crawl spaces is prohibited unless prior written approval is obtained from the authority having jurisdiction.

Add exception #3 as follows:
3. Direct vent appliances can be installed as long as no water or sign of water is present and the installation is in accordance with IMC 304.10.

23.20.306.5 Equipment and appliances on roofs or elevated structures.
At the end of design criteria #2 add the following sentence:
The bottom rung of the ladder shall be located within 14" of the floor or grade.

Add exception #2 to section 306.5 as follows:
2. Where equipment requiring access and appliances are installed on the roof of a new building or new building addition, such access shall be provided by a permanent approved means, interior to the building, extending from floor level to the equipment and/or appliances level service space, regardless of the roof height.

23.20.306.5.2 Electrical requirements.
Revise the sentence to read as follows:
A receptacle outlet shall be provided as required by the N.E.C.

23.20.306 Access and Service Space.
Add a new section as follows:
306.6 Mezzanines and platforms. Every mezzanine or platform containing appliances or equipment requiring access more than ten feet, six inches above the ground or floor level shall be made accessible by a stairway or ladder fastened to the structure. The ladder shall be constructed in accordance with the provisions in section 306.5.

23.20.307.3 Condensate pumps.

Add to the end of the paragraph:
This paragraph does not apply to residential applications.

23.20.401.2 Ventilation required.
Amend section 401.2 by revising the first sentence to read as follows:
Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with one of the following applicable options:

1) Section 403;
2) ASHRAE Standard 62.1- 2016, Ventilation for Acceptable Indoor Air Quality; or
3) ASHRAE Standard 62.2- 2016, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings.

Add the following exception:
Exception: Nail salon ventilation shall be in accordance with Table 403.3.1.1.

23.20.401.4.1 Intake opening location.
Add the following section:

401.4.1 Mechanical intake openings serving single family dwelling units. Mechanical outdoor air intake openings serving single family dwelling units shall be located a minimum of 6-feet horizontally from a gas pressure regulator relief vent outlet. Where a vent outlet is located within 6-feet horizontally of a mechanical outdoor intake opening, such opening shall be located a minimum of 2-feet below the vent outlet. Measurements shall be taken from the gas pressure regulator relief vent outlet.

23.20. Table 401.5 Opening Sizes in Louvers, Grilles and Screens Protecting Air Intake Openings.
Revise Table 401.5 as follows:

OUTDOOR OPENING TYPE	**MINIMUM AND MAXIMUM OPENING SIZES IN LOUVERS, GRILLES AND SCREENS MEASURED IN ANY DIRECTION**
Intake openings in residential occupancies	½ inch
Intake openings in other than residential occupancies	Not < ½ inch and not > 1 inch

23.20. Table 403.3.1.1.1.2 Zone air distribution effectiveness.
In the last row of the table, replace the words "near to" with "within 4-feet of".

23.20.501.3 Exhaust discharge.
Delete Exception #1.

23.20.501.3.2 Exhaust opening protection.
Delete the words ”1/4 inch (6mm) and not larger than”.

23.20.504.8.2 Duct Installation
In the first paragraph, last sentence, delete the words “more than 1/8 inch (3.2mm)”.

23.20.504.8.5 Length identification
Replace “equivalent length exceeds 35 feet (10 668mm)” with “is concealed from visual inspection”.

Add to the end of the paragraph:
and shall be laminated or in a moisture-resistant sleeve secured to the wall using screw, staples, or thumb tacks. Push pins will not be accepted.

23.20.505.3 Exhaust Ducts
Insert the following sentence after the second sentence:
Clearance above cook top shall be at least 30 inches to unprotected combustible material when the underside of such combustible material is protected with insulating millboard at least ¼-inch thick covered with 0.021-inch-thick (No. 28 U.W. Gauge) sheet metal or metal ventilating hood, the distance shall not be less than 24 inches.
Delete exception No. 1.

23.20.505.4 Makeup air required.
Add the following exception:
Exception: A back draft test may be performed to verify proper operation of all combustion appliances. If back draft occurs under any operational scenario, makeup air shall be required.

23.20.505.6 Other than Group R
Revise the section title to read “All occupancies”.

Replace the wording “other than Group R occupancies” with “All occupancies”.

23.20.506.3.8 Grease Duct Cleanouts and Openings
Item No. 2, replace “20 feet (6096mm)” with “12 feet.”

23.20.506.5.2 Pollution Control Units
Change item No. 6 to read: Roof-mounted pollution control units are prohibited.

23.20.507.1.2 Domestic cooking appliances used for commercial purposes.
Add the following exception:
Exception: A residential gas or electric stovetop with up to 4 burners, used for warming foods in a commercial building application such as an office building break room or church kitchen may utilize a residential or Type II exhaust hood, vented to the exterior under the following stipulations:

1. The intended use will not produce grease laden vapors or smoke.

2. A letter of intended use is submitted to the AHJ stating the intended use with a printed menu if applicable. This provision does not apply to office break rooms.
3. A permanent laminated or moisture resistant sign shall be placed in plain sight within 6-feet of the stove top stating "Cooking that produces grease laden vapors or smoke is prohibited." This provision does not apply to office break rooms.

23.20.507.2.6 Clearances for Type I hood.

In Exception #1, replace "in all directions from the hood" with "beyond the top and sides, and continuous to the floor."

23.20.511.1 Dust, stock and refuse conveying systems.

Add the following exception to section 511.1:

Exception: Manufactured dust collectors and separators designed and installed in accordance with NFPA 664.

23.20.515 Multi-port exhaust fans.

Amend Chapter 5 by adding the following section:

515 Multi-port exhaust fans. Multi-port exhaust fan installations shall comply with the following:

1. This type of fan may be used for exhausting environmental air such as bathrooms and toilet rooms and shall not be used for clothes dryer or range exhaust.
2. If this fan is installed in the attic, it shall be within 3-feet of the attic access and the exhaust registers it serves shall be permanently labeled as to the location of the fan for service and maintenance.
3. The operating range for these fans is limited to -40 degrees F to +140 degrees F.
4. Combustion air requirements for fireplaces, water heaters, furnaces, boilers, etc., shall not be affected by the use or operation of this type of fan.
5. These fans shall not be used to exhaust combustible or flammable vapors, fumes, or dusts.
6. The exhaust fan and ductwork shall be insulated with minimum 2-inch thick fiberglass duct insulation to minimize heat transfer to the attic space, which can result in ice damming on the roof.
7. All ceiling vapor barrier penetrations shall be sealed airtight to minimize condensation build-up in the attic and ice damming on the roof.
8. All duct seams shall be sealed airtight with duct mastic/sealer to prevent condensation damage in the attic.

23.20.601.4 Contamination prevention.

Amend by adding the following two exceptions:

Exceptions:

3. Environmental air exhaust ducts under positive pressure may extend into or through ducts or plenums if one of the following design approaches is used:

a. Route environmental air exhaust ducts inside a shaft when passing through a duct or plenum.
b. Install a second duct around the environmental air exhaust duct where passing through ducts and plenums to minimize leakage to the duct or plenum; seal both ends of the outer duct to outside.
c. Seal the environmental air exhaust ducts along all seams and joints using a listed low to medium pressure duct sealant, typically applied by brush, trowel, or caulking gun; install sealant per manufacturer's recommendations.
d. Provide flexible duct with no seams in the duct or plenum only to a limit of 8 feet. The 8 foot limit is due to high static losses. Also, sleeving the metal duct with flexible seamless duct is acceptable.

4. Gas vents installed in accordance with section 503.3.6 in the International Fuel Gas Code.

23.20.601.5 Return Air Openings
Delete item #6.

Add “or underfloor crawlspace” to the end of item #7.

23.20.602.1 General.
Delete from the first sentence the words “uninhabited crawl spaces”.

Add the following sentence to the end of the paragraph:

Underfloor crawlspaces shall not be used as plenums.

23.20.702 Circulation of air.
Amend Chapter 7 by adding the following section:
702 Circulation of air.
Fuel burning appliances may be required to pass a back-draft test as a part of the final plumbing or mechanical inspection. This test shall be conducted with all exhaust fans operating and with fireplace draft open.

23.20.801.20 Plastic vent joints.
Add to the end of the paragraph:
Solvent cement joints for CPVC and PVC pipe and fittings shall be primed. The primer shall be a contrasting color listed for the use.

23.20.801.21 Location and support of venting systems other than masonry chimneys.
Add a new section as follows:
801.21 Location and support of venting systems other than masonry chimneys. Unless a vent or chimney listed for exterior use in cold weather climates is installed, a vent or chimney system installed exterior to the building outside the thermal envelope shall be enclosed in an insulated (R-19 minimum) chase. The portion of the system above the last (highest) roof and its projected plane need not be enclosed. The portion

of the system passing through an attic space need not be insulated or enclosed.

23.20.802.10 Vent terminals - ice and snow protection.

Amend by adding the following section:

802.10 Vent terminals – ice and snow protection. Vent terminations penetrating a metal roof with a pitch shall be protected by an ice or snow deflector of an approved type acceptable to the Administrative Authority.

23.20.923.1 General

Replace reference to “Section 105.2” with “Anchorage Administrative Code”.

23.20.923.2 Small ceramic kilns – ventilation.

Amend by adding the following section:

923.2 Small ceramic kilns - ventilation.

A canopy-type hood shall be installed directly above each kiln. The face opening area of the hood shall be equal to or greater than the top horizontal surface area of the kiln. The hood shall be constructed of not less than 0.024-inch (No. 24 U.S. gauge) galvanized steel or equivalent and be supported at a height of between 12 inches and 30 inches above the kiln by noncombustible supports.

Exception: Electric kilns installed with listed exhaust blowers may be used when marked as being suitable for the kiln and installed in accordance with manufacturer's instructions.

Each hood shall be connected to a gravity ventilation duct extending in a vertical direction to outside the building. This duct shall be of the same construction as the hood and shall have a minimum cross-sectional area of not less than one-fifteenth of the face opening area of the hood. The duct shall terminate a minimum of 12 inches above any portion of a building within 4-feet and terminate no less than 4-feet from any openable windows or other openings into the building or adjacent property line. The duct opening to the outside shall be shielded, without reduction of duct area, to prevent entrance of rain into the duct. The duct shall be supported at each section by noncombustible supports.

Provisions shall be made for air to enter the room in which a kiln is installed at a rate at least equal to the air being removed.

23.20.1001.1 Scope.

Amend Exception 7 by deleting the words “or state”.

23.20.1004.4 Mounting.

Add the following to the end of the paragraph:

Boilers shall be installed in a water-tight pan of corrosion-resistant material. The pan shall be equipped with a minimum ¾-inch diameter drain discharging to an approved location.

Exceptions:

1. A pan is not required when a boiler is installed on a concrete slab.

2. A pan is not required where a corrosion-resistant material is placed under the boiler provided that it covers the entire platform and extends to all walls adjoining the platform and turning up the walls a minimum of 2 inches.

23.20.1006.6 Safety and relief valve discharge.

Add item #14 to read:

14. When a boiler is installed on a platform, the boiler relief valve piping shall discharge to between 6 and 24 inches off the finished floor over the edge of the platform.

23.20.1006.7 Boiler safety devices.

Replace section 1006.7 with the following:

1006.7 Boiler safety devices.

Boilers shall be equipped with controls and limit devices as required by the manufacturer's installation instructions, Table 1006.7 and the conditions of the listing.

23.20. Table 1006.7 –CONTROLS AND LIMIT DEVICES FOR AUTOMATIC BOILERS.

			Trial for Main	Safety Control Timing (Nominal Maximum Time in Seconds)											
Boiler Group	Fuel	Fuel Input Range[1] (Inclusive) (x0.293071 for W)	Type Of Pilot[2]	Trial for Pilot	Direct Electric Ignition	Flame Pilot	Main Burner Flame Failure[3]	Assured Fuel Supply Control[4]	Assured Air Supply Control[5]	Low Fire Start Up Control[6]	Pre-Purging Control [7]	Hot Water Temp. and Low Water Limit Controls[8]	Steam Pressure and Low Water Limit Controls[9]	Approved Fuel Shutoff[10]	Control and Limit Device System Design[11]
A	Gas	0-400,000 Btu/h	Any type	90	Not required	90	90	Not required	Required	Not required	Not required	Required	Required	Not required	Required
B	Gas	400,001-2,500,000 Btu/h	Interrupted or intermittent	15	15	15	2-4	Not required	Required	Not required	Not required	Required	Required	Not required	Required
C	Gas	2,500,001-5,000,000 Btu/h	Interrupted or intermittent	15	15	15	2-4	Required	Required	Required	Required	Required	Required	Required	Required
D	Gas	Over 5,000,000 Btu/h	Interrupted	15	15	15	2-4	Required	Required	Required	Required	Required	Required	Required	Required
E	Oil	0-400,000 Btu/h	Any type	Not required	90	90	90	Not required	Required	Not required	Not required	Required	Required	Not required	Required
F	Oil	400,001-1,000,000 Btu/h	Interrupted	Not required	30	30	2-4	Required	Required	Not required	Not required	Required	Required	Not required	Required
G	Oil	1,000,001-3,000,000 Btu/h	Interrupted	Not required	15	15	2-4	Required	Required	Not required	Not required	Required	Required	Not required	Required
H	Oil	Over 3,000,000 Btu/h	Interrupted	15	15	60	2-4	Required	Required	Required	Required	Required	Required	Required	Required
K	Elec.	All	Not required	Not required	Not required	Not required	Not required	Not required	Not Required	Not required	Not required	Required	Required	Not required	Required

1. Fuel input shall be determined by one of the following:

   1.1 The maximum burner input as shown on the burner nameplate or as otherwise identified by the manufacturer.
   1.2 The nominal boiler rating, as determined by the building official, plus 25 percent.

2. Automatic boilers shall have one flame failure device on each burner which shall prove the presence of a suitable ignition source at the point where it will reliably ignite the main burner, except that boiler Groups A, B, E, F and G which are equipped with direct electric ignition shall monitor the main burner, and all boiler groups using interrupted pilots shall monitor only the main burner after the prescribed limited trial and ignition periods. Boiler Group A equipped with continuous pilot shall accomplish 100 percent shutoff within 90 seconds upon pilot flame failure. The use of intermittent pilots in boiler Group C is limited to approved burner units.

3. In boiler Groups B, C and D, a 90-second main burner flame failure limit may apply if continuous pilots are provided on manufacturer-assembled boiler-burner units approved by an Approved testing agency as complying with nationally recognized standards approved by the building official. Boiler Groups F and G equipped to reenergize their ignition system within 0.8 second after main burner flame failure shall be permitted 30 seconds for Group F or 15 seconds for Group G to reestablish its main burner flame.

4. Boiler Groups C and D shall have controls interlocked to accomplish a nonrecycling fuel shutoff upon high or low gas pressure, and boiler Groups F, G and H using steam or air for fuel atomization shall have controls interlocked to accomplish a nonrecycling fuel shutoff upon low atomizing steam or air pressure. Boiler Groups F, G and H equipped with a preheated oil system shall have controls interlocked to provide fuel shutoff upon low oil temperature.

5. Automatic boilers shall have controls interlocked to shut off the fuel supply in the event of draft failure if forced or induced draft fans are used or, in the event of low combustion airflow, if a gas power burner is used. Where a single motor directly driving both the fan and the oil pump is used, a separate control is not required.

6. Boiler Groups C, D and H, when firing in excess of 400,000 Btu per combustion chamber, shall be provided with low fire start of

its main burner system to permit smooth light off. This shall normally be a rate of approximately one-third of its maximum firing rate.

7. Boiler Groups C, D and H shall not permit pilot or main burner trial for ignition operation before a purging operation of sufficient duration to permit a minimum of four complete air changes through the furnace, including combustion chamber and the boiler passes. Where this is not readily determinable, five (5) complete air changes of the furnace, including combustion chamber up to the first pass, shall be considered equivalent. An atmospheric gas burner with no mechanical means of creating air movement or an oil burner which obtains two-thirds or more of the air required for combustion without mechanical means of creating air movement shall not require purge by means of four (4) air changes so long as its secondary air openings are not provided with means of closing. If such burners have means of closing secondary air openings, a time delay shall be provided which puts these closures in a normally open position for four (4) minutes before an attempt for ignition. An installation with a trapped combustion chamber shall in every case be provided with a mechanical means of creating air movement for purging.

8. Every automatic hot-water-heating boiler, low-pressure hot-water-heating boiler, and power hot-water boiler shall be equipped with two (2) high-temperature limit controls with a manual reset on the control with the higher setting interlocked to shut off the main fuel supply, except the manual reset on the high-temperature limit control shall not be required on any approved by an approved testing agency. Every automatic hot-water heating, power boiler and package hot-water supply boiler shall be equipped with one low-water-level limit control with a manual reset interlocked to shut off the fuel supply, installed to prevent damage to the boiler and to permit testing of the control without draining the heating system except on boilers used in Group R Occupancies of less than six (6) units. However, a low- water-flow limit control installed in the circulating water line may be used instead of the low-water-level limit control for the same purpose on coil-type boilers.

9. Every automatic low-pressure steam-heating boiler, small power boiler and power steam boiler shall be equipped with two high- steam pressure limit controls interlocked to shut off the fuel supply to the main burner with manual reset on the control with the higher setting, and two (2) low-water-level limit controls, one of which shall be provided with a manual reset device and independent of the feed water controller. Coil-type flash steam boilers may use two (2) high-temperature limit controls, one of which shall be manually reset in the hot-water

coil section of the boiler instead of the low-water-level limit control.

10. Boiler Groups C, D and H shall use an approved automatic reset safety shutoff valve for the main burner fuel shutoff, which shall be interlocked to the programming control devices required. On oil burners where the safety shutoff valve shall be subjected to pressures in excess of ten (10) psi when the burner is not firing, a second safety shutoff valve shall be provided in series with the first. Boiler Groups C and D, using gas in excess of 1-pound-per-square-inch pressure or having a trapped combustion chamber or employing horizontal fire tubes, shall be equipped with two (2) approved safety shutoff valves, one of which shall be an automatic-reset type, one of which may be used as an operating control, and both of which shall be interlocked to the limit-control devices required. Boiler Groups C and D using gas in excess of 1-pound-per-square-inch pressure shall be provided with a permanent and ready means for making periodic tightness checks of the main fuel safety shutoff valves.

11. Control and limit device systems shall be grounded with operating voltage not to exceed 150 volts except, on approval by the building official, existing control equipment to be reused in an altered boiler control system may use 220-volt single phase with one side grounded, provided such voltage is used for all controls. Control and limit devices shall interrupt the ungrounded side of the circuit. A readily accessible means of manually disconnecting the control circuit shall be provided with controls so arranged that when they are de-energized the burner shall be inoperative.

23.20.1006.8 Electrical requirements.
Delete this section in its entirety.

23.20.1007 Boiler low-water cutoff.
Delete this section in its entirety.

23.20.1105.3 Refrigerant detector.
Add a second sentence to read as follows:

Refrigerant detectors shall alarm audibly and visually both inside and outside the machinery room or refrigerated space.

23.20.1105.6.2 Makeup air.
Amend last sentence by changing ¼ -inch to ½ -inch.

23.20.1105.10 Seismic protection.
Amend section 1105 by adding subsection 1105.10 as follows:
1105.10 Seismic protection.

Refrigeration piping supported by equipment and/or structures that are not supported by a common foundation shall be installed to accommodate differential movement. Flexible connectors, soft copper piping loops and swing joints are an acceptable means. Flexible connectors shall be approved for use in refrigeration systems, and when installed outdoors, shall be approved for outdoor use.

Chapter 23.25 - LOCAL AMENDMENTS TO THE UNIFORM PLUMBING CODE 2018 EDITION

23.25.100 Local amendments to the Uniform Plumbing Code 2018 Edition.

Amendments to the 2018 Uniform Plumbing Code are listed hereafter by section. The digits after the title and chapter digits are the section number of the Uniform Plumbing Code to which the amendment refers, e.g., 23.25.510.8 refers to section 510.8 of the Uniform Plumbing Code.

Plumbing provisions for swimming pools, spas and hot tubs shall be in accordance with the Uniform Swimming Pool, Spa and Hot Tub Code adopted by the State of Alaska.

23.25.103 through 107 - Delete.

Delete sections 103 through 107. Refer to the Anchorage Administrative Code.

23.25.204.0 Definitions. -B-

Amend by adding the following definition:

Bathroom. Any room or space containing a bathtub, shower, combination bath/shower, hot tub, or swimming pool.

23.25.210.0 Definitions. -H-

Amend by adding the following definition:

Health Care Facilities. Buildings or portions or buildings in which medical, dental, psychiatric, nursing, obstetrical or surgical care is provided.

23.25.312.12.3 Tub waste openings (Rodent proofing).

Delete Section 312.12.3.

23.25.314.4 Excavations (Trenching, Excavation, and Backfill).

Amend section 314.4 by adding, after the third sentence, the following:

Backfill material shall be 3/8-inch pea gravel or smaller. In the case of cast iron drain, waste and vent piping, the backfill material shall be ¾-inch gravel and earth or smaller.

23.25.318.2 Pressure tests (10 psi or less).

Replace 0.10 psi with 0.20 psi.

23.25.321.0 Mezzanines and platforms.

Amend Chapter 3 by adding section 321 as follows:

321.0 Mezzanines and platforms.

Every mezzanine or platform containing appliances or equipment requiring access more than 10-feet 6-inches above the ground or floor level shall be made accessible by a stairway or ladder fastened to the structure. The ladder shall be constructed with:

1. Rung spacing not to exceed 14 inches on center.
2. Toe spacing not less than 6 inches deep.
3. At least 18-inch spacing between rails.
4. Rungs at least 0.75 inches in diameter capable of withstanding a 300 lb. load.
5. Offset sections and landings capable of withstanding 100 pounds per square foot when height exceeds 30 feet.

23.25.407.3 Limitation of hot water temperature for public lavatories.
Amend section 407.3 by adding the following sentence to end of section:
The device shall be installed at the point of use, except a single device may serve multiple fixtures when allowed by the manufacturer installation instructions.

23.25.407.4 Transient public lavatories.
Add the following to the end of the sentence:
bus stations, cocktail lounges, bars, concert halls, sports arenas, theaters, shopping malls, churches, and grocery stores.

23.25.409.4 Limitation of hot water in bathtubs and whirlpool tubs.
Add the following to the end of the section:
The device shall be installed at the point of use, except a single device may serve multiple fixtures when allowed by the manufacturer installation instructions.

23.25.409.6 Installation and Access.
Add the following to the end of the section:
The access opening shall be a minimum of 16 inches by 16 inches, although alternate access arrangements may be considered. The intent is the pump can be easily and safely removed. Pumps shall be located so the supporting or securing bolts are no more than 2-feet from the access opening. The access panel may be caulked in place but shall remain easily removable. If removal of a pump motor is in question, the contractor may be required to remove the pump motor to demonstrate proper access.

23.25.415.2 Drinking Fountain Alternatives.
Delete section 415.2. Refer to International Building Code.

23.25.418.6 Unvented garage floor drains.
Amend section 418 "Floor Drains" by adding a subsection as follows:

418.6 Unvented garage floor drains.

418.6.1 General.
A maximum of three unvented floor drains may be installed in a residential garage serving a single-family home or duplex. Each floor drain shall be

2-inch minimum with three-inch 3-inch minimum trap and trap arm. No other plumbing fixtures may be connected to the garage drain piping.

418.6.2 Inspections.
Underground inspections of these floor drains are not required, but spot checks may be made by inspectors. If requested, MOA staff performs this inspection at no additional fee.

23.25.422 Minimum number of required fixtures.
Delete section 422. Refer to the International Building Code.

23.25.423.0 Minimum hot water supply temperature.
Amend Chapter 4 by adding section 423 as follows:
423.0 Minimum hot water supply temperature.
The minimum hot water temperature to showers, tub and shower combinations and tub fillers shall be 110°F, except for engineered systems.

23.25.504.6 Temperature pressure and vacuum relief devices.
Add the following sentence:

When a water heater is installed in a garage, the water heater relief valve piping shall discharge to the floor over the edge of the platform.

23.25.506.0 Air for combustion and ventilation.
Delete section 506.0. Refer to the IMC and IFGC.

23.25.507.2 Seismic Provisions.
Add an exception as follows:
Exception: Tank type gas and electric water heaters that are a minimum of 5 gallons and a maximum of 10 gallons require only one approved seismic strap placed as close to the middle of the heater as possible, measured vertically, without blocking access to the controls.

23.25.507.5 Drainage Pan
Replace Section 507.5 with the following:
507.5 Drainage pan.
Water heaters shall be installed in a watertight pan of corrosion-resistant material. The pan shall be equipped with a minimum ¾-inch diameter drain discharging to an approved location. Water heater enclosures shall be provided with an approved floor drain.
Exceptions:

1. A floor drain is not required when a water heater is installed in a garage and the garage floor slopes to the exterior.
2. A floor drain is not required if a water heater is equipped with a listed safety device to control flooding.
3. A floor drain is not required when a water heater is installed in an attic or above a drop ceiling and the pan is drained to an approved location.
4. A pan is not required when a water heater is installed on a concrete slab on grade.

5. A pan is not required in a garage, where a corrosion-resistant material is placed under the water heater provided that it covers the entire platform and extends to all walls adjoining the platform and turning up the walls a minimum of two inches.

23.25.507.5.1 Water heaters located in manufactured (mobile) homes.
Amend section 507.5 by adding the follow section:

507.5.1 Water heaters located in manufactured (mobile) homes.

A. Installation of a water heater in a compartment off a bedroom shall be acceptable if the water heater was factory installed, if the compartment is sealed from the bedroom by a panel screwed to the wall, and if the combustion air is taken from a source outside of the bedroom and complies with Uniform Plumbing Code.

B. Replacement water heaters shall be tested, approved, and listed for use in mobile homes. Combustion air shall be provided in accordance with the International Fuel Gas Code.

23.25.507.6 Added or converted equipment or appliances.
Revise Item (1) to read as follows:

(1) Air for combustion and ventilation is provided where required, in accordance with the provisions of the International Fuel Gas Code (IFGC), Chapter 3. Where existing facilities are not adequate, they shall be upgraded to meet the IFGC.

Revise Item (2) to read as follows:

(2) The installation of components and appliances meet the combustible material provisions of the IFGC, Chapter 5.

Revise Item (3) to read as follows:

(3) The venting system is constructed and sized in accordance with the provisions of the IFGC, Chapter 5. Where the existing venting system is not adequate, it shall be upgraded to comply with the IFGC.

23.25.507.13 Installation in residential garages.
Delete "unless listed as flammable vapor ignition resistant".

23.25.507.16 Venting of flue gases.
Replace “provisions of section 509” with “provisions of IFGC Chapter 5.”

23.25.507.27 Clearance to combustible materials.
Delete section 507.27. Refer to the IMC and IFGC.

23.25.508.0 Appliances on roofs.
Delete section 508.0. Refer to the IMC and IFGC.

23.25.509.0 Venting of appliances.
Delete section 509.0. Refer to the IMC and IFGC.

23.25.510.0 Sizing of category I venting systems.
Delete section 510.0. Refer to the IMC and IFGC.

23.25.603.0 - Cross-connection control.
Amend section 603.0 by adding the following:

PURPOSE AND SCOPE: The purpose of this section is to protect the public health by controlling or eliminating actual or potential cross-connections. The control or elimination of cross-connections shall be in accordance with this code, the current edition of the Cross-Connection Control Manual published by the Pacific Northwest section of The American Water Works Association and the Manual of Cross-Connection Control published by the University of Southern California Foundation for Cross-Connection Control. In the event a conflict exists between the technical publications adopted herein and the Uniform Plumbing Code, the most stringent provision shall apply.

UNSAFE FACILITIES: The Municipality may refuse to furnish water and may discontinue services to any premises where plumbing facilities, appliances, or equipment using water are dangerous, unsafe, or not in conformity with the water utility tariff or other related municipal ordinances. No potable water service connection to any premises shall be installed or continued in use by a purveyor unless the potable water supply is protected by all necessary backflow prevention devices and assemblies. The installation or maintenance of a cross-connection, endangering the quality of the purveyor's water supply, shall be unlawful and is prohibited.

ADMINISTRATIVE AUTHORITY: The Building Official or authorized representative.

PURVEYOR: The operator or owner of a water supply.

PREMISES: Real property, including any house or building thereon, located within the Municipality of Anchorage.

CROSS-CONNECTION INSPECTIONS: No water shall be delivered to any structure hereafter built within the Municipality of Anchorage until it is inspected by the Administrative Authority for possible cross-connections and approved as being protected from such cross-connections.

Inspections shall be made periodically of all potentially hazardous buildings, structures, or improvements of any nature now receiving water through the municipal water system, for the purpose of ascertaining whether cross-connections exist. Such inspections shall be made by the Administrative Authority.

Any building modification requiring a plumbing or mechanical permit may require a cross-connection inspection and compliance.

POSSIBLE CROSS-CONNECTIONS: Backflow prevention assemblies or devices shall be installed in any premises where, in the judgment of the

Administrative Authority, the nature and extent of activities, or the materials used or stored on the premises, may present a hazard to the potable water supply in the event a cross-connection were to be made; even though such cross-connection has not been made. Such circumstances include, but are not limited to:

1. Premises having an auxiliary water supply.
2. Premises having intricate plumbing arrangements making it impractical to ascertain whether or not cross-connections in fact exist.
3. Premises where entry is restricted so inspection for cross-connections cannot be made with sufficient frequency or on sufficiently short notice to assure cross-connections do not exist.
4. Premises having a repeated history of cross-connections being established or re-established.
5. Premises on which any substance is handled under pressure, so as to permit entry into the water supply. This shall include the handling of process waters and cooling waters.
6. Premises where materials of a toxic or hazardous nature are handled in such a way if back siphonage should occur, a health hazard might result.

The following facilities, or portions of a building containing one of the listed facilities, when connected to a potable water supply, require backflow prevention assemblies or devices unless the authority having jurisdiction determines no hazard exists. An example of a facility within a building is a dental office in a multi-story office building. For this application, a reduced pressure principle backflow preventer is required to be installed on the hot and cold water serving the dental office and backflow prevention is not required on the main supply to the building. This protects both the city main and the occupants in the building:

Hospitals, mortuaries, and clinics;
Laboratories;
Metal plating industries;
Piers and docks;
Sewage treatment plants;
Food or beverage processing plants;
Chemical plants;
Petroleum processing or storage plants;
Radioactive material processing plants, nuclear reactors, or other facilities where radioactive materials may be utilized;
Manufacturing facilities;
Car wash facilities;
Water systems not within the definition of potable water supply;
Fire sprinkler systems;
Medical/dental facilities;
Waterfront facilities;
Irrigation systems;
Laundries and dry cleaners;
High rise or other buildings above system pressure which require booster pumps; and

Sand, gravel and concrete plants or other material processing plants.

23.25.603.2 Approval of devices and assemblies.
Amend by adding the following:
Backflow assemblies and devices shall be considered approved if they successfully passed both the laboratory and field evaluation tests conducted by the University of Southern California Foundation for Cross-Connection Control.

23.25.603.4.8 Area drain sizing for backflow assemblies.
Replace section 603.4.8 “Drain Lines” with the following:
603.4.8 Area drain sizing for backflow assemblies. For new building construction, backflow devices or assemblies with drainage (reduced pressure principle assemblies) shall be provided with an area drain, as listed below.

Backflow Device Size	Area Drain Waste Line Minimum Size
1" and less	2"
1¼"—2"	3"
2½"—3"	4"
4" and greater	6"

Exception: Area drain size is not required to be larger than building sewer service line

23.25.603.5.6.4 Lawn irrigation.
Amend section 603.5.6 by adding the following subsection:
603.5.6.4 Lawn irrigation.
The Uniform Plumbing Code regulates the installation of these types of plumbing systems up to and including the required type(s) of backflow preventer. A permit, plan check, and inspection are required to ensure the potable water piping is sized correctly for the number of fixture units effected by such a system and required piping material and backflow preventer(s) are installed. The installation downstream of the required backflow preventer is not regulated by the plumbing code and is considered non-potable water piping. Installation of backflow preventers and/or vacuum breakers on public systems shall be done by a plumbing contractor properly licensed with the Municipality of Anchorage. Private installations require either a plumbing contractor or a legal owner complying with all the requirements in the Anchorage Administrative Code.

23.25.603.5.8 Water-cooled equipment.
Amend section by adding a second paragraph to read as follows:
Installation, operation or use of air conditioning or cooling units employing water or other fluid as a cooling agent without a recovery and recirculation unit is prohibited.

23.25.603.5.10 Steam or hot water boilers.
Amend section 603.5.10 as follows:

603.5.10 Steam or hot water boilers. Potable water connections to hot water boilers shall be protected from backflow by a minimum double check valve with intermediate vent backflow prevention assembly complying with ASSE 1012. Potable water connections to steam boilers shall be protected from backflow by a minimum reduced pressure principle backflow prevention assembly in accordance with Table 603.2. Where chemicals are introduced into the system a reduced pressure principle backflow prevention assembly shall be provided in accordance with Table 603.2.

23.25.603.5.22 Potable water supply to dental chairs.

Amend section 603.5 by adding section 603.5.22 as follows:

603.5.22 Potable water supply to dental chairs. Potable water supply to each individual dental chair shall be protected at a minimum by a Spill-Resistant Pressure Breaker complying with an ASSE 1056 backflow prevention device.

23.25.603.5.23 Hydronic heating/cooling.

Amend section 603.5 by adding section 603.5.23 as follows:

603.5.23 Hydronic heating/cooling. Systems with heat transfer fluids containing plain water or water/propylene glycol mixture require a minimum double check valve with intermediate atmospheric vent backflow preventer, complying with ASSE 1012, to be installed on any directly connected potable water makeup piping to the system. In addition, the below listed requirements apply when a system contains propylene glycol:

1. Water/propylene mixture shall contain a food grade powder dye. (A suitable example is FD+C Powder Dye.) Liquid food coloring is not acceptable due to its potential dissipation into the system.
2. A warning tag shall be installed on the backflow preventer stating the following information:
   A. System contains propylene glycol - use no other substitute.
   B. Do not add ethylene glycol or automotive anti-freeze of any type.
   C. No high hazard toxic chemicals permitted to be added to this system.

Systems having a heat transfer fluid containing Ethylene Glycol (approved for such use) require minimum protection of the potable water makeup system by installation of a physical air gap or a reduced pressure principal backflow preventer.

23.25.603.5.24 Steam systems.

Amend section 603.5 by adding section 603.5.24 as follows:

603.5.24 Steam systems.

Due to the potential addition of toxic chemicals in any steam system, the minimum protection for the potable water makeup shall be by installation of a physical air gap or a reduced pressure principal backflow preventer.

23.25.603.5.25 Cooling towers.

Amend section 603.5 by adding section 603.5.25 as follows:

603.5.25 Cooling towers. Cooling towers obtaining makeup water from a potable source shall have a reduced pressure principal backflow preventer or air gap separation installed at the source of the potable water.

23.25.603.5.26 Buildings over 30 feet in height.

Amend section 603.5 by adding section 603.5.26 as follows:

603.5.26 Buildings over 30 feet in height. Buildings with water piping exceeding 30 feet in height measured from grade plane as defined by the Building Code to the highest portion of the piping system shall be equipped with a Double Check Valve Assembly on the main water supply to the building.

23.25.603.5.27 Commercial hose bibbs.

Amend section 603.5 by adding section 603.5.27 as follows:

603.5.27 Commercial hose bibbs. Hose bibbs within facilities that have a potential for a high hazard cross-connection such as automotive and maintenance shops and any facility where chemicals are used or stored in the vicinity of the hose bibb shall be protected by a minimum pressure vacuum breaker or spill-resistant vacuum breaker.

23.25.603.5.28 Steam producing kitchen appliances.

Amend section 603.5 by adding section 603.5.28 as follows:

603.5.28 Steam producing kitchen appliances. Steam producing kitchen appliances shall be protected from backflow by a minimum double check valve with intermediate vent backflow prevention device complying with ASSE 1012.

23.25.604.1 Pipe, tube and fittings (Materials).

Add the following sentence:

Nonmetallic piping shall not be used for cold water building supply distribution systems outside of a building.

Add the following exception:

Exception: PVC or HDPE water service pipe 4-inch in diameter and greater may extend from the utility main horizontally into the footprint of the building. The piping shall transition underground to an approved metallic pipe at a 90-degree fitting. The PVC and HDPE pipe and fittings shall comply with the latest version of the Anchorage Water and Wastewater Utility (AWWU) Design Construction Practice Manual (DCPM).

23.25.604.3 Copper or copper alloy tube (Materials).

Delete "or underground outside of structures" in the Exception.

23.25.604.10 Plastic materials.

Replace section 604.10 with the following:

604.10 Plastic materials.

Plastic piping materials shall not be used for water service piping from the

street service main, private well, or other water source to a building or premises.

Exception: PVC or HDPE water service pipe 4-inch in diameter and greater may extend from the utility main horizontally into the footprint of the building. The piping shall transition underground to an approved metallic pipe at a 90-degree fitting. The PVC and HDPE pipe and fittings shall comply with the latest version of the Anchorage Water and Wastewater Utility (AWWU) Design Construction Practice Manual (DCPM).

23.25.606.3 Multidwelling units.

Amend section 606.3 by adding the following:

Shutoff valves located in a crawlspace shall be visible and shall be located within 10-feet of the crawl space access hatch/door.

23.25.608.5 Discharge piping.

Delete item (7).

23.25.609.3 Under concrete slab.

Add the following exception:

Exception: Brazing shall not be required on non-pressurized, non-potable piping such as trap primers. Where joints are permitted, they shall be of the approved type.

23.25.609.4 Testing.

Revise the paragraph to read as follows:

Upon completion of a section or of the entire hot and cold water supply system, the system shall be tested and proved tight under a water pressure not less than the working pressure under which it is to be used. The water used for tests shall be obtained from a potable source. A 50 psig air pressure may be substituted for the water test. In either test method, the piping shall withstand the test without leaking for a period of not less than 15 minutes.

23.25.609.10.1 Mechanical devices.

Add the following:

Properly sized expansion tanks approved for potable water may be used in a single-family or duplex residence in lieu of water hammer arresters. Such expansion tanks shall be installed on the cold water piping between the residence shutoff valve and each water heater location. In the event the expansion tank(s) do not eliminate water hammer, mechanical water hammer devices will be required. Examples of quick-acting valve locations include, but are not limited to, dishwasher, clothes washer, toilet ballcock, icemaker, and any single handle faucet.

23.25.609.11 Pipe insulation.

Delete section. Refer to the IECC for insulation requirements.

23.25.609.12 Crawlspace water supply access.

Amend section 609 by adding section 609.12 as follows:

609.12 Crawlspace water supply access.

An unobstructed clear passageway no less than 40 inches high by 22 inches wide is required from the crawlspace access to the water supply line entrance.

23.25.610.8 Size of meter and building supply pipe using Table 610.4.
Amend by replacing the last sentence of section 610.8 with the following:
No new street service or building supply pipe shall be less than 1-inch in diameter.

23.25.612.0 Residential fire sprinkler systems.
Delete section 612.0. Required residential fire sprinkler systems shall comply with the International Fire Code.

2**3.25.613.0 Indoor water meter setter.**
Amend Chapter 6 by adding section 613 as follows:

613.0 Indoor water meter setter.

All newly constructed single family, duplex and triplex residences shall install an approved indoor water meter setter with meter idler or a removable section of pipe to facilitate the future installation of water meters in a horizontal position. It shall be located in the vicinity of the main supply full-way valve, ahead of any branch lines and shall also have a valve on the outlet side. An easily accessible frost-proof area with adequate clearances shall be provided for meter installation, maintenance or removal. "Easily accessible" shall be considered an open area not concealed by an appliance, furnace, water heater or standard building material. When the meter is installed in a crawlspace, the maximum distance from the access opening to the meter shall not exceed 10-feet.

A horizontal section of pipe may be used in lieu of the indoor meter setter provided the pipe is equal in length to a water meter of the same size including meter couplings, but in no case shall it be less than 24 inches in length. The piping shall be supported to provide a permanent support for the water meter when installed.

When the water tariff is revised to allow the metering of these residences, the utility shall furnish two meters and remote feed-outs at its expense and its crews shall install remote read-out meters at the time of actual meter installation.

23.25.704.3 Commercial Sinks.
Amend the second sentence in paragraph 704.3 to read as follows:
A floor drain or flush mounted floor sink shall be provided within 5 feet of the fixture, and the fixture…

23.25.712.1 Media.
Replace the first sentence of section 712.1 with the following:
The piping of the plumbing, drainage, and venting systems shall be tested with water or air. The air test shall be a minimum 5 psig and shall be performed with gauges of 0.20 psi incrementation or less.

23.25.719.1 Locations (Cleanouts).
Delete first paragraph and substitute the following:
Cleanouts shall be placed at the end of building drains, 2-feet outside of the building and shall be of same material as the building drain.

23.25.724.0 Building drain access.
Amend Chapter 7 by adding section 724.0 as follows:

724.0 Building drain access.
An unobstructed clear passageway no less than 40 inches high by 22 inches wide is required from the crawlspace access to the building drain entrance.

23.25.801.4 Bar and fountain sink traps.
Amend section 801.4 by replacing "5 feet" with “15-feet”.

23.25.814.1.1 Condensate Pumps.
Amend by adding the following at end of the paragraph:
This section does not apply to dwellings that fall under the scope of the IRC.

23.25.814.2 Condensate control.
Amend item (1) by adding the following sentence:

This section does not apply to dwellings that fall under the scope of the IRC.

23.25.815.0 Soda fountains, condensates, drip pans, ice machines, and other similar equipment.
Amend Chapter 8 by adding section 815.0 as follows:

815.0 Soda fountains, condensates, drip pans, ice machines, and other similar equipment.

A. If the drain outlet for this type of equipment is below or remotely located from an approved point of disposal, the equipment may drain by gravity to a single pump, lift station receiver based on the following:
   1. A "Little Giant" condensate unit or equal is acceptable for lift station receiver. The pump shall be appropriately sized for the required condition.
   2. The equipment drain outlet or tailpiece may not exceed 1-inch I.D.
   3. The discharge pipe and fittings from the lift station receiver shall be a material approved for drainage piping and shall be piped to an approved indirect waste receptor per section 701.

B. Vending company employees may install the drainage piping from the equipment they install to an approved point of disposal, provided the equipment drain pipe from the outlet of the tailpiece to a lift station receiver or approved point of disposal does not exceed 5-feet measured along the centerline of the pipe and such piping is installed in accordance with this code.

C. If the equipment installed requires a water supply, it shall be provided by a properly licensed plumber to within 10-feet of the equipment, complete with any required backflow prevention device. The vendor employee may make the water connection from that point to the equipment.

23.25.906.1 Roof Termination.
Amend section 906.1 by deleting the last sentence.

2**3.25.906.8 Roof Terminations.**
Amend section 906 by adding section 906.8 as follows:

906.8 Roof Terminations. For roof construction regulated by the International Residential Code:

1. No roof penetration shall be located in required valley ice barrier.
2. All roof penetrations shall be located a minimum of 6-feet from valley centerline and 4-feet from the exterior wall line measured on a horizontal plane, excluding attic ventilation.

23.25.908.2 Horizontal Wet Venting for Bathroom Groups.
Delete subsection 908.2.

23.25.911.0 Circuit Venting.
Delete section 911.0.

23.25. Table 1002.2 - Horizontal Lengths of Trap Arms.
Add ** after "Horizontal Lengths of Trap Arms" and add below Table 1002.2 the following note:
** 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.

23.25.1007.1 General (Trap Seal Protection).
Amend by adding the following exception:
Exception: Floor drains in one and two-family dwellings.

23.25.1014.1 General (Grease interceptors).
Amend by adding the following words to the first sentence after the words "draining from fixtures":
"such as pot sinks (two- and three-compartment), scullery sinks, dishwashing sinks, silverware sinks,"…

23.25.1014.1.4 Hood washdown.
Amend section 1014.1 by adding section 1014.1.4 as follows:

1014.1.4 Hood washdown. Discharge from Type 1 hood washdown shall be discharged through an approved grease Interceptor in accordance with AWWU and AHJ requirements.

23.25.1014.1.5 Grease Producing Fixtures.
Amend section 1014.1 by adding section 1014.1.5 as follows:

1014.1.5 Grease Producing Fixtures. A grease interceptor shall be

provided within 50 feet of grease producing fixtures.

23.25.1014.1.6 External Cleanouts.

Amend section 1014.1 by adding section 1014.1.6 as follows:

1014.1.6 External Cleanouts. Where hydromechanical grease interceptors are installed, an external manway shall be provided for cleaning of utility sewer piping. The manway shall be sized and installed in accordance with the utility requirements and the Authority Having Jurisdiction.

23.25.1014.1.7 Piping Slope.

Amend section 1014.1 by adding section 1014.1.7 as follows:

1014.1.7 Piping Slope. Drain piping upstream of the grease interceptor shall be sloped at a minimum of ¼-inch per foot of horizontal travel.

23.25.1017.1 Interceptors required.

Amend by replacing reference to "550 gallons" with "100 gallons".

23.25.1101.2 Where required.

Delete from the first sentence "or into a combined sewer system where a separate storm sewer system is not available."

Delete from the second sentence "In the case of one- and two-family dwellings," and "such as streets or lawns".

23.25.1101.4 Material uses.

Replace "Chapter 14 Firestop Protection" with "the Building Code".

23.25.1101.6.1 Discharge (Subsoil drains).

Amend section 1101.6.1 by adding the following to the beginning of the section:

When required by the authority having jurisdiction…

23.25.1101.7 Building subdrains.

Amend section 1101.7 by replacing "public" with "storm".

23.25.1101.10 Filling stations and motor vehicle washing establishments.

Amend section 1101.10 by adding to the beginning of the paragraph:

When required by the authority having jurisdiction …

23.25.1101.12.1 Primary roof drainage.

Replace the first sentence with the following:

Roof areas of a building shall be drained by roof drains, gutters, scuppers, or sheet flow off the edge of the roof.

23.25.1101.12.2.2.2 Combined system.

Revise 1101.12.2.2.2 to read as follows:

1101.12.2.2.2 Combined system.

The secondary roof drains may connect to the horizontal portion of the

primary drain a minimum of 3 feet downstream from the primary drain. Additionally, an approved flexible connector shall be installed on each roof drain per the manufacturer's installation instructions or a swing joint configuration may be used (see detail "A" of MOA Handout P.02). When this combined system is used, an overflow line shall be installed in the drain line and run to the exterior of the building above grade to an appropriately designed overflow drain or scupper system to allow sheet flow from the drain line to surface in the case of a below grade freeze-up of the main drain line or storm main. The primary storm drainage system shall connect to an underground public storm sewer or discharge to an approved location.

23.25.1105.0 Controlled-flow roof drainage.

Delete section 1105.0.

23.23.1107.2 Methods of testing storm drainage systems.

Delete "except that plastic pipe shall not be tested with air" from the first sentence.

23.25.1207.2 Temporary gas installations—Permit required.

Amend section 1207 by adding subsection 1207.2 as follows:

1207.2 Temporary gas installations - permit required.

A. Temporary gas approval is given to allow "comfort heating" appliances to be used to provide temporary heat to a building or building site prior to the completion of the building's primary heating system.

B. The most commonly used appliance is a natural gas portable space heater. Other comfort heat appliances allowed for temporary heat purposes are warm air furnaces, boilers, and unit heaters. It is NOT the policy of the Building Safety Division or Enstar Natural Gas Company to allow "decorator fireplaces" or "ranges" to be utilized as temporary heat for buildings. These appliances are not designed or "listed" for such purpose.

C. All appliances used to provide temporary heat for buildings shall be installed in accordance with the manufacturers' instructions and terms of their listing, with particular attention being paid to the clearances to combustibles from the top, bottom, back, and sides of these appliances.

D. Unit heaters used for temporary heat shall be installed per manufacturers' instructions and listed clearances to combustibles from the top, bottom, front, back, and sides of these appliances. The vent connector shall be graded at ¼-inch per foot slope upward to the outside and it shall be changed to "B" vent at the wall penetration. The "B" vent must maintain its listed clearance to combustibles, extend a minimum of 5-feet vertically, and be secured.

E. Furnaces used for temporary heat shall comply with the same requirements as for unit heaters as stated above. In addition, the return air for the furnace shall be ducted a minimum of 10-

feet from the furnace.

F. Portable space heaters shall be provided with one hundred percent outside air to the back end of the heater. In most cases, the gas regulator attached to these heaters shall be piped to the outside. If the regulator vent discharges, it shall not be allowed to discharge into the space being heated.

G. Gas hose used for temporary heaters shall be a type approved by the Building Safety Division and all manufacturers' listed clearances shall be maintained. The hose shall have an internal wire mesh or braid and be "kink proof". Supporting wire shall run the full length of the hose. Each time a hose is moved from one lot to another, it shall be retested with 60 psig air pressure.

23.25.1207.3 Temporary gas installations—Permit not required.

Amend section 1207 by adding section 1207.3 as follows:

1207.3 Temporary gas installations—Permit not required.

A permit and inspection shall not be required for residential temporary construction heat serving tented footings and foundations. This provision is for thawing ground and curing concrete, not comfort heat for workers, such as plumbers installing underground. This allowance is limited to portable "SURE FLAME" type heaters and not intended for unit heaters, furnaces, and boilers with special venting considerations. All heaters and hoses shall be of the approved type. Heaters shall be listed by an approved listing agency. All hoses shall have an internal wire mesh or braid and be "kink proof". Supporting wire shall run the full length of the hose. One hundred percent outside air shall be provided to heater at all times. Listed clearances to combustibles shall be maintained. A licensed journeyman plumber or gasfitter shall perform all work.

23.25.1208.5.2 Medium pressure gas.

Amend section 1208.5 by adding section 1208.5.2 as follows:

1208.5.2 Medium pressure gas. The installation of a medium pressure gas system (2 psig or 5 psig) within a building must be pre-approved by the local gas utility. Steel piping shall be welded. Test pressure for all medium pressure gas piping shall be 60 psig.

Exception: Medium pressure gas piping within mechanical rooms that house the equipment being served shall be threaded or welded in accordance with 1208.6.11. Threaded piping shall not be concealed within the space.

23.25.1208.5.3 CSST medium pressure gas.

Amend section 1208.5 by adding section 1208.5.3 as follows:

1208.5.3 CSST medium pressure gas.

The installation of a CSST medium pressure gas system (2 psig or 5 psig) within a building must be pre-approved by the local gas utility. Test pressure for all medium pressure gas piping shall be 60 psig. Joints shall be limited to the meter connection and appliance regulator being served. Intermediate joints are not allowed without prior approval.

23.25.1208.6.11.1 Pipe joints.

Amend by adding the following at 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 2½ inches or larger.
2. The pipe is installed under a driveway.
3. Medium pressure systems.

23.25.1208.6.11.2 Tubing joints.
Amend by adding the following sentences at 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. All pipe to tubing transitions shall be made above ground.

23.25.1208.6.11.4 Metallic pipe fittings.
Amend Item 2 by deleting "or cast iron".

Delete Item 5.

Add Item 9 as follows:
9. Right and left nipple couplings. Where unions are necessary, right and left nipples and couplings shall be used. Ground joint unions may be used at exposed fixture, appliance, or equipment connections and in exposed exterior locations immediately on the discharge side of a building shutoff valve.

23.25.1208.8.2.1 Manufactured home connections.
Amend section 1208.8.2 by adding section 1208.8.2.1 as follows:
1208.8.2.1 Manufactured home connections. Pounds to inches water column regulators serving mobile homes and connected to copper tubing shall be attached to the exterior of the mobile home and shall not be located under the mobile home.

23.25.1208.8.3 Regulator Protection.
Amend by adding the following:
When the regulator instructions do not specify an installation elevation, the regulator shall be installed 12 inches minimum above the anticipated snow depth to avoid the accumulation of snow and ice.

2**3.25.1210.1.1 Cover requirements.**
Amend by adding the following sentence to the end of the paragraph:
Plastic and copper gas piping shall have at least 18 inches of earth cover or other equivalent protection.

23.25.1210.1.5 Piping through foundation wall.
Replace text with the following:
Building fuel gas piping entrances and exits shall be located above grade or in an approved vented vault.

23.25.1210.1.8 Ground penetrations.

Amend section 1210.1 by adding section 1210.1.8 as follows:

1210.1.8 Ground penetrations. At all points where fuel gas piping enters or leaves the ground there shall be installed, above ground, an approved or listed fuel gas piping connector capable of absorbing a 6-inch displacement in any direction, due to frost heave action.

23.25.1210.1.9 Fuel gas piping connectors.

Amend section 1210.1 by adding section 1210.1.9 as follows:

1210.1.9 Fuel gas piping connections. Fuel gas piping connectors listed for outdoor use may be used between the 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.

23.25.1210.1.10 Frost heave protection for copper tubing.

Amend section 1210.1 by adding section 1210.1.10 as follows:

1210.1.10 Frost heave protection for copper tubing. At points where copper tubing type systems enter or leave the ground, they shall be protected from frost heave action by the incorporation of a suitable above ground 6-inch radius loop, or listed fuel gas piping connector of equal size.

23.25.1210.2.1 Building Structure.

Amend section 1210.2.1 by replacing the last sentence with the following:

Cutting and notching of beams and joists shall be in conformance with the manufacturer's requirements, or the approval of a licensed design professional.

23.25.1210.2.4.4 Above-ground outdoor piping.

Amend section 1210.2.4 by adding section 1210.2.4.4 as follows:

1210.2.4.4 Above-ground outdoor piping. Piping installed outdoors shall be elevated not less than 5½ inches above ground or roof surface. Piping installed across a roof surface shall be securely supported and located where it will be protected from physical damage. Where passing through an outside wall, the piping shall be protected against corrosion by coating or wrapping with an inert material. Where piping is encased in a protective pipe sleeve, the annular space between the piping and the sleeve shall be sealed.

23.25.1301.7 Veterinary clinics.

Amend section 1301 by adding section 1301.7 as follows:

23.25.1301.7 Veterinary clinics. The material requirements, installation, and testing practices of NFPA 99 for Category 3 gas and vacuum systems shall apply to veterinary clinics except third party verification is not required.

23.25.1308.7 Vacuum systems for dental offices.

Amend section 1308 by adding section 1308.7 as follows.

1308.7 Vacuum systems for dental offices. The purpose of this amendment is to point out and clarify the requirements for wet vacuum systems in dental offices. Refer to NFPA 99C (most current edition) [NFPA 99 5.3.10] for full text on these requirements.

A. Category 3 wet vacuum systems (in dental offices) may be installed using schedule 40 PVC with pressure fittings [NFPA 99 5.3.8.2.3 and 5.3.8.2.4]. Piping and fittings installed in plenums shall have a flame spread index of not more than 25 and a smoke developed rating of not more than 50.

B. The wet vacuum system (in dental offices) is considered a Category 3 system if:

1. The system is entirely separate from other Category 1 systems.
2. The occupancy to be served and the function of the occupancy is distinct from other occupancies in the building.
3. The patient population, during or subsequent to treatment, are not dependent for life on the vacuum system, and the treatment the facility performs may be completed without detrimental effect on patient outcomes in the event of sudden loss of vacuum systems [NFPA 99 Chapter 18].

C. The wet vacuum system (in dental offices) shall be verified by a third party technically competent and experienced in the field of Category 3 vacuum systems and testing and meeting the requirements of ANSI/ASSE Standard 6030 [NFPA 5.3.6.23.3.1].

23.25 Appendices.

Adopt Appendices A, B, C (excluding C601), D, E (parts E through M), and I.

Chapter 23.30 LOCAL AMENDMENTS TO THE NATIONAL ELECTRICAL CODE 2017 EDITION.

23.30.10 Local amendments to the National Electrical Code 2017 Edition.

The amendments to the 2017 edition of the National Electrical Code are listed here by section. The last digits of the number after the title and chapter digits are the article, section and subsection of the National Electrical Code to which the amendment refers, i.e., 23.30.210.23(D) refers to article 210, section 210.23 and subsection (E) of the National Electrical Code, 2017 Edition.

Informational Note: For further information on other Building Codes, Policies and Handouts that may affect electrical installation requirements, refer to the Municipality of Anchorage, Building Safety Website at: www.muni.org/departments/ocpd/development/bsd

23.30.20 Certificate of fitness—Right to inspection.

Municipal electrical inspectors may contact any electrical worker performing work for which a certificate of fitness is required by Alaska Statue 18.62.070 and request the person to exhibit their certificate of fitness or trainee certificate of fitness. The inspector may immediately serve upon that person a notice to cease any further work in that occupation until the person has

demonstrated possession of the required certificate.

23.30.100
Add the following definition to article 100:
DORMITORY. A space in a building where group sleeping accommodations are provided in one room or series of closely associated rooms, for persons not of the same family group, under joint occupancy and single management, as in college dormitories, boarding houses and assisted living facilities.

23.30.210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.
Replace second paragraph with:
For the purposes of this section, when determining distance from receptacles the distance shall be measured as the shortest path the cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or passing through a personnel door, personnel doorway, or window.

23.30.210.8(B) Other Than Dwelling Units.
Replace first paragraph with:
All single-phase receptacles rated 150 volts to ground or less, 50 amperes or less installed in the following locations shall have ground-fault circuit-interrupter protection for personnel.

23.30.210.12(A) Arc-Fault Circuit-Interrupter Protection (Dwelling Units).
(A) Dwelling Units.

Delete items (3) and (4).

Replace exception with:
Exception: Where an individual branch circuit to central heating equipment (furnace or boiler) or a fire alarm system installed in accordance with 760.41(B) or 760.121(B) is installed in RMC, IMC, EMT, or steel-sheathed cable, Type AC or Type MC, meeting the requirements of 250.118, with metal outlet and junction boxes, AFCI protection shall be permitted to be omitted.

23.30.210.23 Permissible Loads, Multiple-Outlet Branch Circuits (Outlets Per Circuit).
Add subsection (E) as follows:

(E) Outlets Per Circuit. In dwelling units, no more than (15) outlets are allowed on one branch circuit. All smoke detectors on a circuit may be counted as a total of one outlet. Appliance circuits are limited to six (6) duplex receptacles per circuit.

Exception: Fixed lighting circuits designed to meet the appropriate sections of the code.

23.30.210.52 Dwelling Unit Receptacle Outlets.
Add subsections (J), (K) and (L) as follows:

(J) Parking Spaces. For each dwelling unit and mobile home, there shall

be at least one (1) exterior GFCI protected duplex outlet on a separate 20-ampere circuit adjacent to required on-site parking locations.
Exception: For multi-family dwellings, eight-plex and larger where indoor parking is provided, the required number of exterior duplex receptacles may be reduced by the number of indoor heated parking locations.

(K) Under-Floor Crawl Spaces. A receptacle shall be provided in each unconnected space; the receptacle shall be located adjacent to a sump when one is provided. This receptacle shall be a GFCI protected duplex outlet.

(L) Electric vehicle (EV) charging rough-in for detached one- and two-family dwellings and townhouses. Detached one- and two-family dwellings and townhouses require a minimum of one EV charging rough-in per dwelling unit. The rough-in shall include an adequately sized conduit or cable wiring method terminated in a J-box with cover. The panel shall have sufficient space and capacity to feed a 50-amp circuit with 9.6 KVA EV load. The outlet shall be located inside a garage when the dwelling is served by a garage, otherwise, the outlet shall be located adjacent to onsite parking. **The spare load capacity required by this amendment shall not require the capacity of the service, feeder or panel to be larger than 200 Amps. A load calculation or demand KW history per the NEC is required to verify adequate capacity is available for the electric vehicle charger at the time of the charger installation.**

23.30.230.1 Scope.
Add the following sentence:

The service installation shall also conform to the current written electric service requirements of the utility serving the area.

23.30.230.32 Protection Against Damage.
Add the following paragraph:

Physical protection of underground service laterals for residential services of 200 amperes and less shall consist of not more than nine feet of liquid tight flexible metal conduit.

23.30.230.70(A)(1) Readily Accessible Location.
Add the following paragraph:

The service disconnecting means shall be operable from the exterior of the building if the service disconnect is within the building. A fire pump service disconnect is not required to be operable from the exterior of the building.

23.30.230.70(A)(3) Remote Control.
Replace subsection (3) with:

(3) Remote Control. Where a remote-control device(s) is used to actuate the service disconnecting means, the service disconnecting means shall be located in accordance with section 230.70(A)(1). The control device shall meet the requirements of the electrical utility.

23.30.250.53(D)(2) Grounding Electrode System Installation (Metal Underground Water Pipe - Supplemental Electrode Required).

Delete the exception.

23.30.250.68(C) Grounding Electrode Conductor and Bonding Jumper Connection to Grounding Electrodes (Grounding Electrode Connections).

Delete the exception under location (1).

23.30.250.118 Types of Equipment Grounding Conductors.

Delete items (2) through (14) and replace with:

(2) The copper sheath of mineral insulated, metal-sheathed cable Type MI.
(3) Metal enclosures of busways listed for grounding.
(4) Armor of Type AC cable as provided in 320.108.
(5) Type MC cable that provides an effective ground-fault current path in accordance with one or more of the following:
  a. It contains an insulated or uninsulated equipment grounding conductor in compliance with 250.118(1).
  b. The combined metallic sheath and uninsulated equipment grounding/bonding conductor of inter-locked metal tape-type MC cable that is listed and identified as an equipment grounding conductor.
  c. The metallic sheath or the combined metallic sheath and equipment grounding conductors of the smooth or corrugated tube-type MC cable that is listed and identified as an equipment grounding conductor.
(6) Cable trays as permitted in 392.10 and 392.60.

23.30.250.122(B) Increase in Size.

Add the following to the end of the paragraph:

Increase in size shall not be required for circuits less than 100 feet in length. Circuits 100 amps or less may use the 60 degree C column for determining smallest conductor size with sufficient ampacity in accordance with section 110.14. Rounding up shall not be considered as the smallest conductor size with sufficient ampacity.

23.30.300.4(I) Protection Against Physical Damage (Roofs).

Add subsection (I) as follows:

(I) **Roofs.** Raceways run on the surface of a roof or subject to damage from snow, ice, or foot traffic, shall be rigid metal or intermediate metal conduit only.

23.30.300.5 Underground Installations (Separation from Other Systems).

Add subsection (L) as follows

(L) Separation from Other Systems. When direct buried cables or conductors cross or are installed parallel to sewers, water lines, gas or other fuel lines, steam lines, communication and utility electric cables or conductors, a minimum 12 inch radial separation shall be maintained.

23.30.300.24 Cold Temperature Installations.

Add section 300.24 as follows:

300.24 Cold Temperature Installations. Thermoplastic type insulated wires or cables, or non-metallic tubing shall not be installed when ambient temperatures are less than 20 degrees F.

23.30.330.40 Boxes and Fittings.

Add section 330.40 as follows:

330.40 Boxes and Fittings. An insulated bushing or its equivalent protection shall be provided between the conductors and the outer metal sheath and must be visible for inspection.

23.30.334.10 Uses Permitted.

Replace permitted uses (2) and (3) with the following:

(2) Multi-family dwellings of Type III, IV and V construction having wood-wall-stud framing.

(3) AFCI protected branch circuits in Group R-1, R-2, R-3, R-4 and I-1 occupancies of Type III, IV or V construction having wood-wall-stud framing. Cables shall be concealed in walls, floors, or ceilings that provide a thermal barrier of material that has at least 15-minute finish rating as identified in listings of fire-rated assemblies

23.30.334.104 Conductors.

Replace section 334.104 with:

334.104. Conductors. The insulated power conductors shall be sizes 14 AWG through 2 AWG with copper conductors or sizes 10 AWG through 2 AWG with aluminum or copper-clad aluminum conductors. Conductors supplying receptacles shall be minimum size 12 AWG copper conductors or sizes 10 AWG with aluminum or copper-clad aluminum conductors. The communication conductors shall comply with Part V of Article 800.

23.30.410.17 Other Closet or Storage Spaces.

Add section 410.17 as follows:

410.17 Other Closet or Storage Spaces. Luminaires shall meet the location requirements for clothes closets or be of a totally enclosed fluorescent or LED type.

23.30.445.18 (A) Disconnecting Means.

Add the following sentence to the end of the paragraph:
Generator disconnecting means shall conform to the requirements of sections 23.30.230.70(A)(1) and 23.30.230.70(A)(3).

23.30.510 Hazardous (Classified) Locations.
Add the following informational note:

Informational Note: The requirement for elevation of ignition source in the International Mechanical Code and the International Fuel Gas Code does not constitute a hazardous classification in accordance with this code. The requirement for elevation of ignition source may apply to both classified and unclassified areas. The requirement reads as follows:

Elevation of ignition source. Equipment and appliances having an ignition source and located in hazardous locations and public garages, private garages, repair garages, automotive motor fuel-dispensing facilities and parking garages shall be elevated such that the source of ignition is not less than 18 inches above the floor surface on which the equipment or appliance rests. For the purpose of this section, rooms or spaces that are not part of the living space of a dwelling unit and that communicate directly with a private garage through openings shall be considered to be part of the private garage. Rooms and spaces that are not part of the living space of a dwelling unit shall include but not be limited to utility, storage, mud, laundry, toilet and bathing rooms. Group F (factory), M (mercantile) and S (storage) occupancies with overhead doors providing access to vehicles and equipment containing combustible fuel shall comply with this section.

Replace Table 23.30.511.3(C) Table with the following:

Table 511.3(C) Extent of Classified Locations for Major and Minor Repair Garages with Heavier-Than-Air Fuel

Location	Class I		Extent of Classified Location
	Division (Group D)	Zone (Group IIA)	
Repair garage, major (where Class I liquids or gaseous fuels are transferred or dispensed*)	1	1	Entire space within any pit, below grade work area, or subfloor work area that is not ventilated
	2	2	Entire space within any pit, below grade work area, or subfloor work area that is provided with ventilation of at least 1 ft3/min/ft2 of floor area, with suction taken from a point within 12 in. of floor level
	2	2	Up to 18 in. above floor

			level of the room
	2	2	Within 3 ft. of any fill or dispensing point, extending in all directions
Specific areas adjacent to classified locations	Unclassified	Unclassified	Areas adjacent to classified locations where flammable vapors are not likely to be released, such as stock rooms, switchboard rooms, and other similar locations, where designed with positive air pressure or where effectively cut off by walls or partitions. Doorways shall be by means of a vestibule providing a two door separation.
Repair garage, minor (where Class I liquids or gaseous fuels are not transferred or dispensed*)	2	2	Entire space within any pit, below grade work area, or subfloor work area that is not ventilated
	2	2	Up to 18 in. above floor level, extending 3 ft. horizontally in all directions from opening to any pit, below grade work area, or subfloor work area that is not ventilated
	Unclassified	Unclassified	Entire space within any pit, below grade work area, or subfloor work area that is provided with ventilation of at least 1 ft3/min/ft2 of floor area, with suction taken from a point within 12 in. of floor level
Specific areas adjacent to classified locations	Unclassified	Unclassified	Areas adjacent to classified locations where flammable vapors are not likely to be released, such as stock rooms, switchboard rooms, and other similar locations,

			where designed with positive air pressure, or where effectively cut off by walls or partitions. Doorways shall be by means of a vestibule providing a two door separation

*Includes draining of Class I liquids from vehicles.

Replace 23.30.511.3 (D) Table with the following:

Table 511.3(D) Extent of Classified Locations for Major Repair Garages with Lighter-than-Air Fuel

Location	Class I		Extent of Classified Location
	Division[2]	Zone[3]	
Repair garage, major (where lighter-than-air gaseous fueled[1] vehicles are repaired or stored)	2	2	Within 18 in. of ceiling, except as noted below
	Unclassified	Unclassified	For Existing buildings only within 18 in. of ceiling where ventilation of at least 1 ft3/min/ft2 of floor area, with suction taken from a point within 18 in. of the highest point in the ceiling
Specific areas adjacent to classified locations	Unclassified	Unclassified	Areas adjacent to classified locations where flammable vapors are not likely to be released, such as stock rooms, switchboard rooms, and other similar locations, where designed with positive air pressure, or where effectively cut off by walls or partitions. Doorways shall be by means of a vestibule providing a two door separation

[1]Includes fuels such as hydrogen and natural gas, but not LPG.
[2]For hydrogen (lighter than air) Group B, or natural gas Group D.
[3]For hydrogen (lighter than air) Group IIC or IIB+H2, or natural gas Group IIA

23.30.511.3(E)(1) Specific Areas Adjacent to Classified Locations.

Replace subsection (1) with:

(1) **Specific Areas Adjacent to Classified Locations.** Areas adjacent to classified locations in which flammable vapors are not likely to be released such as offices, stock rooms, switchboard rooms, and other similar locations shall be unclassified where any of the following parameters apply:

a) Adjacent areas less than 300 square feet and mechanically ventilated at a rate of four or more air changes per hour.

b) Adjacent areas designed with positive air pressure.

c) Adjacent areas effectively cutoff by walls or partitions. Doorways shall be by means of a vestibule providing a two door separation.

23.30.513.3(D) Areas Suitably Cut Off and Ventilated.

Replace subsection (D) with:

(D) **Areas Suitably Cut Off and Ventilated**. Areas adjacent to classified locations in which flammable liquids or vapors are not likely to be released such as offices, stock rooms, electrical control rooms, and other similar locations shall be unclassified where designed with positive air pressure and effectively cutoff by walls. Doorways shall be by means of a vestibule providing a two door separation.

230.30.517.13 (A) Wiring Method.

Add exception to (A)

Exception: shall not apply to Patient Care - Support (category 4) Space

23.30.620.22 Branch Circuits for Car Lights, Receptacle(s), Ventilation, Heating and Air-Conditioning.

Add the following to (A) Car Light Source:

If the elevator is powered by a generator these circuits shall also be fed by the generator.

23.30.620.23 Branch Circuits for Machine Room or Control Room/Machinery Space or Control Space Lighting and Receptacle(s).

Add the following paragraph to (A) Separate Branch Circuits:

The separate circuits shall be one or more lighting circuits and one or more receptacle circuits that are separated from each other and from building circuits but may be comingled between machine room, control room, machine space, control space, hoistway and pit.

If the elevator is powered by a generator these circuits shall also be fed by

the generator.

23.30.620.24 Branch Circuit for Hoistway Pit Lighting and Receptacles.

Add the following to (A) Separate Branch Circuits:

The separate circuits shall be one or more lighting circuits and one or more receptacle circuits that are separated from each other and from building circuits but may be comingled between machine room, control room, machine space, control space, hoistway and pit.

If the elevator is powered by a generator then these circuits shall also be fed by the generator.

23.30.620.51(D) Identification and Signs.

Replace item (1) with the following:

(1) Identification
The disconnecting means shall be provided with a sign to identify the location of the supply side overcurrent protective device.

Where there is more than one driving machine or motor controller in a machine room, machine space, control room or control space the disconnecting means shall be numbered to correspond to the identifying number of the driving machine they control.

23.30.620.71 Guarding Equipment.

Add the following to (A) Motor controllers:

Unless specifically addressed in the adopted elevator code (ASME A17.1), motor controllers that are recessed mounted in a wall with less than 1¼ inch clearance between the back of the cabinet and the inside surface of the wall sheathing shall be protected by 1/16 inch thick steel plate, or equivalent. This plate is in addition the cabinet construction.

23.30.620.85 Ground-Fault Circuit-Interrupter Protection for Personnel.

Revise section to read as follows:

Each 125-volt, single-phase, 15- and 20-ampere receptacle installed in pits, in hoistways, on the cars of elevators, dumbwaiters and wind turbine tower elevators, on the platforms or in the runways and machinery spaces of platform lifts and stairway chairlifts, and in escalator and moving walk wellways shall be of the ground-fault circuit interrupter type.

All 125-volt, single-phase, 15- and 20-ampere receptacles installed in machine rooms, machine space, control spaces, and control rooms shall be GFCI protected by a ground-fault type circuit-interrupter located in that space

for personnel.

A single receptacle supplying a permanently installed sump pump shall not require ground-fault circuit-interrupter protection.

Feed through ground-fault type protection to other spaces shall be prohibited.

23.30.700.19 Multiwire Branch Circuits.

Add the following exception:
Exception: Existing installations on multiwire branch circuits where retrofit kits, unit equipment or same type replacements are installed, or no more than 6 new luminaires with associated branch wiring are added to each existing circuit.

23.30.702.5 Transfer Equipment.

Add the following to the end of the section:

Transfer switches for residential applications which are installed without a permanently installed generator shall be configured to allow installation as a separately derived system (i.e. an additional switched pole for the grounded conductor will be provided in the transfer switch).

Chapter 23.45.100 LOCAL AMENDMENTS TO THE INTERNATIONAL FIRE CODE, 2018 EDITION.

The amendments to the 2018 Edition of the International Fire Code are listed hereinafter by Section. The last digits of the Section number (after the title and chapter digits) refer to the Section of the International Fire Code to which the amendment applies, i.e., 23.45.103.3.1.1 refers to Section 103.3.1.1 of the International Fire Code (2018 Edition).

23.45.105.4.2 Information on construction documents.
Amend Section 105.4.2 by adding a new Section 105.4.2.2 as follows:
105.4.2.2 Fire system plans. Fire system plans shall be designed by a State of Alaska Fire System Permit holder Level IC, IIC or IIIC in accordance with 13 AAC 50.027 or a professional fire protection engineer, mechanical engineer or electrical engineer registered under AS 08.48. Plans shall include the following on each drawing:

1. Original signature and date on professional seal, or digital signature and date on professional seal.
2. State of Alaska Fire System Permit license number with permit level designation or Engineer license number; and date.

23.45.105.6 Required operational permits.
Amend Section 105.6 by adding Section 105.6.51:
105.6.51 Connection to municipal fire alarm. An operational permit is required to connect a private fire alarm system to the municipal fire alarm circuit.

23.45.105.7 Required Construction Permits
Amend Section 105.7 as follows:

Delete Section 105.7.25.

Add Section 105.7.26.
105.7.26 Energy Systems. A construction permit is required to install Energy Systems where required by Section 1203.2.

Add Section 105.7.27.
105.7.27 Access Control Systems. A construction permit is required to install access control systems that delay egress or electrically lock egress doors.

Add Section 105.7.28.
105.7.28 Modification of fire protection, gas detection, energy, access control or life safety systems. A construction permit is required to modify any fire protection, gas detection, energy, access control or life safety system as set forth in this section.

105.7.28.1 Fire protection, gas detection, energy, access control or life safety systems modified or repaired shall be in accordance with the requirements set forth in Section 105.7.28. Maintenance of fire protection, gas detection, energy, access control or life safety systems, including like-for-like change of system devices totaling not more than 20% of the devices or equipment per floor or system whichever is less, do not require a permit unless specifically required by Section 105.7.28.

105.7.28.2 PERMITS.

105.7.28.2.1 General.
Permits shall be issued by the Fire Code Official. The building owner shall maintain a record of all system modifications in accordance with Section 901.6.3.

105.7.28.2.2 Plan review requirements.
Plan review shall be required, unless otherwise approved by the fire code official, whenever a system required by 105.7 is modified.

105.7.28.2.3 Permit requirements.
Whenever a permit is required by Section 105.7, a separate permit application shall be submitted along with all supporting documentation to the fire code official.

105.7.28.2.4 System modifications requiring a permit.
A permit shall be required in accordance with Sections 105.7.28.2.4.1 through 105.7.28.2.4.13.

105.7.28.2.4.1 New or replacement fire protection, energy or life safety

system. A permit is required for all new and replacement fire protection, energy or life safety systems, whether the system is required or not.

105.7.28.2.4.2 Fire sprinkler and water-based systems. A permit is required for fire sprinkler and water-based systems under any of the following conditions:

a. Relocation or addition of sprinkler heads to a system riser.
b. Replacement of conventional sprinklers and piping with flexible piping and sprinklers.
c. Changes to piping that require seismic bracing.
d. Changes to the most demanding design density flow area.
e. Increase to the building area and/or an increase to the system design density.
f. High pile/rack storage sprinkler system modifications.
g. Additions to an in-rack sprinkler system or a new in rack sprinkler system.
h. Any change to an ESFR sprinkler system.
i. Any change to a sprinkler system having a 0.2 gpm/sf or greater density.
j. At the discretion of the fire official, sufficient changes to a system or occupancy/use that minimum design density requirements and/or seismic bracing requirements must be verified.
k. Pipe schedule systems must have a plan review completed if the changes will affect pipe size anywhere other than on a branch line or any of the above requirements.
l. Change out of dry or pre-action sprinkler valves.
m. Changes to a sprinkler system with extended coverage heads.
n. Changes to a sprinkler system with residential heads.

105.7.28.2.4.3 Backflow prevention device. A permit including drawings and hydraulic calculations shall be required for installation of a Backflow Prevention Device under the following conditions:

a. A backflow prevention device installed on a water-based fire system that previously did not have a backflow device.
b. Replacement of a backflow prevention device.
c. Changing a backflow prevention device from a double check to a reduce pressure backflow device.
d. Backflow prevention devices installed on tank supply lines.

105.7.28.2.4.4 Fire alarm system. A permit is required for fire alarm systems under the following conditions:

a. Fire alarm control panel is replaced or upgraded. Note that a full visual upgrade is required per the IFC Section 907.5.2.3, Exception 1.
b. Any changes to a networked fire alarm system.
c. Addition of a booster power supply.
d. Addition of initiating/monitoring/control devices to a fire alarm system.
e. Addition of fire alarm notification to any fire alarm system.
f. Fire alarm panel replacement like-for-like.
g. Installation of a communication device to transmit alarm, trouble, supervisory or other signals to a supervising station.

105.7.28.2.4.5 Kitchen hood fire systems. A permit is required for kitchen hood fire systems under the following conditions:

a. Addition of nozzles to a system.
b. Addition of agent cylinders.
c. Addition of larger agent cylinder.
d. Installation of a relocated system.

105.7.28.2.4.6 Special hazard fire systems. A fire systems permit is required for special hazard fire systems under the following conditions:

a. Addition or modification to the system.
b. Installation of a relocated system.

105.7.28.2.4.7 Fire standpipe system. A fire systems permit is required for fire standpipe systems under the following conditions:

a. Addition or modification to the system.

105.7.28.2.4.8 Fire Pump. A fire systems permit is required for fire pumps under the following conditions:

a. Addition to the system.
b. Change out of the fire pump.
c. Change out of the fire pump controller.
d. Modifications to piping arrangements.
e. Change out or rebuilding of electric motor or diesel engine.
f. Changes to electrical service.

105.7.28.2.4.9 Gas Detection System. A permit is required for a gas detection system under the following conditions:

a. Changes to the approved or required detection levels.
b. Change out of the system controller.
c. Expansion of the system.
d. Modifications to detection coverage arrangement.

105.7.28.2.4.10 Energy System. A permit is required for an energy system under the following conditions:

a. Rebuilding of engine or generator unit.
b. Replacement of transfer switch.
c. Relocation of any wiring or equipment.
d. Change of fuel supply type or size.
e. Change to an energy system regulated under Section 1203.

105.7.28.2.4.11 Life Safety System. A permit is required for life safety systems as regulated by Chapter 9 under the following conditions:

a. Change out of the system controller.
b. Expansion of the system.
c. Modification to the system.

105.7.28.2.4.12 Access Control System. A permit is required for any modification to an access control system that has delayed egress or electronically controlled egress doors.

105.7.28.2.4.13 Demolition of Fire Protection System and Life Safety System. A demolition permit is required for demolition or partial removal of any fire protection system and life safety system under the following conditions:

a. Removal of fire protection system.
b. Removal of gas detection system.
c. Removal of energy system regulated under Section 1203.
d. Removal of life safety system regulated by Chapter 9.

105.7.28.2.5 Retrofit Permits. Retrofit permits are limited to projects involving fire alarm, fire sprinkler and kitchen fire system where design is not required by Fire Code Official. Fire alarm, fire sprinkler and kitchen fire system retrofit permits are permitted to be used on the same project. Plan review is not required, and retrofit permits are limited in scope-of-work as follows:

a. Relocation of 4 to 14 standard spray fire sprinkler heads.
b. Addition of 3 to 6 standard spray fire sprinkler heads.
c. Where 2 to 3 conventional sprinkler heads and piping are replaced with flexible piping and sprinkler heads.
d. Addition of 3 to 10 initiation/monitoring/control devices to a fire alarm system.
e. Addition of 2 to 5 notification devices of 75 candela or less to a fire alarm system.
f. Kitchen hood fire system re-piping of the system for new appliance layout.
g. Addition of up to 2 kitchen hood fire system nozzles with a maximum total of 3 nozzle flow points are allowed to be added to a system not exceeding maximum allowable flow points of the cylinder.

Fire alarm, fire sprinkler and kitchen fire systems exceeding the above listed parameters require design in accordance with Section 105.7. A commercial alteration permit is required.

105.7.28.2.4.5.1 Retrofit permit close out. Where changes are made to fire systems utilizing a retrofit fire system permit, the following actions shall be required by the company and individual making the changes to close out the permit.

1. Modifications shall have design and install oversite by a person holding a Level C State of Alaska Fire Systems Permit.

Exception: Sprinkler head additions shall be documented by a Level IIB or IIC State of Alaska Fire Systems Permit holder when the repairs are done per the pipe schedule parameters set forth in NFPA 13. Additions must be indicated on the original sprinkler plans that it was done per pipe schedule and does not exceed the limitations of a pipe schedule system.

2. A person holding a Level B or C State of Alaska Fire Systems permit shall make the changes.
3. The person making the changes shall submit an installer's certification letter to the permanent building fire system record located at the site

were the installation was completed in accordance with Section 901.6.3 and a copy to the fire code official containing the following.

a. A diagram on 8 ½ x 11 paper of the changes made to the fire system.
b. Written description of the changes to the fire system. Included but not limited to battery calculations, sound pressure levels, system components compatibility, circuit capacity loads, wiring diagrams showing the connection between new and existing systems, piping diagrams, tank size with flow points used.
c. A statement verifying that the changes are in compliance with the appropriate standard/codes and manufacturer's installation manuals.
d. State of Alaska Fire System Permit number of person making made the changes.
e. Printed name and signature of the person performing the system modifications.
f. Printed name and signature of a level C State of Alaska Fire System permit holder certifying modification does not exceed system design limitations.

4. Completed installers certification shall be submitted to the fire code official at 907-343-8438 within 30 days of work completion.
5. Schedule a final inspection within 30 days of work completion. Inspections are permitted be closed out by the Fire Code Official without a physical inspection following receipt of Installer's Certification paperwork.

105.7.28.2.6 Fire systems not requiring permit.

A permit is not required for installations or modifications with work quantities less than specified in section 105.7.28. The following actions shall be required by the company/individual making the changes:

1. Modifications shall have design and install oversite by a person holding a Level C State of Alaska Fire Systems Permit.

Exception: Sprinkler head additions shall be documented by a Level IIB or IIC State of Alaska Fire Systems Permit holder when the repairs are done per the pipe schedule parameters set forth in NFPA 13. Additions must be indicated on the original sprinkler plans that it was done per pipe schedule and does not exceed the limitations of a pipe schedule system.

2. A person holding a Level B or C State of Alaska Fire Systems permit shall make the changes.
3. The person making the changes shall submit an installer's certification letter to the permanent building fire system record located at the site were the installation was completed in accordance with Section 901.6.3 and a copy to the fire code official containing the following.
   a. A diagram on 8 ½ x 11 paper of the changes made to the fire system.
   b. Written description of the changes to the fire system. Included but not limited to battery calculations, sound pressure levels, system components compatibility, circuit capacity loads, wiring diagrams showing the connection between new and existing systems, piping diagrams, tank size with flow points used.

c. A statement verifying that the changes are in compliance with the appropriate standard/codes and manufactures instructions.
d. State of Alaska Fire System Permit number of the person who actually made the changes.
e. Printed name and signature of the person who performed the system modifications.
f. Printed name and Signature of a level C State of Alaska Fire System permit holder certifying modification do not exceed system design limitations.

4. Completed installers certification shall be submitted to the fire code official at 907-343-8438 within 30 days of work completion.

23.45.202 General Definitions.
Amend Section 202 by adding a definition for driveway:

DRIVEWAY. A vehicular ingress and egress route that serves no more than two buildings, not including accessory structures, or more than five dwelling units.

23.45.308.1.4 Open-flame cooking devices.
After the word "operated" add "or stored".

After the words "combustible balconies" add "and decks".

23.45.401.3 Emergency responder notification.
Amend by adding Section 401.3.4 to read as follows:

401.3.4 False alarm charges. The owner of a building containing a fire alarm or fire protection systems shall pay a charge in accordance with AMC Section 14.70.190 for false alarms to which the fire department responds.

As used in this Section, “false alarm” means an alarm signal generated by a fire alarm system reporting an alarm for which no fire or emergency actually exists, and includes system malfunctions, faulty operation of detectors, and false alarms not classified above. It does not include incidents where the detector or system operated as designed, such as but not limited to, a smoke detector sounding from someone smoking under the detector or a manual pull station being pulled.

23.45.403.1 General.
Amend 403.1 as follows: change 403.12.3.3 to 403.13.4.3.

23.45.403.10.3 Group R-3 custodial care/assisted living facilities and Group R-4 occupancies.
Amend Section 403.10.3 by replacing 403.10.3 with:
403.10.3 Group R-3 custodial care/assisted living facilities and Group R-4 occupancies. An approved fire safety and evacuation plan in accordance with Section 404 shall be prepared and maintained for Group R-

3 custodial care/assisted living facilities and Group R-4 occupancies. Group R-3 custodial care/assisted living facilities and Group R-4 occupancies shall comply with Sections 403.10.3.1 through 403.10.3.6.

23.45.403 Emergency Preparedness Requirements.
Amend Section 403 by adding a Section 403.13 as follows:
403.13 Occupants needing physical assistance. Facilities housing occupants needing physical assistance shall comply with this Section.

403.13.1 Applicability. The provisions of this Section apply to Group I-1 Institutional and Group R-3 Custodial Care/Assisted Living Facilities and Group R-4 facilities where the occupants require physical assistance from staff or others to respond to an emergency.

403.13.2 Definitions. The following terms and definitions are to be utilized for occupants needing physical assistance, section 403.13.

Evacuation capability means the ability of occupants, residents, and staff as a group either to evacuate a building or to relocate from the point of occupancy to a point of safety.

Point of safety means a location (a) exterior to and away from a building or (b) within a building of any type construction protected throughout by an approved automatic sprinkler system and is either (1) within an exit enclosure meeting the requirements of Section 1022 or (2) within another portion of the building separated by smoke partitions meeting the requirements of IBC Section 710 with not less than one half hour fire resistance rating, and the portion of the building has access to a means of escape or exit conforming to the requirements of this code and does not require return to the area of the fire.

Prompt evacuation capability means a group has the ability to move reliably to a point of safety in a manner equivalent to the ability of a household in the general population as measured under Section 403.13.3.

Slow evacuation capability means a group has the ability to move reliably to a point of safety in a manner not as rapid as members of a household in the general population, as measured under Section 403.13.3.

Impractical evacuation capability means a group does not have the ability to reliably move to a point of safety in a timely manner as measured under Section 403.13.3.

403.13.3 Fire drills. A fire drill conducted by the Fire Code Official or other approved agencies that have oversite of the licensee shall make the initial determination of evacuation capability. Changes to the evacuation capability shall be based on a record of drills conducted by the facility and

recorded for review by the Fire Code Official or other approved agencies that have oversite of the licensee.

Fire drills with all occupants participating shall be conducted six (6) times a year on a bimonthly basis, with at least two (2) drills conducted during the night when residents are sleeping. Records shall indicate the time taken to reach a point of safety, date and time of the drill, location of simulated fire origin, escape paths used. Residents who resisted or failed to participate in the drills shall be classed as impractical capability and corrected per 403.13.4.3. The relation of drill time to evacuation capability is as follows:

1. Three (3) minutes or less – prompt;
2. Over three (3) minutes but under 14 minutes – slow; or
3. Fourteen (14) minutes or more – impractical.

403.13.4 Evacuation capability and fire protection requirements. Evacuation capability and fire protection requirements of a facility under this Section are as follows:

403.13.4.1 Prompt evacuation capability. Evacuation capability of three minutes or less indicates prompt evacuation capability. Facilities maintaining prompt evacuation capability are considered to be in compliance with this code.

403.13.4.2 Slow evacuation capability. Evacuation capability of more than three but less than 14 minutes indicates slow evacuation capability. Facilities maintaining slow evacuation capability shall be protected by an automatic fire sprinkler system in accordance with Section 903.

Additionally, Group I-1 and R-4 facilities maintaining slow evacuation capability shall be protected by an automatic smoke detection system using addressable smoke detectors in accordance with the provisions of this code.

403.13.4.3 Impractical evacuation capability. Evacuation capability of fourteen minutes or more indicates impractical evacuation capability. Impractical evacuation capability is not allowed and must be corrected immediately with additional staff or relocation of residents to an appropriate facility that can meet the level of care required.

23.45.502.1 Definitions.
Amend 502.1 by adding **DRIVEWAY** to definitions.

23.45.503 Fire apparatus access roads.
Amend Section 503.1 by adding the following sentence:

Driveways shall be provided and maintained in accordance with Section

503.7.

Amend Section 503 by adding Section 503.7 as follows:

503.7 Driveways. Driveways shall be provided when any portion of an exterior wall of the first story of a building is located more than 150 feet from a fire apparatus access road. Driveways shall comply with Sections 503.7.1 through
503.7.4.

Exception: Where driveways cannot be installed because of topography, railways, waterways, non-negotiable grades or other similar conditions, the fire code official is authorized to require additional fire protection.

503.7.1 Dimensions. Driveways shall provide a minimum unobstructed width of 12 feet and a minimum unobstructed height of 13 feet 6 inches.

503.7.2 Length. Driveways in excess of 150 feet in length shall be provided with a turnaround. Driveways in excess of 200 feet in length and less than 20 feet in width shall be provided with a turnout in addition to a turnaround.

503.7.3 Turnarounds. The design for driveway turnarounds shall be approved by the fire code official.

503.7.4 Turnouts. Driveway turnouts shall be an all-weather road surface at least 10 feet wide and 30 feet long. Driveway turnouts shall be located as required by the fire code official.

23.45.506.1.2 Key boxes for nonstandardized fire service elevator keys.

Revise the wording in Item 1 to read as follows:

The key cylinder for the Elevator key box shall be of a tubular, 7 pin, style 137 construction and shall have a bitting code of 6143521 starting at the tab sequenced clockwise as viewed from the barrel end of the key. The key shall be coded “FEO-K1”.

23.45.507.1 Required water supply.

Amend Section 507.1 by adding the following exception:

Exception: In areas of the jurisdiction not served by a water utility the following structures do not require a water supply:

1. Detached one- and two-family dwellings**, townhouses and related accessory structures** [~~**regulated by the International Residential Code and protected throughout by an approved automatic fire sprinkler system**~~];
2. Structures accessory to detached one- and two-family dwellings and regulated by the International Residential Code having 3,000 square feet or less gross floor area;
3. Structures classified as a Group U occupancy in accordance with the International Building Code having 3,000 square feet or less gross floor area;
4. Structures classified as a Group U occupancy in accordance with the International Building Code in excess of 3,000 square feet of gross

floor area and protected throughout by an approved automatic fire sprinkler system;

5. Buildings protected throughout by an approved automatic fire sprinkler system and constructed of Type I-A or I-B construction in accordance with the International Building Code;
6. Buildings protected throughout by an approved automatic fire sprinkler system and constructed of Type II-A construction when Type II-B construction is allowed based on occupancy classification, allowable height and allowable area in accordance with the International Building Code;
7. Buildings protected throughout by an approved automatic fire sprinkler system and constructed of Type III-A construction when Type III-B construction is allowed based on occupancy classification, allowable height and allowable area in accordance with the International Building Code; and
8. Buildings protected throughout by an approved automatic fire sprinkler system and constructed of Type V-A construction when Type V-B construction is allowed based on occupancy classification, allowable height and allowable area in accordance with the International Building Code.

23.45.606.7 Elevator key location.

Amend by adding the following language to 606.7:

Building owners/managers shall have 2 years from the date of adoption of this requirement or at the time of elevator modernization per ASME A17.3 to complete the following for all existing buildings with elevators. The keys to be provided in the elevator key Knox Box model #1404 and shall include but are not limited to; the machine room/space or control room/space keys (as is applicable to the elevator(s) in each building), the proper hoist way door unlocking device keys for the particular vintage of elevator or bank of elevators, a fire service key for each phase-I and phase-II switch, a key to the auxiliary power selector switch (if present), stop/run keys (if present), and all other keys located in the elevator car operating panels, such as the fans, lights, floor lockouts and service cabinet. All keys shall be marked for their intended use.

23.45.901.6.3 Records.

Amend Section 901.6.3 by adding the following to the end of the Section.

Records shall be copied to the fire code official in accordance with Appendix I.

23.45.901.6 Inspection, testing and maintenance.

Amend 901.6 by adding Section 901.6.4 as follows:

901.6.4 Sound level check. The fire alarm sound pressure levels shall be checked annually in Group R and I-1 occupancies in the following locations:

1. Common areas.
2. Sleeping areas, a minimum of 15% of the units per floor with a minimum of 2 units per floor.

23.45.901.11 Registration of monitoring company.
Amend section 901 by adding Section 901.11 as follows:
901.11 Registration of monitoring company. All companies that provide Central Station Service, Proprietary Supervision Station or Remote Supervising Station alarm monitoring, as required by IFC, IBC and NFPA 72, shall annually register with the Anchorage Fire Department Fire Prevention Division. A company failing to register shall be subject to fines AMC Title 10.75.010C3.

23.45.901.12 Registration of fire and life safety company.
Amend Section 901 by adding Section 901.12 as follows:
901.12 Registration of fire and life safety company. A company that performs inspection(s), install, repairs or maintains a fire protection system or life safety system shall register with the Anchorage Fire Department Fire Prevention Division on an annual basis. A company failing to register shall be subject to fines AMC Title 10.75.010C3.

23.45.903.2.3 - Group E.
Revise 903.2.3 to read as follows:
An automatic sprinkler system shall be provided throughout all buildings that contain a Group E occupancy and for every portion of educational buildings below the level of exit discharge. The use of a fire wall does not establish a separate building for purposes of this section.
Exception: Buildings having an occupant load of 49 or less.
Daycare uses licensed to care for more than five persons between the hours of 10 p.m. and 6 a.m. shall be equipped with an automatic sprinkler system designed and installed in accordance with subsection 903.3.1 or an approved equivalent system.

23.45.903.2.11 - Specific building areas and hazards.
Amend Section 903.2.11 by changing “903.2.11.6” to “903.2.11.7”.
Amend Section 903.2.11 by adding the following section:
903.2.11.7 Sprinkler systems shall not be allowed in elevator machine rooms/spaces or control room/spaces and at the tops of hoistways, except as required by NFPA 13.

23.45.903.3 - Installation requirements.
Amend 903.3 by changing “903.3.8” to “903.3.9”.

23.45.903.3.1.3 - NFPA 13D sprinkler systems.
Amend section 903.3.1.3 by adding the following section:
903.3.1.3.1 Group R-3 care facilities and Group R-4, Condition 1 occupancies. An automatic sprinkler system serving a Group R-3 care facility or Group R-4, Condition 1 occupancy shall have a minimum 30 minute water supply or a minimum 20 minute water supply with fire department connection (FDC). Fire sprinkler protection shall be provided in attached garages.

23.45.903.3.5 - Water supplies.
Amend by adding new Section 903.3.5.3 as follows:

903.3.5.3 Fire sprinkler hydraulic water flow design. Fire sprinkler hydraulic water flow design shall be by one of the following methods:

1. Preferred method. Fire sprinkler hydraulic design water supply shall be from AWWU computer model Max Day demand.
2. Alternate method. Can only be used if AWWU computer model cannot be obtained. Fire sprinkler system being designed with water supply data from a hydrant flow test shall have a 10 percent minimum flow rate and pressure safety factor at the water source. Hydrant flow test shall be witnessed by the fire code official or their designee.

23.45.903.3.9 - Seismic Design
Add a new Section 903.3.9 as follows:

903.3.9 Seismic Design. Fire sprinkler systems shall have a minimum seismic design coefficient Cp of 0.72 or greater as by NFPA 13.

23.45.903.4 - Sprinkler system supervision and alarm.
Amend exception number 1 by adding the following to the end of the sentence: “not used as an assisted living or custodial care facility.”

23.45.907.2 - Where required-new buildings and structures.
Amend Section 907.2 by replacing “907.2.23” with “907.2.24”.
Add new Section 23.45.907.2.24 Group R-4.

23.45.907.2.1 - Group A.
Delete Exception.

23.45.907.2.2 - Group B.
Delete Exception.

23.45.907.2.3 - Group E.
Amend 907.2.3 (Group E) by adding a second paragraph to read:
Rooms used for sleeping or napping within a Group E day care shall be provided with smoke alarms that comply with Section 907.2.10.2.
Delete Exceptions 3 and 4.

23.45.907.2.4 - Group F.
Delete Exception.

23.45.907.2.7 - Group M.
Delete Exception 2.

23.45.907.2.8.1 - Group R-1: Manual fire alarm system.
Delete Exception 2.

23.45.907.2.9.1 - Group R-2: Manual fire alarm system.
Amend section 907.2.9.1 by deleting the first sentence and replacing it with:
A manual fire alarm system and an automatic fire detection system with smoke detection in the public and common use areas shall be installed in Group R-2 occupancies where any of the following conditions apply:

Delete Exception 2.

23.45.907.2 – Fire Alarm and Detection Systems – Where Required – New Buildings and Structures

Add the following section:

907.2.24 - Group R-4: Manual and Automatic Fire Alarm System. Fire alarm systems and smoke alarms shall be installed in Group R-4 assisted living or custodial care occupancies as required in Sections 907.2.24.1 through 907.2.24.3.

907.2.24.1 Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-4 assisted living or custodial care facilities.

Exceptions:

1. A manual fire alarm system is not required in buildings not more than two stories in height where all individual sleeping units and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by at least 1-hour fire partitions and each individual sleeping unit has an exit directly to a public way, egress court or yard.
2. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at exits where located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.2.1 are not exceeded.

907.2.24.2 Automatic smoke detection system. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens.

Exceptions:

1. Smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

907.2.24.3 Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.10.

23.45.907.5.2.1 – Audible alarms.

Amend Section 907.5.2.1 by adding the following section:

907.5.2.1.3 Minimum sound pressure. The minimum sound pressure level in every occupiable space shall be 75 dBA in Group I-1 and R occupancies and 60 dBA in all other occupancies.

23.45.907.5.2.3 - Visible alarms.
Amend section 907.5.2.3 by adding the following to Exception No. 1:
An upgrade shall be the replacement of a fire alarm panel, or fire system components providing improved functional performance or capabilities. (A software upgrade is exempt from this requirement.)

23.45.907.6.1 - Wiring.
Amend Section 907.6.1 by adding the following:
Exposed wiring, transformers and equipment installed below 7 feet above finished floor shall be protected from physical damage by an enclosure, raceway or metallic cable.

23.45.907.6.2 - Power supply.
Amend 907.6.2 by adding the following:
Exposed wiring, transformers and equipment installed below 7 feet above finished floor shall be protected from physical damage by an enclosure, raceway or metallic cable.

23.45.907.6.6 - Monitoring.
Amend exception number 3 by adding the following to the end of the sentence: “not used as an assisted living or custodial care facility”

23.45.915 – Carbon Monoxide Detection.
Amend Section 915.1 as follows:
915.1 General. Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6 and NFPA 72. Carbon monoxide detection shall be installed in existing buildings in accordance with IFC Section 1103.9 and NFPA 72.

23.45.915.5.1 - General.
Amend Section 915.5.1 by replacing NFPA 720 with NFPA 72.

23.45.915.5.2 - Locations.
Amend Section 915.5.2 by replacing NFPA 720 with NFPA 72.

23.45.915.6 - Maintenance.
Amend Section 915.6 by replacing NFPA 720 with NFPA 72.

23.45.1007.1.2 - Three or more exits or exit access doorways.
Amend Section 1007.1.2 to read as follows:
1007.1.2 - Three or more exits or exit access doorways. Where access to three or more exits is required, not less than two exit or exit access doorways shall be arranged in accordance with the provisions of Section 1007.1.1. Three exits or exit access doorways shall be separated from each other by a minimum distance of one-third the maximum overall diagonal dimension of the area served. Additional required exit or exit access doorways shall be arranged a reasonable distance apart so that if one becomes blocked, the others will be available.

23.45.1010.1.9.12 – Stairway doors.
Amend Section 1010.1.9.12 by adding the following:
Where a building is protected by an automatic sprinkler system in accordance with Section 903 or a fire alarm system in accordance with Section 907, including automatic smoke detection located at the top and every other landing in stairways, doors are permitted to be locked opposite the egress side, provided they are openable from the egress side and shall be unlocked simultaneously without unlatching upon sprinkler waterflow or activation of occupant notification devices.

23.45.1010.1.9 – Door operations.
Amend by adding Section 1010.1.9.13 as follows:
1010.1.9.13 Electrically locked egress doors from elevator lobbies. For elevator lobbies not having direct access to an egress stair, the lobby doors may be electrically locked to secure all or part of a floor. In addition to the requirements of Section 1010.1.9.9 or 1010.1.9.10, a manual unlocking device listed in accordance with UL 294 shall be provided within 12 inches of the door frame and is clearly labeled “Pull handle (or push button) to release door”.

23.45.1103.1 Required construction.
Amend Section 1103.1.

Replace 1103.10 with 1103.12.

23.45.1103.3.1 Elevators, escalators and moving walks.
Amend Section 1103.3.1 by adding a Section 1103.3.1.1 as follows:
1103.3.1.1 Compliance date. Buildings have until January 1, 2025 to comply with 1103.3.1.

23.45.1103.3.2 Elevator emergency operation.
Amend Section 1103.3.2 by adding a Section 1103.3.2.1 as follows:
1103.3.2.1 Compliance date. Buildings where the elevator(s) have a rise of 75 feet or greater shall have until January 1, 2021 to comply with 1103.3.2. Buildings where the elevator(s) have a rise of less than 75 feet shall have until January 1, 2025 to comply with 1103.3.2.

23.45.1103.5.3 Group I-2, Condition 2.
Replace “as established by the adopting ordinance [DATE BY WHICH SPRINKLER SYSTEM MUST BE INSTALLED]” with “by January 1, 2022.”

23.45.1103.5 Sprinkler systems.
Replace “and 1103.5.4” with “through 1103.5.6”.

Add two new sections as follows:

1103.5.5 Group E occupancies. An approved automatic fire extinguishing or sprinkler system shall be installed throughout an existing building containing a Group E occupancy having an occupant load of 50 or more in accordance with Section 903.2.3, as amended, whenever alterations

involving the reconfiguration of space, or additions are made to the Group E occupancy.

1103.5.6 Pit sprinklers. In buildings that contain a fire sprinkler system, sprinklers shall be installed in the bottom of all existing elevator pits below the lowest projection of the elevator car but no higher than 24" from the bottom of the pit.

23.45.1103.7 Fire alarm systems.
Amend Section 1103.7 by adding the following to the end of the exception:

"…meeting a minimum sound pressure level of 65 dBA in Group R and I-1 occupancies and 60 dBA in Group E, I-2, and I-3 occupancies."

23.45.1103.7.5.1 Group R-1 hotel and motel manual fire alarm system.
Delete Exception #2.

23.45.1103.8.1 Where required.
Amend Section 1103.8.1 by deleting Exceptions No. 1 and 2.

23.45.1103.11 Monitoring.
Amend section 1103 by adding Section 1103.11 as follows.

1103.11 Monitoring. Monitoring shall be provided for all existing occupancies with fire sprinkler or fire alarm systems. Fire sprinkler system monitoring shall comply with Sections 903.4 and 903.4.1. Fire alarm monitoring shall comply with Section 907.6.6.

1103.11.1 Compliance Date. Group I and R occupancies shall be in compliance by January 1, 2023. All other occupancies shall be in compliance by January 1, 2025.

23.45.1103.12 Group I-1, R-3 and R-4 occupancies.
Amend section 1103 by adding subsections 1103.12 as follows:
1103.12 Group I-1, R-3 and R-4 occupancies. An automatic fire sprinkler system shall be installed throughout all existing Group I-1 facilities, and Group R-3 and R-4 custodial care/assisted living facilities in accordance with Section 903 of this Code. Occupancies shall be in compliance by January 1, 2024.

23.45.1204.2.1 Solar photovoltaic systems for Group R-3 buildings.
Add the following exception:
3. Roof access, pathways and setback requirements do not apply to photovoltaic systems installed on a single roof plane of a building having multiple roof planes where such roof plane is not located below or provide access to an emergency escape and rescue opening.

23.45.1206.2.11.1 Fire-extinguishing systems.
Change reference "Chapter 5 of NFPA 13" to Chapter 20 of NFPA 13.

23.45.1206.3.5.1 Fire-extinguishing systems.
Change reference “Chapter 5 of NFPA 13” to Chapter 20 of NFPA 13.

23.45.2006.3 Construction of aircraft-fueling vehicles and accessories.
Revise 2006.3 by adding Exceptions to read:
Exception: A vehicle or trailer tank with a capacity of 500 gallons or less may be used for non-commercial refueling of private non-commercial aircraft provided:

1. The tank is placarded with no smoking signs, the type of fuel contained in the tank, and the tank capacity.
2. The tank and all appurtenances used in the fueling operation are listed and approved for the specific purpose.
3. Electrical bonding is provided as required under Section 2006.3.7.
4. Two (2) listed portable fire extinguishers complying with Section 906, each having a minimum rating of 20-B:C are provided. A portable fire extinguisher shall be readily accessible from either side.

23.45.3103.5 Use period.
Add an exception to read as follows:
Exception: Seasonal Use Structures permitted under AMC 23.10.104.3.

23.45.3107.12 Heating and cooking equipment.
Amend 3107.12 by adding at the end of the sentence:
“unless as otherwise approved by the fire code official.”

23.45 Chapter 80 - Referenced standards.
Amend the Reference Standards as follows:

Change NFPA 13-16 to NFPA 13-19: Standard for the Installation of Sprinkler Systems.
Change NFPA 13D-16 to NFPA 13D-19: Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes.
Change NFPA 13R-16 to NFPA 13R-19: Standard for the Installation of Sprinkler Systems in Low-rise Residential Occupancies.
Change NFPA 20-16 to NFPA 20-19: Standard for the Installation of Stationary Pumps for Fire Protection.
Change NFPA 25-17 to NFPA 25-20: Standard for the Inspection, Testing and Maintenance of Water-based Fire Protection Systems
Change NFPA 72-16 to NFPA 72-19: National Fire alarm and Signaling Code.
Change NFPA 2001-15 to NFPA 2001-18 Stand on clean Agent Fire Extinguishing Systems.
Add NFPA 291-19 Recommender Practice for Fire Flow Testing…Ref. 507.5.2.

23.45 Appendices.
Adopt appendices B, C, D, F and I.

23.45.B105.1 One- and two-family dwellings, Group R-3 and R-4

buildings and townhouses.

Amend Section B105.1 by adding the following exception:

Exception: Buildings protected throughout with an approved automatic fire sprinkler system.

23.45.B105.2 Buildings other than One- and two-family dwellings, Group R-3 and R-4 buildings and townhouses.

Amend Section B105.2 by adding the following exception:

Exception: Group U occupancies and accessory structures having 3,000 square feet or less gross floor area.

23.45.D102.1 Access and loading.

Amend Section by deleting 75,000 pounds and replacing it with 80,000 pounds.

23.45. Appendix I - Fire Protection Systems-Noncompliant Conditions

Delete I102 Referenced Standards and replace with the following:

23.45.I102 FIRE, GAS DETECTION, ENERGY SYSTEMS AND LIFE SAFETY SYSTEMS STATUS REPORTING.

I102.1 Scope.

Fire, gas detection, energy and life safety system service reports shall be in accordance with this appendix and all other applicable requirements of the International Fire Code, NFPA Standards, Manufactures instructions and other governing codes.

I102.2 Definitions.

For the purpose of this appendix, certain terms are defined as follows:

Status 1 – Impairment / Out of order. A condition where a fire, gas detection, energy or life safety system or portion thereof is out of order, and the condition can result in the fire, gas detection, energy or life safety system not functioning in an event.

Status 2 – Critical Deficiency. A deficiency that, if not corrected, can have a material effect on the ability of the fire, gas detection, energy, or life safety system, to function as intended in an event.

Status 3 – Noncritical Deficiency. A deficiency that does not have a material effect on the ability of the fire, gas detection, energy or life safety system to function in an event, but correction is needed to meet the requirement of fire, gas detection, energy or life safety standard, manufactures instructions or other governing codes for the proper inspection, testing and maintenance of the system or unit.

Status 4 – No Deficiencies. The fire, gas detection, energy or life safety system is operational with no impairment, critical or noncritical deficiencies.

I102.3 Reporting of Fire, Gas Detection, Energy and Life System Inspections.

A report shall be generated for all Fire, Gas Detection, Energy and Life Safety Systems. Inspections and Corrective Action repair/corrections provided within the Building Safety Service Area. The providing entity/company shall

send a legible copy of the report, including observation reports, suggestions, notes etc., to the Division of Fire Prevention, Anchorage Fire Department or appointed fire department representative. Said report shall contain the following information per I102.3.1 through I102.3.4

I102.3.1 Requirement for 1st page of inspection report.

a. Service company.
   i. Name.
   ii. Address.
   iii. Phone Number.
b. Service location.
   i. Property management company or owners name.
      a. Point of contact name.
      b. Phone number.
      c. Address.
      d. Email address.
   ii. Inspected property.
      a. Building name.
      b. Address.
      c. Point of contact name.
      d. Phone number.
      e. Email address.
c. Date of Inspection.
d. Inspection Type:
   i. Fire Alarm.
   ii. Fire Sprinkler.
   iii. Fire Pump.
   iv. Generator, emergency or legally required standby.
   v. Gas Detection.
   vi. Life Safety System.
   vii. Kitchen Fire System.
   viii. Other inspections not addressed.
e. Inspection Frequency:
   i. Annual.
   ii. Semi-annually.
   iii. Quarterly.
   iv. Monthly.
   v. Other frequencies not addressed.
f. Building occupancy type as shown in 2018 IBC Section 202.
g. Inspector Information.
   i. First and last name.
   ii. Email address.
   iii. Cell phone number.
   iv. State of Alaska Fire System Permit number issued. under 13 AAC 50.035.
   v. Certification number for other systems.
h. System Status Number.
   i. Determined System Status Number shall be located on the 1st page in the upper right corner.
   ii. System Status Number 1, 2, 3 or 4 shall be determined in

accordance with Section I102.4.

i. Deficiencies.
    i. Typed or legibly handwritten (no cursive/long hand handwriting).
    ii. Deficiency write-ups must include the code citation in violation and a description of the problem.
    iii. All deficiencies shall be listed together on the report.
j. Only white or yellow copies will be accepted for submitted reports.

I102.3.2 Requirement for additional pages of the inspection report.

a. Building name (located on top of the report page).
b. Date of service (located on top of the report page).

I102.3.3 Requirement of Corrective Actions reports.

a. Service Company.
    i. Name.
    ii. Address.
    iii. Phone number.
b. Service location.
    i. Building name.
    ii. Address.
    iii. Point of contact name for the property management company or owner.
    iv. Phone number.
    v. Email address for the property management company or owner.
c. Date of Repairs.
d. Repairs or corrections.
    i. List items repaired or corrected.
    ii. List any items not repaired or corrected.
e. System Status after repairs are made.
    i. Determined System Status Number shall be located on the 1st page in the upper right corner.
    ii. System Status Number 1, 2, 3 or 4 shall be determined in accordance with Section I102.4.
f. Copy of the original inspection report.
g. Corrective service reports shall be submitted to Anchorage Fire Department Fire Prevention within 3 days after corrective service has been completed

    Email: fireprevention@muni.org or Assigned Fire Inspector.

I102.3.4 Requirement for sound level check inspection report.

a. Service company.
    i. Name.
    ii. Address.
    iii. Phone Number.
b. Service location.
    i. Property management company or owners name.
        a. Point of contact name.

b. Phone number.
c. Address.
d. Email address.

ii. Inspected property.
a. Building name.
b. Address.
c. Point of contact name.
d. Phone number.
e. Email address.

c. Date of Inspection.

d. Inspection Type:
- Decibel – Sound Level check.

e. Inspection Frequency:
i. Annual.
ii. Other frequencies not addressed.

f. Test areas.
i. Common area locations.
ii. Sleeping area locations – Minimum of 15% of the units. per floor with a minimum of 2 units per floor.

g. Sound meter information.
i. Sound meter make and model meeting the requirements of ANSI S1.4 Type 1.
ii. Serial number.
iii. Annual calibration date.

I102.3.2 Failure to Report.
Any company, individual or entity failing to file reports in the required times as required in Appendix I102 shall be subject to AMC Title 10.75.010C4.

I102.4 System Status:
I102.4.1 Status 1 – Impairment / Out of Order. Systems out of service or having identified major deficiencies shall be reported as Status 1. The service company shall immediately contact the Division of Fire Prevention at 267-4901, if the system cannot be returned to service. After-hours or on weekends, contact AFD dispatch at 267-4950. Written notification shall be faxed to the Fire Marshal's Office within 24 hours at 249-7788.

I102.4.1.1 Corrective action. Systems reported as Status 1 shall be repaired immediately. Building and facilities with systems reported as Status 1 shall comply with IFC 901.7 through 901.7.6, and AFD Fire watch policy.

I102.4.1.2 Qualifying deficiencies. Systems with deficiencies listed in I102.4.1.2.1 through I102.4.1.2.8 shall be reported as Status 1.

I102.4.1.2.1 Fire sprinkler or water-based system. Impairment deficiencies refer to 2020 NFPA 25 Table A.3.3.8 for list and below requirements.
1. Non-working flow/pressure switches.
2. Damage to fire department connections.
3. No water to system.
4. Frozen or otherwise damaged system.

5. Local sprinkler alarm not functioning.
6. Large quantities of corrosion scale or debris found when flowing of test connections, remote drains or water motor gong alarm lines. Clogged or plugged sprinkler heads, test ports or alarm lines.
7. Physically damaged piping, sprinkler heads or valves (such as from forklift strike).
8. Main drain test where residual pressure drops below 20 psi during flow of main drain.
9. Painted sprinkler heads reference the 2020 edition of NFPA 25, Table A3.3.8, Chapter 5 Sprinkler Systems Inspections.
10. Antifreeze systems where freeze protection is rated above 20° Fahrenheit.
11. Substantial deficiency not addressed but deemed by the servicing agent or fire code official, as impairment or out of service.

I102.4.1.2.2 Fire pump. Impairment deficiencies refer to 2020 NFPA 25 Table A.3.3.8 for list and below requirements.

1. Non-working fire pump.
2. Fire pump controls not working or malfunctioning.
3. Degradation of water supply below rating of pump, or any degradation causing cavitation of the pump.
4. Substantial deficiency not addressed but deemed by the servicing agent or fire code official, as impairment or out of service.

I102.4.1.2.3 Fire alarm system (detection and alarm):

1. Non-working fire alarm panel.
2. Malfunctioning fire alarm panel.
3. Audio and visual devices not working entire Notification Appliance Circuit (NAC) loop.
4. Detection not working entire detection loop.
5. Loss of programming.
6. More than three audio & visual devices not working in building.
7. Detection devices not working - more than three devices in building.
8. Substantial deficiency not addressed but deemed by the servicing agent or fire code official, as impairment or out of service.

I102.4.1.2.4 Kitchen hood fire system:

1. System cylinder is not charged or is leaking.
2. Appliance not properly covered due to rearrangement of appliances.
3. Plugged discharge nozzles.
4. Automatic detection not functional.
5. Fuel or electric power supply not shutting off.
6. Substantial deficiency not addressed but deemed by the servicing agent or fire code official, as impairment or out of service.

I102.4.1.2.5 Required clean agent or special hazard fire system:

1. System cylinder is not charged or is leaking.
2. Releasing panel not functional.
3. Where any of the following occur:
    - New holes and/or openings in walls and ceilings.

- Wall or ceiling removed in system area.
- Faulty door closers where required.
- In any room or system area, physical changes to the building which could change clean agent concentration level, which adversely impact systems ability to perform as designed.

4. Substantial deficiency not addressed but deemed by the servicing agent or fire code official, as impairment or out of service.

I102.4.1.2.6 Gas detection system:

1. Nonworking control panel.
2. Malfunctioning control panel.
3. Detection not working.
4. Failure to report alarm.
5. Detection not provided due to modifications in the room with required protection.
6. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as impairment or out of service.

I102.4.1.2.7 Energy Systems / Emergency or legally required standby generator:

1. Nonworking generator.
2. Malfunctioning generator.
3. Failure to carry building load.
4. Failure of transfer switch.
5. Substantial deficiency not addressed but deemed by the servicing agent or fire code official, as impairment or out of service.

I102.4.1.2.8 Life safety system regulated by chapter 9:

1. Nonworking system.
2. Malfunctioning system.
3. Failure of detection or protection devices.
4. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as impairment or out of service.

I102.4.2 Status 2 – Critical Deficiency. Systems with a critical deficiency shall be reported as Status 2. The service company shall contact the Division of Fire Prevention at 267-4901 or by fax at 249-7788 within 14 days from the date of inspection if the deficiency cannot be repaired and system returned to service. Reports shall be sent to the Fire Marshal's Office in a manner approved by the fire code official.

I102.4.2.1 Corrective action. Systems reported as Status 2 shall be repaired within 14 days.

I102.4.2.2 Qualifying deficiencies. Systems with deficiencies listed in I102.4.2.2.1 through I102.4.2.2.9 shall be reported as Status 2.

I102.4.2.2.1 Fire sprinkler or water-based system. Critical deficiencies refer to 2020 NFPA 25 Table A.3.3.8 for list and below requirements.

1. Painted sprinkler heads reference the 2020 edition of NFPA 25, Table

A3.3.8, Chapter 5 Sprinkler Systems Inspections.

2. Change of use in buildings which causes a change in the occupancy classification to a higher hazard occupancy.
3. Low water pressure - negative changes of 10% or more of static or residual pressures during main drain test from previous year test or from original flow information where available.
4. Any other major problem that will affect the performance - (bad trim valves, pressure switches, etc.).
5. No monitoring on required systems.
6. Five-year obstruction investigation not performed or not verifiable.
7. Water control valves that will not hold back water / allow water to leak by.
8. Hydrostatic testing past due.
9. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.2.2.2 Fire pump. Critical deficiencies refer to 2020 NFPA 25 Table A.3.3.8 for list and below requirements.

1. Low fuel.
2. Pump packing leaking beyond specifications.
3. Fire pump room below 40 degrees.
4. Fire pump not meeting its rated discharge pressure or GPM flow over a 10% difference.
5. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.2.2.3 Fire alarm system (detection and alarm).

1. Batteries overdue for replacement.
2. No monitoring on required system.
3. Audio and visual devices not working – up to three devices; over three devices Status 1.
4. Detection not working – up to three devices; over three devices Status 1.
5. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.2.2.4 Kitchen hood fire system.

1. Hood and ducts with heavy grease buildup.
2. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.2.2.5 Required clean agent or special hazard fire system.

1. Room not properly sealed.
2. Room size has changed.
3. Expired squibs.
4. HVAC shutdowns not properly working.
5. Any other major problem that will affect the performance. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.2.2.6 Non-required clean agent or special hazard fire system.

1. Room not properly sealed.
2. Room size has changed.
3. Expired squibs.
4. HVAC shutdowns not properly working.
5. Any other major problem that will affect the performance.
6. System cylinder is not charged or is leaking.
7. Releasing panel not functional.
8. Wall or ceiling removed in system area.
9. Faulty door closers where required.
10. In any room or system area, physical changes to the building which could change clean agent concentration level, which adversely impact system's ability to perform as designed.
11. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.2.2.7 Gas detection system:

1. Damaged detector.
2. Expired detectors.
3. Out of calibration range.
4. No current calibration.
5. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.2.2.8 Energy Systems / Emergency or legally required standby generator:

1. Failure to pass load bank test.
2. Failure to start in required time.
3. Malfunctioning automatic transfer switch.
4. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.2.2.9 Life safety system regulated by chapter 9:

1. Nonworking system.
2. Malfunctioning system.
3. Failure of detection or protection devices.
4. Substantial deficiency not addressed but deemed, by the servicing agent or fire code official, as critical.

I102.4.3 Status 3 – Noncritical Deficiency. Systems with a minor deficiency shall be reported as Status 3. Status 3 reports shall be provided to the Division of Fire Prevention in a manner approved by the fire code official within 30 days from the date of inspection. These deficiencies will not affect the performance of the system.

I102.4.3.1 Corrective action. Systems reported as Status 3 shall be repaired within 30 days.

I102.4.3.2 Qualifying deficiencies. Systems with minor deficiencies such as missing signs, data plates, leaking ball drip, improperly identified zones in

panel programming, and similar items which will not affect the ability of the system to perform in any way shall be reported as Status 3. Includes any items not included in Status 1 or Status 2 and defined by NFPA as deficiencies.

I102.4.3.2.1 Water Based system. Noncritical deficiencies refer to 2020 NFPA 25 Table A.3.3.8 for list.

I102.4.4 Status 4 – No Deficiencies. System with no deficiencies shall be reported as Status 4. Status 4 reports shall be provided to the Division of Fire Prevention in a manner approved by the fire code official within 30 days from the date of inspection.

Chapter 23.60 - LOCAL AMENDMENTS TO THE INTERNATIONAL ENERGY CONSERVATION CODE 2018 EDITION

23.60.100 Local Amendments to the International Energy Conservation Code 2018 Edition

The amendments to the 2018 edition of the International Energy Conservation Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the sections of the International Energy Conservation Code to which the amendments refer.

23.60.C102 through 23.60.C109 - Delete sections.
Delete sections C102 through C109. Refer to the Anchorage Administrative Code.

23.60.C303.1.4 Insulation product rating.
Add the following exception:
Exception: A mean testing temperature of 40°F is acceptable for demonstrating compliance with this code.

23.60. Table C402.1.3 - Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method.
Replace TABLE C402.1.3 with the following:

TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD[a] CLIMATE ZONE 7 All Other and Group R	
Roofs - Insulation entirely above deck	R-30ci
Roofs - Metal Buildings[b]	R-13 + R-19
Roofs - Attic and Other	R-38
Walls - Above Grade - Mass [g]	R-15.2ci
Walls - Above Grade - Metal Building	R-19+ R-5.6ci

Walls - Above Grade - Metal Framed	R-13+ R-7.5ci
Walls - Above Grade - Wood framed and other	R-13+ R-7.5ci or R-21
Walls - Above Grade - Insulated Metal Wall Panels	R-20
Walls - Below Grade[d]	R-8ci
Floors - Mass[e]	R-15ci
Floors - Joist/Framing - Note: For framing cavities 12 inches or less in depth the entire cavity shall be filled with insulation.	R-30 wood framing R-38 metal framing
Floors - Slab-on-grade, unheated	R-8, extending 36" below
Floors - Slab-on-grade, heated	R-10, extending 36" below
Opaque Doors – Side hinge swinging[i]	R-2

a. Assembly descriptions can be found in ANSI/ASHRAE/IESNA Appendix A.
b. Where using R-value compliance method, a thermal spacer block having a minimum R-value of 5 shall be provided, otherwise use the U-factor compliance method in Table C402.1.4.
c. Not used.
d. Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for heated slabs.
e. “Mass floors” shall be in accordance with Section C402.2.3.
f. Not used.
g. “Mass walls” shall be in accordance with Section C402.2.2.
h. Not used.
i. Not applicable to garage doors. See Table C402.1.4.

23.60. Table C402.1.4 - Opaque Thermal Envelope Assembly Maximum Requirements, U-factor Method.

Replace TABLE C402.1.4 with the following:

TABLE C402.1.4 OPAQUE THERMAL ENVELOPE ASSEMBLY MAXIMUM REQUIREMENTS, *U*-FACTOR METHOD [a, b] Climate Zone 7 All Other and Group R		
Component	**Maximum Allowable Factor**	**ANSI/ASHRAE/IESNA 90.1 APPENDIX A Section Reference**
Roofs - Insulation	U-0.032	A2.2

entirely above deck		
Roofs - Metal Buildings (W/R-5 Thermal Blocks)	U-0.049	A2.3
Roofs - Attic and Other	U-0.027	A2.4, A2.5
Walls Above Grade – Mass [g]	U-0.071	A3.1
Walls Above Grade - Metal Building	U-0.057	A3.2
Walls Above Grade - Metal Framed	U-0.064	A3.3
Walls Above Grade - Wood framed and other [c]	U-0.051	A3.4
Walls above Grade - Insulated Metal Panels	U-0.050	--
Below grade wall [c]	C-0.119	A4.2
Floors – Mass [d]	U-0.064	A5.2
Floors - Steel Joist/Framing	U-0.033	A5.3
Floors - Wood Joist/Framing	U-0.033	A5.4
Slab-on-grade Floors - Unheated	F-0.52	A6.3
Slab-on-grade Floors – Heated [f]	F-0.84	A6.3
Opaque side hinge swinging door	U-0.37	A7
Opaque garage door with less than 14% glazing	U-0.31	A7

a. Where assembly U-factors, C-factors and F-factors are established in ANSI/ASHRAE/IESNA 90.1 Appendix A, such opaque assemblies shall be a compliance alternative where those values meet the criteria of this table, and provided the construction, excluding the cladding system on walls, complies with the appropriate construction details from ANSI/ASHRAE/IESNA 90.1 Appendix A.

b. Where U-factors have been established by testing in accordance with ASTM C1363, such opaque assemblies shall be a compliance alternative where those values meet the criteria of this table. The R-value of continuous insulation shall be permitted to be added to or subtracted from the original tested design.

c. Where heated slabs are below grade, below-grade walls shall comply with the U-factor requirements of above-grade mass walls.

d. “Mass floors” shall be in accordance with Section C402.2.3.

e. Not used.

f. The first values is for perimeter insulation and the second value is for full slab insulation.
g. “Mass walls” shall be in accordance with Section C402.2.2.

23.60. Table C402.4 - Building Envelope fenestration Maximum U-Factor and SHGC Requirements.

Replace TABLE C402.4 with the following:

TABLE C402.4 BUILDING ENVELOPE FENESTRATION MAXIMUM U-FACTOR AND SHGC REQUIREMENTS CLIMATE ZONE 7	
U-factor - Vertical fenestration, framing materials other than metal with or without metal reinforcement or cladding	0.35
U-factor - Vertical fenestration, metal framing with or without thermal break - Curtain wall/storefront	0.40
U-factor - Vertical fenestration, metal framing with or without thermal break - Entrance Doors	0.80
U-factor - Vertical fenestration, metal framing with or without thermal break - All other - Including operable windows, fixed windows and non-entrance doors	0.45
SHGC - Vertical fenestration, oriented more than 45 degrees from true north, PF<25	0.45
SHGC - Vertical fenestration - PF≥0.25	No Requirement
U-factor - Skylights - Glass or plastic	0.60
SHGC - Skylights - Glass or plastic	No Requirement

23.60.C402.2.1 Roof assembly.
Add the following sentence:
When eave vents are installed, baffling of the vent openings shall be provided to deflect the incoming air above the surface of the insulation.
Add the following exception:
4. Continuously insulated tapered roof assemblies with an average R-value of not less than that specified in Table C402.2 and having not less than R-12.5 at each roof drain location.

23.60.C402.2.4 Slabs-on-grade perimeter insulation.
Revise the exception to read as follows:
Exception: Where the slab-on-grade floor is greater than 36 inches below the finished exterior grade and the below grade wall is insulated in accordance with section C402.2.5, perimeter insulation is not required.

23.60.C402.2.5 Below-grade walls.
Amend section C402.2.5 by adding the following sentence:
In new construction, the minimum required R-value of insulating material shall be installed on the exterior side of the wall.

23.60.C403.3.1 Equipment and system sizing (Mandatory).
Amend section C403.3.1 by adding exception number 3 as follows:
3. Single unit heating systems with less than 25 percent excess capacity.

23.60.C403.4.1.4 Heated or cooled vestibules (Mandatory).
Amend section C403.4.1.4 to read as follows:
Vestibule heating systems shall be controlled by a thermostat located in the vestibule.

23.60.C403.4.2.1 Thermostatic setback (Mandatory).
Delete section C403.4.2.1.

23.60.C403.4.2.3 Automatic start (Mandatory).
Delete section C403.4.2.3.

23.60.C403.4.4 Part load controls.
Amend section C403.4.4 by deleting “and cooling demand” from Item No. 1, and revising exception #4 to read as follows:
4. Hydronic heating systems serving domestic hot water generation equipment or other equipment that requires a consistent supply temperature or flow may override temperature setback and/or flow controls in this section.

23.60.C403.5 Economizers (Prescriptive).
Amend the first sentence in item No. 2 to read as follows:
2. Individual fan systems with a cooling capacity greater than or equal to 120,000 Btu/h in buildings having other than a Group R occupancy.

23.60.C403.5.4.1 Design capacity.
Amend section C403.5.4.1 by deleting “indirect evaporation and”.

23.60.C403.7.2 Enclosed parking garage ventilation controls (Mandatory).
In the last sentence, replace “cause the exhaust fans to operate continuously at design airflow” with “trigger audible, visible or automation system alarm”.

23.60.C403.7.4 Energy recovery ventilation systems (Mandatory).
Revise the second sentence to read as follows:
The energy recovery system shall be configured to provide a change in the enthalpy or sensible heat of the outdoor air supply of not less than 50 percent of the difference between the outdoor air and return air enthalpies or sensible heats.

Amend the exception by revising condition Number 8 to read as follows:
8. For each system where the largest source of air exiting the building at a single location at the building exterior is less than 75 percent of the design outdoor airflow rate.

Amend the exception by adding condition number 12 as follows:

12. Where the system does not operate continuously and is controlled only to operate under a safety operation such as carbon monoxide exhaust systems in garages.

Amend the exception by adding condition number 13 as follows:

13. Where it is demonstrated that simple economic payback is greater than 20 years. Market value equipment, construction and utility costs at the time of design shall be used to determine economic payback.

23.60.C403.7.7 Shutoff dampers (Mandatory).

Amend section C403.2.7.7 by adding exception number 4 as follows:

4. Motorized dampers shall not be required for exhaust systems where grease, lint, and similar particulates may accumulate on the damper and create a fire hazard.

23.60.C403.8.1 Allowable fan horsepower (Mandatory).

Amend section C403.8.1 by replacing 5 horsepower with 10 horsepower.

23.60.C403.8.3 Fan efficiency (Mandatory).

Amend section C403.8.3, Exception #1, by replacing 5 horsepower with 10 horsepower.

23.60.C403.11.2.3 High-pressure duct systems (Mandatory).

Amend section C403.11.2.3 by deleting the last sentence stating "Documentation shall be furnished by the designer demonstrating…"

23.60.C403.11.3 Piping insulation (Mandatory).

Amend exception #5 to read as follows:

5. Strainers, valves, unions and system components other than piping.

Add exception #7 as follows:

7. Piping within baseboard radiation assemblies serving the zone requiring conditioning and piping that is intended to serve as a terminal heating device.

23.60.C404.4 Insulation of piping.

Amend exception #2 to read as follows:

2. Strainers, valves, unions and system components other than piping.

23.60.C404.5 Heated water supply piping.

Delete section C404.5.

23.60.C404.6.1 Circulation systems.

Add the following exception:

Exception: Circulation pumps may be controlled by manual control or time clocks.

23.60.C404.7 Demand circulation controls.

Delete section C404.7.

23.60.C405.1 General (Mandatory).

Amend the second paragraph to read as follows:

Compliance with section C405 may be achieved by one of the following:

1. Compliance with the interior lighting power requirements specified in Section C405.3. Compliance with Section C405.2 and Sections C405.4 through C405.9 is not required.
2. Compliance with lighting controls specified in Section C405.2 (as amended) and compliance with the interior lighting power requirements specified in Section C405.3 where the total connected interior lighting power is no greater than 125% of the interior lighting power allowance. Compliance with Sections C405.4 through C405.9 is not required.

23.60.C405.2.2.2 Light-reduction controls.

Amend section C405.2.2.2 by revising the exception as follows:

Exception: Light reduction controls are not required in:

a) Daylight zones with daylight responsive controls complying with Section C405.2.3.
b) Spaces that have only one luminaire with a rated power of less than 100 watts.
c) Spaces that use less than 0.6 watts per square foot.
d) Corridors, lobbies, restrooms and similar common spaces.
e) Equipment rooms, storerooms and similar normally unoccupied spaces.
f) Areas where HID lighting is used as the primary light source.

23.60.C405.2.3 Daylight-responsive controls.

Unless using daylight-responsive controls to comply with other provisions in this code, compliance with Section C405.2.3 is optional.

23.60.C405.2.4 Specific application controls.

Compliance with this section is not required.

23.60.C405.2.6 Exterior lighting controls.

Revise the first sentence to read as follows:

Exterior lighting systems shall be provided with controls that comply with Section C405.2.6.1 or Section C405.2.6.4.

Delete the second sentence.

23.60.C406 Additional Efficiency Package Options.

Delete section C406.

23.60.C408.2 - Mechanical systems and service water-heating systems commissioning and completion requirements.

Revise exception #1 to read as follows:

1. Mechanical systems serving buildings smaller than 20,000 square feet are exempt from the commissioning requirements in this section. These exempt systems shall be tested to ensure that control elements are calibrated, adjusted and in proper working condition.

23.60.R101 through 23.60.R505 – Residential Provisions. Energy conservation provisions for residential buildings regulated by the International Residential Code (IRC) shall comply with IRC Chapter 11, as amended under Chapter 23.85. Energy conservation provisions for residential buildings regulated by the International Building Code (IBC) shall comply with the International Energy Conservation Code.

Chapter 23.65 - LOCAL AMENDMENTS TO THE INTERNATIONAL EXISTING BUILDING CODE 2018 EDITION

23.65.100 Local Amendments to the International Existing Building Code 2018 Edition

The amendments to the 2018 Edition of the International Existing Building Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the sections of the International Existing Building Code to which the amendments refer.

23.65.103 through 23.65.117 - Delete sections.
Delete IEBC sections 103 through 117. Refer to the Anchorage Administrative Code.

23.65.302.7 Abandoned equipment
Amend section 302 by adding the following section:
302.7 Abandoned equipment. Equipment no longer in use and suspended over occupied space shall be removed.

23.65.302.8 Existing acoustical tile and lay-in panel suspended ceilings.
Amend section 302 by adding the following section:
302.8 Existing acoustical tile and lay-in panel suspended ceilings. Suspended ceiling systems exceeding 144 square feet in area and undergoing repair, modification, raising or lowering of the grid, or where more than 50 percent of the tiles are replaced shall be evaluated for compliance with the seismic provisions of ASCE 7. Noncompliant ceiling systems shall be seismically restrained in accordance with ASCE 7. The suspended ceiling system area is the area of ceiling bounded by walls, partitions, soffits, or seismic separation joints.
Exception: Where the grid is not being replaced, two-inch wide perimeter support closure angle and seismic separation joints are not required.

23.65.303.4 Additional permit requirements for reroofing.
Amend section 303 by adding the following section:
303.4 Additional permit requirements for reroofing.
In addition to the permit submittal requirements in Chapter 23.10, the following information is required for reroof permits:

1. In existing non-snow-drift areas, if the R value of the existing assembly is less than R-30 and the new system will increase the R value by more than 30 percent, an engineer's report is required to verify that the existing framing is sufficient for a 40-psf snow load.
2. In existing snow-drift areas, if the assembly increase the R value, an engineer's report is required verifying that the existing framing is

sufficient for 40-psf snow load plus drift.

3. Where mechanical fasteners are used, capacities based on testing shall use the following minimum factors of safety: Fasteners in wood (4), Fasteners in metal deck (3).

23.65.502.4 Existing structural elements carrying gravity load.

Replace "5 percent" in the first sentence with "10 percent".

23.65.502.5 Existing structural elements carrying lateral load.

Number the exception 1 and add the following exception 2:

2. Additions to one- and two-family detached structures are not required to be structurally independent from the existing structure where all of the following conditions are met:
    1. The occupancy of the addition is the same as the existing, or is a Group U occupancy;
    2. The existing structure is not needed to support lateral loads from the addition other than at the common wall(s);
    3. The common wall(s) can support the combined loads from the existing and new structures; and
    4. The addition does not reduce the capacity of any existing lateral element.

23.65.503.3 Existing structural elements carrying gravity load.

Replace "5 percent" in the first sentence with "10 percent".

23.65.705.1 Reroofing – General.

Modify the Exceptions as follows:

In Exception number 1, delete “Roof replacement or”.

In Exception number 2, delete “or replacing”.

Add Exception number 3 as follows:

3. Minimum roof slope requirements shall not be required when positive drainage is provided and headwall flashings of existing openings or drainable cavity wall assemblies other than open rainscreen systems restrict the available flashing heights.

23.65.706.2 Addition or replacement of roofing or replacement of equipment.

Replace "5 percent" with "10 percent".

Delete exception No. 2.

23.65.706.3.2 Roof diaphragms resisting wind loads in high-wind regions.

Add the following exception:

Exception: Buildings constructed after 1984 need not comply with this section.

23.65.803.2 - Automatic sprinkler systems.

Amend section 803.2.2 by deleting the reference to Group E occupancies.

Add the following subsection:

23.65.803.2.2.2 Group E Occupancy: When required by the International Fire Code, an automatic sprinkler system shall be installed throughout all buildings containing a group E occupancy.

23.65.805.4.4 - Panic hardware.
Amend section 805.4.4 by replacing "greater than 100" with "of 50 or more".

23.65.806.2 Existing structural elements carrying gravity load.
Replace "5 percent" with "10 percent".
Replace the second sentence with the following:
Any existing gravity load-carrying structural element whose gravity load-carrying capacity is decreased by more than 10 percent as part of the alteration shall be shown to have the capacity to resist the applicable design dead, live and snow loads including snow drift effects required by the International Building Code for new structures.
Delete exception No. 2.

23.65.1006.1 Live loads.
Replace "5 percent" in the exception with "10 percent".

23.65.1103.1 Additional gravity loads.
Replace "5 percent" with "10 percent".

23.65.1103.2 Lateral force-resisting system.
Add exception #3 to read as follows:
3. Additions to one- and two-family detached structures are not required to be structurally independent from the existing structure where all of the following conditions are met:
    1. The occupancy of the addition is the same as the existing occupancy, or is a Group U occupancy;
    2. The existing structure is not needed to support lateral loads from the addition other than at the common wall(s);
    3. The common wall(s) can support the combined loads from the existing and new structures; and
    4. The addition does not reduce the capacity of any existing lateral element.

23.65.1402.5 Snow loads.
Replace "5 percent" in the exception with "10 percent".

Chapter 23.70 - ABATEMENT OF DANGEROUS BUILDINGS 2018 EDITION

23.70.701 Purpose and scope.
23.70.701.1 Purpose.
1. It is the purpose of this chapter to provide a just, equitable and practicable method, to be cumulative with and in addition to any other remedy provided by the codes, or otherwise available by law, whereby buildings or structures which from any cause endanger the life, limb, health, morals, property, safety or welfare of the general public or their occupants shall be required to be repaired, demolished or removed.

2. The purpose of this chapter is not to create or otherwise establish or designate any particular class or group of persons who shall or should be especially protected or benefited by the terms of this chapter.

23.70.701.2 Scope. The provisions of this chapter apply to all dangerous buildings or structures, as defined in section 702, now in existence or which may hereafter become dangerous in this Municipality, whether located within or outside of the Building Safety Service Area (BSSA).

23.70.701.3 Abatement of dangerous building standards. All buildings or structures required to be repaired under the provisions of this chapter shall be subject to the provisions of the technical codes as adopted by the Municipality of Anchorage.

23.70.702 - Definitions.

23.70.702.1 General. For the purpose of this chapter, certain terms, phrases, words and their derivatives shall be construed as specified in either this chapter or as specified in the code. Where terms are not defined, they shall have the ordinary accepted meanings within the context with which they are used. Webster's Dictionary shall be construed as providing ordinary accepted meanings. Words used in the singular include the plural and the plural the singular. Words used in the masculine gender include the feminine and the feminine the masculine.

Abatement - the code compliant corrections of all conditions or defects described in section 702, as confirmed by the code official.

Beyond economic feasibility to repair - when the estimated cost of repair exceeds the estimated replacement cost of the entire structure.

Code or codes - the relevant codes, as adopted by the Municipality.

Code official - the building official or designee.

Dangerous building - for the purpose of this chapter, any building or structure with any or all of the conditions or defects hereinafter described to such an extent the condition endangers life, limb, health, morals, property, safety, or welfare of the general public or its occupants.

1. Whenever any door, aisle, passageway, stairway or other means of exit is not of sufficient width or size or is not so arranged as to provide safe and adequate means of exit in case of fire or panic.
2. Whenever the walking surface of any aisle, passageway, stairway or other means of exit is so warped, worn, loose, torn or otherwise unsafe as to not provide safe and adequate means of exit in case of fire or panic.
3. Whenever the stress in any materials, member or portion thereof, due to all dead and live loads, is more than one and one-half times the working stress or stresses allowed in the code for buildings of similar structure, purpose or location.
4. Whenever any portion thereof has been damaged by fire, earthquake,

wind, flood or by any other cause, to such an extent the structural strength or stability thereof is materially less than before such catastrophe and is less than the minimum requirements of the code for buildings of similar structure, purpose or location.

5. Whenever any portion or member or appurtenance thereof is likely to fail, or to become detached or dislodged, or to collapse and thereby injure persons or damage property.
6. Whenever any portion of a building or structure, or any member, appurtenance or ornamentation of the exterior thereof is not of sufficient strength or stability, or is not so anchored, attached or fastened in place so as to be capable of resisting a wind pressure of one half of that specified in the code for such buildings or structures.
7. Whenever any portion thereof has wracked, warped, buckled or settled to such an extent that walls or other structural portions have materially less resistance to winds or earthquakes than is required in the case of similar construction.
8. Whenever the building or structure, or any portion thereof, because of:
    a. Dilapidation, deterioration or decay;
    b. Faulty construction;
    c. The removal, movement or instability of any portion of the ground necessary for the purpose of supporting such building or structure;
    d. The deterioration, decay or inadequacy of its foundation; or
    e. Any other cause is likely to partially or completely collapse.

9. Whenever, for any reason, the building or structure, or any portion thereof, is unsafe for the purpose of which it is being used.
10. Whenever the exterior walls or other vertical structural members list, lean or buckle to such an extent a plumb line passing through the center of gravity does not fall inside the middle one-third of the base.
11. Whenever the building or structure, exclusive of the foundation, shows thirty-three (33) percent or more damage or deterioration of its supporting member or members, or fifty (50) percent damage or deterioration of its non-supporting members, enclosing or outside walls or coverings.
12. Whenever the building or structure has been so damaged by fire, wind, earthquake or flood, or has become so dilapidated or deteriorated as to become
    a. An attractive nuisance to children;
    b. A harbor for vagrants, criminals or immoral persons; or
    c. Enables persons to resort thereto for the purpose of committing unlawful or immoral acts.
13. Whenever any building or structure has been constructed, exists or is maintained in violation of any specific requirement or prohibition applicable to such building or structure provided by the building regulations of this Municipality, as specified in the code, or of any law or ordinance of this state or Municipality relating to the condition, location or structure of buildings.
14. Whenever any building or structure which, whether or not erected in accordance with all applicable laws and ordinances, has in any non-

supporting part, member or portion less than fifty (50) percent, or in any supporting part, member or portion, less than sixty-six (66) percent of:

a. Strength;
b. Fire-resisting qualities or characteristics; or
c. Weather-resisting qualities or characteristics required by law in the case of a newly constructed building or structure of like area, height and occupancy in the same location.
d. This subsection does not apply to strength required to resist seismic loads.

15. Whenever a building or structure, used or intended to be used for dwelling purposes, because of inadequate maintenance, dilapidation, decay, damage, faulty construction or arrangement, inadequate light, air or sanitation facilities, or otherwise, is determined by the code official to be unsanitary, unfit for human occupancy or in such a condition it is likely to cause sickness or disease.
16. Whenever any building or structure, because of obsolescence, dilapidated condition, deterioration, damage, inadequate exits, lack of sufficient fire-resistive construction, faulty electric wiring, gas connections or heating apparatus, or other cause, is determined by the code official to be a fire hazard.
17. Whenever any building or structure is in such a condition as to constitute a public nuisance known to the common law or in equity jurisprudence.
18. Whenever any portion of a building or structure remains on a site after the demolition or destruction of the building or structure or whenever any building or structure is abandoned for a period in excess of six months so as to constitute such building or structure or portion thereof an attractive nuisance or hazard to the public.

Habitual - customarily, or by frequent practice or use; does not mean entirely or exclusively.

Imminent or immediate - near at hand, or if left unattended to on the point of happening; an observable structural, electrical, mechanical or plumbing failure to the extent a reasonable person may believe it poses a serious threat to life and safety.

Record owner - any legal interest of record disclosed from official public records.

Unfit for human occupancy - a building or structure is unfit for human occupancy whenever the code official finds such structure is unsafe, unlawful or because of the degree to which the building or structure is in disrepair or lacks maintenance, is unsanitary, vermin or rat infested, contains filth and contamination, contains significant visible mold, or lacks ventilation, illumination, sanitary or heating facilities or other essential equipment required by this code, or because the location of the building or structure constitutes a hazard to the occupants of the building or structure or to the public.

Unlawful building or structure - is one found in whole or in part to be occupied by more persons than permitted under this code, or was erected, altered or occupied contrary to law.

Unsafe building or structure - is one found to be dangerous to the life, health, property or safety of the public or the occupants of the building or structure by not providing the minimum safeguards to protect or warn occupants in the event of fire, or because such building or structure contains unsafe equipment or is so damaged, decayed, dilapidated, contains significant visible mold, structurally unsafe or of such faulty construction or unstable foundation, that partial or complete collapse is possible.

Unsafe equipment - includes any boiler, heating equipment, elevator, moving stairway, electrical wiring or device, flammable liquid containers or other equipment on the premises or within the building or structure in such disrepair or condition that such equipment is a hazard to life, health, property or safety of the public or occupants of the premises, building or structure.

23.70.703 - Administration.

23.70.703.1 Authority.

1. The code official is hereby authorized to enforce the provisions of this chapter.
2. The code official shall have the power to render interpretations of this chapter and to adopt and enforce rules and supplemental regulations in order to clarify the application of its provisions. Such interpretations, rules and regulations shall be in conformity with the intent and purpose of this chapter.

23.70.703.2 Extension of time to perform work. Upon receipt of a written request from the person required to conform to a notice and order issued under Section 23.70.704 and by agreement of such person to comply with the notice and order if allowed additional time, the code official may grant an extension of time, not to exceed an additional one hundred twenty (120) days, within which to complete said repair, demolition or removal, if the code official determines such an extension of time does not create or perpetuate a situation imminently dangerous to life or property. The code official's authority to extend time is limited to the physical repair, demolition or removal of the building or structure and shall not in any way affect the time to appeal the notice and order.

23.70.703.3 Inspections. The health officer, the fire marshal and the code official are hereby authorized to make such inspections and take such actions as may be required to enforce the provisions of this chapter.

23.70.703.4 Right of entry. When it is necessary to make an inspection to enforce the provisions of this chapter, or when the code official or designee has reasonable cause to believe there exists in a building or structure a condition which is contrary to or in violation of this chapter and makes the building or structure dangerous or unlawful, the code official may enter the

building or structure at reasonable times to inspect or to perform the duties imposed by this chapter, provided if such building or structure be occupied that credentials be presented to the occupant and entry requested. If such building or structure is unoccupied, the code official shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or structure and request entry. If entry is refused, the code official shall have recourse to the remedies provided by law to secure entry.

23.70.703.5 Abatement of dangerous buildings. All buildings or structures or portions thereof determined after inspection by the code official to be dangerous or unlawful as defined in this chapter are hereby declared to be public nuisances and shall be abated by repair, demolition, or removal in accordance with this code.

23.70.703.6 Violations. It shall be unlawful for any person, firm or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the same to be done in violation of this chapter.

23.70.703.7 Board of building regulation examiners and appeals. Orders, decisions or determinations made by the code official relative to the application and interpretations of this chapter may be appealed to the board of building regulation examiners and appeals (building board), established under AMC 4.40.030 and defined in AMC 23.10.103.4. Appeals to the building board shall be processed in accordance with the provisions contained in section 706 of this chapter.

23.70.704 - Notices and orders.

23.70.704.1 Commencement of proceedings. When the code official has inspected a building or structure and determined it is a dangerous or unlawful building, the code official shall commence proceedings to cause the repair, demolition, or removal of the building or structure.

23.70.704.2 Notice of violation. All violations noted by the code official shall be listed on the posted notice of violation. A notice of violation shall be posted at the location of the building or structure determined by inspection to have a violation. The code official shall give the owner three (3) business days to meet with the code official to determine the extent of the repair, demolition or removal necessary. After the three (3) business days, the code official shall determine if a notice and order shall be issued.

23.70.704.3 Notice and order. The code official shall issue a notice and order directed to the record owner of the building or structure. The notice and order shall contain:

1. The street address and a legal description sufficient for identification of the property upon which the building or structure is located.
2. A statement the code official found the building or structure to be dangerous or unlawful with a brief and concise description of the conditions found to render the building or structure dangerous or

unlawful under the provisions of section 702.

3. A statement of the action required to be taken as determined by:
   a. If the code official has determined the building or structure must be repaired or removed, the order shall require all required permits be secured therefore and the work physically commenced within sixty (60) days from the date of the order. The repairs shall be completed within such time as the code official shall determine is reasonable under all the circumstances and specified in the Notice and Order.
   b. If the code official has determined the building or structure must be vacated, the order shall require the building or structure shall be vacated within a time certain from the date of the order as determined by the code official to be reasonable and specified in the Notice and Order. The notice to vacate shall be posted as per section 705.
   c. If the code official has determined the building or structure must be demolished, the demolition shall be completed within such time as the code official determines is reasonable and shall be specified on the Notice and Order.
4. Statements advising if any required repair or demolition work is not commenced within the time specified, the code official:
   a. May order the Notice to Vacate as per section 705, and
   b. May proceed with causing the repair, demolition or removal as per section 708.
5. Statements advising:
   a. The notice and order may be appealed to the board of appeals as per section 706; and
   b. Failure to appeal shall constitute a waiver of all right to an administrative hearing and determination of the matter.

23.70.704.4 Service of notice and order. The notice and order, and any amended or supplemental notice and order, shall be served upon the record owner and posted on the property. The failure of the code official to serve any person required herein to be served shall not invalidate any proceedings hereunder as to any other person duly served or relieve any such person from any duty or obligation imposed by the provisions of this section.

23.70.704.5 Method of service.

1. Such notice shall be deemed to be properly served if a copy thereof is:
   a. Delivered personally;
   b. Sent by certified or first-class mail addressed to the last known address, return receipt requested; or
   c. Posted in a conspicuous place in or about the structure affected by such notice.

23.70.704.6 Recordation of notice and order.

1. If the order has not been complied with in the time specified therein, and no appeal has been properly and timely filed, the code official shall file in the Anchorage District Recorder's Office a certificate describing

the property and certifying:

a. The building or structure is a dangerous or unlawful building; and

b. The owner has been so notified.

2. When the corrections ordered have been completed or the building or structure demolished so it no longer exists as a dangerous or unlawful building or structure on the property described in the certificate, the code official shall file a new certificate with the Anchorage District Recorder certifying the building or structure has been removed, demolished or all required repairs have been made so the building or structure is no longer dangerous or unlawful.

23.70.704.7 Transfer of ownership. It shall be unlawful for the owner of any building or structure who has received a notice and order or notice of violation to sell, transfer, mortgage, lease or otherwise dispose of such building or structure to another until the provisions of the notice and order or notice of violation have been complied with, or until such owner shall first furnish the grantee, transferee, mortgagee or lessee a true copy of any notice and order or notice of violation issued by the code official and shall furnish the code official a signed and notarized statement from the grantee, transferee, mortgagee or lessee, acknowledging the receipt of such notice and order or notice of violation fully accepting the responsibility without condition for making corrections or repairs required by such notice and order or notice of violation.

23.70.705 - Notice to vacate.

23.70.705.1 Notice to vacate. The code official may post a building or structure with a notice to vacate if the building or structure is determined by the code official to contain an imminent or immediate life safety violation or condition. A notice to vacate shall be served under the same requirements for a notice and order as section 704.

23.70.705.2 Posting. Every notice to vacate shall, in addition to being served as provided in section 705.1, be posted at or upon each exit of the building or structure and shall be in substantially the following form:

23.70.705.3 No occupancy compliance. Whenever such notice is posted, the code official shall include a notification thereof in the notice and order issued under section 704, reciting the emergency and specifying the conditions which necessitate the posting. No person shall remain in or enter any building or structure so posted, except entry may be made to repair, demolish or remove such building or structure under permit. No person shall remove or deface any such notice after it is posted until the required repairs, demolition or removal are completed and a certificate of occupancy issued pursuant to the provisions of the code. The code official may assess fines as per 23.10. Table 3-M for each building code violation and the hourly rate for the code officials time as per the code abatement fee for failure to comply.

23.70.705.4 Code compliance inspection. All buildings or structures posted with a notice to vacate may be required to have a code compliance inspection

performed before any permit for repair or removal is issued.

23.70.706 - Appeal.

23.70.706.1 Form of appeal. Any person entitled to service under sections 704 or 705 may appeal any notice and order or any action of the code official under this chapter by submitting an application and the filing fee for an appeal to the board of building regulation examiners and appeals (building board) at the office of the code official. The appeal shall be filed within thirty (30) days from the date of the service of such order or action of the code official; provided, however, if the building or structure is in such condition as to make it immediately dangerous to the life, limb, health, morals, property, safety or welfare of the general public or their occupants and is ordered vacated and is posted in accordance with section 705, such appeal shall be filed within ten (10) days from the date of the service of the notice and order of the code official.

23.70.706.2 Processing of appeal. Upon receipt of any appeal filed pursuant to this section, the code official shall present it at the next regular or special meeting of the building board.

23.70.706.3 Scheduling and noticing appeal for hearings. As soon as practicable after receiving the written appeal, the secretary to the building board shall fix a date, time and place for the hearing of the appeal by the building board. Such date shall not be less than ten (10) days nor more than sixty (60) days from the date the appeal was filed with the code official. Written notice of the time and place of the hearing shall be given at least ten (10) days prior to the date of the hearing to each appellant by the secretary of the building board either by causing a copy of such notice to be delivered to the appellant personally or by mailing a copy thereof, postage prepaid, addressed to the appellant at the address shown on the appeal.

23.70.706.4 Effect of failure to appeal. Failure of any person to file an appeal in accordance with the provisions of section 706 shall constitute a waiver of the right to an administrative hearing and adjudication of the notice and order or any portion thereof.

23.70.706.5 Scope of hearing of appeal. Only those matters or issues specifically raised in the notice and order or actions by any persons with authority under this chapter shall be considered in the appeal hearing.

23.70.706.6 Staying of order under appeal. Except for notice to vacate order made pursuant to section 705, enforcement of any notice and order of the code official issued under this chapter shall be stayed during the appeal there from which is properly and timely filed.

23.70.707 - Performance of work, repair, demolition or removal by owner.

23.70.707.1 Repair, demolition or removal by owner. The following standards shall be followed by the code official in allowing the owner to complete the repair, demolition or removal of any dangerous building or

structure:

1. Any building or structure declared a dangerous building or structure under this chapter shall be made to comply by the owner with the following:

a. The building or structure shall be repaired in accordance with the code applicable to the type of substandard conditions requiring repair. All work shall be permitted and inspected according to the code; or

b. The building or structure shall be demolished at the option of the owner. A demolition permit shall be obtained prior to the work being performed; or

c. The building or structure shall be removed at the option of the owner. If building or structure is to be moved to another location within the Municipality, a code compliance inspection shall be performed prior to the removal.

23.70.707.2 Securing a vacated building against casual access/ingress. Any building or structure posted with a Notice to Vacate under Section 23.70.705 shall be secured against casual access or ingress in a manner satisfactory to the building official. Measures to secure may include: locks, covering doors and windows with plywood, fencing, and the like.

23.70.708 - Enforcement by code official.

23.70.708.1 General. After any notice and order, board of appeals decision, contract agreement, or extension has been finalized, no person to whom any such order is directed shall fail, neglect, or refuse to obey any such order.

23.70.708.2 Failure to obey order. If, after any notice and order, board of appeals decision, contract agreement, or extension has been made final, the person to whom such order is directed shall fail, neglect or refuse to comply with such order, the code official may institute any appropriate action to abate such building or structure as a public nuisance.

23.70.708.3 Failure to commence work.

1. Whenever the required repair, demolition or removal of building or structure is not commenced within time specified under the notice and order, appeals board action, contract agreement or extension the following becomes effective:

   a. The code official shall cause the building or structure described in such notice and order to be vacated as per section 705.

   b. No person shall remove or deface any such notice so posted until the repairs, demolition or removal ordered by the code official are completed and a certificate of occupancy issued pursuant to the provisions of this code.

   c. The code official may, in addition to any other remedy provided herein, cause the building or structure to be repaired, demolished or removed according to this chapter. The cost of any such repairs, demolition, or removals shall be recovered in the manner provided in this chapter.

23.70.708.4 Personal property. After reasonable notice and prior to the time

of repair, demolition or removal, the code official has the authority to enter the dangerous building or structure to make an inspection for any personal property of value abandoned on the premises. If such property is discovered, an inventory shall be taken and made part of the case file. If the owner fails to remove the discovered property prior to the demolition, the owner may redeem said property only under the conditions set forth below. At the time of demolition, the demolition contractor has the authority to remove the inventoried abandoned property from the premises and store the same safely. The record owner of the demolished property may, within thirty (30) days after the date of demolition, redeem the stored property upon the payment of a reasonable storage fee to the demolition contractor. If the record owner of the demolished building or structure fails to redeem the stored property, it shall become the property of the demolition contractor who shall have no recourse against the record owner of the demolished building or structure or the Municipality for any storage charges.

23.70.708.5 Repair, demolition or removal by code official. When any work, repair or demolition is to be done pursuant to section 708.3, the code official shall cause the required work to be accomplished by personnel of this Municipality or by private contract. All necessary permits shall be obtained prior to any work. If any part of the work is to be accomplished by private contract, standard Municipality contractual procedures shall be followed.

23.70.708.6 Interference with repair, demolition or removal work prohibited. No person shall obstruct, impede or interfere with the code official engaged in the work of repairing, demolishing or removing any such building or structure, pursuant to the provisions of this chapter, or in performing any necessary act preliminary to or incidental to such work or authorized or directed pursuant to this chapter.

23.70.709 - Emergency abatement by code official.

23.70.709.1 Summary abatement. The code official, with written approval of the city manager, may abate any public nuisance without notice in an emergency where the lives or safety of the public is endangered and where immediate action is necessary and timely notice cannot be given. All other abatement proceedings, except the necessity and the manner and method of giving notice shall apply to the nuisance summarily abated, including the recovery of the costs of the summary abatement.

23.70.710 - Recovery of costs by code official.

23.70.710.1 Responsibility for payment. The responsibility for payment of the charges for all expenses incurred during abatement by code official as set forth in this chapter shall rest solely upon the owners of the property upon which the abatement occurred. Owners, as used in this section, includes the record owner upon the date of service of notice and order as served under section 704, jointly and severally with any subsequent owner until all costs assessed under this chapter are paid in full.

23.70.710.2 Enforcement. The Municipality shall have the right to bring suit for the collection of charges for abatement as set forth in this chapter plus

costs and attorney's fees against any or all of the parties responsible for payment.

23.70.710.3 Account of expense.

1. The code official shall cause to be kept an account of the cost, including incidental expenses, incurred by the Municipality in the repair, demolition or removal of any building or structure done pursuant to the provisions of this chapter. Upon the completion of the work for repair, demolition or removal of the building or structure, the code official shall forward one or more bills for collection to the record owner as identified in this chapter, specifying the nature and costs of the work performed. Such costs shall be considered charges against the property and may be collected pursuant to this chapter or through any other legal means.
2. The term "incidental expenses" shall include, but not be limited to, the actual expenses and costs of the Municipality in the preparation of notices, specifications and contracts, overhead for account work, work inspection, and the cost of printing and mailing notices required hereunder.
3. If the bill for collection remains unpaid thirty (30) days after mailing of notice to the record owner(s), the Municipality shall be entitled to late fees on the amount billed from the date of mailing until paid at the rate prescribed by law for delinquent real property taxes. Any payments made or received shall be first applied to accumulated late fees.

23.70.710.4 Lien procedure. Charges for the repair, demolition or removal of any building or structure done pursuant to the provisions of this chapter become a lien upon the real property upon which the building or structure is or was located. The code official shall record a claim of lien at the Anchorage District Recorder's Office. The Lien placed shall meet all Alaska Statutes and municipal codes.

23.70.710.5 Bill to collections. When charges for the repair, demolition or removal of any building or structure remain unpaid after thirty (30) days from the date the code official forwards an invoice for payment to the record owner as identified in this chapter, the code official shall forward the bill to collections as per Municipality policies and procedures.

23.70.710.6 Collection of abatement charges. The lien created herein may be enforced as provided in Alaska Statute. The enforcement of the lien is a cumulative remedy and does not bar the collection of the charges for abatement as provided in section 709.

CHAPTER 23.75 LOCAL AMENDMENTS TO THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) A17.1-2016/CSA B44-16 SAFETY CODE FOR ELEVATORS AND ESCALATORS

The amendments to the 2016 edition of the ASME Safety Code for Elevators and Escalators are listed hereafter by section. The

last digits of the number (after the title and chapter digits) are the sections of the Safety Code for Elevators and Escalators to which the amendments refer.

23.75.1.1.4 Effective Date.

Amend Section 1.1.4 to read as follows:

The effective date for the A17.1-2016 edition will be that which is decided upon by the Municipality of Anchorage (MOA) Assembly.

23.75.1.3 Definitions.

In 1.3-Definitions: Amend the definition of “elevator personnel” to read as follows:

Elevator personnel: persons who have been trained in the construction, maintenance, repair, inspection, or testing of the particular type of device they are constructing, maintaining, repairing, inspecting, or testing.

23.75.2.2.2 Design and Construction of Pits.

Replace section 2.2.2.3 with the following:

For pits subject to the periodic accumulation of ground water, a permanent drain or sump pump shall be installed. For pits not subject to the periodic accumulation of ground water, the permanent installation of a drain or sump pump is not required, unless required by Section 2.2.2.5.

Replace section 2.2.2.5 with the following:

Elevators serving 4 or more stories above or 4 or more stories below the level of fire department vehicle access and elevator serving Group I-2 occupancies shall be provided with a gravity drain or sump pump. The level of fire department vehicle access shall be considered the first story. The drain or sump pump shall have the capacity to remove a minimum of 50 gallons per minute per common elevator hoistway or pit. This provision does not apply to existing elevator hoistways.

Add the following sections:

2.2.2.7 Sump pumps serving elevators required to be powered by a standby or emergency generator shall also be powered by the standby or emergency generator.

2.2.2.8 Hydraulic elevator pit drainage shall pass through an oil/water separator, or other approved means shall be employed to prevent the discharge of hydraulic fluid.

2.2.2.9 Discharge shall go into the building sanitary drainage system or to an approved location on the exterior of the building.

2.2.2.10 Discharging into the building sanitary drainage system shall be

through an air gap or air break into an approved indirect waste receptor. The indirect waste receptor shall be of such shape and capacity to control splashing or flooding and shall be located where readily accessible for inspection. The sanitary drainage system must be sized in accordance with the plumbing code to accommodate the rate of flow.

2.2.2.11 The discharge point shall be permanently labeled “ELEVATOR PIT DISCHARGE” in letters a minimum of ½ inch in height. Discharge resulting from periodic ground water accumulation shall not flow over a walking surface and shall not create a nuisance or hazard.
Discharge resulting from fire suppression shall not create a hazard.

23.75.2.27.1.1.4 Emergency Communications.
Amend the first paragraph of section 2.27.1.1.4 to read as follows:

Where the elevator rise is 18 m (60 ft) or more, a two-way voice communication means shall be located in the fire command center. If there is no fire command center, then it shall be located adjacent to the main fire alarm panel, adjacent to the main elevator entrance(s) at the primary re-call landing of the building or in a location approved by the AHJ. The two-way voice communication means shall comply with the following requirements:

23.75.6.1.3.15 Water Accumulation.
Amend the last sentence of section 6.1.3.15 to read as follows:

Drains and sump pumps, where provided, shall comply with the applicable plumbing code and shall be provided with a positive means to prevent water, gases, and odors from entering the pit.

23.75.6.2.3.18 Water Accumulation.
Amend the last sentence of section 6.2.3.18 to read as follows:

Drains and sump pumps, where provided, shall comply with the applicable plumbing code and shall be provided with a positive means to prevent water, gases, and odors from entering the pit.
23.75.8.1.2 Group 1: Restricted.

Amend section 8.1.2, by adding subparagraphs (e), (o) and (p) as follows:

(e) Requirement 2.7.6.3.2(b), motor controller cabinet door(s) or panel(s), shall apply to new installations only.
(o) Requirement 3.19.4.4, access to a manual lowering valve, shall apply to new installations only.
(p) Requirement 3.19.4.5, access to pressure gauge fittings, shall apply to new installations only.

23.75.8.6.1.1.2 Maintenance, Repair and Replacement.
Amend section 8.6.1.1.2 by adding subparagraph (d) to read as follows:

(d) The manufacturer’s design and intended function of components and

systems

23.75.8.6.1.7.2 Periodic Test Record.
Amend section 8.6.1.7.2 to read as follows:

8.6.1.7.2 – Periodic Test Record. A periodic test record for all periodic tests containing the applicable Code requirement(s) and date(s) performed, and the name of the person and elevator contractor performing the tests, shall be created and shall be safely and securely stored with the On-Site Maintenance Records in the machine room/space, Control room/space for each unit or in a location on the premises approved by the Authority Having Jurisdiction. The record of periodic tests shall be recorded on the approved applicable Municipality of Anchorage test form.

23.75.8.6.5.14.3 Additional Tests.
Amend section 8.6.5.14.3 by adding subparagraphs (j), (k) and (l) as follows:

(j) Emergency Communication (8.6.4.19.15)
(k) Means to Restrict Hoistway or Car Door Opening (8.6.4.19.16)
(l) Inspect and record measurement of Top Runby of car with elevator on its stop ring

23.75.8.6.10.1.1 Periodic Test.
Amend the first sentence of 8.6.10.1.1 to read as follows:

“Dumbwaiters and Material Lifts shall be subject to the applicable periodic tests specified in Sections 8.6.4.19, 8.6.4.20, 8.6.5.14, 8.6.5.16”

23.75.8.6.10.2. Periodic Test.
Amend the first sentence of 8.6.10.2.1 to read as follows:

“Dumbwaiters and Material Lifts with automatic transfer devices shall be subject to the applicable periodic tests specified in Sections 8.6.4.19, 8.6.4.20, 8.6.5.14, 8.6.5.16”

23.75.8.6.11.1 Firefighters’ Emergency Operation.
Amend section 8.6.11.1 to read as follows:
8.6.11.1 Firefighter’s Emergency Operation. Firefighter’s Emergency Operation (Phase 1 & 2) shall be subjected to periodic testing not less than once for every 3-month period of time. Testing may be performed by authorized personnel or elevator personnel with documentation and results of the tests recorded on a test form approved by the AHJ. The test form shall be made available to elevator personnel and the Authority Having Jurisdiction and shall be stored with the maintenance records for that elevator or in a location approved by the AHJ.

23.75.8.7.1.1 Applicability of Alteration Requirements.
Amend section 8.7.1.1 to read as follows:
8.7.1.1 Applicability of Alteration Requirements. When any Alteration is performed, regardless of other requirements of section 8.7, the installation,

as a minimum, shall conform to the applicable Code requirements identified in subparagraphs (a) and (b) of this section. When a modernization is performed, regardless of other requirements of section 8.7, the installation, as a minimum, shall conform to the applicable code requirements identified in subparagraphs (a) through (c) of this section. For the purposes of administrating the requirements of section 8.7, a “Modernization” shall be defined as controller replacement, or a change in type of motion or operation control.

(a) The code at the time of installation
(b) The code requirements for the alteration at the time of any alteration
(c) ASME A17.3

23.75.8.7.2.29 Electric Seismic Requirements
Add section 8.7.2.29 to read as follows:
8.7.2.29 Electric Seismic Requirements. When the alteration includes replacing the controller or drive machine, the installation shall conform to sections 8.4.10. For other seismic upgrades made to the equipment, the equipment and work performed shall conform to the requirements of section 8.4 where applicable.

23.75.8.7.3.32 Hydraulic Seismic Requirements
Add section 8.7.3.32 to read as follows:
8.7.3.32 Hydraulic Seismic Requirements. When the alteration includes replacing the controller, hydraulic machine or hydraulic jack, the installation shall conform to section 8.4.11.11, 8.4.11.12 and section 8.4.11.13. For other seismic upgrades made to the equipment, the equipment and work performed shall conform to the requirements of section 8.4 where applicable.

23.75.8.10.1.1.4 Acceptance Test Tags.

Delete section 8.10.1.1.4

23.75.8.10.1.1.5 Acceptance Test Records.
Amend section 8.10.1.1.5 by adding the following sentence to the end of the section:

The test record shall be installed to be readily visible and shall be permanently attached on or adjacent to the controller of each unit.

23.75.8.11.1.1.2 Periodic Tests.
Amend section 8.11.1.1.2 to read as follows:

The owner or the owner’s authorized agent shall have all of the periodic tests required by 8.6.4, 8.6.5, 8.6.6, 8.6.7 & 8.6.8, performed by elevator personnel as defined in A17.1-2016. All periodic tests required by 8.6.4, 8.6.5, 8.6.6 & 8.6.7 shall be permitted to be witnessed by the elevator personnel. Periodic test results shall be reviewed for compliance by a Municipality of Anchorage (MOA) Elevator Inspector during their periodic inspections required by 8.11.2, 8.11.3 and 8.11.5. The elevator personnel shall record the test results

on the approved MOA A17.1-2016 periodic test form. The MOA A17.1-2016 periodic test form shall be placed in the elevator machine room/space or control room/space, or other location approved by the Authority Having Jurisdiction for review by the MOA Elevator Inspectors during their periodic inspections required by 8.11.2, 8.11.3 and 8.11.5. For Periodic test requirements listed in 8.6.8 (Escalators and Moving Walks), The MOA Elevator Inspector shall be the witness to the tests, on years when periodic inspections are due.

At major modernization acceptance inspections, all Category-1, 3 & 5 tests applicable to a conveyance shall be witnessed by a MOA Elevator Inspector.

23.75.8.11.1.2 Applicability of Inspection Requirements.
Amend section 8.11.1.2 by adding subparagraph (d) as follows:

(d) The manufacturer's design and intended function of components and systems.

23.75.8.11.1.3 Periodic Inspection and Test Frequency.
Amend section 8.11.1.3 to read as follows:
8.11.1.3 Periodic Inspection and Test Frequency. The inspection and test intervals for all equipment covered by ASME A17.1 shall be as noted in Appendix N, Table N-1, except as noted in subparagraphs (a) through (d):

(a) Periodic inspections for all equipment except escalators, moving walks and all private residence conveyances shall be performed at intervals of 24 months.

(b) Periodic inspections for escalators and moving walks shall be performed at intervals of 12 months.

(c) All private residence conveyances shall be exempt from periodic inspection requirements.

(d) Periodic Inspections may also be performed at any time in situations where alterations to the equipment has occurred, deficiencies from previous reports remain unresolved, when an accident involving the equipment has been reported to the department, when a complaint regarding the safety of the equipment has been reported to the department and in all instances when the department has reason to believe that the equipment may be operating in an unsafe condition.

CHAPTER 23.76 - LOCAL AMENDMENTS TO THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) A18.1-2017 SAFETY STANDARD FOR PLATFORM LIFTS AND STAIRWAY CHAIRLIFTS

The amendments to the 2017 edition of the ASME Safety Standard for Platform Lifts and Stairway Chairlifts are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the sections of the Safety Standard for Platform Lifts and Stairway Chairlifts to which the amendments refer.

23.76.1.1.3 Application.
Amend the definition of “Application” to read as follows:
“This Standard applies to new installations only, except sections 10 and 11, which apply to new and existing installations.”

23.76.1.3 Definitions-machine, driving.
Amend section 1.3 by adding the following definition:

“chained-hydraulic driving machine: a hydraulic driving machine in which the plunger or piston is connected to the platform with roller chains and sprockets. It includes the cylinder, the plunger or piston, and multiplying sprockets, if any, and their guides.”

23.76.1.3 Definitions-installation placed out of service.
Amend the definition of “Installation, placed out of service” to read as follows:

“an installation whose power feed lines have been disconnected from the machine disconnect switch, whose suspension means, driving belts, etc. have been removed from the premises, whose car and counterweight rests at the bottom of the runway, whose pressure piping has been disassembled and a section removed from the premises, and whose hoistway doors are permanently barricaded or sealed in the closed position on the runway side, except for the bottom landing door/gate which can be sealed or barricaded on the outside of the runway with a permanent and tamper proof means.”

23.76.2.1.1.7 Runway Enclosure Provided.
Amend section 2.1.1.7 by adding the following sentence to the end of the section:

“Running clearance between platform enclosure walls and the runway enclosure walls, vertical face of the machine housing, or other rigid surfaces shall not exceed 75mm (3 in.) when the open space is of a width 300mm (12 in.) or greater.”

23.76.2.3 Driving Means and Sheaves.
Amend section 2.3 by adding the following:

“(l) chained-hydraulic”

23.76.5.3 Driving Means and Sheaves.
Amend section 5.3 by adding the following:

“(l) chained-hydraulic”

23.76.10.1.2 Periodic Inspections and Tests.
Amend section 10.1.2 by replacing sub-sections 10.1.2.1 through 10.1.2.3 with the following:

“The owner or the owner’s authorized agent shall have all of the periodic tests required by 10.3 performed by Lift personnel, as defined in 1.3 of the A18.1-

2017. All periodic tests required by 10.3 shall be permitted to be witnessed by the Lift personnel. Periodic test results shall be reviewed for compliance by a Municipality of Anchorage (MOA) Elevator Inspector during their routine inspections required by 10.2. The Lift personnel shall record the test results on the approved MOA A18.1-2017 periodic test form. The MOA A18.1-2017 periodic test form shall be placed on the lower exterior of the lift tower (if the lift is a vertical platform lift), or adjacent to the top or bottom ends of the lift (if the lift is an inclined platform lift or stairway chairlift) for review by the MOA Elevator Inspector during their routine inspections required by 10.2."

23.76.10.2 Routine Inspections and Tests.
Amend the title and language of section 10.2.1 to read as follows:

"Inspection and Test Periods. The routine inspections and tests of sections 2 through 4 lifts (lifts installed in locations other than in or at a private residence) shall be made at intervals not longer than 24 months."

23.76.10.3.1.7 Slack-Rope Device on Roped-Hydraulic Machines.
Amend the title and language of section 10.3.1.7 to read as follows:

"Slack-Rope or Slack-Chain Device on Roped-Hydraulic and Chained-Hydraulic Machines. Slack-rope or slack-chain devices for roped-hydraulic or chained-hydraulic lifts will be tested for conformance by lowering the platform or blocking and creating slack rope or chain causing the device to operate. The slack rope or chain can also be obtained by operation of the safety during the annual safety test."

23.76.10.3.3. Ropes.
Amend the first sentence in section 10.3.3.4 to read:

"Ropes or chains used on roped-hydraulic or chained-hydraulic lifts shall be inspected."

23.76.11.1.2(c) Written Maintenance Program (WMP/MCP).
Amend section 11.1.2(c) to read:

"(c) a procedure for checking the operation of the lift to be conducted at intervals not greater than weekly by authorized personnel."

23.76.11.3.1 On-Site Documentation.
Amend section 11.3.1 by adding subsection (e) as follows:

"(e) for lifts that have a runway enclosure, the required on-site documentation logs shall be kept outside the tower but within the lower end of runway enclosure, so that they are available to lift and inspection personnel, but not to the general public (one-year and five-year test forms shall still be in their own plastic sleeve on the lower exterior of the lift tower, per local amendment to section 10.1.2, and the test forms shall not be covered up by the written maintenance program logs). For lifts that have no runway enclosure, the required on-site documentation shall be kept in a secure on-site location

chosen by the building owner or their representative, so that the written documents are available to lift and inspection personnel, but not where they are available to the general public. For those documents kept in a secure-on-site location, instructions to locate the written documents shall be placed on the lower exterior of the lift tower adjacent to the test forms, if the lift is a AO Updating Electric, Elevator, Lift Codes Page 23 of 23 vertical platform lift, or adjacent to the top or bottom ends of the lift adjacent to the test forms, if the lift is an inclined platform lift or stairway chairlift ."

CHAPTER 23.85 LOCAL AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE 2018 EDITION

23.85.R100 Local amendments to the 2018 International Residential Code.

The amendments to the 2018 International Residential Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the section of the 2018 International Residential Code to which the amendments refer, i.e., 23.85.R310 refers to amendments to Section R310 of the 2018 International Residential Code.

23.85.R103 through R114 Administration and Enforcement
Delete Sections R103 through R114. See the Anchorage Administrative Code, Chapter 23.10 for Administrative Provisions, Fees, and Special Inspections.

23.85. Table R301.2(1) - Climatic and Geographic Design Criteria.
Add the following information to Table R301.2(1):

Ground snow load	50 PSF - Equates to 40 psf roof snow load
Wind Speed	See 23.85. Figure R301.2(5)A
Topographic effects	Per site
Special Wind Region	Per site
Windborne Debris Zone	No
Seismic Design Category	D 2
Subject to damage from: Weathering	Yes, severe
Frost Line Depth	42" for warm foundation, 60" for cold foundation
Termite	No
Winter Design Temperature	-7 Degrees Note this ASHRAE 99% design temperature may not be appropriate for all areas within the MOA.
Ice Barrier Underlayment Required	Yes
Flood Hazards	Yes, see flood hazard maps
Air Freezing Index	3500
Mean Annual Temperature	35°F

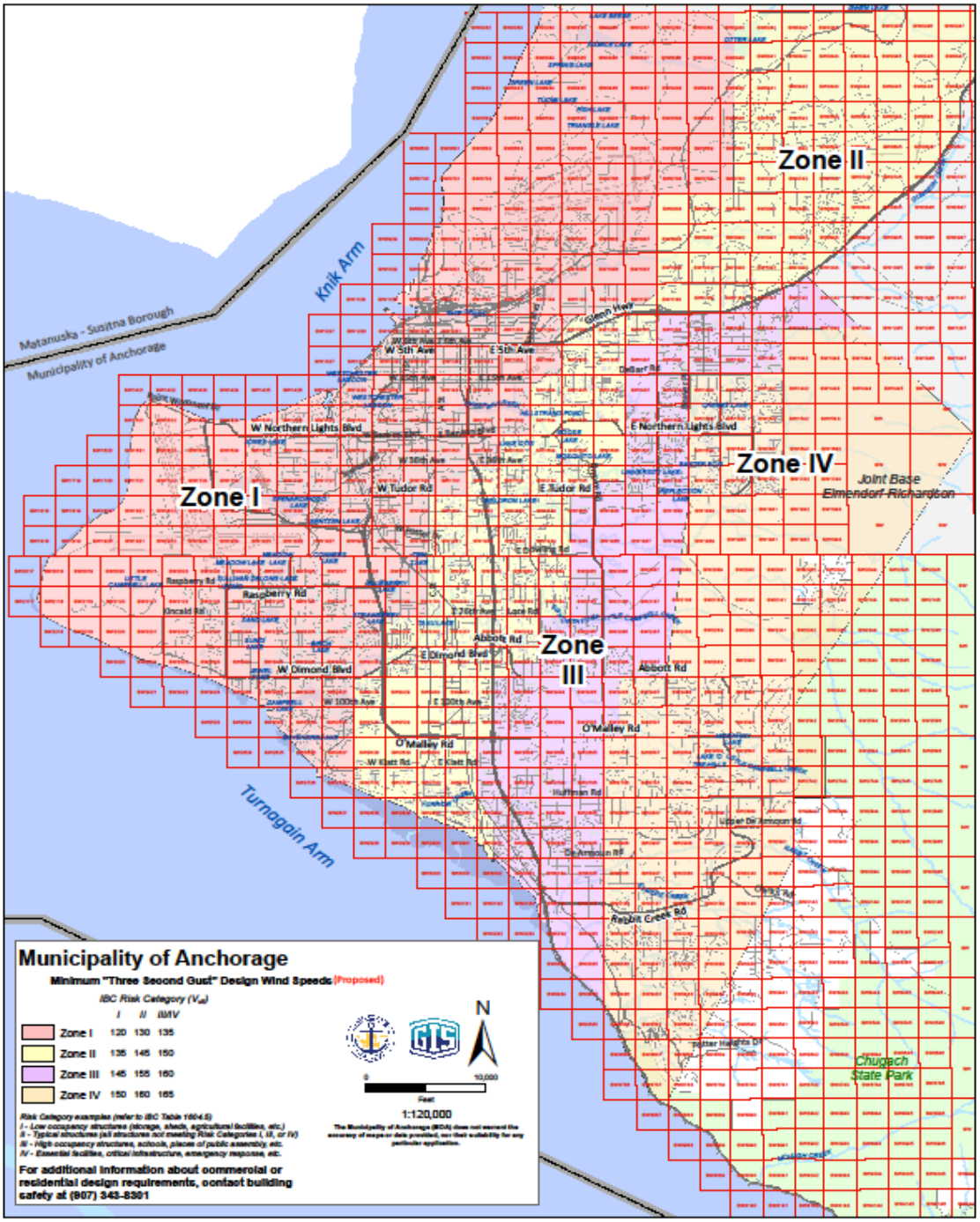
Manual J Design Criteria:

Elevation	Less than 1000 ft.
Latitude	61 Degrees N
Winter Heating	-7 Degrees (ASHRAE 99%)
Summer Cooling	72 Degrees
Altitude correction factor	1.0
Indoor design temperature	70 Degrees
Heating temperature difference	84 Degrees
Wind Velocity heating	15
Wind velocity cooling	7.5
Coincident wet bulb	58 Degrees
Daily range	M

23.85. Figure R301.2(5)A - Basic wind speeds for 50-year mean recurrence interval.

Amend by deleting Figures R301.2(5)A and R301.2(5)B, and replace with the following:

Anchorage Bowl "Three Second Gust" Wind Zone Map:



23.85.R301.2.1.1 Wind limitations and wind design required.

Amend the first paragraph by deleting, "where wind design is required in accordance with Figure R301.2(5)B", and replace with, "where the ultimate wind speeds are equal to or exceed 145 mph per figure 23.85.Figure R301.2(5)A

Under exceptions add exception 4:

4. Single story accessory structures 600 square feet or less in gross floor area.

Amend paragraph after exceptions by deleting: "In regions where wind

design is required in accordance with Figure R301.2(5)B,", and replace with "Where the ultimate wind speeds are equal to or exceeds 145 mph per figure 23.85.Figure R301.2(5)A,".

23.85.Table R302.1(1) Exterior walls.
Under the "Projections" row and "Minimum Fire Separation Distance" column, replace 5 feet with 3 feet (two occurrences).

23.85.R302.2.3 Continuity (townhouse fire-resistant construction).
Add the following subsections:

R302.2.3.1 Horizontal continuity. The fire resistance rated dwelling unit separation wall or walls shall be continuous from exterior wall to exterior wall and shall terminate at the interior surface of the exterior sheathing or siding.

R302.2.3.2 Exterior walls. Where the fire resistance rated wall assembly separating townhouses intersects the exterior wall, an (assumed) imaginary lot line shall extend outward from the intersection. The location of the imaginary lot line in relation to the exterior walls shall be such that the exterior wall fire resistance rating and opening protection meet the requirements set forth in section R302.1. Where the exterior walls on each side of the townhouse's separation walls form an angle equal to or greater than 180 degrees, exterior wall and opening protection is not required.

R302.2.3.3 Horizontal projecting elements. The fire resistance rated dwelling unit separation wall or walls shall extend to the outer edge of horizontal projecting elements such as balconies, roof overhangs, canopies, marquees, and similar projections that are within 4 feet of the separation wall.

Exceptions:
1. Horizontal projecting elements without concealed spaces.
2. Noncombustible horizontal projecting elements.

23.85.R302.2.4 Parapets for townhouses.
Add the following sentence to the exception:
The 4-foot dimension shall be measured from the centerline of the townhouse separation.

23.85.R302.2 Townhouses (fire resistant construction).
Add the following section:
R302.2.7 Common wall insulation. The dwelling unit separation wall shall be fire blocked at ceiling line and insulated in the attic directly above the fire blocking to the minimum required attic R-value.

23.85.R302.3 Two-family dwellings.
Add to the end of the paragraph:
A detached single family dwelling unit with ADU (Accessory Dwelling Unit) is considered to be a two-family dwelling, unless the ADU communicates freely with the single-family dwelling unit.

Add the following section:
R302.3.2 Common wall insulation. The dwelling unit separation wall shall be fireblocked at ceiling line and insulated in the attic directly above the fireblocking to the minimum required attic R-value.

23.85.R302.5.1 Opening protection.
Add to the end of the paragraph:
Doors shall have smoke gaskets along the top and sides and an adjustable threshold or sweep. Access from a garage to the crawlspace shall be in a wall and not through the floor. Access from a garage to the crawlspace shall be protected in accordance with this section.

23.85.Table R302.6 Dwelling-Garage Separation.
Amend table by replacing all references to 1/2-inch gypsum board with 5/8-inch Type X gypsum board.

23.85.R302.13 Fire protection of floors.
Add the following sentence to the end of exception 2:
Direct vent, sealed-combustion fuel fired appliances shall be allowed without floor protection.

23.85.R303.1 Habitable rooms.
Add exception #4 as follows:
4. Theater rooms are exempt from the ventilation requirements of this section.

23.85.R303.3 Bathrooms.
Delete section R303.3. Reference the adopted plumbing code.

23.85.R307 Toilet, bath and shower spaces.
Delete section R307. Reference the adopted plumbing code.

23.85.R308.6.9 Testing and labeling.
Add the following sentence to end of paragraph:
In lieu of labels adhered to skylights, literature provided on site is acceptable to demonstrate skylights meet the criteria of this section.

23.85.R310.1 Emergency escape and rescue opening required.
Add exception #3 as follows:
3. Where windows are provided as a means of escape or rescue in a basement, the sill height shall be measured from the finished floor to the bottom of the clear opening and shall be no more than 48 inches above the finished floor.

23.85.R311.7.7 Stairway walking surface.
Add the following sentence to the end paragraph:
Exterior landings at grade can slope up to 5% in either direction.

23.85.R313 Automatic fire sprinkler systems.
Delete the text in section R313 and replace with the following:

The installation of a fire sprinkler system requires a fire systems permit in accordance with the International Fire Code.

23.85.R317.1 Location required.
Amend first sentence by deleting the words "naturally durable wood or".
Add the following sentence to the end of item number 5:
Measures should be taken to mitigate frost heaving if wood siding or sheathing has less than six-inch clearance.

23.85.R317.1.1 Field treatment.
Add the following sentence to the end of the paragraph:
This requirement only applies to exposed glue-laminated timbers in section R317.1.5 and AWW foundation walls.

23.85.R324.6 Roof access and pathways.
Add the following exception:
4. Roof access, pathways and setback requirements do not apply to photovoltaic systems installed on a single roof plane of a building having multiple roof planes where such roof plane is not located below or provides access to an emergency escape and rescue opening.

23.85.R328 Moisture control in insulated assemblies.
Amend Chapter 3 by adding the following section:
SECTION R328 MOISTURE CONTROL IN INSULATED ASSEMBLIES
R328.1 Moisture control strategies. The building design shall incorporate both interior and exterior moisture control strategies to prevent the accumulation of moisture within insulated assemblies. Exterior moisture control shall comply with Chapters 7 and 9. Interior moisture control shall comply with section R328.1.1. Should insulated assemblies become wet or start out wet, the design strategy shall allow the assembly to dry to either the exterior or interior. Materials shall be allowed to dry prior to enclosure.
R328.1.1 Interior moisture control in insulated assemblies. Methods to control moisture accumulation within insulated assemblies from the building interior shall address both vapor diffusion and air leakage. Vapor diffusion shall be controlled by the installation of a class I or class II vapor retarder on the warm-in-winter side of the insulation. The vapor retarder shall be continuous, and seams shall be lapped 6 inches minimum. Penetrations and seams shall be sealed with approved vapor retarder compatible tape or sealant to control air leakage. Where a vapor retarder is located in dropped ceilings adjacent to attics, the vapor retarder continuity shall be maintained above the dropped ceiling and shall be fully covered with a solid material such as gypsum wallboard, plywood, oriented strand board or other similar material.
Exceptions:
1. A vapor retarder is not required in construction where moisture or its freezing will not damage materials.
2. A vapor retarder is not required on crawlspace walls designed to dry to the interior.
3. A vapor retarder is not required on basement walls designed to dry to the interior. Such walls shall be insulated with one of the following

methods:

a. Two inches minimum of EPS or XPS foam plastic insulation applied directly against the exterior of the foundation wall, and one inch of EPS, XPS or polyisocyanurate (PIR) applied between the interior surface of the foundation wall and framing. The framing cavity may be insulated with any type of approved insulation.

b. Three inches minimum of two-pound density closed cell foam plastic insulation applied to the interior side of the foundation wall with one inch minimum of insulation between any wall framing and the foundation wall.

c. Four inches minimum of EPS or XPS foam plastic insulation applied directly against the exterior of the foundation wall.

d. Equivalent moisture resistant system approved by the building official.

4. A vapor retarder is not required at cantilevered floor assemblies where the floor decking consists of nominal ¾ inch plywood, OSB or other approved material having a perm rating meeting the class II requirements. Joints shall be sealed.

5. The rim joist does not require a vapor retarder.

6. Notwithstanding exception 3a, up to one-third of the total installed insulation R-value may be installed on the warm side of the vapor retarder. This exception applies only when the daily average indoor relative humidity is maintained below 35 percent during the heating months of November through March.

7. A class III vapor retarder may be used on walls and roof insulated to a minimum value of R-21 with spray foam having a minimum density of 2 pounds per cubic foot.

23.85.R401.1 Application.

Add the following situation to the exception:

3. Repair of wood foundations with a crawlspace shall be per 23.85.Figure R403-34.

23.85.R401.3 Drainage.

Add the following sentence to the end of the paragraph:

There shall not be a net increase in surface drainage across property lines. Approved discharge locations shall include street gutters, drainage easements, ditches, or other approved locations. Surface runoff may be retained on site or follow existing drainage patterns to prevent adverse impact to neighboring properties.

23.85.R401.4 Soil tests.

Add the following subsection:

R401.4.3 Areas of high and very high Seismically induced ground failure susceptibility. The construction of a dwelling or accessory structure in seismically induced ground failure zones 4 or 5 (as delineated on the Municipality of Anchorage, Geotechnical Hazard Assessment Map) requires a site-specific geotechnical investigation in accordance with section 1803 of the 2018 IBC. The site-specific geotechnical investigation shall be prepared

by a professional civil engineer, qualified in the field of Geotechnical Engineering, registered in the State of Alaska. The structure shall be designed and sealed by a structural engineer registered in the State of Alaska.

Exceptions:

1. A geotechnical report is not required for an addition to a detached single-family residence or duplex where all the following conditions apply:
   a. The footprint of the addition does not exceed the footprint of the existing building;
   b. The addition does not increase or exceed the number of stories of the existing building; and
   c. Structural analysis demonstrates that new foundation elements can match existing.
2. A geotechnical report is not required for a detached accessory structure less than 400 square feet in area.
3. Unless required by a plat note, a registered engineer does not need to design either the structure or its foundation if the geotechnical report is based on site-specific soils information where all the following are true:
   a. Slope Stability: A submitted pseudo-static slope stability analysis has a minimum factor of safety of at least 1.10 for seismic loading conditions in accordance with AMC 23.15.1803.5.11.
   b. Liquefaction: The potential for liquefaction and soil strength loss evaluated in terms of peak ground acceleration, earthquake magnitude, and duration is unlikely.
   c. Lateral Spreading and Pressure Ridges: The potential for earthquake induced lateral spreading and pressure ridges is unlikely.

23.85.R402.1 Wood foundations.

Add the following:

Wood foundations are not allowed on new construction. Repair of existing wood foundations shall be in accordance with this code.

23.85.R403.1 Footings - General.

Replace R403.1 through R403.1.3.6 and associated figures and Tables with the following:

1. Definitions:
   a. WARM FOUNDATION: Any foundation where the temperature of the bearing soils is normally maintained above freezing;
   b. COLD FOUNDATION: Any foundation where the temperature of the bearing soils is normally subjected to freezing.
2. Foundations shall be constructed as shown in Table 23.85.R403-16 and Figures 23.85.R403-25, 23.85.R403-29, 23.85.R403-31, 23.85.R403-34 (repair only), and 23.85.R403-37 or foundations shall be designed under the provisions of the IBC. Footings and foundations shall be constructed of masonry or concrete. Footings of concrete and masonry shall be of solid material. Foundations supporting wood shall

extend at least 6 inches above the adjacent grade. Unless other recommendations are provided by a foundation investigation report, footings shall meet the following requirements:

a. Minimum footing depths shall be indicated in 23.85.Table R403.1. Footings shall bear on undisturbed natural inorganic soil, or suitably compacted fill.

b. Cast-in place concrete piers shall be founded at a depth suitable for structural support or as indicated in 23.85.Table R403.1, whichever is greater. Connecting grade beams between piers on perimeter walls of warm buildings shall extend at least 36 inches below ground surface and shall be protected from frost heave. The potential for frost heave below grade beams of cold structure shall be accounted for in the design of these elements.

c. All reinforcement in foundation walls shall be grade 60.

d. All masonry shall be solid grout, Type M or S Mortar and mechanically consolidated.

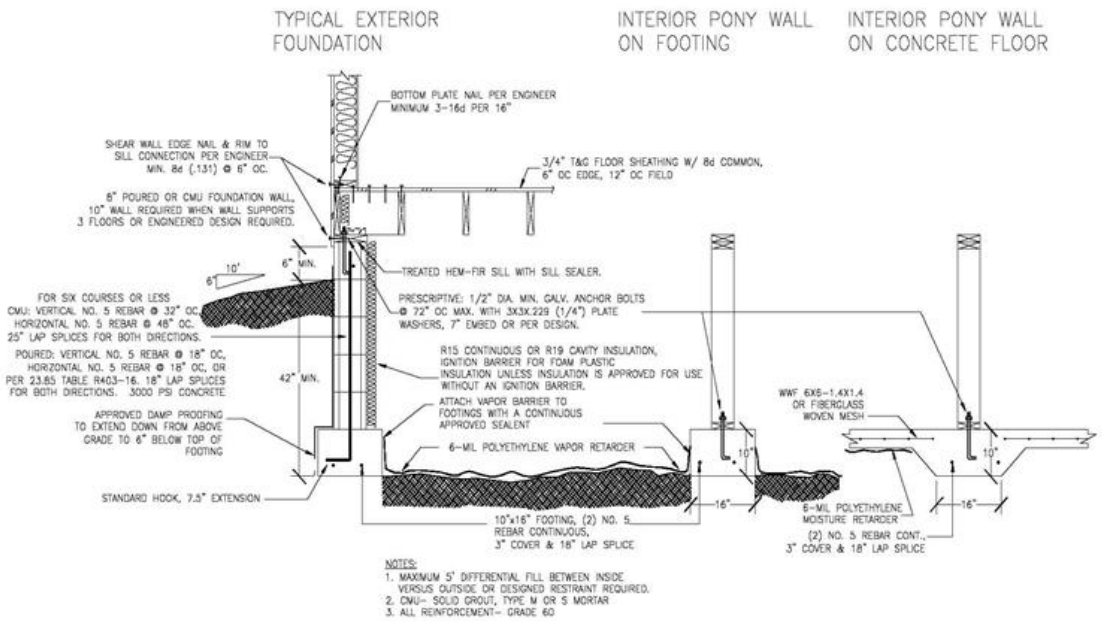
23.85.Table R403-16 - Reinforced concrete.

1. Reinforced concrete walls shall be anchored to all floors and roofs in accordance with section 1604.8.2 of the International Building Code.
2. All intersecting reinforced concrete walls shall be tied together. (ACI 318-14; 11.2.4.1)
3. All interior and exterior concrete walls shall be reinforced. Minimum yield strength - Grade 60. (ACI 318-14; 11.6)
4. All structural members framing into or supported on concrete walls or columns shall be anchored. (ASCE 7-16; 1211)
5. All deformed reinforcing bars shall meet or exceed one of the listed ASTM requirements. (ACI 318-14; 20.2.1.3)
6. Concrete in seismic zone D shall have a minimum compressive strength of 3000 psi for severe exposure. (See IBC 1808.8.6; ACI 318-14; table 19.3.2.1)
7. The following minimum reinforcement requirements shall apply to all below grade concrete walls (i.e. basement walls and crawlspace walls). This reinforcing does not apply to above grade walls, which must be designed in accordance with the requirements of IBC.

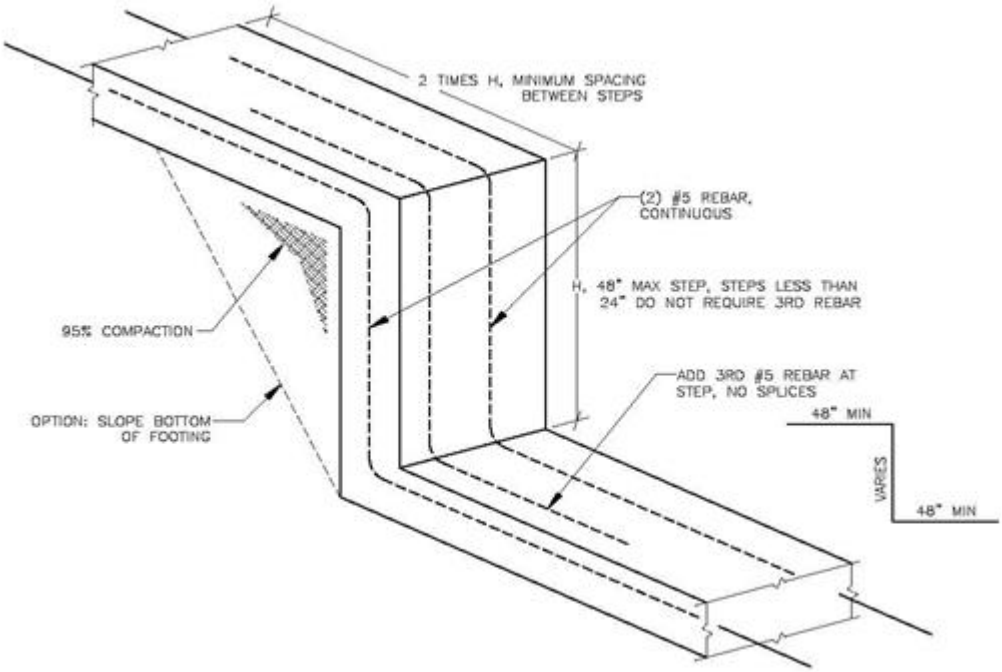
MINIMUM REINFORCEMENT FOR CONCRETE WALLS
(Horizontal and Vertical Spacing)

Width of Wall	#5 Bar	#4 Bar
6" Walls	#5 @ 18" O.C. hor.	#4 @ 16" O.C. hor.
	#5 @ 18" O.C. vert.	#4 @ 18" O.C. vert.
8" Walls	#5 @ 18" O.C. hor.	#4 @ 12" O.C. hor.
	#5 @ 18" O.C. vert.	#4 @ 18" O.C. vert.
10" Walls	#5 @ 15" O.C. hor.	#4 @ 10" O.C. hor.
	#5 @ 18" O.C. vert.	#4 @ 16" O.C. vert.

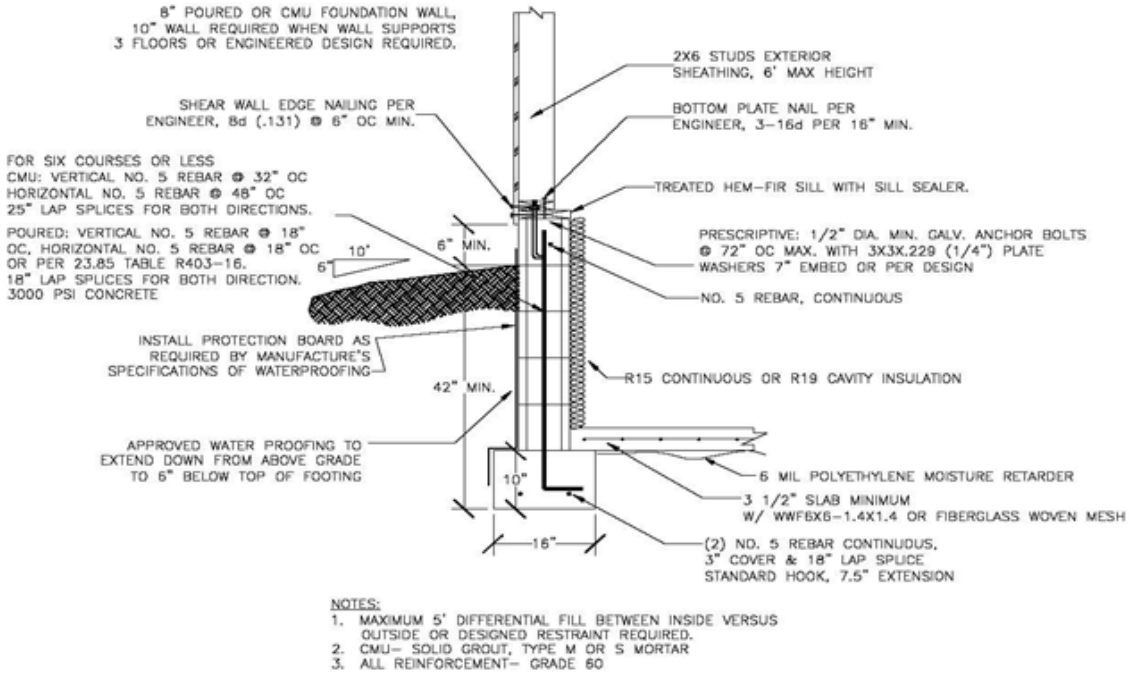
23.85. Figure R403-25 - Typical foundation and footing details.



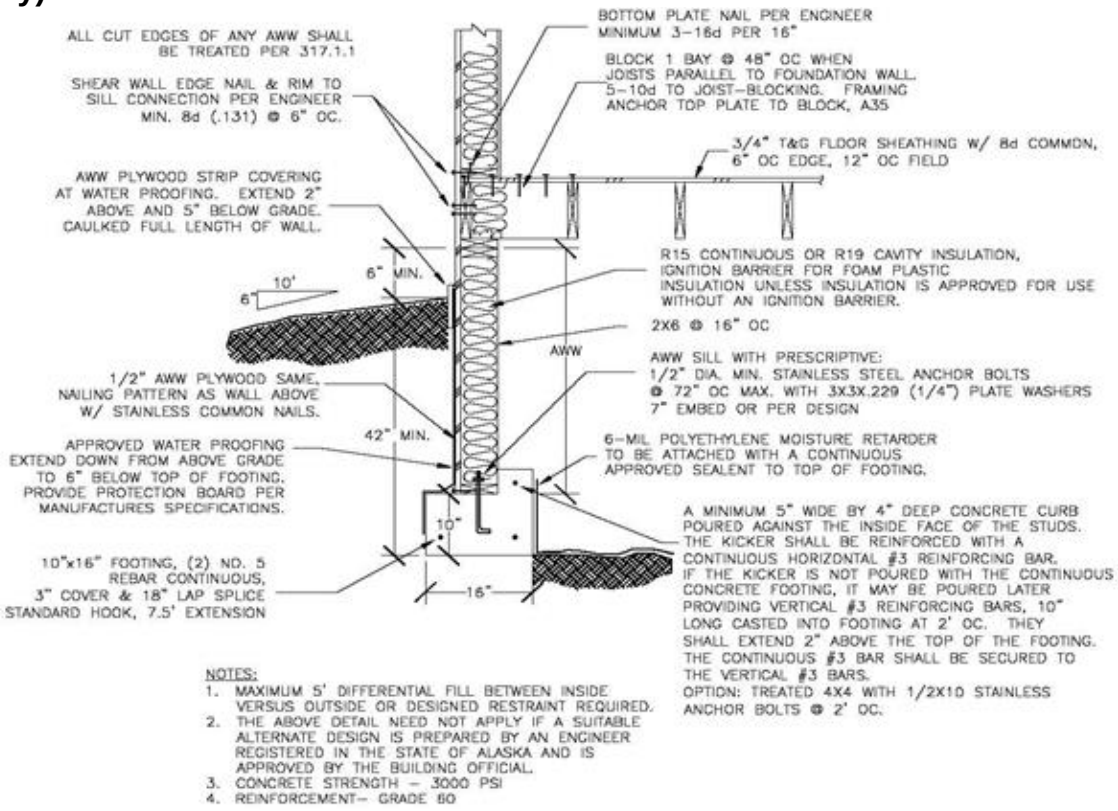
23.85. Figure R403-29 - Typical step footing.



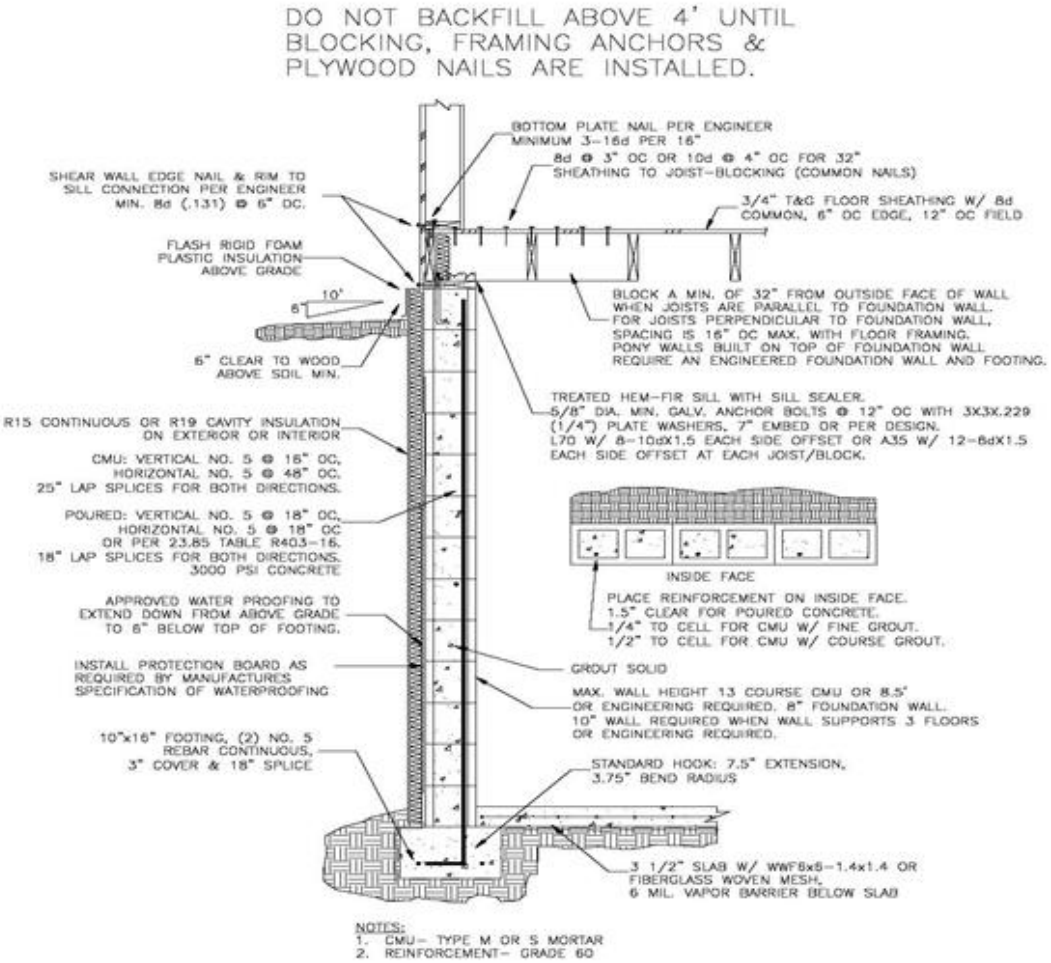
23.85. Figure R403-31 - Typical pony wall for split level.



23.85. Figure R403-34 - All weather wood foundation (For use in repairs only).



23.85. Figure R403-37 - Typical basement foundation wall.



23.85.Table R403.1 - Footing depths.

Foundation Type	Minimum Footing Depth (Inches)		
	Warm Foundation		Cold Foundation (3)(4)
Perimeter Footing (1)	42	All measurements are from top of finished grade	60
Interior or Interior Isolated Spread Footings (2)			60
Cast-in-Place Concrete Pier	42		120 (5)

NOTES TO TABLE:

(1) Dimension indicated is from bottom of footing to adjacent exterior grade. Basements or crawlspace walls supporting more than five feet differential fill on opposite faces shall be restrained as necessary against lateral movement.

(2) Dimension indicated is from bottom of footing to nearest adjacent

grade.

(3) Exterior landings, that are not the primary entrance, and not attached to the building, and not larger than 50 square feet and not greater than 72 inches above grade may be supported on near surface pier blocks founded on adequate soils. Bearing materials shall meet the other provisions of this code. The potential for and the effects of frost heave shall be considered.

(4) The minimum footing depths may not be adequate for frost susceptible soils. Cold footings shall be founded below the frost line or be protected from freezing with insulation or other appropriate means. In addition, provisions shall be made to resist uplift forces due to frost jacking on the side of cold foundations.

(5) Cast-in-place concrete piers installed in non-frost-susceptible material may be 60 inches.

23.85.R403.1.4.1 Frost protection.

Revise method #1 to reference 23.85.Table R403.1 in lieu of Table R301.2(1).

23.85.R403.2 Footings for wood foundations.

Delete paragraph and replace with the following:

Wood foundations are not allowed on new construction. Repair of wood foundations shall be in accordance with 23.85.Figure R403-34.

23.85.Table R403.3(1) - Minimum Footing Depth and Insulation Requirements for Frost-Protected Footings in Heated Buildings

Amend footnote (c) as follows:

c. Insulation shall be expanded polystyrene (EPS) or extruded polystyrene (XPS) manufactured in accordance with ASTM C578. The following R-values shall be used to determine insulation thickness required for this application:

i. Type II EPS: R-3.2 per inch vertical and R-2.6 per inch horizontal;

ii. Type IX EPS: R-3.4 per inch vertical and R-2.8 per inch horizontal;

iii. Type X, IV, VI, VII and V XPS: R-4.5 per inch vertical and R-4.0 per inch horizontal.

For EPS insulation Types not listed, the R-value used to determine insulation thickness shall be 80 percent of the manufacturer listed R-value @75F for vertical insulation and 67 percent of the manufacturer listed R-value @75F for horizontal insulation. Reference ASCE Standard 32-01, Appendix A.

Delete footnotes (d) and (e).

23.85.Table R403.3(2) Air-Freezing Index for U.S. Locations by County.

Add Anchorage to the "3500" column in the Alaska row.

23.85.R404.1 Concrete and masonry foundation walls.

Delete sections R404.1.1 through R404.1.8.
Delete Tables R404.1.1(1) through R404.1.1(4), and R404.1.2(1) through R404.1.2(9), and Figure R404.1.5(1).
See 23.85.R403.1.

23.85.R404.2 Wood foundation walls.
Delete section R404.2. Wood foundations are not allowed on new construction. Existing wood foundations shall be repaired in accordance with 23.85.Figure R403-34 All Weather Wood Foundation.

23.85.R404.3 Wood sill plates.
Delete paragraph and substitute with the following:
Wood sill plates shall be minimum 2-inch by 6-inch and shall be bolted to the foundation or foundation wall with not less than 10-inch by ½-inch nominal diameter galvanized steel bolts embedded at least 7 inches into the concrete or in fully grouted cells of reinforced masonry and spaced not more than 6-feet apart. There shall be a minimum of two bolts per piece with one bolt located within 12 inches of each end of each piece. Wood sill plates must be a treated material specified in Section R317.1.

23.85.R404.6 Insulating concrete form (ICF) foundation walls.
Amend section 404 by adding the following subsection:
R404.6 Insulating concrete form (ICF) foundation walls. Only flat insulating concrete form (ICF) wall systems shall be used with reinforcement per 23.85.Table R403-16.

23.85.R405.1.1 Precast concrete foundation.
Delete section R405.1.1.

23.85.R406.1 Concrete and masonry foundation dampproofing.
In the first sentence beginning with the word "enclose", replace the wording in the rest of the sentence with the following: "crawl space walls 40 inches or less in height shall be damp-proofed from above grade to 6 inches below the top of the footing."
Add exception #2 as follows:
2. Foundation walls backfilled on both sides, such as those used in conjunction with a "slab on grade", do not require damp-proofing.

23.85.R406.2 Concrete and masonry foundation waterproofing.
Replace the first sentence with the following:
Exterior foundation walls that retain earth and enclose habitable or usable interior spaces and floors below grade shall be waterproofed from above grade to 6 inches below the top of the footing.
Add exception #2 as follows:
2. Foundation walls backfilled on both sides, such as those used in conjunction with a "slab on grade" do not require waterproofing.

23.85.R406.3 Dampproofing for wood foundations.
Replace "dampproofing" in the heading and body of section with "waterproofing".

23.85.R406.3.2 Below grade moisture barrier.
Revise R406.3.2 to read as follows:
Approved waterproofing shall be applied over the below-grade portion of exterior basement and crawlspace walls prior to backfilling. 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. The approved waterproofing shall extend down from above grade to six inches below the top of the footing.

23.85.R406.4 Precast concrete foundation system dampproofing.
Replace paragraph with the following:
See Section 23.85.R406.1 and 23.85.R406.2 for requirements.

23.85.R407.2 Steel column protection.
Replace paragraph with the following:
Exterior surface of steel columns exposed to the elements shall be protected with a rust inhibitive paint, except for corrosive-resistant steel and steel treated with coatings to provide corrosion resistance.

23.85.R506.2.3 Vapor retarder.
Delete item #1 under the exception.

23.85.R602.3.2 Top plate.
Delete the exception.

23.85.R602.6 Drilling and notching of studs.
Amend section by adding item 3 as follows:
3. All studs in walls containing plumbing drains and vents shall be a minimum of 6-inch nominal width or structurally sheath one side when 4-inch nominal width studs are used.

23.85.R702.7.1 Class III vapor retarders.
Delete section R702.7.1. Reference 23.85.R328.

23.85.R703.2 Water-resistive barrier.
Amend the first sentence by starting the sentence with:
"Though not required by the Municipality of Anchorage, when installed or when required by the exterior wall covering manufacturer, apply…".
Amend the first sentence by adding the word "permeable" between the "of" and "No. 15".

23.85.R703.4 Flashing.
Renumber item 1.3 to 1.4 and add 1.3 as follows:
1.3. Where flashing cannot be installed per one of the above referenced

methods, the exterior opening shall be caulked and sealed with exterior grade, paintable caulk, a minimum of a 3/8-inch bead.

23.85.R703.5.2 Panel siding.
Add the following to the end of the paragraph:
Exterior type plywood siding with a grooved pattern shall not be installed horizontally and used as the weather resistant siding.

23.85.R802.2 Design and construction.
Add a sentence to end of paragraph as follows:
The minimum depth from the roof sheathing to the wall top plate at exterior side of the exterior wall shall be 11¼ inches.

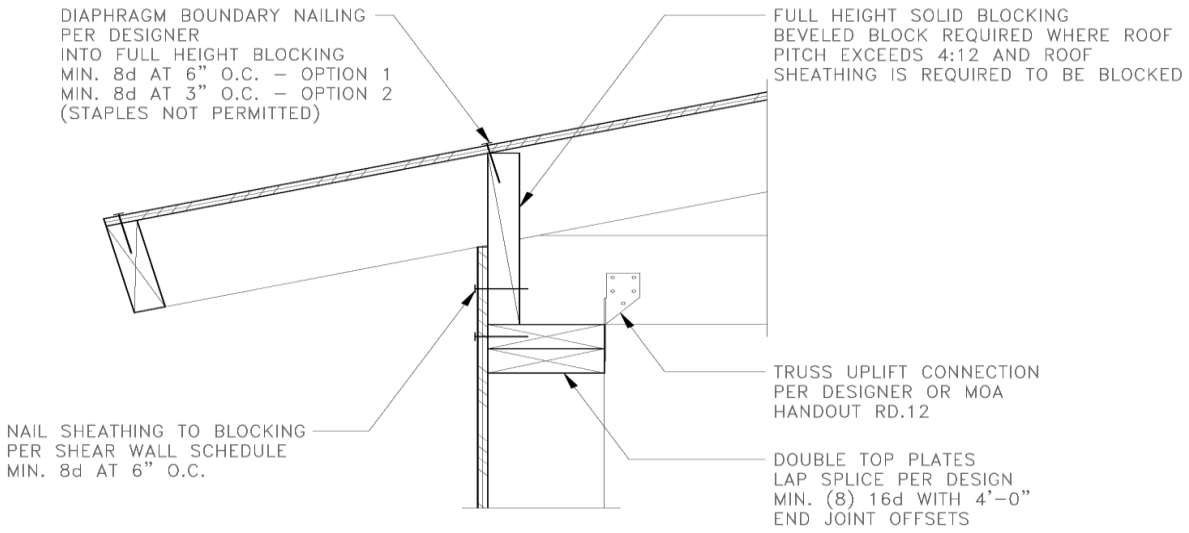
23.85.R802.10.1 Truss design drawings.
Amend first sentence by deleting the words: "and approved prior to installation."

23.85.R802.10.2 Design.
Add the following sentence to end of paragraph:
Minimum depth of truss at exterior wall plate shall be 11¼ inches at exterior side plate.

23.85.R802.12 Wood frame roof attachment at eave - blocking.
Amend section R802 by adding the following section:
R802.12 Wood frame roof attachment at eave blocking. The following 5 options are an acceptable means for transferring roof diaphragm shear forces to exterior walls. Alternative designs based on calculations for shear transfer to the exterior walls may be used in lieu of these details. Regardless of the method selected, roof ventilation shall comply with section R806.

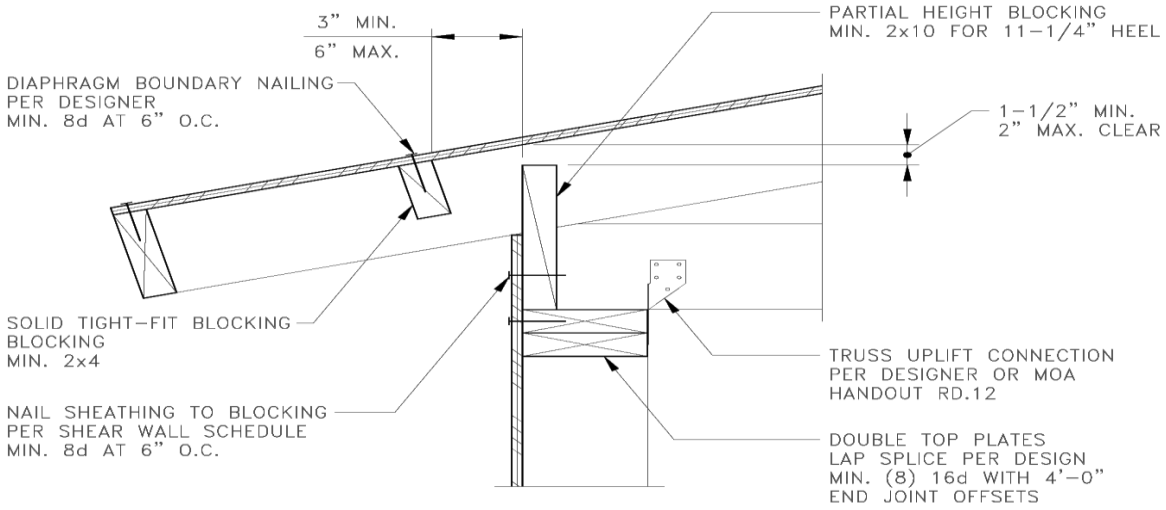
OPTION 1
Full-height blocking in every truss space with 3 or more 2-inch diameter or larger holes located near the top of block.

OPTION 2
Full-height blocking in every other truss space with 3 or more 2-inch diameter or larger holes located near the top of block, with partial height blocking in alternate spaces. Partial height blocking shall allow a clear air gap of between 1½ to 2 inches. Minimum size partial height block is 2×10 where truss heels are 11¼ inches high.



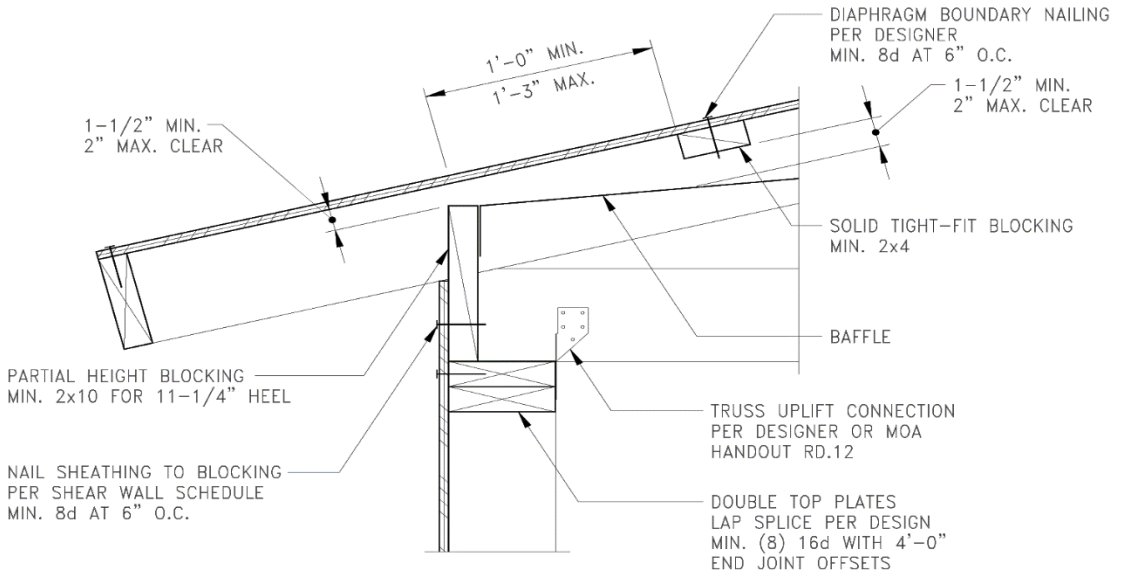
OPTION 3

This partial height blocking configuration may be used where trusses have of 11¼ inch heels at the wall line. Blocking is required in every truss space.



OPTION 4

This partial height blocking configuration may be used where diaphragm shear is less than 95 plf. Blocking is required in every truss space.



OPTION 5

For prescriptively braced wall panels and engineered shear wall designs for one- and two-family dwellings and townhomes, this configuration, as described in R602.10.8.2.2, may be used.

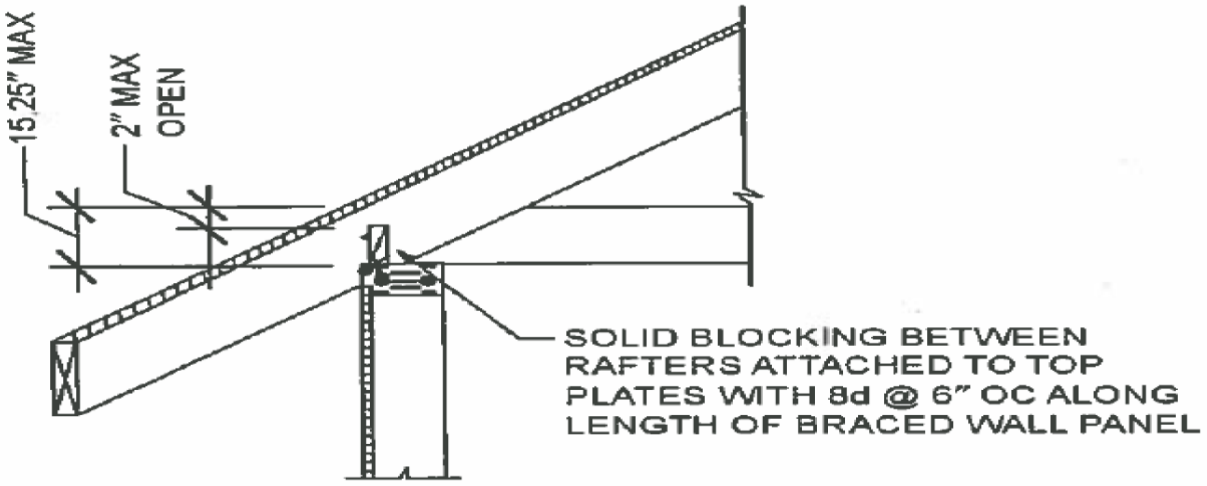


FIGURE R602.10.8.2(1)
BRACED WALL PANEL CONNECTION TO PERPENDICULAR RAFTERS

23.85.R806.2 Minimum vent area.

Add the following to the end of the paragraph:

At least 50 percent and not more than 80 percent of the required ventilating area shall be provided by ventilators located in the upper portion of the space. Upper ventilators shall be located no more than 3 feet below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided at the eaves. Where the location of wall or roof framing members conflicts with the installation of the upper ventilators, installation more than 3 feet below the ridge or highest point of the space

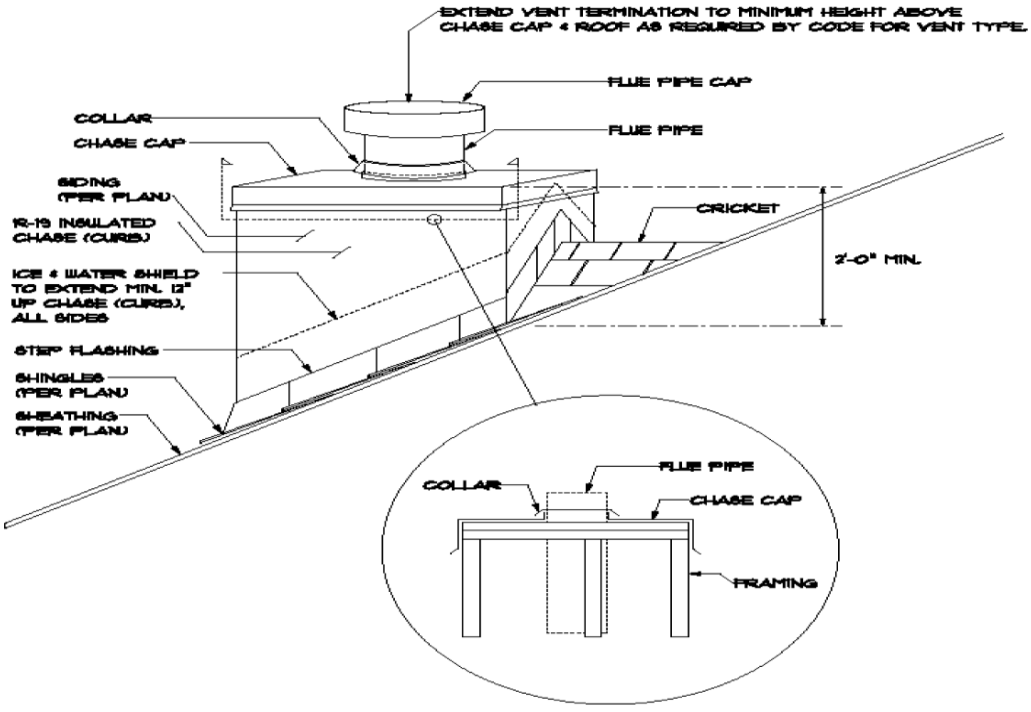
shall be permitted.

23.85.R806.5 Unvented attic and unvented enclosed rafter assemblies.
Delete section R806.5.

23.85.R807.1 Attic access.
Add the following to Section:
Attic access shall not be located in a room containing bathing facilities. Access may be located in closets with minimum depth of 23 inches and minimum width of 48 inches.

23.85.R903.1 General.
Add the following to the end of section:

1. All valleys shall have a modified bitumen ice barrier lapped eighteen inches minimum each side of valley centerline. No penetrations shall be located in required valley ice barrier.
2. All roof penetrations shall be located a minimum of six feet from valley centerline and four feet from the exterior wall line at the eave measured on a horizontal plane, excluding attic ventilation.
3. All roof penetrations shall extend above the roof surface a minimum of 24 inches, except attic ventilation.
4. Type B gas vents may penetrate the eave ice barrier area if installed within 24 inches, wood framed, R-19 insulated curb, measured on the ridge side of the roof. The ice barrier must extend up the curb a minimum of 12 inches on all sides. See detail below.



23.85.R903.4.2 Snow impact on neighboring lot.
Amend section R903.4 by adding the following subsection:
R903.4.2 Snow impact on neighboring lot. Snow from a structure shall not shed across property line.

23.85.R905.1.1 Underlayment.
Delete sections and tables and replace with the following:
Underlayment shall comply with ASTM D 226 Type I (No. 15 Asphalt Felt). For slopes 4V:12H and steeper underlayment shall be at least one layer installed with a 4-inch lap over the ice barrier. Each subsequent layer shall be lapped 4 inches vertically and two inches horizontally to shed water, continuing to the ridge, fastened sufficiently to hold in place.

23.85.R905.1.2 Ice barrier.
Replace section with the following:
An ice barrier shall be a self-adhering polymer modified bitumen sheet complying with ASTM D 1970. For slopes less steep than, but not including, 4V:12H, an ice barrier shall be used over the entire surface of the roof. No additional normal underlayment is required. For slopes 4V:12H and steeper an ice barrier shall extend from the lowest edges of all roof surfaces to a point at least 36 inches inside the exterior wall line of the building. The remainder of the roof surfaces may be covered with underlayment per 23.85.R905.1.1.

23.85.R905.2.2 Slope.
Replace “two units vertical” with “three units vertical”.

23.85.R905.2.8.2 Valleys (asphalt shingles).
Replace items 1, 2, and 3 with the following:
1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be not less than 24 inches wide and of any of the corrosion-resistant metals in table R905.2.8.2 installed over the required 36-inch wide self-adhering polymer modified bitumen underlayment complying with ASTM D 1970.
2. For open valleys (valley lining exposed) lined with one ply of mineral-surfaced roll roofing, complying with ASTM D 3909 or ASTM D 6380 Class M, 36" wide installed over the required 36" wide self-adhered polymer modified bitumen underlayment complying with ASTM D 1970.
3. For closed valleys (valley covered with shingles), valley lining of one layer of self-adhered polymer modified bitumen underlayment, minimum 36" wide, complying with ASTM D 1970 shall be permitted.

23.85.R905.2.8.3 Sidewall flashing.
Delete the words "continuous or" in the first sentence and the word "continuous" in the second sentence.

23.85.R905.2.8.5 Drip edge.
Add the following exception:
Exception: A 1x drip edge installed at the top of the fascia shall be permitted where the roof shingles overhang the 1x at least 1-inch.

23.85.R905.9.1 Slope (built-up roofs).
Delete the words:
"except for coal-tar built-up roofs, which shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope)."

23.85.R905.14 Sprayed polyurethane foam roofing.
Delete section R905.14.

23.85.R905.16.2 Deck Slope (photovoltaic shingles).
Replace “two units vertical” with “three units vertical”.

23.85.R1005.8 Insulation shield.
Add to the end of the paragraph:
If the manufacture recommendations does not require a clearance from insulation, an insulation thimble is not required.

23.85.N1101.5 Information on construction documents.
Delete section. Refer to Anchorage Administrative Code.

23.85.N1101.6 Defined terms.
Add the following terms:
AHFC. Alaska Housing Finance Corporation.

AK HERS Guidelines. AHFC Alaska Home Energy Rating System Guidelines.

AKWarm. AHFC approved home energy rating system computer-simulation software.

ASHRAE. The American Society of Heating, Refrigerating and Air-Conditioning Engineers.

BEES. AHFC Building Energy Efficiency Standard, established by the State of Alaska. BEES is comprised of the 2018 International Energy Conservation Code, ASHRAE Standard 62.2 2016, and the Alaska Specific Amendments.

23.85.N1101.10.4 Insulation product rating.
Add the following exception:
Exception: A mean testing temperature of 40^{o}F is acceptable for demonstrating compliance with this code.

23.85.N1101.13 Compliance.
Delete compliance option 3.

23.85.N1101.14 Certificate (Mandatory).
Replace first sentence with the following:
A permanent certificate shall be completed by the Energy rater, builder or other approved party and made available to the owner by posting it on a wall in the space where the furnace is located, a utility room, electrical panel or an approved location inside the building.
Add the following exception:
Exception: A certificate is not required for an addition, alteration, or repair to an existing building.

23.85.N1102.1.2 Insulation and fenestration criteria.

Add the following to end of paragraph:

Where constructing an assembly with both continuous exterior insulation and stud cavity insulation, a dew-point calculation is required to demonstrate condensation within the assembly is adequately addressed.

23.85.Table N1102.1.2 - Insulation and Fenestration Requirements by Component.

Replace the Table N1102.1.2 and footnotes with the following:

Table N1102.1.2 Insulation and Fenestration Requirements by Components Climate Zone 7	
Component	R-Value (Minimum)
Fenestration	3.1
Skylight	1.8
Ceiling	49
Wood Framed Wall	21
Mass Wall	21
Floor over Unheated Areas	38
Basement Wall	15 Continuous or 19 Cavity
Slab on Grade	10 for 36 inches vertically along perimeter
Slab – Heat in slab	10 Under entire slab and for 36 inches vertically along perimeter
Crawlspace wall	15 Continuous or 19 Cavity

23.85.Table N1102.1.4 - Equivalent U-Factors.

Replace the Table N1102.1.4 and footnotes with the following:

Table N1102.1.4 Equivalent U-Factors Climate Zone 7	
Component	Equivalent Maximum U-Factor or F-Factor[1]
Fenestration	U-0.32
Skylight	U-0.55
Ceiling	U-0.020
Wood Framed Wall	U-0.047
Mass Wall	U-0.047
Floor over Unheated Areas	U-0.026
Basement Wall	U-0.067 Continuous or 0.052 Cavity
Slab on Grade	F-0.51
Slab – Heat in slab	F-0.55
Crawlspace wall	U-0.067 Continuous or 0.052 Cavity

[1] Use of opaque assembly U-factors, C-factors, and F-factors from ANSI/ASHRAE/IESNA 90.1 Appendix A is permitted, provided the

construction complies with the applicable construction details from ANSI/ASHRAE/IESNA 90.1 Appendix A

23.85.N1102.2.1 Ceilings with attic spaces.
Replace section text with the following:
A minimum 11.25 inch truss heel height is allowed to meet the R-49 insulation requirement. Insulation R-values may be lower at eaves to allow for proper ventilation.

23.85.N1102.2.4 Access hatches and doors.
Replace “weatherstripped” in the first sentence with “sealed to prohibit air movement”.

23.85.N1102.2.11 Crawlspace walls.
Revise the section to read as follows:
Crawlspace walls shall be insulated, and a ground vapor retarder shall be installed in accordance with 23.85.Figure R403-25. Crawlspace wall insulation shall be securely fastened in place and shall extend downward from the floor to the top of the footing. Vapor retarder joints shall overlap 6 inches minimum and be sealed or taped. Vapor retarder edges shall extend not less than 6 inches up and be attached to the footing/stem walls.

23.85.N1102.3 Fenestration (Prescriptive).
Add the following sub-section:
N1102.3.6 Glazing limitation. Glazing shall be limited to 18% of the gross floor area of the structure.

23.85.N1102.4.1.2 Testing (building thermal envelope).
Replace the first sentence with:
The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding 4 air changes per hour at 50 pascals.

23.85.N1103.3.5 Building Cavities (Mandatory).
Delete sentence and replace with the following:
Stud wall cavities and the spaces between solid floor joists to be used as air plenums shall comply with the following conditions:

1. Such cavities or spaces shall not be used as a plenum for supply air.
2. Such cavities or spaces shall not be part of a required fire-resistance-rated assembly.
3. Stud wall cavities shall not convey air from more than one floor level.
4. Stud wall cavities and joist space plenums shall be isolated from adjacent concealed spaces by tight fitting fire blocking in accordance with R602.8.
5. Stud wall cavities in the outside walls of building envelope assemblies shall not be utilized as air plenums.

23.85.N1103.3.6 Ducts buried within ceiling insulation.
Replace section with the following:
Ducts are to be installed inside the continuous air barrier and building thermal envelope of the dwelling.

Exception: Ducting for ventilation systems.

23.85.N1103.3.7 Ducts located in conditioned space.
Delete section N1103.3.7.

23.85.N1103.4 Mechanical system piping insulation.
Add the following exception:
Exception: piping installed within the building thermal envelope.

23.85.N1103.6 Mechanical ventilation (Mandatory).
Amend section N1103.6 to read as follows:
N1103.6 Mechanical ventilation (Mandatory). Ventilation shall be provided in accordance with ANSI/ASHRAE Standard 62.2-2016. Compliance with AHFC Alaska Specific Amendments is optional.

23.85.N1103.7 Equipment sizing and efficiency rating (Mandatory).
Add the following exceptions:
Exceptions:
1. AkWarm is an approved heating load calculation methodology.
2. Equipment shall be sized to meet the load and oversizing shall not exceed 125 percent. When this is not feasible given the discrete size options available, equipment delivering the smallest output while satisfying the calculated load shall be used.

23.85.N1105.1 Scope (Simulated Performance Alternative).
Add an exception as follows:
2. Compliance with section N1105 may be demonstrated through an AHFC approved home energy rating program that meets the following:
    a. A minimum five-star rating is required.
    b. The maximum air infiltration rate shall not exceed four air changes per hour at 50 pascals pressure difference.
    c. The compliance rating shall be performed by a person authorized by AHFC.
    d. Compliance with sections 1105.4 is not required.

23.85.N1106 Energy Rating Index Compliance Alternative.
Delete section N1106.

23.85. Chapters 12 through 43.
Amend by deleting in their entirety Chapters 12 through 43, except for the specific sections referenced by the adopted provisions of this code.

23.85. Appendices.
Adopt Appendices E, K and Q.

23.85.AE101.1 General.
Amend the first sentence to read:
These provisions shall apply to manufactured homes, mobile homes, campers, and travel trailers serving as detached single-family dwelling units placed either on private (non-rental) lots or within mobile home parks licensed

by the Municipality of Anchorage, and shall apply to the following:

23.85.AE102.7 Mobile homes, campers, and travel trailers.

Add the following section:

23.85.AE102.7 Mobile homes, campers, and travel trailers.

23.85.AE102.7.1 Mobile homes. Every mobile home built prior to June 15, 1976, shall be labeled as required in Section AE201, and shall conform to all of the following:

1. FIRE WARNING SYSTEM - Smoke detectors shall be provided with in accordance with R314.
2. FIRE PROTECTION - Each mobile home shall be equipped with at least one 2-A rated portable fire extinguisher installed in accordance with NFPA 10-2018.
3. ELECTRICAL SYSTEM - All electrical equipment, wiring, and appliances shall be installed per Building Safety Handout No. R.10 Mobile Home Set-Up and Permit Requirements, as maintained by the Building Official.
4. MECHANICAL SYSTEM - All heating equipment shall be maintained in a safe condition. Additions, alterations, repairs and replacements shall comply with manufacturer's instructions and the currently adopted editions of the International Mechanical Code and the International Fuel Gas Code.
5. PLUMBING SYSTEM - All plumbing facilities shall be maintained in a safe and sanitary condition. Additions, alterations, repairs and replacements shall comply with manufacturer's instructions and the currently adopted edition of the Uniform Plumbing Code.
6. EXIT FACILITIES - Mobile homes shall have a minimum of two external doors located remotely from each other and so arranged as to provide means of unobstructed travel to the outside of the mobile home.
7. GROUND FAULT CIRCUIT INTERUPTER (GFCI) - Outlets shall have GFCI protection in accordance with the currently adopted edition of the National Electrical Code (NEC).

23.85.AE102.7.2 Campers and travel trailers. Campers and travel trailers shall not be occupied as a permanent dwelling. Campers and travel trailers may be occupied as a temporary dwelling in accordance with the limitations specified in AMC Title 21. When occupied as a temporary dwelling, campers and travel trailers shall be certified by the manufacturer as complying with ANSI A119.5 or NFPA 1192.

23.85.AE201 Definitions.

Add the following:

CAMPER PARK. A tourist facility approved by the Municipality for use by dependent and independent recreational vehicles, including motor homes, pickup campers, travel trailers, tent campers and similar recreational vehicles as opposed to a mobile home park which is licensed to accommodate mobile homes.

MOBILE HOME PARK. Any parcel or adjacent parcels of land in the same ownership which is utilized for occupancy by more than two mobile homes.

This term shall not be construed to mean tourist facilities for parking of travel trailers or campers.

MANUFACTURED HOME:

Add the following at the end of the first paragraph:

Each manufactured home shall bear a certification label in accordance with the Manufactured Home Standards.

MANUFACTURED HOME STANDARDS:

Add the following to the definition:

Every manufactured home installed in the Municipality of Anchorage must be certified for the "North Zone" (40 pounds per square foot) for snow load and heat loss "Comfort Zone 3" in accordance with HUD standards.

23.85.AE301.1 Initial installation.

Add the following after the word "be" in the first sentence of the first paragraph:

…located, moved, set-up or…

23.85.AE301.5 Gas and plumbing service.

Add the following section:

AE301.5 Gas and plumbing service. The owner of a manufactured home or a licensed mobile home contractor may install or retrofit gas piping, gas appliances, or plumbing only under the following conditions:

1. The owner performing such work shall be a current occupant of the manufactured home and shall personally perform all work.
2. A licensed mobile home contractor may perform work on gas and plumbing utility connections only by use of a licensed journeyman plumber or journeyman gas fitter who is an employee of the contractor. All such work shall bear a tag with the identification number of the journeyman plumber or journeyman gas fitter who performs the work.
3. Except as provided in items 1 and 2 of this section, all plumbing, gas piping, or gas appliance retrofit work shall be performed by a licensed plumbing or gas contractor.
4. No person may pipe natural gas to service gas fired equipment unless:
   a. Such equipment has been certified by the manufacturer as being suitable to that use; and
   b. Such equipment has first been converted for use of natural gas.

23.85.AE302.4 Who may apply.

Add the following section:

AE302.4 Who may apply. Only the owner of a manufactured home or a licensed mobile home contractor may apply for a permit under this Section.

23.85.AE307 Utility service.

Add the following sentence to AE307.1:

All sewer, electricity, gas, and water services shall be installed and maintained in a safe manner in accordance with the appropriate adopted codes.

23.85.AE502.3 Footings and foundations.

Replace the last sentence of the first paragraph with the following:

Footings shall have a minimum depth of 42 inches below exterior grade on privately owned (non-rental) lots, unless a greater depth is required by the Building Official based on a foundation investigation or other information. Footings or piers in mobile home parks may be placed at surface grade, provided all other requirements are met.

23.85.AE502.6 Under-floor clearances-ventilation and access.

Add the following to the second paragraph:

Where combustion air is not taken from the crawl space, and where the floor area of the home does not exceed 800 square feet, the ventilation requirement may be met by operable vents of 8 inches by 16 inches installed in skirting not less than 18 inches above exterior grade at opposite ends of the manufactured home.

23.85.AE503.1 Skirting and permanent perimeter enclosures.

Replace the first sentence of the first paragraph with the following:

Every manufactured home shall be skirted around its perimeter from the floor line to exterior grade with a skirting material having an insulation value of R-19 as published by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE). A minimum of 6 mil polyethylene film vapor retarder shall entirely cover the soil surface of the crawl space.

23.85.AE604.1 Ground anchors.

Replace the first paragraph with the following:

Ground anchors shall be designed and installed to resist overturning and lateral movement of the manufactured home, and shall extend at least 60 inches below exterior grade, or deeper if required by the Building Official because of poor soils. Ground anchors shall be installed for every manufactured home, except where a permanent foundation bearing at least 42 inches below grade is demonstrated by calculation to resist the forces as determined by Chapter 16 of the International Building Code.

CHAPTER 23.95 RELOCATABLE ANCILLARY BUILDINGS 1997 EDITION.

23.95.100 Building permit: exemption.

Relocatable ancillary buildings, which meet the requirements of section 23.95.200 qualify for a building permit. Relocatable ancillary buildings are exempt from the requirements of section 23.10.101.9, Moved buildings, and section 23.10.104.3, Temporary structures of the Anchorage Administrative Code, or any successor or local amendment thereto.

23.95.200 Requirements for building permit.

A relocatable ancillary building which meets all of the following requirements qualifies for a building permit:

A. The relocatable ancillary building shall comply with the provisions of the technical codes for new buildings or structures relating to fire, building and life safety concerns and are current as of the date of the building plan review, except the relocatable ancillary building is not required to have:

1. Plumbing facilities;

2. Water service;
3. Permanent foundation;
4. Active fire alarm system, provided the relocatable ancillary building is less than 1,000 square feet in size and has at least two exit doors;
5. Fire sprinkler system; or
6. Accessibility for the disabled, provided a similar education program is offered in the permanent building accessible to the disabled.

B. The relocatable ancillary building must be secured to prevent overturning or sliding by lateral forces, including wind, and to minimize movement during seismic activities.

C. A plan for the proposed location of the relocatable ancillary buildings shall be approved by the municipal Fire Department and the Development Services Department.

D. An electrical permit and reinspection for the relocatable ancillary building is required following each relocation thereof.

E. A plumbing permit and reinspection for any relocatable ancillary building having plumbing facilities or water service is required following each relocation thereof.

23.95.300 Definitions.

A. Relocatable ancillary building - a publicly or privately owned moveable educational classroom or support facility meeting the Group E occupancy definition of the Building Codes contained in Title 23 and constructed for multi-year use in conjunction with one or more publicly or privately owned permanent building and which meets all of the following criteria:
1. Is a public or private educational facility which serves a public education purpose;
2. Is ancillary to a permanent building and serves the same general purpose and function as the permanent building;
3. Is located in close proximity to the permanent building; and
4. Is used as a classroom for students who have access to the plumbing facilities and water service of the permanent building or is used as a storeroom solely for classroom supplies.

CHAPTER 23.100 - MOBILE AIRCRAFT SHELTERS 1997 EDITION.

Section 23.100.010 General.

Notwithstanding other requirements of this code, mobile structures for the housing of aircraft may be moved and maintained subject to the requirements set forth in this section.

Section 23.100.020 Location.

Existing Mobile Aircraft Shelters (shelters) may be relocated on municipal airports. No such shelter shall be located closer than twenty (20) feet from any permanent building, mobile home or lot line, except where lot lines are along streets or aircraft taxiways where the twenty (20) feet may be measured from the centerline of the right of way; and except where such

shelters are situated in a configuration providing periodic fire breaks in conformity with required building and fire codes. The location of each structure shall also comply with the requirements of title 21.

Section 23.100.030 Occupancy.

Mobile Aircraft Shelters shall be used only for the following authorized purposes:

A. Storage of personal or business use aircraft and related spare parts;
B. Storage or use of tools subject to the limitations contained in this chapter; and
C. Minor maintenance or repair of aircraft by their owners or contract/licensed mechanics.

Section 23.100.040 Authorized activities.

Authorized activities shall include storage or maintenance of the following:

A. Storage of an aircraft for personal or business use, or in the case of smaller aircraft, more than one aircraft;
B. Hand tools and small power tools required to support authorized activities;
C. Spare parts such as:
    1. tires and wheels
    2. propellers
    3. seats
    4. avionics
    5. hardware
    6. wire and wiring supplies
    7. lamps
    8. small structural sections
    9. personal and cargo parachutes, including packing and repairs to parachutes.
D. Work benches and shelves;
E. Storage cabinets;
F. Aircraft ingress winches and required electrical and communications utilities to support the same;
G. Routine cleaning of aircraft parts or the shelter;
H. Minor aircraft repairs, adjustments, and configurations;
I. Inspections, including annual inspections;
J. Installation or changing, or changing calibration of avionics;
K. Replacement of control surfaces, axles, bearings and aircraft accessories including but not limited to generators, alternators, fuel pumps, oil and vacuum pumps, magnets, batteries, cylinder heads and cylinder barrel replacement;
L. Open houses and posting signs for the purpose of showing or selling or subleasing a mobile aircraft shelter;
M. Storage of snow blowers or snow removal equipment;
N. Storage of compressors and related tools;
O. Unused oil not to exceed two (2) cases or ten (10) gallons;
P. Aircraft fuel in the aircraft tanks;
Q. Lubricants in factory containers;
R. Emergency electrical generators;

S. Seasonal equipment such as ice augers, survival equipment and non-commercial fishing equipment; and
T. Personal vehicles in place of the aircraft when the aircraft is flying.

Section 23.100.050 Unauthorized activities.

Mobile aircraft shelters shall not be used for any of the following:

A. Commercial activities including but not limited to:
   1. performing for hire annual inspections for other aircraft owners;
   2. commercial basing of aircraft for the purposes of guiding, air cargo or commuter operations where the mobile aircraft shelter is used for ancillary uses other than the actual storage of this aircraft; and
   3. commercial basing of aircraft for instructional purposes when the mobile aircraft shelter is used for purposes other then only storage of the aircraft.
B. Major repairs, including engine tear downs;
C. Welding of any kind;
D. Painting except for minor touch up painting utilizing small, hand-held spray cans;
E. Storage of non-aviation related products including but not limited to:
   1. furniture not related to authorized shelter uses;
   2. unrelated business records or files;
   3. equipment, tools, or other items of household or business use;
   4. vehicles not otherwise allowed, including snow machines, motorcycles, all-terrain vehicles, automobiles, trucks;
   5. boats, except for rubber rafts and their motors;
   6. campers and camper shells;
   7. mobile homes;
   8. trailers;
   9. commercial generators and welders;
   10. used oil;
   11. fuel in drums or portable containers in excess of a total of five (5) gallons;
   12. hydraulic oil in excess of a total of one (1) gallon.

Section 23.100.060 Heating methods.

Heating mobile aircraft shelters may be provided as follows:

A. The following may be used as methods of heating authorized aircraft, vehicle, equipment or shelters:
   1. electric block-type with UL approval for such purposes;
   2. pan adhesion with UL approval for such purposes;
   3. individual catalytic heaters with UL approval for such purposes; and
   4. forced air sealed combustion chamber heaters using outside combustion air connected to natural gas, provided such heaters are UL approved and are designed, installed and operated in conformity with applicable building and fire codes.
B. The following shall not be used as methods of heating aircraft, vehicles, equipment or shelters:
   1. open flame heaters of any kind;

2. propane heaters;
3. diesel fired heaters; and
4. “salamander” or kerosene catalytic heaters.

Section 23.100.070 Area and height limitations.

Individual shelters shall not exceed two thousand five hundred (2,500) square feet of usable floor area. Where two or more shelters are grouped together (or “nested” in “T-Hangar” configuration), the total gross floor area of such grouping shall not exceed twenty thousand (20,000) square feet on non-combustible construction without an approved area separation wall.

A. Adjacent shelters may be joined with non-combustible materials of similar design to original construction providing that they are separated by a one (1) hour rated fire door and applicable hardware. All floors shall be ground level, and no balcony or mezzanine floors shall be permitted, except that the areas which are not in the landing gear “footprint” may be insulated with insulfoam covered with plywood where said exposed materials are covered with an approved, rated, fire retardant coating.

B. Minimum spacing between groupings of shelters shall be sixty-five (65) feet, except when an area separation wall is provided as noted above and in concert with applicable building and fire codes. Maximum height of any portion of the structure above grade shall be twenty-five (25) feet, and subject to the appropriate, approved and adopted airport height zoning map.

Section 23.100.080 Design.

Shelters may be constructed of any non-combustible materials permitted by this code. Adequacy of design shall be evidenced by International Code Council (ICC) Research Report, computations by a registered engineer in the State of Alaska, or other additional information such as manufacturer’s specification sheets and test results, subject to the approval of the building official.

Section 23.100.090 Utilities.

Shelters may be connected to electrical, communications and natural gas utilities provided all devices utilized and all methods of installation and use meet the appropriate building codes and Municipal amendments thereto. If shelters are required in the future to be connected to water and/or sewer, and when and if such a requirement is perceived to exist, the Building Official shall provide guidance and where deemed appropriate and in the public interest, issue appropriate permits.

Section 23.100.100 Foundations.

Shelters shall be founded on a concrete slab with a sufficient sill between each unit to prevent liquid from flowing from one unit to another unit with appropriate anchorage for the units into the concrete slab. Maximum soil pressures shall be in accordance with this code.

Section 23.100.110 Anchorage.

Shelters shall be anchored to resist uplift and lateral forces. Anchors shall

resist various forces through gravity and soil pressures. The suitability and capacity of anchors shall be established by appropriate test reports or computations. Anchors shall be installed in accordance with the manufacturer's recommendations.

Section 23.100.120 Structural strength.
Existing shelters are grandfathered. Any modifications to existing shelters shall be designed and constructed to meet criteria as required by the building code.

Section 23.100.130 Exits.
Exit requirements for portable aircraft shelters shall be as required in the building code.

Section 23.100.140 Protective Finish.
Shelters shall have protective finishes required by building code on exposed surfaces.

CHAPTER 23.105 - GRADING, EXCAVATION, FILL AND LANDSCAPING 2018 EDITION

23.105.101 General.

23.105.101.1 Scope. The provisions of this chapter apply to earthwork construction, including excavation, fills, embankments, grading, landscaping, and isolated retaining walls.

23.105.101.2 Flood hazard areas. The provisions of this chapter shall not apply in floodways within flood hazard areas established by Anchorage Municipal Code, Title 21, unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed work will not result in any increase in the level of the base flood.

23.105.102 Definitions.

23.105.102.1 Definitions. For purposes of this chapter, the terms, phrases, and words listed in this section and their derivatives shall have the indicated meanings.

APPROVAL. The proposed work or completed work conforms to the requirements of this chapter in the opinion of the building official.

APPROVED PLAN. The site plan and/or sections showing the extents of grading operations, existing grade and the proposed final grade after being reviewed for code compliance by the building official and accepted as conforming to this and other applicable codes and laws.

AS-GRADED. The extent of surface conditions on completion of grading; see also GRADE, FINISH.

BEDROCK. In-situ solid rock.

BENCH. A relatively level step excavated into a slope of earth material onto which fill is to be placed.

BORROW. Earth material acquired from an off-site source for use in grading.

BORROW SITE. The location where borrow material is taken.

COMPACTION. The densification of a fill section by mechanical means.

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

EXCAVATION. The removal of earth material by artificial means; also referred to as a cut.

FILL. Deposition of earth material by artificial means.

GRADE. The vertical location of the ground surface.

GRADE, EXISTING. The grade of the site prior to grading.

GRADE, FINISH. The grade of the site at the conclusion of all grading efforts.

GRADE, ROUGH. The stage at which the grade of the site approximately conforms to the approved plan.

GRADING. An excavation or fill, or a combination thereof.

GRADING QUANTITY. The total amount of excavated earth material removed and fill placed on the site.

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

LANDSCAPING. Finish grading using organic soils for the placement of surface vegetation, including annual and perennial plants, grasses, shrubs, and trees.

RETAINING WALL. A wall or structure used to resist lateral earth pressures.

RETAINING WALL, SEGMENTAL. A retaining wall constructed entirely of individual modules or blocks, which are not cast or grouted together.

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

SLOPE. An inclined surface. The inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SOIL. Naturally-occurring superficial deposits overlying bedrock.

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

UTILITY. Building or site services that include water, wastewater, natural gas, electric, or telecommunications. Stormwater drainage is not considered a utility under this code.

23.105.103 Permits required.

23.105.103.1 Permits required. Except as exempted in Section 23.105.103.2, no grading shall be performed without first having obtained a permit from the building official. A grading permit issued under this chapter shall include isolated retaining walls, but does not include other structures, or any retaining walls connected to another structure. Separate permits shall be required for each individual site.

23.105.103.2 Exceptions. A grading permit shall not be required for the following work:

1. When approved in advance by the code official, grading in an isolated, self contained area if there is no danger to private or public property.
2. Cemetery graves.
3. Refuse disposal sites controlled by other regulations when not intended to be developed to carry structural loads after the site is closed for further refuse disposal.
4. Excavation for wells or utilities.
5. Mining, quarrying, excavating, processing, or stockpiling of rock, sand, gravel, aggregate, or clay, where established and provided by law, provided such operations do not increase the stresses in or pressure upon any adjacent or contiguous property.
6. Exploratory excavations under the direction of soils engineers or engineering geologists.
7. An excavation that does not adversely affect drainage, and is:
    a. less than 2 feet (610 mm) in depth; or
    b. does not create a cut slope greater than 3 feet (914 mm) in height or greater than 1 unit vertical in 2 units horizontal (50% slope).
8. A fill that does not adversely affect drainage, and is not more than:
    a. 1 foot (305 mm) in depth placed on natural terrain with a slope not exceeding 1 unit vertical in 5 units horizontal (20% slope); or
    b. 3 feet (914 mm) in depth that does not exceed 50 cubic yards (38.3 m3) on any site that does not obstruct a draining course, and is not intended to support structural loads.
9. An isolated retaining wall not supporting a surcharge where the retained height measured from the bottom of the footing to the top of the retained soil at the face of the wall is not more than 4 feet (1,219 mm) and the top of the wall above the retained soil is not more than 1 foot (305 mm).
10. Landscaping that does not alter an existing drainage course.

Exemption from the permit requirements of this chapter shall not be deemed

to grant authorization for any work to be done in any manner in violation of the provisions of this code, or any other laws or ordinances of the Municipality of Anchorage.

23.105.104 Hazards.

Section 23.105.104.1 Hazardous conditions. When the code official has determined any existing excavation, fill, or landscaping on private property has become a hazard to life and limb, endangers property, or adversely affects the safety, use, or stability of a public way, the owner of the property upon which the excavation or fill is located, or other person or agent in control of the property, upon receipt of notice in writing from the code official, shall within the period specified therein abate by repair or elimination such excavation or fill to remove the hazard and be in conformance with the current requirements of this code.

23.105.104.2 Abatement. Abatement of hazardous conditions shall be in accordance with this code and AMC 23.70.

23.105.105 Permit application and submittals.

23.105.105.1 Grading designation. All earthwork construction shall be designated in accordance with this section.

23.105.105.1.1 Regular grading. Regular grading is defined as meeting all of the following requirements:

1. Grading quantities shall not exceed 5,000 cubic yards;
2. Existing slopes do not exceed 1 unit vertical in 5 units horizontal (20% slope);
3. Does not include retaining walls not exempted per Section 23.105.103.2 that are adjacent to property lines or structures where the distance from the face of the retaining wall to the property line or structure is less than twice the height of the retained soil; and
4. Does not include retaining walls not exempted per Section 23.105.103.2 that are located in Seismically-Induced Ground Failure Zones 4 or 5, as defined by AMC 23.15.1613.2.

23.105.105.1.2 Engineered grading. Engineered grading is defined as all other grading not meeting the requirements of Section 23.105.105.1.1 for regular grading, or where the building official determines that special conditions or unusual hazards exist that requires professional engineering. Landscaping that does not qualify as regular grading shall be an engineered grading.

23.105.105.2 Submittal requirements. In addition to the requirements of AMC 23.10, the applicant shall state the estimated quantities of excavation and fill, and the estimated length of isolated retaining walls.

23.105.105.2.1 Site plan requirements. The construction documents submitted with the application for permit shall be accompanied by a site plan showing, to scale, the size and location of new construction and existing

structures on the site, distances from lot lines, and elevations at all lot corners, based on ties to a recovered Benchmark identified in the MOA Benchmark Network. Assumed elevations shall only be allowed with prior written consent of the department. The site plan shall also show existing and proposed drainage patterns, identifying any location where drainage is proposed to be transported off-site; and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished, and the location and size of existing structures and construction to remain on the site or plot. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

23.105.105.2.2 Soils engineering report. Where grading is designated as engineered in accordance with Section 23.105.105.1.2, a soils engineering report shall be required. The report shall be prepared in accordance with Section 1803 of the International Building Code.

23.105.105.2.3 Statement of special inspections. Where special inspections are required under Section 23.105.106.2, a statement of special inspections shall be provided on the plans or as a separate document. The statement shall comply with the requirements of Section 1705.2 of the International Building Code.

23.105.106 Inspections.

23.105.106.1 Municipal inspections. All grading, landscaping, and retaining wall construction for which a permit is required shall be subject to inspections by the building official and shall remain exposed and accessible until approved by the building official.

23.105.106.1.1 Municipal inspection schedule. Municipal inspections shall be scheduled at 50-percent and 100-percent completion for all grading work.

23.105.106.1.2 Additional engineered grading inspections. Additional municipal inspections for engineered grading shall be scheduled at the start of work, and for every 25,000 cubic yards, or portion thereof, beyond 50,000 cubic yards.

23.105.106.1.3 Retaining wall inspections. Municipal inspections shall be scheduled at regular intervals based on the type of retaining wall system utilized.

23.105.106.1.3.1 Concrete or masonry retaining walls. Municipal inspections shall be scheduled at completed excavation, prior to concrete pouring or masonry grouting, and at backfill.

23.105.106.1.3.2 Segmental retaining walls. Municipal inspections shall be scheduled for segmental retaining walls at completed excavation, and at each lift between geosynthetic reinforcing.

23.105.106.1.3.3 Other retaining wall systems. Municipal inspections shall be scheduled as required by the building official.

23.105.106.2 Special inspections. Special inspections are required for all engineered grading. Special inspections shall be performed in accordance with Chapter 17 of the International Building Code.

23.105.107 Excavations.

23.105.107.1 General. Unless otherwise recommended in the approved soils engineering report, excavations shall conform to the provisions of this section.

Exception: The provisions of this section may be waived for excavations where final slopes are less than 1 unit vertical in 2 units horizontal (50% slope), where the excavation is isolated from existing structures and property lines, and the slopes of the excavation are not intended to support structures or surcharges.

23.105.107.2 Slope. The slope of excavation surfaces not be steeper than is safe for intended use, and shall not be steeper than 1 unit vertical in 2 units horizontal (50% slope) unless a slope stability analysis shows that a steeper slope is stable for static and seismic conditions, and does not create a hazard to public or private property.

23.105.108 Fills.

23.105.108.1 General. Unless otherwise recommended in the approved soils engineering report, fills shall conform to the provisions of this section.

Exception: The provisions of this section may be waived for fills where final slopes are less than 1 unit vertical in 2 units horizontal (50% slope), where the fills are isolated from existing structures and property lines, and are not intended to support structures or surcharges.

23.105.108.2 Preparation of ground. Fill slopes shall not be constructed on natural slopes steeper than 1 unit vertical in 2 units horizontal (50% slope). The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other organics, non-complying fill, and other unsuitable or deleterious material.

23.105.108.2.1 Parking lots over organic soils. Structural fill for parking lot sections may be placed over peat and other organic soils where an approved geotechnical report provides recommendations for fill placement, and the site is designed by a registered design professional.

23.105.108.3 Fill material. Fill material shall not include organic, frozen, or other deleterious material. No rock or similar irreducible material with a maximum dimension of 12 inches shall be buried or placed in fills.

Exception: Organic soils may be used within the top 6 inches for surface landscaping.

23.105.108.4 Compaction. All fills shall be placed in lifts not exceeding 12

inches in thickness and compacted to a minimum of 90 percent of maximum density. Fills under structures, driveways, and parking lots shall be compacted to a minimum of 95 percent of maximum density.

23.105.108.5 Slope. The slope of fill sections shall not be any steeper than is safe for intended use, and shall be not be steeper than 1 unit vertical in 2 units horizontal (50% slope) unless a slope stability analysis shows that a steeper slope is stable for static and seismic conditions, and does not create a hazard to public or private property.

23.105.108.3 Temporary fills. Where permitted under Title 21, placement of material for stockpiling or surcharging shall be permitted without meeting the provisions of this section where the following are met:

1. The slopes are not steeper than 1-unit vertical in 3 units horizontal (33% slope);
2. The soils are stabilized against erosion as required in AMC 21.07.040;
3. Soils are removed to existing grade at final inspection.

23.105.109 Retaining walls.

23.105.109.1 Design. Retaining wall design and construction shall be designed in accordance with Section 1807.2 of the International Building Code.

23.105.109.2 Retaining wall setbacks. Where multiple retaining walls are located on the same slope, the combined retaining wall shall be analyzed together.

Exception: Where the toe of the upper retaining wall is located more than twice the height of the lower retaining wall measured from the back face of the lower wall to the front face of the upper wall per Figure 23.105.109.2.

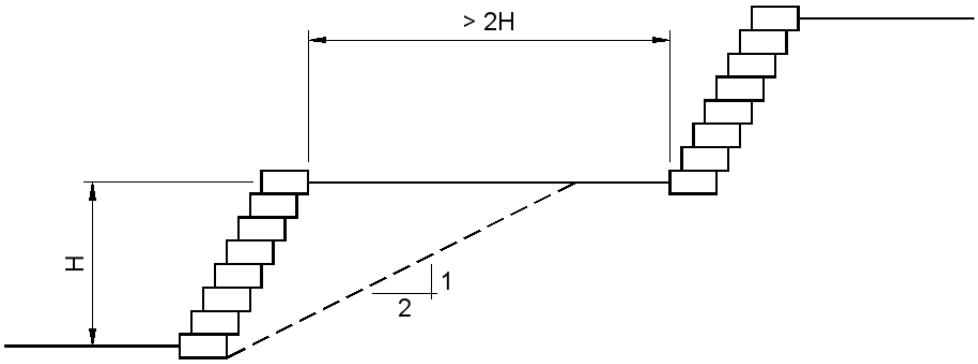


Figure 23.105.109.2 Retaining wall setbacks

23.105.110 Setbacks.

23.105.110.1 General. Excavation and fill slopes shall be set back from the site boundary in accordance with this section. Setback dimensions shall be measured horizontally and shall be perpendicular to the site boundary.

23.105.110.2 Top of excavation slope. The top of excavation slopes shall be set back from the site boundary not less than one-fifth the vertical height

of the slope, but not less than 2 feet, and need not exceed 10 feet.

23.105.110.3 Toe of fill slope. The toe of fill slopes shall be set back from the site boundary not less than one-half the vertical height of the slope, but not less than 2 feet, but need not exceed 20 feet.

23.105.110.3.1 Slope protection. Where the fill slope is located near the site boundary and the adjacent off-site parcel is developed, special precautions shall be incorporated in the work as the building official deems necessary to protect the adjoining property from damage as a result of such grading. The precautions may include, but are not limited to:

1. Setback distances greater than those required by this section.
2. Provisions for retaining walls or similar construction.
3. Mechanical stabilization or chemical treatment of the fill slope surface to minimize erosion.
4. Provisions for the control of surface waters.

23.105.110.4 Modification of slope location. Setback locations may be modified when approved by the building official. Such modifications may require investigations and recommendations by a registered design professional and shall show the intent of the code has been satisfied.

23.105.111 Benching and terracing.

23.105.111.1 General. Terraces shall be provided where final excavation or fill heights exceed 60 feet (18,288 mm), and final slopes exceed 1 unit vertical and 3 unit horizontal (33.3 percent slope). Benching shall be provided where the existing slopes exceed 1 unit vertical in 5 units horizontal (20% slope).

23.105.111.2 Terraces. Terraces shall meet the minimum width and vertical spacing per Table 23.105.111.2. Terraces with a slope height greater than 120 ft shall be designed by a registered design professional and approved by the building official.

Table 23.105.111.2

Slope height	Terrace width	Vertical spacing
60 feet	6 feet	30 feet max.
Greater than 60 feet up to 120 feet	12 feet 6 feet	At mid-height of slope 30 feet max. above and below mid-height

23.105.111.3 Benching. Benches shall be excavated per Figure 23.105.111.3 into the existing slope to allow for proper compaction. Bench widths shall be a minimum of 5 feet in width and shall have a slope no greater than 1 unit vertical in 5 units horizontal (5% slope). Benches shall be spaced consecutively where the existing slope exceeds 1 unit vertical in 5 units horizontal (20% slope). Bench heights shall not exceed the lesser of one-half the bench width, or 10 feet, unless recommendations are provided by an approved soils report.

23.105.111.3.1 Keying. Benches shall have a key at the toe of the slope

where the slope height exceeds 5 feet. The key shall be a minimum depth of 2 feet and a length not less than 10 feet.

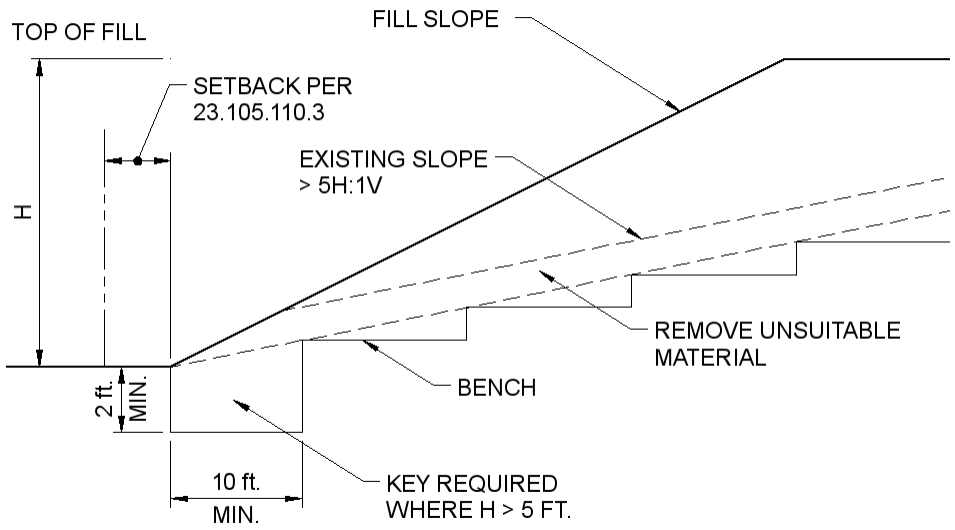


Figure 23.105.111.3 Benching detail.

23.105.112 Drainage and erosion control.

23.105.112.1 General. Grading plans shall include a drainage plan conforming to the requirements of this code and AMC 21.07.040.

23.105.112.2 Standards. Drainage plans shall comply with the requirements of municipal code and the guidance of the Design Criteria Manual. Post-development drainage plans shall be designed such that there will be no adverse off-site impacts. Any net increase of water volumes shall be mitigated and/or directed to adjacent drainage systems or receiving waters that has the demonstrated capacity to handle the new flows. The municipality may require a dedicated drainage easement(s) to ensure proper drainage is consisted and compatible with the surrounding drainage patterns.

23.105.112.3 Drainage across property lines. Drainage across property lines shall not exceed that which existed prior to earthwork construction. Excess or concentrated drainage shall be contained on site or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of non-erosive down drains or other devices.

23.105.112.4 Erosion control. The faces of excavation and fill slopes shall be prepared and maintained to control against erosion. The protection shall be installed as soon as practicable and prior to scheduling final inspections. Where necessary, check dams, cribbing, riprap, or other suitable devices or methods shall be employed to control erosion and provide slope stability and safety.

Exception: Where cut slopes are not subject to erosion due to the erosion-resistant characteristics of the facing materials, such protection may be omitted.

23.105.113 Referenced Standards

ASTM D 1557-e01, Test method for Laboratory Compaction Characteristics of Soil Using Modified Effort [56,000 ft-lbs/ft3]

CHAPTER 23.110 - LOCAL AMENDMENTS TO THE INTERNATIONAL FUEL GAS CODE 2018 EDITION

The amendments to the International Fuel Gas Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the section of the International Fuel Gas Code to which the amendments refers, i.e., 23.110.210 refers to amendments to section 210 of the International Fuel Gas Code.

23.110.101.2 Scope.
Delete the exception.

23.110.103 through 110.
Delete sections 103 through 110. Refer to the Anchorage Administrative Code.

23.110.103 Authority to render gas service.
Amend Chapter 1 by adding section 103 as follows:
103 Authority to render gas service.
103.1 Unlawful acts. It shall be unlawful for any person, firm, or corporation, excepting an authorized agent or employee of a person, firm, or corporation engaged in the business of furnishing or supplying gas and whose service pipes supply or connect with the particular premises, to turn on or reconnect gas service in or on any premises where and when gas service is, at the time, not being rendered.
103.2 Authority to disconnect. The administrative authority or the serving gas supplier is hereby authorized to disconnect any gas piping or appliance, or both, found not to conform to the requirements of this code or found defective and in such condition as to endanger life or property. Where such disconnection is made, a notice shall be attached to such gas piping, appliance, or both stating the same has been disconnected, together with the reasons, therefore.

23.110.202 General definitions.
Add the following definition:
Connector fuel gas piping. A fitting that is used at all points where fuel gas piping enters or leaves the ground. Connector shall be capable of absorbing a displacement due to frost heave action. An example for low pressure systems would be a Dormont flex. An example for medium pressure would be CSST. An example for diameters greater than two inches would be a braided metal flex connector. (See amendment to section 404 Piping System Installation.) Rubber flexible connectors are not approved.

23.110.302 Structural safety.
Add the following section:

302.8 Roof penetrations. For roof construction regulated by the IRC:

1. No penetrations shall be located in required valley ice barrier.
2. All roof penetrations, excluding attic ventilation, shall be located a minimum of six feet from valley centerline and four feet from the exterior wall line measured on a horizontal plane.
3. All roof penetrations shall extend above the roof surface a minimum of 24 inches, except attic ventilation.
4. Type B gas vents may penetrate the eave ice barrier if installed within a 24 inches, wood framed, R-19 insulated curb, measured on the ridge side of the roof. The ice barrier shall extend up the curb a minimum of 12 inches on all sides. See AMC 23.85.R903.1 for detail.

23.110.303.3 Prohibited locations.

Delete exceptions 3 and 4. Unvented room heaters are not allowed.

23.110.303.4 Protection from vehicle impact damage.

Add the following section:

303.4.1 Appliances subject to vehicle impact. Appliances, including their associated piping and ductwork, subject to vehicle impact shall be protected by one or more of the following methods:

1. Install the appliance on a platform a minimum of 24 inches high. The appliance shall not extend beyond the face of the platform. Piping and ductwork shall not be surface mounted to the platform in a location subject to vehicle impact.
2. Protect the appliance with a barrier. The barrier shall be a minimum of 30 inches high and be constructed of a minimum 2-inch diameter schedule 40 steel pipe. The barrier must have a minimum 6-inch setback from the platform or appliance. The maximum unprotected distance shall not exceed 5-feet. The barrier shall be installed per one of the following methods:
    a. Buried a minimum of 24 inches deep in compacted soil and imbedded in concrete slab.
    b. Set in a minimum 12-inch by 12-inch square by 12-inch deep block of concrete (slab not included).
    c. Secured to the wood framed garage floor with flange and stainless steel bolts and imbedded in concrete slab.
    d. Secured to the concrete slab using a floor flange with a minimum of four 3/8 inch diameter by 3-1/2 inch long galvanized or stainless anchor bolts.
3. Mount appliance and associated piping and ductwork to wall and/or suspend from the ceiling in a location clear of any potential vehicle interference.

In all cases the minimum clear width and depth of the garage shall be maintained in accordance with Title 21.

23.110.303.8 Liquefied petroleum gas facilities.

Amend section 303 by adding the following section:

303.8 Liquefied petroleum gas facilities. Liquefied petroleum gas facilities shall not be located in any pit, basement, crawlspace, under show windows,

or interior stairways, in engine, boiler, heater, or electric meter rooms. LPG facilities include tanks, containers, container valves, regulating equipment, meters, and/or appurtenances for the storage and supply of LPG for any building structure or premises.

303.8.1 Liquefied petroleum gas piping. Liquefied petroleum gas piping shall not serve any appliance located in a pit or basement where heavier than air gas might collect to form a flammable mixture.

23.110.304.6 Outdoor combustion air.

Delete Figure 304.6.1(1).

Delete Figure 304.6.1(2).

Delete Alternate Opening Location in Figure 304.6.2.

23.110.304.8 Engineered installations.

Amend section 304.8 by adding the following subsection:

Section 304.8.1 Cold climate alternate requirements for combustion and ventilation air.

304.8.1.1 Purpose. The purpose of this section is to provide alternate methods of designing combustion air and ventilation air systems for fuel burning appliances in cold climate regions. Only persons registered to practice engineering in the applicable jurisdiction will be permitted to use these alternate design methods.

304.8.1.2 Scope. The requirements of this section apply to all fuel gas burning appliances.

Exception: Direct vent appliances, listed cooking appliances, appliances having separated combustion system, enclosed furnaces, refrigerators and domestic clothes dryers.

304.8.1.3 Definitions. Certain words and terms used in this section shall have meanings as listed. The below-listed definitions shall apply to this section only, even though they may differ with broader definitions found elsewhere in the code.

Free area is the net actual open area of a louver, screen, duct, or intake grille.

Ventilation air is air required for cooling of the appliance enclosure to maintain temperatures required for proper equipment operation.

304.8.1.4 General.

304.8.1.4.1 Air supply. Fuel-burning equipment shall be provided with a sufficient supply of combustion and ventilation air.

304.8.1.4.1.1 Enclosures containing fuel burning appliances. Enclosures shall be provided with minimum unobstructed combustion air openings as specified in section 304.8.1.9 and arranged as specified in sections 304.8.1.5 and 304.8.1.6, and ventilation air systems shall be as specified in section 304.8.1.10.

304.8.1.4.1.2 Existing buildings. When fuel-burning appliances are installed in an existing building containing other fuel-burning equipment, the enclosure shall be provided with sufficient combustion and ventilation air for all fuel-burning equipment contained therein as specified in sections 304.8.1.9 and 304.8.1.10.

304.8.1.5 Combustion air openings.

304.8.1.5.1 Location. The combustion air opening(s) may be located anywhere in the enclosure provided there is an unobstructed area extended to the fire box that does not increase the total combustion air system static pressure requirements.

304.8.1.5.2 Dampers prohibited. Combustion air openings shall not be installed so as to open into construction where fire dampers are required. Volume dampers shall not be installed in combustion air openings.
Exception: Dampers electrically interlocked with the firing cycle of the appliance, so as to prevent operation of the appliance when the dampers are not proven open.

304.8.1.5.3 Screening. Combustion air openings shall be covered with corrosion-resistant screen of 1/2 inch mesh, except as provided in section 304.8.1.7.3.
Exception: Combustion air openings serving a nonresidential portion of a building may be covered with a screen having openings larger than 1/2 inch but in no case larger than one inch.

304.8.1.6 Sources of combustion and ventilation air.

304.8.1.6.1 Air from outside. Combustion and ventilation air obtained from outside the building shall be supplied as follows:

1. Through permanent openings of the required area directly to the outside of the building through the floor, roof, or walls of the appliance enclosure; or
2. Through continuous ducts of the required cross-sectional area extending from the appliance enclosure to the outside of the building.

304.8.1.6.2 Interior spaces. Large indoor areas may be used for combustion and/or ventilation air if sufficient infiltration or other outside air supply is available by nature of the building construction, system design, or building use.

304.8.1.6.3 Prohibited sources. Openings and ducts shall not connect appliance enclosures with space where the operation of a fan may adversely affect the flow of combustion air. Combustion and ventilation air shall not be obtained from a hazardous location or from

any area in which objectionable quantities of flammable vapor, lint or dust are given off. Combustion and ventilation air shall not be taken from a machinery room.

304.8.1.7 Combustion and ventilation air ducts.

304.8.1.7.1 General. Combustion and ventilation air ducts shall:

1. Be of galvanized steel complying with IMC Chapter 6 or equivalent corrosion-resistant material approved for this use.
2. Have a minimum cross-sectional dimension of 3 inches.
3. Serve a single appliance enclosure.

304.8.1.7.2 Dampers. Combustion air ducts shall not be installed so as to pass through construction where fire dampers are required, unless properly enclosed in a rated shaft. Volume dampers shall not be installed in combustion air ducts.

Exception: Motor operated dampers interlocked with appliance controls to open damper prior to firing appliance are permitted, if damper blade actuated end switches are provided to prevent appliance operation should dampers fail to open.

304.8.1.8 Special conditions created by mechanical exhausting or fireplaces. Operation of exhaust fans, kitchen ventilation systems, clothes dryers or fireplaces shall be considered in determining combustion and ventilation air requirements to avoid unsatisfactory operation of installed fuel burning appliances.

304.8.1.9 Area of combustion air openings.

304.8.1.9.1 General. The free area of openings, ducts or plenums, screens and louvers supplying combustion air to enclosures containing fuel-burning appliances shall be as required: The opening(s) shall communicate directly or by means of ducts with outdoors or to such spaces (crawl space) freely communicating with outdoors and shall be sized in accordance with Table No. 304.8.1.1.

304.8.1.10 Ventilation air.

304.8.1.10.1 General. In addition to the combustion air required, sufficient ventilation shall be supplied for proper operation of equipment. Ventilation system shall be designed to maintain positive or atmospheric pressures within the enclosure. If exhaust fans are provided, a mechanical make-up air fan shall be installed to make-up exhausted air. Natural or gravity make-up air is not allowed.

Table No. 304.8.1.1 - Combustion Air System Design Criteria

Fuels	System Static Pressure Limits[1]		Combustion Air Requirements	
	Atmospheric			
	Draft Hoods	Barometric	Forced Draft	All Types

		Dampers		
GAS (Natural, Propane, Butane)	0.02" WG	0.02" WG	0.05" WG	24 CFM 100,000 BTUH

Note 1: Static pressure values represent maximum static pressure losses across all components of the combustion air system including screens, louvers, ducts and fittings.

Note 2: For enclosures containing both atmospheric and forced draft appliances, the most restrictive design requirements shall apply.

PER ASHRAE 1993 FUNDAMENTALS HANDBOOK CHAPTER 15 TABLE 11 (Pg 15.10) 1 cu. ft. natural gas requires 9.6 cu. ft. air.

Convert to cubic feet of air per 1000 Btu input assuming 1,000 Btu per cubic foot of gas:

GAS:	9.6 cu. ft. air / 1 cu. ft. gas	X	1 cu. ft. gas / 1,000 Btu	=	9.6 cu. ft. air/1000 Btu (14.4 @ 50% excess)

* Air at 2000 feet above sea level. Installations above this shall de-rate appliance output 4% per 1,000 feet.

EXAMPLE: Natural gas rated at 1,000 Btuh per cubic foot.
Combustion air flow rate:
16 CFM per 100,000 Btuh input for stoichiometric combustion.
24 CFM per 100,000 Btuh input for 50% excess air.

23.110.304.10 Louvers and grilles.
Replace “not smaller than 1/4 inch” with “of 1/2 inch for residential and 1/2 inch up to one inch for commercial applications”.

23.110.304.11 Combustion air ducts.
Delete the exception to Item 1.

Replace Item 5 with the following:
Combustion air shall not be obtained from an attic, unless prior written approval is obtained from the authority having jurisdiction.

Add an exception to item #6 as follows:
Exception: This requirement does not preclude installation of a cold trap (upturned elbow). The installation shall maintain the free area of the combustion air duct.

Insert the following words at the beginning of Item 8:
“Due to an anticipated snow depth of 12 inches,”.

In Item #8 replace 12 inches with 24 inches.

23.110.304.13 LPG systems.

Amend section 304 by adding subsection 304.13 as follows:

304.13 LPG systems. Appliances using LPG shall have two (2) 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. Use of under-floor areas for supply of combustion air to LPG burning appliances is prohibited.

23.110.305.3 Elevation of ignition source.

Amend section 305.3 by adding the following to the end of the paragraph:

Rooms and spaces that are not part of the living space of a dwelling unit shall include but are not limited to utility, storage, mud, laundry, toilet and bathing rooms.

Group F, M and S occupancies with open spaces less than 5,000 square feet that include overhead doors providing access to vehicles and equipment containing combustible fuel shall comply with this section. Communicating spaces separated by a door are not considered part of this space.

Delete the exception to 305.3.

23.110.305.11 Installation in aircraft hangars.

Replace Section 305.11 with the following:

305.11 Installation in aircraft hangars. Overhead appliances installed in aircraft storage areas shall be located at least 10-feet vertically above the upper surface of the wings or engine enclosures of the tallest aircraft which may be housed in the hangar.

Exception: Where a 10-foot vertical separation cannot be maintained in an NFPA 409 Class III hangar, a sealed combustion appliance may be used. The appliance shall be located as high and as far away from the wings and engine enclosure as possible. This exception shall not apply to NFPA 409 Class I and II hangars.

23.110.306.3 Appliances in attics.

Add exception #3 as follows:

3. The passageway and level surface are not required for replacement of horizontal furnaces located above drop ceilings in strip malls. All other code requirements apply.

23.110.306.4 Appliances under floors.

Amend by adding the following as the first sentence:

Installation of appliances in under-floor crawlspaces is prohibited unless prior written approval is obtained from the administrative authority.

Add an exception to the amendment as follows:

3. Direct vent appliances may be installed as long as no water or sign of

water is present and the installation is in accordance with IFGC 305.7.

23.110.306.5 Equipment and appliances on roofs or elevated structures.

Add Exception #2 as follows:

2. Where equipment requiring access and appliances are installed on the roof of a new building or new building addition, such access shall be provided by a permanent, approved means, interior to the building, extending from floor level to the equipment and/or appliance's level service space, regardless of the roof height. The bottom rung of the ladder shall be located within 14” of floor or grade.

23.110.306.6 Guards

Delete the exception

23.110.306.7 Mezzanines and platforms.

Add a new section as follows:

306.7 Mezzanines and platforms. Every mezzanine or platform more than 10-feet 6-inches above the ground or floor level shall be made accessible by a stairway or ladder fastened to the structure. The ladder shall be constructed in compliance with the provisions of section 306.5.

23.110.307.2 Fuel burning appliances.

Replace "collected" with "piped through a factory-built condensate neutralizer sized and approved for the use".

Add a sentence at the end of the amended sentence as follows:

Neutralized wastewater PH levels shall be elevated to a minimum PH of 7.

Add the following exception:

Exception: Condensate from Category III appliances may be run to an evaporative drain pan covering at least 144 square inches having a depth of at least one inch.

23.110.307.6 Condensate Pumps

Add the following exception:

Exception: Residential installations.

23.110.310 Electrical bonding.

Amend section 310 by adding the following subsection:

310.4 Electrical bonding. Bonding to the electrical service grounding electrode system shall be in accordance with NEC 250.104(B).

23.110.402.7 Maximum operating pressure.

Revise Item #2 to read “The piping joints are press connected.”

23.110.403.10.1 Pipe joints.

Amend by adding the following at 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 ½ inches or larger.
2. The pipe is installed under a driveway.
3. The gas pressure is 2 psig or greater.

23.110.403.10.2 Copper tubing joints.
Amend by adding the following at 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. All pipe to tubing transitions shall be made above ground.

23.110.403.10.5 Metallic fittings.
Amend Item 2 by deleting the words “or cast iron.”

Delete Item 5.

Add a new Item 10 as follows:

10. Right and left nipple couplings. Where unions are necessary, right and left nipples and couplings shall be used. Ground joint unions may be used at exposed fixture, appliance, or equipment connections and in exposed exterior locations immediately on the discharge side of a building shutoff valve.

23.110.404.9 Above-ground outdoor piping.
Amend by replacing 3 ½ inches with 5 ½ inches (in 2 locations).

23.110.404.12 Minimum burial depth.
Delete the wording “except as provided for in Section 404.12.1”

Add the following to the end of the paragraph:

Plastic and copper gas piping shall have at least 18 inches of earth cover, or other equivalent protection. Provide a minimum radial separation of 12 inches between direct burial piping systems and utility, electrical cables and conductors, communication cables and ground rods.

Delete subsection 404.12.1.

23.110.404.21 Ground penetrations.
Amend section 404 by adding subsection 404.21 as follows:

404.21 Ground penetrations. At all points where fuel gas piping enters or leaves the ground, there shall be installed, above ground, an approved or listed fuel gas piping connector, capable of absorbing a 6-inch displacement,

in any direction, due to frost heave action.

23.110.404.22 Fuel gas piping connectors.
Amend section 404 by adding subsection 404.22 as follows:

404.22 Fuel gas piping connections. Fuel gas piping connectors listed for outdoor use may be used between the 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.

23.110.404.23 Frost heave protection for copper tubing.
Amend section 404 by adding subsection 404.23 as follows:

404.23 Frost heave protection for copper tubing. Copper tubing ground penetrations shall be protected from frost heave by incorporation of a suitable above ground 6-inch radius loop or a listed fuel gas piping connector of equal size.

23.110.404.24 Frost heave protection for above grade piping.
Amend section 404 by adding subsection 404.24 as follows:

404.24 Frost heave protection for above grade piping. Above grade exterior piping routed between separate structures or between a structure and an exterior appliance installed on grade shall have an approved or listed fuel gas piping connector, capable of absorbing a 6-inch displacement in any direction at each structure and each exterior appliance.

23.110.406.4.1 Test pressure.
Replace “1 ½” with “10”.

Replace the minimum test pressure of 3 psig with 10 psig.

Add the following to the end of the paragraph:

Required pressure tests of 10 psig shall be performed with gauges of 1/10 psi increments or less. Welded pipe shall be tested with not less than 60 psig test pressures.

23.110.406.8 Temporary gas provisions.
Amend section 406 by adding subsection 406.8 as follows:

406.8 Temporary gas provisions. Temporary gas installations shall comply with sections 406.8.1 and 406.8.2.

406.8.1 Temporary gas installations – permit required.

A. Temporary gas approval is given to allow “comfort heating” appliances to be used to provide temporary heat to a building or building site prior to the completion of the building’s primary heating system.

B. The most commonly used appliance is a portable natural gas space heater. Other comfort heat appliances allowed for temporary heat purposes are warm air furnaces, boilers, and unit heaters. It is NOT the policy of the Building Safety Division

or Enstar Natural Gas Company to allow “decorator fireplaces” or “ranges” to be utilized as temporary heat for buildings. These appliances are not designed or “listed” for such purpose.

C. All appliances used to provide temporary heat for buildings shall be installed in accordance with the manufacturers’ instructions and terms of their listing, with particular attention being paid to the clearances to combustibles from the top, bottom, front, back, and sides of these appliances.

D. Unit heaters used for temporary heat shall be installed per manufacturer’s instructions and listed clearances to combustibles from the top, bottom, front, back, and sides of these appliances. The vent connector shall be graded at ¼ inch per foot slope upward to the outside and it shall be changed to “B” vent at the wall penetration. The “B” vent must maintain its listed clearance to combustibles, extend a minimum of 5 feet vertically, and be secured.

E. Furnaces used for temporary heat shall comply with the same requirements as for unit heaters as stated above. In addition, the return air for the furnace shall be ducted a minimum of 10 feet from the furnace.

F. Portable space heaters shall be provided with 100 percent outside air to the back end of the heater. In most cases, the gas regulator attached to these heaters shall be piped to the outside. If the regulator vent discharges, it shall not be allowed to discharge into the space being heated.

G. Gas hose used for temporary heaters shall be a type approved by the Building Safety Division and all manufacturers’ listed clearances shall be maintained. The hose shall have an internal wire mesh or braid and be “kink proof”. Supporting wire shall run the full length of the hose. Each time a hose is moved from one lot to another, it shall be tested with 60 psig air pressure.

406.8.2 Temporary gas installations – permit not required.

A permit and inspection shall not be required for residential temporary construction heat serving tented footings and foundations. This provision is for thawing ground and curing concrete, not comfort heat for workers, such as plumbers installing underground. This allowance is limited to portable ‘SURE FLAME’ type heaters and not intended for unit heaters, furnaces, and boilers with special venting considerations. All heaters and hoses shall be of the approved type. Heaters shall be listed by an approved listing agency. All hoses shall have an internal wire mesh or braid and be “kink proof”. Supporting wire shall run the full length of the hose. One hundred percent (100%) outside air shall be provided to heater at all times. Listed clearances to combustibles shall be maintained. A licensed journeyman plumber or gasfitter shall perform all work.

23.110.410.6 Regulator protection.

Amend section 410 by adding subsection 410.2 as follows:

23.110.410.6 Regulator protection. When the manufacturer’s

instructions don't specify an installation elevation for the gas regulator, the regulator shall be installed 12 inches above the anticipated snow depth to protect the regulator from snow and ice buildup.

23.110.411.2 Manufactured home connections.
Add the following to the end of the section:

Pounds to inches water column regulators serving mobile homes and connected to copper tubing shall be attached to the exterior of the mobile home and shall not be located under the mobile home.

23.110.417 MEDIUM PRESSURE GAS.
Amend Chapter 4 by adding section 417 as follows:

417.1 Medium pressure gas. The installation of a medium pressure gas system (2 psig or 5 psig) within a building must be pre-approved by the local gas utility. Steel piping shall be welded or assembled with press-connect fittings. Test pressure for all medium pressure gas piping shall be 60 psig.
Exception: Medium pressure gas piping within mechanical rooms housing the equipment being served, shall be threaded, welded, or assembled with press-connect fittings in accordance with IFGC 403.10. Threaded piping and piping assembled with press-connect fittings shall not be concealed within construction.

417.2 CSST medium pressure gas. The installation of a CSST medium pressure gas system (2 psig or 5 psig) within a building must be pre-approved by the local gas utility. Test pressure for all medium pressure gas piping shall be 60 psig. Joints shall be limited to the meter connection and at the regulator to the appliance being served. Intermediate joints are not allowed without prior approval.

23.110.501.8 Appliances not required to be vented.
Delete Item 8 and Item 10.

23.110.502.8 Enclosure required.
Amend section 502 by adding subsection 502.8 as follows:

502.8 Enclosure required. Venting systems installed outside the building thermal envelope shall be enclosed in an insulated (R-19 minimum) chase. The portion of the vent system above the last roof and its projected plane need not be enclosed. The portion of the venting system passing through an attic space need not be insulated or enclosed.

23.110.502.9 Protection from sliding snow and ice.
Amend section 502 by adding subsection 502.9 as follows:

502.9 Protection from sliding snow and ice. Vent terminations penetrating a metal roof with a pitch shall be protected by an ice dam or deflector of an approved type acceptable to the Administrative Authority.

23.110.503.3.6 Above ceiling air handling spaces.
Add the following to the end of the section 503.3.6:

The vent material shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E84.

23.110.503.5.5 Size of chimneys.
Item 2: Delete the phrase ", nor greater than seven times the draft hood outlet area" at the end of the sentence.

Item 3: Delete the phrase ", nor greater than seven times the draft hood outlet area" at the end of the sentence.

Add the following to the end of the section:

In no case shall the gas vent be sized more than one size larger than the minimum size required by the appliance sizing tables referenced in this code or the manufacturer's installation instructions.

23.110.503.6.10.1 Category I appliances.
Item 2: Delete the phrase ", nor greater than seven times the draft hood outlet area" at the end of the sentence.

Item 3: Delete the phrase ", nor greater than seven times the draft hood outlet area" at the end of the sentence.

Add the following to the end of the section:

In no case shall the gas vent be sized more than one size larger than the minimum size required by the appliance sizing tables referenced in this code or the manufacturer's installation instructions.

23.110.503.8 Venting system termination location.
Amend by adding Item 6 to read as follows:

6. 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.

23.110.503.10.4.2 Common vents for multiple appliances.
Amend 503.10.4 by adding subsection 503.10.4.2 as follows:

503.10.4.2 Common vents for multiple appliances. When venting 3 or more Category I appliances, the common vent shall be a minimum Type “B” double wall.

23.110. Table 504.2(3)
At the bottom of Table 504.2(3), delete the category "maximum internal area

of chimney (square inches)" and the wording "seven times the listed appliance categorized vent area, flue collar area, or draft hood outlet area".

23.110. Table 504.2(4)
At the bottom of Table 504.2(4), delete the category "maximum internal area of chimney (square inches)" and the wording "seven times the listed appliance categorized vent area, flue collar area, or draft hood outlet area".

23.110.504.2.9 Chimney and vent locations.
Change R8 to R19 in last sentence of paragraph.

23.110.504.3.20 Chimney and vent locations.
Change R8 to R19 in last sentence of the first paragraph.

23.110.505.1.1 Commercial cooking appliances vented by exhaust hoods.
Delete “and the appliances shall be interlocked with an exhaust hood system to prevent appliance operation when the exhaust hood system is not operating.”

Add the following to the end of the last sentence: “unless part of the listed system.”

23.110.614.8.2 Duct Installation

Delete the words “more than 1/8 inch (3.2mm)”.

23.110.614.8.5 Length identification.
Revise the section to read as follows:
Where the exhaust duct is concealed from visual inspection, the equivalent length of the exhaust duct shall be identified on a permanent label or tag. The label or tag shall be located within 6-feet of the exhaust duct connection and shall be laminated or in a moisture-resistant sleeve secured to the wall using screws, staples, or thumb tacks. Push pins will not be accepted.

23.110.618.3 Prohibited sources.
Revise the first sentence to read:

Outdoor, return, or transfer air for forced-air heating and cooling systems shall not be taken from the following locations:

Revise item #7 to simply read "Crawl space".

23.110.618.4 Screen.
Change ¼ to ½ in both places.

23.110.621 Unvented room heaters.
Delete section 621. Unvented room heaters are not allowed.

23.110.623.8 Ventilating hoods.
Amend section 623 by adding subsection 623.8 as follows:

623.8 Ventilating hoods. Ventilating hoods shall be installed over all domestic free standing or built-in ranges, unless the range is otherwise listed for forced down draft ventilation. The hood or ventilation system shall exhaust to exterior of the building.

23.110.629.2 Small ceramic kiln ventilation.
Amend section 629 by adding subsection 629.2 as follows:

629.2 Small ceramic kiln ventilation. A canopy-type hood shall be installed directly above each kiln. The face opening area of the hood shall be equal to or greater than the top horizontal surface area of the kiln. The hood shall be constructed of not less than 0.024-inch (No. 24 U.S. gauge) galvanized steel or equivalent and be supported at a height of between 12 inches and 30 inches above the kiln by noncombustible supports.
Each hood shall be connected to a gravity ventilation duct extending in a vertical direction to outside the building. This duct shall be of the same construction as the hood and shall have a minimum cross-sectional area of not less than one fifteenth of the face opening area of the hood. The duct shall terminate a minimum of 12 inches above any portion of a building within 4 feet and terminate no less than 4 feet from any openable windows or other openings into the building or adjacent property line. The duct opening to the outside shall be shielded, without reduction of duct area, to prevent entrance of rain into the duct. The duct shall be supported at each section by noncombustible supports.

Provisions shall be made for air to enter the room in which a kiln is installed at a rate at least equal to the air being removed through the kiln hood.

23.110.630.3 Combustion and ventilation air.
Delete section 630.3.

23.110.634 Chimney damper opening area.
Delete section 634.

23.110. Appendix A - Sizing and capacities of gas piping.
Adopt Appendix A.

Section 2. This ordinance shall be effective immediately upon passage and approval by the Assembly.

PASSED AND APPROVED by the Anchorage Assembly this 27th day of October, 2020.

ATTEST: Chair

Municipal Clerk