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CHAPTER 21.07: DEVELOPMENT AND DESIGN STANDARDS

21.07.010 GENERAL PROVISIONS

A. Purpose

The development and design standards set forth in this chapter shall apply to the physical layout and design of development in the municipality. These provisions address the physical relationship between development and adjacent properties, public streets, neighborhoods, and the natural environment, in order to implement the comprehensive plan vision for a more attractive, efficient, and livable community. The specific purposes of this chapter include:

1. To encourage the proper use of the land by promoting an appropriate balance between the built environment and the preservation and protection of open space and natural resources;

2. To protect public and private investment through preservation of open spaces, protection of natural resources including existing trees, providing buffers between incompatible uses and along roadways, and encouraging the planting of new trees and vegetation as deemed appropriate;

3. To promote sound management of water quality and quantity through preservation of natural areas and their functions and by encouraging soil management and the use of native plant materials;

4. To provide appropriate standards to ensure a high quality appearance for the municipality and promote good design while also allowing flexibility, individuality, creativity, and artistic expression;

5. To provide development and design standards that address and are tailored to the municipality's northern climate and winter city character;

6. To strengthen and protect the image, identity, and unique character of the municipality and thereby to enhance its business economy;

7. To protect and enhance residential neighborhoods, commercial districts, and other areas by encouraging physical development that is of high quality and is compatible with the character, scale, and function of the surrounding area;

8. To encourage developments that relate to adjoining public streets, open spaces, and neighborhoods with building orientation and physical connections that contribute to the surrounding network of streets, walkways, and trails; and

9. To provide road connectivity for the safe and efficient movement of people, goods, and services.

B. Buildings to Have Access

Every building shall be on a lot abutting on a constructed public street with principal access to such street, or with access to a constructed private street approved by the fire department, project management and engineering department, development services department, traffic department, and planning department. This standard may be waived by approval of the municipal engineer, traffic engineer, and the director.

C. Addresses

It is the responsibility of the property owner to affix street address numbers assigned by the municipality to the affected building(s) or on another structure (natural or otherwise) nearer to the street, to be plainly visible and legible from the street named in the address. Sub-addresses must also be visible when approaching the building and on each applicable entrance.

D. Alternative Equivalent Compliance

1. Purpose

Alternative equivalent compliance is a procedure that allows development to meet the intent of the design-related provisions of this chapter through an alternative design. It is not a general waiver or weakening of regulations. Rather, the procedure permits a site-specific plan that is equal to or better than the strict application of a design standard specified in this title. This procedure is not intended as a substitute for a variance or administrative modification or as a vehicle for relief from standards in this chapter.

2. Applicability

The alternative equivalent compliance procedure shall be available only for the following sections of this chapter:

a. Section 21.07.060, *Transportation and Connectivity;*

b. Section 21.07.080, *Landscaping, Screening and Fencing;*

c. Section 21.07.090, *Off-Street Parking and Loading;*

d. Section 21.07.100, *Residential Design Standards*;

e. Section 21.07.110, *Public/Institutional and Commercial Design Standards*;

f. Section 21.07.120, *Large Commercial Establishments*; and

g. Section 21.07.130, *Exterior Lighting.*

3. Pre-Application Conference Required

An applicant proposing to use alternative equivalent compliance under this section shall request and attend a pre-application conference prior to submitting the site plan for the development, to determine the preliminary response from the director. Based on that response, the site plan application shall include sufficient explanation and justification, in both written and graphic form, for the alternative compliance requested.

4. Decision-Making Responsibility

Final approval of alternative equivalent compliance under this section shall be the responsibility of the decision-making body responsible for deciding upon the application. For example, proposed alternative equivalent compliance on a major site plan application shall be considered and decided upon by the urban design commission. By-right projects that would not ordinarily require review under this title, yet which are proposing alternative equivalent compliance, shall receive written approval of the alternative equivalent compliance from the director.

5. Criteria

To grant a request for alternative equivalent compliance, the decision-making body shall find that the following criteria are met:

a. The proposed alternative design achieves the intent of the subject design standard to the same or better degree than the subject standard.

b. The proposed alternative design achieves the goals and policies of the comprehensive plan to the same or better degree than the subject standard.

c. The proposed alternative design results in benefits to the community that are equivalent to or better than compliance with the subject design standard.

6. Effect of Approval

Alternative compliance shall apply only to the specific site for which it is requested and does not establish a precedent for assured approval of other requests.

21.07.020 NATURAL RESOURCE PROTECTION

A. Purpose

The municipality contains many natural amenities, including stream corridors, natural drainages, wildlife habitat areas, water bodies, wetlands, and hillsides, as well as significant amounts of native forest, tree cover, and open space, all of which contribute to the municipality's character, quality of life, and property values. The requirements of this section are intended to ensure that the natural character of the municipality is reflected in patterns of development and redevelopment, and significant natural features are incorporated into open space areas.

B. Stream, Water Body, and Wetland Protection

1. Purpose

The following requirements are intended to promote, preserve, and enhance the important hydrologic, biological, ecological, aesthetic, recreational, and educational functions provided by stream corridors, associated riparian areas, water bodies, and wetlands, particularly by minimizing impervious surface and by reducing erosion and the contamination of streams, wetlands, and water bodies by pollutants.

2. Applicability

This subsection 21.07.020B. shall apply to all new development, except for the following development or activities:

a. Maintenance and repair of existing public roads, utilities, and other public facilities within an existing right-of-way or easement, or otherwise within a setback;

b. Flood prevention or rehabilitation work carried out by a government agency or approved by a government agency;

c. Maintenance and repair of flood control structures and activities in response to a flood emergency; and

d. Wetland, stream channel, and wildlife habitat restoration, construction, and/or enhancement that improves or restores the wetland or stream corridor functions, provided that the proposed activity is approved by the appropriate agency such as the U.S. Corps of Engineers or the Alaska department of fish and game.

3. Relationship to Other Regulations

a. This subsection 21.07.020B. does not repeal or supersede any existing federal, state, or local laws, easements, covenants, or deed restrictions. When this subsection imposes a higher or more restrictive standard than found in another applicable ordinance, statute, or regulation, this subsection shall apply.

b. No person shall engage in any activity that will disturb, remove, drain, fill, dredge, clear, destroy, or alter any area, including vegetation, within a wetland that falls in the jurisdiction of the federal government and its agencies, except as may be expressly allowed under a permit issued by the appropriate federal agency.

c. The decision-making body shall not grant preliminary or final approval to any development or activity, including subdivisions, in a wetland that falls within the federal government's jurisdiction until all necessary federal approvals and permits have been obtained.

4. Buffer/Setback Requirements

a. ***Streams Corridors***

i. In all zoning districts, buildings, accessory structures, and parking lots shall be set back at least 50 feet horizontally from the ordinary high-water mark on each side of stream corridors or, if not readily discernible, from each side of the defined bank of the stream. Except as provided in B.6. below, no disturbance is permitted in the 50-foot setback area.

ii. In all zoning districts, buildings, accessory structures, and parking lots shall be set back at least 10 feet horizontally from the edge of each side of drainageways and ephemeral streams defined or verified by watershed management services division staff. Except as provided in B.6. below, no disturbance is permitted in the 10-foot setback area.

iii. Segments of streams or tributaries that are contained underground in pipes or culverts have no setback.

iv. For parcels where there are wetlands contiguous with a stream, setback requirements are listed in table 2 of the *Anchorage Wetlands Management Plan*.

b. ***Wetlands***

i. To the maximum extent feasible, class A and those class B wetlands which, as a result of a U.S. Corps of Engineers decision or permit condition, are not authorized for development, shall be platted into separate tracts and not included as part of a development lot. Wetland classes are defined and delineated in the *Anchorage Wetlands Management Plan*.

ii. Except as provided in B.6. below, all buildings, accessory structures, fills and other storage of materials, and parking lots shall be set back at least 15 feet horizontally from the delineated edge of all class A wetlands, and all portions of class B and C wetlands not authorized for development; no disturbance is permitted in the 15-foot setback area.

c. ***Water Bodies***

In all districts, buildings, accessory structures, and parking lots shall be set back at least 15 feet horizontally from the edge of water bodies. Within each lot, 50%

of the width of the setback area (measured between the lot lines that are perpendicular to the water body) shall remain undisturbed, in one or two contiguous areas. The other 50% may be cleared of vegetation to within two feet of the ground, but the vegetative mat shall not be disturbed, except for access to those uses such as docks, boathouses, and floatplane storage that require direct access to a water body by their very nature or function.

d. ***Credit for Other Requirements of this Title***

Stream corridor, water body, and wetland setback areas shall be credited toward any applicable private open space requirements or landscaping requirements only if such setback areas serve the purposes of those requirements as set forth in this title.

5. Boundary Delineation

a. ***Official Definitions and Standards***

i. In cases where stream channels or water bodies are not mapped and recorded in official plans or other documents, delineation of such features shall be made according to the watershed management services division's procedures, and shall be subject to formal verification by the watershed management services division.

ii. In cases where wetlands are not mapped and recorded in official plans or other documents, including the *Anchorage Wetlands Management Plan*, delineation of such features shall be performed using procedures as described by the U.S. Corps of Engineers. Delineations shall be subject to formal verification by the department and/or the U.S. Corps of Engineers.

b. ***Stream Corridor Boundaries***

Stream corridors shall be delineated at the ordinary high-water mark or, if not readily discernible, the defined bank of the stream, as those terms are defined in chapter 21.14. The watershed management services division shall maintain the official record of all stream corridor boundaries.

c. ***Wetland Boundaries***

i. *Mapped Wetlands*

Boundary delineation of wetlands shall be established by reference to the *Anchorage Wetlands Management Plan*, which is available for reference in the department and which is hereby adopted and incorporated into this title by reference. Plats shall depict class A and B wetland boundaries, and boundaries of class C wetlands that are not authorized for development.

ii. *Unmapped Wetlands*

The review of a development proposal may discover a potential wetland that has not been mapped or for which the boundaries have not been clearly established. In such instances, the boundaries of the wetland shall be delineated according to subsection 5.a.ii. above. Any new wetland boundaries delineated herein shall be submitted to the U.S. corps of engineers for approval.

6. Development Standards

a. ***Permitted Activities***

i. With the appropriate permits, maintenance, including placement of riprap, debris removal, glaciation control, sediment removal, protection of adjacent or downstream property from flooding, soil stabilization, and erosion control, may be performed within the setbacks described in B.4. above.

ii. The following structures and uses of land or structures are permitted generally perpendicular to the setback or stream edge within the closest 35 feet of the stream, and within the drainageway, ephemeral stream, wetland, and water body setback, where it is necessary in order to cross or enter the feature:

(A) Roads, driveways, and other transportation facilities;

(B) Utility facilities pursuant to 6.c. below;

(C) Drainage facilities, in accordance with subsection 21.07.040 and approved by the watershed management services division; and

(D) Trails and other public recreation facilities.

iii. The following structures and uses of land or structures are permitted parallel to the stream within the outer 15 feet of the setback:

(A) Trails and other public recreation facilities;

(B) Utility facilities pursuant to 6.c. below;

(C) Drainage facilities, in accordance with subsection 21.07.040 and approved by the watershed management services division; and

(D) Lawns, landscaping, play equipment, storage sheds on temporary foundations, fences, decks, unpaved patios, and other similar features that are based on a pervious surface.

iv. Redevelopment of structures or uses existing on [date of passage] is allowed in the setback where:

(A) The director determines there is no practical or feasible alternative to encroaching into the setback; and

(B) The redevelopment does not increase the encroachment over the existing situation.

v. On undeveloped platted lots existing before [date of passage] where the director determines the setback precludes practical or feasible development of the lot, the director shall approve a site plan that allows but minimizes encroachment into the setback.

vi. All disturbed areas associated with permitted activities shall be revegetated with landscaping similar to the natural vegetation of the

area. Revegetation shall occur during the same growing season as the permitted activity, unless otherwise permitted by the director.

b. ***Prohibited Activities***

i. No person shall engage in any activity that will disturb, remove, fill, drain, dredge, clear, destroy, or alter an area, including vegetation, within stream corridors, water body edges, wetlands, or their associated setback areas, except as may be expressly allowed in this section or title.

ii. Channel alteration, including culvertization other than for roadway and driveway crossings, is prohibited unless a variance is obtained under the provisions of section 21.03.240, a flood hazard permit is obtained pursuant to section 21.03.090, and relevant state and federal permits are obtained. In emergency situations, the application for the necessary approvals may be made no later than 24 hours after channel alteration has begun. For the purposes of this standard, an "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken immediately.

iii. No storage or processing of hazardous materials or other substances that would constitute a violation of AMC chapter 15.40 is permitted.

c. ***Utilities***

Utilities, including potable water wells, may be allowed in a setback area only if the decision-making body determines that there is no practical alternative. Any disturbance of the setback area shall be reclaimed by regrading to original contours and revegetation with native species. Provisions for reclamation of the disturbed area shall be included in any development or improvements agreement for the project, with adequate collateral to guarantee the reclamation will be completed. Utility corridors in setback areas shall be located at the outside edge of the area or if crossing the setback laterally shall disturb only the minimum area necessary to install the utility. Access roads for maintenance of utilities shall be located outside the setback area to the maximum extent feasible. Access for maintenance of utilities in setback areas should be at specific points rather than parallel to the utility corridor whenever possible.

d. ***Recreation, Education, or Scientific Activities***

Structures and improvements for recreational, educational, or scientific activities such as trails, swimming beaches, docks, fishing access, and wildlife management and viewing may be permitted in a setback area by the appropriate government agency.

7. Preservation and Restoration of Vegetation

All existing vegetation within the stream corridor, water body edge, or wetland setback area shall be preserved and, where necessary to repair damaged riparian areas, supplemented with additional native planting and landscaping. The removal of trees or vegetation that the municipality finds to be a threat to the public health, safety, or welfare; the removal of species identified as invasive by the Alaska department of natural resources; or the removal of dead or naturally fallen trees or vegetation, shall be exempt from this requirement.

8. Implementation of Anchorage Wetlands Management Plan

a. ***Zoning and Platting Actions***

Zoning and platting actions taken under this title shall be consistent with the *Anchorage Wetlands Management Plan*.

i. *"A" Wetlands*

Wetlands designated "A" in the *Anchorage Wetlands Management Plan* and in table 2 of that plan shall be protected as indicated in that table and in chapter 4 of the *Anchorage Wetlands Management Plan*.

ii. *"B" Wetlands*

New development plans in "B" wetlands shall obtain a U.S. Corps of Engineers permit, concurrent with or prior to necessary approval by the platting board and/or the planning and zoning commission. In order to maximize protection of wetlands designated "B," in addition to the criteria normally considered in subdivision, site plan, and conditional use applications, the platting authority or the planning and zoning commission shall, prior to approval, make explicit findings that, or the applicant shall certify with their U.S. Corps of Engineers permit that:

(A) The proposed design and placement of roadways, utility lines, and structures will not interfere with the natural drainage function indicated in the required hydrologic studies or that such interference can be adequately mitigated to maintain the natural drainage function;

(B) The soils in the area proposed for development shall adequately support roadways and structures, or that properly designed roads and foundations will be provided; and

(C) Habitat areas identified in federal, state, or municipal documents shall be adequately protected.

Maintenance of open space in its natural state shall be required where the platting authority or the planning and zoning commission determines that such open space is necessary to protect the hydrologic and habitat values of wetlands on the property being developed or on adjacent property. Areas where open space is to be preserved in its natural state shall be indicated on the plat or approved site plan. The platting authority and planning and zoning commission may require such land development techniques and such additional conditions as may be appropriate to carry out the intent of the *Anchorage Wetlands Management Plan* and such other wetlands studies as may be relevant.

iii. *"C" Wetlands*

When approving plats or conditional use permits in wetlands designated "C" under the plan, the platting authority or the planning and zoning commission shall, whenever practicable, include the recommended construction mitigation techniques and conditions and enforceable policies in table 2 of the *Anchorage Wetlands Management Plan*.

b. ***Application of Plan to Approved Projects***

Conditional uses and preliminary plats approved prior to March 12, 1996, the date of adoption of the revised *Anchorage Wetlands Management Plan*, shall not

have additional conditions imposed upon them as a result of requirements of the plan except as follows:

i. The "A" designation shall apply regardless of prior approvals.

ii. Approved plats or conditional uses in wetlands that are returned to the platting authority or planning and zoning commission for major amendment may be examined for conformity with goals and enforceable policies of the *Anchorage Wetlands Management Plan*.

iii. A new U.S. Corps of Engineers permit is required.

C. Steep Slope Development

1. Purpose

The purpose of this subsection 21.07.020C. is to establish standards that help achieve the following objectives for development on steep slopes:

a. Prevent soil erosion and landslides;

b. Provide safe circulation of vehicular and pedestrian traffic to and within hillside areas and to provide access for emergency vehicles necessary to serve the hillside areas;

c. Encourage only minimal grading that relates to the natural contour of the land and discourage mass grading of large pads and excessive terracing;

d. Encourage appropriate building types, grading design, lot sizes, site design, density, arrangement, and spacing of buildings in developments in sloped areas;

e. Encourage innovative architectural, landscaping, circulation, and site design;

f. Incorporate drainage design that does not adversely impact neighboring or nearby properties, downstream properties, and public infrastructure; and

g. Encourage the retention of natural, indigenous vegetation that provides wildlife habitat and maintains the area's visual character.

2. Applicability

This subsection 21.07.020C. shall apply to any lot within the municipality that is 40,000 square feet or greater in area with an average slope of 20% or greater, or where adverse conditions associated with slope stability, erosion, or sedimentation are present as determined by the municipal engineer, except that lots created through the conservation subdivision process in accordance with section 21.08.070 are exempt.

3. Standards

Except as allowed in subsection C.4. below, all proposed development subject to this section shall comply with the following standards.

a. ***Slopes Greater than 30 Percent***

On any lot where a contiguous area of 5,000 square feet or larger with slopes steeper than 30% exists, such area shall remain undisturbed, except as allowed in subsection C.4. below.

b. ***Site Disturbance Envelope***

i. Each lot shall have a site disturbance envelope which shall define the limits of all earth disturbance and vegetation clearing. Clearing, grubbing, or grading outside the site disturbance envelope is prohibited except to modify fuels in order to reduce fire risk, or to accommodate utility service connections.

ii. The size of the site disturbance envelope shall be as follows:

(A) Lots up to two acres in area: 20,000 square feet maximum.

(B) Lots over two acres but less than five acres: 30,000 square feet maximum.

(C) Lots five acres or greater: 40,000 square feet maximum.

iii. Areas outside the site disturbance envelope shall not be used for stockpiling materials or excess fill, construction vehicle access, storage of vehicles during construction, or similar uses. Temporary construction fencing shall be installed around the perimeter of the site disturbance envelope, to be removed after the final certificate of zoning compliance is issued.

iv. The front setback of the lot may be reduced to 10 feet.

c. ***Cutting, Grading, and Filling***

i. Cutting and grading to create benches or pads for buildings or structures shall be limited to within the site disturbance envelope.

ii. Cut and fill slopes shall be entirely contained within the site disturbance envelope. The toe of any fill slope not utilizing an engineered retaining structure, and any engineered retaining structure shall be a minimum of 15 feet from any property line, except as associated with a driveway.

iii. Cut and fill slopes shall be designed to provide a natural transition into the existing terrain by feathering and rounding.

d. ***Raising or Lowering of Natural Grade***

The original, natural grade of a lot shall not be raised or lowered more than four feet at any point for construction of any structure or improvement, except:

i. The site's original grade may be raised or lowered a maximum of six feet if retaining walls are used to reduce the steepness of constructed slopes, provided that the retaining walls comply with the requirements set forth in this subsection.

ii. As necessary to construct a driveway from the street to a garage or parking area, grade changes or retaining walls up to six feet may be allowed.

iii. For the purposes of this subsection 21.07.020C.3.d., basements and buildings set into a slope are not considered to lower the natural grade within their footprint.

e. ***Retaining Walls***

Retaining walls may be used to maximize the usable area on a lot within the site disturbance envelope. Generally, a retaining wall shall be no higher than four feet, except that a wall varied in height to accommodate a variable slope shall have an average height no greater than four feet and a maximum height no greater than eight feet in any 100-foot length. Parallel retaining walls may be used to overcome steep slopes, provided the following standards are met:

i. The minimum distance between walls shall be six feet;

ii. The maximum allowable slope between walls shall be 3H:1V; and

iii. The area between the walls shall be landscaped with trees, shrubs, or both at a rate of 0.5 landscape units per linear foot measured along the length of the lower retaining wall.

A higher wall is permitted:

i. Where used internally at the split between one- and two-story portions of a building; and

ii. Where substantially hidden from public view at the rear of a building, where it may not exceed the eave height of the building.

f. ***Natural Drainage Patterns***

i. Site design shall not change natural drainage patterns, except as provided below.

ii. All final grading and drainage shall comply with section 21.07.040, title 23, the *Design Criteria Manual* (current approved edition), and the municipality's *Erosion-Sediment Control Handbook*.

iii. To the maximum extent feasible, development shall preserve the natural surface drainage pattern unique to each site as a result of topography and vegetation. Grading shall ensure that drainage flows away from all structures, especially structures that are cut into hillsides. Natural drainage patterns may be modified on site only if the applicant shows that there will be no significant adverse environmental impacts on site or on adjacent properties. If natural drainage patterns are modified, appropriate stabilization techniques shall be employed.

iv. Development shall not adversely impact adjacent and surrounding drainage patterns.

g. ***Ground Cover and Revegetation***

Ground cover and vegetation shall be maintained to control erosion and sedimentation. All areas that are denuded for any purpose shall be revegetated or the soils stabilized to prevent erosion and sedimentation prior to November 1 of the year of construction. No excavation shall be permitted after November 1 or before May 1 except under emergency conditions, as determined by the building official.

h. ***Building Design Standards***

The purpose of the building design standards is to minimize site disturbance, avoid extreme grading required by large building pads on steep slopes, and reduce the risk of damage from natural hazards.

i. All buildings and structures shall have a foundation which has been designed by a professional engineer, architect, or other qualified professional.

ii. At any given point, the height of the structure shall not exceed 25 feet above the original (natural) grade.

iii. Piers or pilings used to support any part of a structure shall be covered.

4. Slopes Greater Than 30 Percent

a. ***Purpose***

The requirements of this section are intended to allow consideration of development on slopes up to 50%. In order to assure the safety and stability of such development and to reduce downstream impacts, additional submittals are required as described in this subsection. Nothing in this subsection guarantees approval to disturb slopes greater than 30%.

b. ***Applicability***

If the site disturbance envelope as defined in C.3.b. above contains slopes over 30%, the standards of this section shall apply.

c. ***Slopes Greater Than 50 Percent***

One hundred percent of areas with slopes greater than 50% shall remain undisturbed.

d. ***Administrative Site Plan Review Required***

Development on slopes greater than 30% but not exceeding 50% requires an administrative site plan review. In addition to the site plan approval criteria set forth in subsection 21.03.180E., the approval criteria in subsection 4.g. below shall apply.

e. ***Additional Submittal Requirements***

In addition to the submittal requirements for an administrative site plan review, the following information is required:

i. A geotechnical and engineering report to include the following:

(A) Nature, distribution, strength, stability, and pH of soils; conclusions and recommendations for grading procedures; recommendations for frequency of soil compaction testing, design criteria for corrective measures; and opinions and recommendations covering the adequacy of sites to be developed.

(B) Slope stability analysis: conclusions and recommendations concerning the effects on slope stability of material removal, introduction of water (both on and offsite), seismic activity, and erosion.

(C) Foundation investigation: conclusions and recommendations concerning the effects of soil conditions on foundation and structural stability, including permeability, bearing capacity, shear strength, and shrink/swell potential of soils.

(D) Specific recommendations for cut and fill slope stability, seepage and drainage control, or other design criteria to mitigate geologic hazards, slope failure, and soil erosion.

(E) Depth to groundwater and to bedrock.

(F) Complete description of the geology of the site, including site geologic maps, a complete description of bedrock and subsurface conditions and materials, including artificial fill, soil depth, avalanche and mass wasting hazard areas, fractures, or other significant features.

(G) A summary of field exploration methods and tests on which the report is based, such as probings, core drillings, borehole photography, or test pits.

ii. A site development plan showing the following:

(A) Site disturbance envelope as set forth in C.3.b. above.

(B) Location of all driveways, and utility lines and installations.

(C) Location of all structures.

(D) Elevation drawings of all structures.

iii. Grading and drainage plans that provide the following:

(A) Topographic survey of existing conditions depicting at a minimum two foot contour intervals on a legible site map of one inch equaling 50 feet, or better.

(B) Proposed grading plan indicating limits of disturbed area, finished grade at minimum two foot contour intervals, proposed elevations of improvements, driveway grading at minimum 10 foot intervals measured on centerline, delineation of cut and fill areas, constructed slopes, proposed drainage features, and related construction.

(C) Drainage plans showing approximate locations for all surface and subsurface drainage devices, retaining walls, dams, sediment basins, storage reservoirs, and other protective devices to be constructed with, or as part of, the proposed work, together with a map showing drainage area, how roof drainage will be disposed, the complete drainage network, including outfall lines and natural drainage ways which may be affected by the proposed development, and the estimated runoff of the area served by the drains.

(D) A plan for erosion control and other specific control practices to be employed on the disturbed area where necessary.

iv. A revegetation plan that shows:

(A) The type, size, location, and grade of vegetation that will be used to complete the development plan and restore areas disturbed during construction, on a scaled plan of one inch equaling 30 feet, or better.

(B) Slope stabilization measures to be installed.

f. ***Standards***

The standards of the following subsections apply to development under this subsection C.4.:

i. 21.07.020C.3.b., *Site Disturbance Envelope*;

ii. 21.07.020C.3.c., *Cutting, Grading, and Filling*;

iii. 21.07.020C.3.f., *Natural Drainage Patterns*;

iv. 21.07.020C.3.g., *Ground Cover and Revegetation*; and

v. 21.07.020C.3.h., *Building Design Standards*.

g. ***Approval Criteria***

i. The proposed development minimizes disruption of the natural topography and protects natural features on the site in their natural state to the greatest degree possible.

ii. The principal and accessory structures have been sited in such a manner as to protect natural features of the site, minimize grading, preserve the appearance of scenic vistas, and minimize the risk of property damage and personal injury from natural hazards.

iii. The design of the structures includes massing, roof lines, exterior materials and colors, and decking that complements the terrain and complies with the building design standards set forth in paragraph C.3.i. above.

iv. Proposed landscaping preserves the natural character of the area while minimizing erosion and fire hazard risks to persons and property.

v. The project protects the public health, safety, and general welfare of persons residing in and around the area, as well as the community at large.

vi. The drainage design of the development will have no adverse impact on neighboring or nearby properties.

vii. Areas not well suited for development due to soil stability characteristics (solifluction, mass movement), geology, hydrology limitations, or wastewater disposal, have been avoided.

D. Wildlife Conflict Prevention Areas

1. Applicability

This subsection shall apply within 200 feet on either side of the ordinary high water of the following streams: Eklutna River (downstream from the Old Glenn Highway), Thunderbird Creek, Peters Creek and its tributaries, Fire Creek (downstream from the Glenn Highway), Eagle River, South Fork of Eagle River (below the falls), Ship Creek (upstream from Reeve Blvd.), Campbell Creek (upstream from Lake Otis Parkway), Rabbit Creek, Little Rabbit Creek, Indian Creek, Bird Creek, and Portage Creek.

2. Standards

Within the area identified in subsection D.1. above, the following mandatory standards shall apply:

a. No landfills, transfer stations, schools, or campgrounds are allowed.

b. Any commercial, institutional, or industrial development shall store edible garbage in bear-proof containers, and shall not store food outside.

c. Roads and driveways are allowed only if there is no feasible and prudent alternative.

d. Stream crossings, either by roads, driveways, or trails, shall be designed to facilitate wildlife passage along the stream, and minimize wildlife-human conflicts.

3. Guidelines

Within the area identified in subsection D.1. above, the following voluntary guidelines apply:

a. Fences are discouraged.

b. New buildings are encouraged to be sited outside these areas.

c. Trails should be sited outside these areas, and/or with direct consultation with the state department of fish and game.

d. All outdoor trash receptacles should be bear-proof.

e. Bird feeders should be empty between April 15 and October 15.

f. Food, including pet food and bird seed, should be stored indoors and/or in bear-proof containers.

g. Bee hives, vegetable gardens, fruit trees and berry bushes, and composting is discouraged in this area.

h. Pet runs and livestock should not be kept in this area.

21.07.030 PRIVATE OPEN SPACE

A. Purpose

1. In residential development, private open space is intended to provide residents with opportunities for active and passive outdoor recreation, relaxation, and enjoyment. Open space enhances the quality and livability of new development and can preserve vegetation, access to light and air, and scenic views.

2. In nonresidential development, private open space is intended to contribute to the walkability and general quality of the public realm, and to provide employees and customers with space for active or passive recreation and relaxation.

B. Applicability

Development shall be required to set aside private open space according to the following minimum requirements. Single-family, two-family, and townhouse residential uses are exempt.

1. R-2M and R-2F districts: 400 square feet of private open space per dwelling unit, or five percent of the gross floor area of nonresidential development.

2. R-3 district: 300 square feet of private open space per dwelling unit. At least half of the private open space shall be shared in common among the units. Nonresidential development shall provide five percent of the gross floor area for open space.

3. R-4 and R-4A districts: 100 square feet of private open space per dwelling unit. At least half of the private open space shall be shared in common among the units. Nonresidential development shall provide five percent of the gross floor area for open space.

4. B-1A, B-3, RO, NMU, CMU, RMU, and MT districts, and nonresidential development in residential districts: Private open space equal to five percent of the gross floor area of the nonresidential portion of the development shall be provided. Where dwelling units are part of the development, an additional 60 square feet of private open space per dwelling unit shall be provided. Private open space required by nonresidential development and private open space required by residential development shall not be combined on a site.

5. DT districts: [to be determined through Downtown Plan and regulations process]

C. Standards

1. Areas Not Credited

Lands within the following areas shall not be counted towards required private open space areas:

a. Setbacks with slopes over 10%;

b. Drainage easements and ditches;

c. Required landscaping;

d. Public or private streets or rights of way;

e. Open parking areas and driveways for dwellings; and

f. Land covered by structures not intended solely for recreational uses.

2. Use of Private Open Space Areas

Required private open space may be private yard, garden, patio, deck, balcony, or other open space reserved for the exclusive use of a single dwelling unit. It shall be designed for the occupants of a specific dwelling, and provided immediately adjacent to, and with direct access from the dwelling. The minimum inside dimension for such an area used to meet the private open space requirement shall be no less than 15 feet for ground level spaces such as yards, or six feet for above ground level spaces such as balconies.

3. Common Private Open Space

Private open space areas to be used in common by residents and/or associated with nonresidential uses or mixed uses are intended to be either green space, such as lawn or natural vegetation, or developed for pedestrian uses, such as patios, courtyards, or active recreation areas. These areas shall meet the following standards:

a. At least half of the common private open space shall be contiguous.

b. A walkway shall connect common private open space to primary building entrances.

c. The minimum inside dimension for an area used to meet the requirement shall be 15 feet.

d. The common private open space shall be either natural vegetation, landscaped vegetation (such as lawn or garden), a plaza or courtyard meeting the requirements of subsection F.5. below, indoor private open space pursuant to C.4. below, or some combination of the four.

e. Up to 25% of the total required open space area may be developed for active recreation, such as with play equipment or delineated sports field.

4. Indoor Private Open Space Option

Up to 25% of the total required private open space may be indoors, which shall be exempt from gross floor area calculations. Such space shall be located and designed to maximize sunlight access, with the majority of its roof or wall area to be transparent to the sky and outdoor views, and shall be climate controlled and furnished with features and amenities that encourage its use.

5. Incentive for High Quality Spaces

The total open space area requirement may be reduced by 10% if the area meets all the other requirements of this section and the following standards:

a. Has less than five percent slope;

b. Is well-drained and not wetlands;

c. Has a minimum inside dimension of 20 feet;

d. Receives sunlight access on the majority of the open space for at least four hours per day between the spring and fall equinox; and

e. In mixed-use districts, is visible from or directly abuts a primary entrance area.

6. Ownership

All private open space areas not reserved for the exclusive use of a single dwelling unit shall be owned jointly or in common by the owners of the development or permanently preserved through some other mechanism satisfactory to the director. While private open space may be platted into separate tracts, those tracts which provide required private open space shall not be sold separately from the development.

7. Fee In Lieu Prohibited

The payment of fees in lieu of the set-aside of land for private common open space is prohibited.

21.07.040 DRAINAGE, STORM WATER TREATMENT, EROSION CONTROL, AND PROHIBITED DISCHARGES

A. Purpose

1. Drainage plans and the requirements of this section and the *Design Criteria Manual* are intended to implement the following principles of drainage planning:

a. The design of a drainage system shall not transfer a problem from one location to another.

b. Adequate space shall be provided for drainage conveyance and storage.

c. Good drainage design incorporates the effectiveness of the natural systems, rather than negating, replacing, redirecting, or ignoring them. The features, capacity, and function of the existing natural system shall be considered and utilized.

d. Drainage and storm water management facilities shall be designed with ease of maintenance, long-term function, arctic climate function, protection of public safety, and accessibility as primary considerations.

2. Other purposes of this section include:

a. Regulating development preparation and land-disturbing activity in order to control erosion and sedimentation and accordingly to prevent water pollution from sedimentation, to prevent accelerated erosion and sedimentation of lakes and natural watercourses; and to prevent damage to public and private property by erosion and/or sedimentation during and after construction;

b. Regulating storm water discharge to improve the quality of the environment for residents of the municipality, administer the Municipal Separate Storm Sewer permit, and manage impacts to the watersheds in the municipality; and

c. Minimizing point and non-point source pollution into the water bodies of the municipality.

B. Relationship to Chapter 21.12, Nonconformities

No nonconforming rights are granted for this section 21.07.040.

C. Guidance Documents

The municipal engineer shall develop, implement, and maintain various guidance manuals which shall provide standards and guidelines for this section 21.07.040. The *Design Criteria Manual* and the *Storm Water Treatment Plan Review Guidance Manual* are examples of such manuals, and are adopted herein by reference.

D. Drainage

1. Intent

A drainage plan shall show the post-development drainage patterns of the site.

2. Applicability

This section applies to all development within the municipality.

3. Drainage Plan Required

a. Applications for the following entitlements shall include a drainage plan:

i. A permit from the development services department;

ii. Subdivision plat (both preliminary and abbreviated plats);

iii. Site plan review (administrative and major); and

iv. Conditional use.

The drainage plan submittal requirement may be waived by the director and the municipal engineer if both agree that such a plan is not necessary.

b. The drainage plan shall show the area affected by the application, as well as watercourses, drainage and water quality easements, appropriate drainage outfall for surface water, roof drainage, and other impervious surfaces, and any other pertinent information, and shall address surface and subsurface drainage. The drainage plan shall also indicate impacts, if any, on adjacent, up-gradient, and down-gradient properties.

c. An approved drainage plan is required before any site work commences.

4. Standards

Drainage plans shall comply with the requirements of municipal code and the Design Criteria Manual. Post-development drainage plans shall be designed in a manner such that there will be no adverse or cumulative impacts on adjacent, up-gradient, or down-gradient properties. Any net increase of water volumes must be mitigated and/or directed to an adjacent drainage system or receiving water that has the demonstrated capability to handle the new flows. The municipality may require a dedicated drainage easement(s) to ensure the drainage is consistent and compatible with surrounding drainage patterns.

5. When No Permit is Required

a. In situations where a building or land use permit is not required, all design and construction activities shall comply with municipal code, the *Municipality of Anchorage Standard Specifications* and the *Design Criteria Manual*.

b. If a project is significant in nature or the municipal engineer reasonably believes it will have negative impacts on surrounding property, water quality, drainage, or

the roadways, the municipal engineer may require submittal of a drainage plan and a full review of the project. The applicant shall pay the appropriate review fees for the review.

c. If a project is under construction, the municipal engineer may issue a stop work order until the project has been reviewed and approved.

d. If a project has been completed and there are negative impacts on surrounding property, water quality, drainage, or the roadways, the municipal engineer may pursue enforcement actions under chapter 21.13.

6. Exposure of Subsurface Flows

If, during site work, unexpected subsurface flows are exposed, site work in the affected area shall immediately stop. The developer shall amend the drainage plan to address the exposed flows and shall submit it to the municipality for approval.

E. Storm Water Treatment and Erosion and Sediment Control

1. Intent

A storm water treatment plan shall show both the controls put in place during construction and any needed post-development controls to prevent erosion and protect water quality.

2. Applicability

No land, water body, watercourse, wetland, structure, or operation within the municipality and regulated by this code shall be operated, altered, repaired, improved, converted, or modified unless a storm water treatment plan has been approved. Storm water treatment plan approval is required prior to commencement of land clearing or ground disturbing activities; the discharge of surface water (including from snow disposal sites); the construction, alteration, installation, modification, or operation of a storm water treatment or disposal system; demolition or utility work; connection to the Municipal Separate Storm Sewer System; work in waterways or watercourses; or dewatering activities, except as listed in E.3. below. All construction, development, and maintenance activities shall be in accordance with the approved storm water treatment plan.

3. Exceptions

A storm water treatment plan shall not be required for the following, except as noted in F.2. below. An erosion control plan may still be required if the discharge is so concentrated as to cause soil disturbance.

a. Building improvements where no earth is disturbed;

b. Any earth disturbance that is both less than 500 square feet in area and less than four feet in depth;

c. Discharges of the following

i. Uncontaminated water line flushing;

ii. Residential irrigation water;

iii. Rising ground waters;

iv. Uncontaminated ground water infiltration;

v. Uncontaminated discharges from potable water sources;

vi. Foundation drains;

vii. Air conditioning condensate;

viii. Springs;

ix. Uncontaminated water from crawl space pumps;

x. Individual residential car washing;

xi. Flows from riparian habitats and wetlands;

xii. De-chlorinated swimming pool discharges;

xiii. Street wash waters; or

xiv. Flows from emergency fire fighting activity.

4. Submittal Requirements and Review Procedure

Storm water treatment plans shall be submitted to the project management and engineering department on the form provided. The submittal shall include plans for both temporary (during construction) and permanent storm water treatment and erosion control, and any supplementary information required in the user's guide or the *Design Criteria Manual*.

a. ***Storm Water Treatment Plan Review Guidance Manual***

The *Storm Water Treatment Plan Review Guidance Manual* shall be used to develop, review, and approve storm water treatment plans. Applicants submitting plans under this subsection shall comply with the manual regarding plan requirements and reviews, and if necessary shall gather data to confirm storm water conditions.

b. ***Changes to an Approved Storm Water Treatment Plan***

Any changes to an approved storm water treatment plan, including additions or changes to best management practices necessary to maintain effective storm water treatment, require approval by the municipal engineer.

c. ***New Application Required***

If dewatering, land clearing, construction, alteration, installation, modification, or operation has not begun within one year after issuance of a storm water treatment plan approval, the approval is void, and a new application shall be submitted to the project management and engineering department for review and approval.

d. ***Project-Wide Approval***

The municipal engineer may issue a project-wide approval to an applicant who plans to conduct an operation with the same runoff characteristics at various discharge locations. He or she may require the submittal of site-specific plans, including a schedule and description of all planned discharge activities, for approval, and may restrict that approval to certain proposed discharge activities.

e. ***Emergency Repairs***
Where site repairs must be performed in an emergency, the storm water treatment plan or changes to an approved storm water treatment plan shall be submitted within the next business day to the project management and engineering department. For the purposes of this section, an "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken immediately.

5. Land Clearing
Mechanized land clearing requires an approved storm water treatment plan. A temporary native vegetation buffer shall be retained on the perimeter of the lot being cleared, equal to or greater than the specified minimum setback required in the zoning district. This buffer shall be at least 15 feet wide on the perimeter of lots in commercial and industrial zoning districts, except where these are adjacent to PLI and/or residential zoning districts, where the temporary buffer shall be a minimum of 30 feet wide. Those buffers of temporary native vegetation in commercial and industrial zoning districts not essential to the parcel's development shall be retained and protected from disturbance.

6. Licensed Contractor
Work for which a storm water treatment plan approval is required shall be performed only by:

a. A contractor licensed to do that work; or

b. The owner of the single- or two-family dwelling for which the work is being done, if the owner demonstrates to the satisfaction of the development services department that he or she can perform the work in a safe manner.

7. Erosion and Sediment Control Administrator (ESCA)
A qualified erosion and sediment control administrator, who shall be responsible for the erosion, sedimentation, and best management practices during construction, shall be identified in each storm water treatment plan submitted for approval, except for storm water treatment plans for owner-built single- and two-family dwellings. Evidence of contractual liability shall be provided when requested.

a. In order to qualify to be an ESCA, a person shall take a training course approved by the municipal watershed management services division. At the end of the training, a test will be administered, and applicants must successfully complete the examination in order to be considered for certification.

b. A certification shall remain in effect until its expiries, unless revoked. Before the expiration of a certification, it may be renewed by paying a renewal fee. ESCAs who have not renewed their certification by 30 days after the expiration date shall be required to re-take the test required for all new applicants.

c. The municipal engineer may revoke any certificate if the certified person later shows incompetence or lack of knowledge in matters relevant to the certificate, or if the certificate was obtained by fraud. The following actions shall serve as evidence of incompetence: If during any 12 month period an ESCA (1) fails on three different occasions to correct any deficiencies noted in a written inspection report by a municipal inspector within the prescribed time; or (2) allows an illicit discharge on two separate occasions. If a certificate is revoked, another

certificate shall not be issued to the same person within 12 months after the date of revocation.

d. ESCA certificates are not transferable from one person to another, and the lending of any certification or the obtaining of permits there under for any other person shall be deemed cause for revocation.

e. The municipal engineer may require retesting of any certificate holder if such person shows incompetence or lack of knowledge in matters relevant to the certificate. Failure to pass the re-testing shall result in the revocation of the certificate.

8. Alternate Materials, Design, and Method of Construction

a. The provisions of this section are not intended to prevent the use of any alternate material, design, or method of construction not specifically prohibited by this code, provided any alternate has been approved and its use authorized by the municipal engineer.

b. The municipal engineer may approve any such alternate, provided that he or she finds that the proposed design complies with the intent and purpose of this code, and that the material, method, or work offered is, for the purpose intended, at least the equivalent of that required in this code in suitability, effectiveness, durability, safety, sanitation, and degree of structural integrity. The details of any action granting modifications or the acceptance of a compliance alternative shall be recorded and entered in the watershed management services division files.

c. Whenever there is insufficient evidence of compliance with any of the provisions of this code or evidence that any material or construction does not conform to the requirements of this code, the municipal engineer may require tests as proof of compliance to be made at no expense to the municipality. Test methods shall be as specified by this code or by other recognized test standards. If there are no recognized and accepted test methods for the proposed alternative, the municipal engineer shall determine test procedures. All tests shall be made by an approved agency. Reports of such tests shall be retained by the municipal engineer for the period required for the retention of public records.

9. Water Quality Easement

a. ***Purpose***

Water quality easements provide protection of land, streams, wetlands, riparian habitat, and water quality collection or treatment structures. Water quality easements provide an option to subdividing separate tracts of land to protect these areas. This will allow areas of land to be protected in an easement and still be used to meet other requirements of this title, such as minimum lot size, open space, etc.

b. ***Applicability***

Water quality easements may be placed on areas of land by the property owner or as required by the municipality.

c. ***Prohibited Activities***

The following activities are prohibited in a water quality easement:

i. Clearing or significantly disturbing vegetation;

ii. Grading and excavation work;

iii. Placement of structures, fill, vehicles, and/or other materials;

iv. Paving; and

v. Storage or processing of hazardous materials.

d. ***Permitted Activities***

If approved through other provisions of this title, the municipal engineer may approve the following activities within a water quality easement:

i. Utilities;

ii. Trails;

iii. Habitat restoration;

iv. Revegetation of disturbed areas with shrubs, trees, and ground cover similar to the natural vegetation in the area; and

v. Drainage facilities, with provisions for water quality control devices, and the necessary maintenance thereof.

Areas disturbed by construction permitted by this subsection shall be revegetated with trees, shrubs, and ground covers similar to the natural vegetation in the area. Revegetation shall occur in the same growing season, except as otherwise permitted by the municipal engineer.

e. ***Responsibility and Enforcement***

The municipal engineer is responsible for control and acceptance of water quality easements and is responsible for enforcing violations within a water quality easement. Violations may be pursued under chapter 21.13.

10. Inspections

a. ***Required Inspections***

Prior to the commencement of land clearing or ground disturbing activities, the discharge of surface water, or dewatering activities subject to this section, an inspection of approved Best Management Practices associated with the storm water treatment plan shall be conducted. Prior to the issuance of a certificate of zoning compliance, a final inspection by the municipal storm water inspector shall be completed and approved. The owner or contractor of record is responsible for requesting the required inspections at the appropriate times.

b. ***Other Inspections Authorized***

i. A municipal official, upon presentation of proper identification, may enter the premises at reasonable times to inspect or perform duties imposed by this code, for the purpose of determining whether the owner or operator thereof is in compliance with the specific requirements of this section. If such premises are unoccupied, the official shall first make a reasonable effort to locate the owner or other person having charge or control of the premises and request entry. If entry is refused, any approvals issued under this section may be immediately suspended until an inspection is conducted, and the official shall have recourse to the

remedies provided by law to secure entry. Permittees, owners, or operators shall immediately stop all work upon the site being posted with a stop work order for failure to allow inspection.

ii. A municipal official may inspect any property or facility suspected as the source of illicit discharges in violation of 33 USC 1342 (1987) as amended.

iii. No inspection for which a warrant would be required under the constitution of this state or the United States may be conducted under this section without the proper warrant.

c. ***Availability and Production of Plans and Records***
Approved plans and specifications shall be available on site for review by municipal storm water inspectors at the time of requested inspections. At the request of municipal officials and during normal working hours, owners or operators of facilities, construction sites, premises, or areas shall produce and make available for inspection or copying all records or information required to be maintained or reported under the provisions of this section.

F. Prohibited Discharges

1. Applicability
This section applies throughout the municipality.

2. Prohibited Discharges or Acts
No person shall cause or permit illicit discharges:

a. Into any waters of the state, or waters of the United States, unless such is first treated in a manner approved by the federal, state, or other agencies having jurisdiction; or

b. Into a storm sewer of the municipality, other than pursuant to a dewatering permit, an approved storm water treatment plan, a National Pollutant Discharge Elimination System permit, or a permit issued by a local, state, or other agency having jurisdiction. Examples of discharges that are prohibited include:

i. Grease, fatty materials, offal, or garbage;

ii. Sand, sand dust, direct, gravel, sawdust, metal filings, broken glass, or any material which may cause or create an obstruction in the sewer;

iii. Gasoline, benzene, fuel oil, or a petroleum product or volatile liquid;

iv. Milk or any liquid milk waste product in quantities in excess of ten gallons during any 24-hour period;

v. Wax, cyanide, phenols, or other chemical or substance that may cause damage to materials of which the sewer system is constructed; or

vi. Wastewater, as defined in AMC section 15.65.010.

For the purposes of this section, “illicit discharges” means pollutants or any materials other than storm water.

3. Dumping in Watercourses and Water Bodies

No person shall deposit, dump, abandon, throw, scatter, or transport solid waste, garbage, rubbish, junk, fill, soil, dirt, snow, ice, or other material in such a manner as to obstruct, impound, or cause siltation of any river, stream, creek, watercourse, water body, stream or water body or wetland setback, water quality easement, storm sewer, ditch, drain, or gutter except as otherwise allowed by valid federal, state, and other permits or licenses relative to water pollution, water impoundment, or water quality control.

G. Hazardous Sites

1. For the purposes of this section, any site meeting any or all of the conditions and defects described below shall be deemed to be a hazardous site, provided that such conditions or defects exist to the extent that the health of the watershed, the requirements of the Municipal Separate Storm Sewer System permit, or the safety of the public are endangered, as determined by the municipal engineer.

a. Any site that causes sediment to be discharged in such a way that it may be delivered directly or indirectly to the storm sewer or receiving waters.

b. Any site that causes pollution to be discharged in such a way that they may be delivered to the watershed;

c. Any property for which the owner, manager, or tenant fails to install and/or maintain properly permitted BMPs;

d. Any site that becomes flooded and retains water for a period exceeding 72 hours, unless the area was designed and approved for water detention; or

e. Any site where actions are causing soil masses to be in danger of sloughing, destabilizing, failing, or collapsing as a mass wasting event.

2. All sites which are determined after inspection by the municipal engineer to be a hazardous site are hereby declared to be public nuisances and shall be abated by installation of appropriate BMPs as determined by the municipal engineer.

H. Violations and Penalties

1. Violations

a. Any person who violates any provisions of this section shall report such violation to the project management and engineering department and shall make available any information or records related to the contents of the substance discharged.

b. In addition to any other remedy or penalty provided by this title, an person who violates any provision of this title or regulations adopted there under shall be subject to the civil penalties or injunctive relief, or both, as provided by AMC section 1.45.010B.

c. In any action under this section, the municipality, if not a party, may intervene as a matter of right.

2. Penalties

a. All sites operating without approval under this section may be immediately posted with a stop work order and shall pay double fees for all required permits or inspections under this section, as well as any fines which may be assessed.

In addition to any other remedy permitted by law, fines may be assess for failure to have a permit or approved plan, failure to allow inspections, or failure to obey a properly issued stop work order. Violators of this section may also be charged $1,000 per day until the violation(s) is corrected.

b. Any person who negligently or intentionally permits or causes a discharge in violation of this section shall, upon conviction, be subject to a civil fine penalty of $5,000 to $10,000 per day, or injunctive relief to cease the violation, or both. In addition to any fine assessed under this section, any person who violates any provision of this section or any rule or regulation adopted pursuant to this section shall be subject to a further civil penalty of up to double the cleanup and remediation costs incurred as a result of the violation.

c. Any person who permits or causes a discharge in violation of this section shall be strictly liable, regardless of intent, for the full amount of any fines or other liquidated penalties incurred by the municipality for any violations of federal law which are caused by the discharge.

d. No certificate of zoning compliance shall be issued until all fines levied under this section have been paid.

I. Appeals

1. Appeals of orders, decisions, or determinations made by the municipal engineer shall be heard by the zoning board of examiners and appeals, pursuant to subsection 21.03.050B.

2. The zoning board of examiners and appeals shall have no authority over the interpretation of the administrative provisions of this section, nor shall the board be empowered to waive requirements of this section.

21.07.050 UTILITY DISTRIBUTION FACILITIES

A. Underground Placement Required for New or Relocated Lines

1. Except as provided in subsection B. below, all newly installed or relocated utility distribution lines shall be placed underground.

2. Utility distribution lines owned or operated by utilities that are parties to a joint trench agreement shall be placed underground in a joint trench.

3. Nothing in this section restricts the maintenance, repair, or reinforcement of existing overhead utility distribution lines.

B. Exceptions

1. Except where an assessment district has been formed to convert overhead utility distribution lines as provided in title 19.60, utility distribution lines need not be placed underground in the class B improvement area defined in subsection 21.08.050B., or in the I-2 zoning district. However, in the following areas newly installed or relocated utility distribution lines shall be placed underground: Lower Hillside, between and including Abbott Road, Rabbit Creek Road, Hillside Drive and the New Seward Highway.

2. Except where an assessment district has been formed to convert overhead utility distribution lines as provided in AMC chapter 19.60, CATV utility distribution lines need

not be placed underground where there are other overhead utility distribution lines; provided that, when all of the other overhead distribution lines are placed underground, the CATV utility distribution line shall also be placed underground.

3. A new utility distribution line may be placed overhead when necessary immediately to restore service interrupted by accident or damage by flood, fire, earthquake or weather; provided that the utility distribution line shall be replaced by a utility distribution line conforming to this chapter within 12 months of its placement.

4. A utility distribution line or service connection may be placed on the surface of frozen ground, provided that it is placed underground within 12 months thereafter.

5. New facilities may be added to existing overhead utility distribution facilities located outside target areas.

6. A temporary utility distribution line may be placed overhead in connection with new construction if the utility's tariff approved by the state public utilities commission expressly provides for removal of that line by a date certain, not to exceed 12 months thereafter.

C. Variances

1. The director may grant a variance from subsection A. above when any of the following is found:

a. Placing a utility distribution line underground would cause an excessive adverse environmental impact;

b. Placing a utility distribution line underground would threaten public health and safety, because the placement cannot be shown to meet acceptable technical standards for safety; or

c. Placing a utility distribution line underground in an environmentally sound and safe manner would cost more than three times the cost of placing the line overhead, where the applicant demonstrates the relative cost to the satisfaction of the director.

2. The director may grant a variance from subsection A. above when he or she finds that the utility distribution line is being placed overhead temporarily for one of the reasons listed in this subsection:

a. The line is being placed to provide service when weather conditions do not allow excavation for underground placement;

b. A permanent location for underground placement is not available because of construction in progress; or

c. The line is being placed to provide service to a temporary use or structure.

A variance issued under this subsection C.2. shall expire within two years of its issuance.

D. Relationship to Chapter 21.12, *Nonconformities*

Existing overhead utility distribution lines located where this title requires new or relocated utility distribution lines to be placed underground are nonconforming utility distribution lines and are

subject to the provisions of this subsection. A utility distribution line is not a nonconforming structure or use under chapter 21.12, *Nonconformities,* solely because it is a nonconforming overhead line under this section.

E. Designation of Target Areas

1. An electric utility that owns poles that support nonconforming utility distribution lines shall prepare or otherwise include as part of its annual capital improvement plan, a five-year undergrounding program consistent with subsection F. below. This five-year program shall be updated on an annual basis. Priorities shall be based on undergrounding in conjunction with the electric utility's essential system improvements and then by target area as set forth below in no particular order of priority. The director shall review and provide comment for consideration by the electric utilities on these five-year programs. When reviewing and commenting on these programs, the director shall consider the following factors in no particular order of priority:

a. Whether undergrounding will avoid or eliminate an unusually heavy concentration of overhead distribution facilities.

b. Whether the street or general area is extensively used by the general public and carries a heavy volume of pedestrian or vehicular traffic.

c. Whether the appearance of grounds and structures adjacent to the roadway is such that the removal of the overhead facilities will substantially improve the general appearance of the area.

d. Whether the street or area affects a public recreation area or an area of scenic interest.

e. Whether there is a significant opportunity to achieve economies due to the anticipated relocation or replacement of overhead lines or the widening or realignment of streets within a given area.

f. Whether the five-year program sufficiently addresses the objectives of subsection F. below.

g. Whether the area under consideration is within a zone where new and relocated distribution lines are required to be placed underground.

h. Whether the installation of underground distribution lines is economically, technically and environmentally feasible, including the effect on the attached utility.

2. The director shall confirm annually that the electric utilities have developed project undergrounding implementation plans. The director shall consult with the utilities and public agencies affected by any implementation plan. In reviewing implementation plans, the director shall consider the factors stated in subsection E.1. above.

3. The following shall be target areas:

a. Central Business District: between and including Third Avenue and Tenth Avenue and L Street and Ingra Street.

b. Midtown area: between and including New Seward Highway and Minnesota Drive and International Airport Road and Fireweed Lane.

c. All municipal and state street improvement projects except for those which do not require relocation of utility distribution facilities.

d. The following major traffic corridors:

i. Old Seward Highway.

ii. Ingra and Gambell Streets between and including Ninth Avenue and Fireweed Lane.

iii. Northern Lights Boulevard and Benson Boulevard between and including Glenwood Street and Arlington Drive.

iv. Muldoon Road between and including New Glenn Highway and Patterson Street.

v. Tudor Road between and including Patterson Street and Arctic Boulevard.

vi. Boniface Parkway between and including 30th Avenue and New Glenn Highway.

vii. Spenard Road between and including Hillcrest Drive and International Airport Road.

viii. Arctic Boulevard between 17th Avenue and Tudor Road.

ix. Lake Otis Parkway between Tudor Road and Abbott Loop

e. All park, recreational use, and scenic interest areas.

f. Eagle River Central Business District between and including the New Glenn Highway, North Eagle River Access Road, Aurora street as extended to the Old Glenn Highway, and the Old Glenn Highway.

g. Any area where utility distribution facilities are provided by more than one utility as a result of mergers and boundary changes approved by the state public utilities commission.

h. School and university areas.

F. Nonconforming Overhead Lines

1. An electric utility that owns poles that support nonconforming utility distribution lines shall remove the poles and place those lines underground. Any other utility that attaches to such poles shall place its lines underground at the same time that the pole owner places lines underground.

a. The electric utility that owns poles shall, in each fiscal year, expend at least two percent of a three-year average of its annual gross retail revenues derived from utility service connections within the municipality, excluding toll revenues,

revenues from sales of natural gas to third parties, and revenues from sales of electric power for resale for purposes of undergrounding nonconforming lines. An electric utility's expenditures, pursuant to AS 42.05.381(h), within the municipality, shall be counted toward satisfaction of the two percent expenditure required by this subsection.

b. A utility with lines attached to a pole that is to be removed under this subsection shall place its lines underground at the same time that the pole owner places its lines underground. To underground nonconforming utility lines, an attached utility shall not be required to expend more than two percent of its annual gross retail revenues derived from utility service connections within the municipality, excluding toll revenues. For the purpose of satisfying subsection 21.07.050F, the utility's expenditures pursuant to AS 42.05.381(h) within the municipality are counted toward this two percent expenditure limit.

c. The electric utility that owns poles may choose which existing lines to underground in order to fulfill the two percent expenditure requirement, in consultation with appropriate public agencies and any other utilities.

d. An electric utility that owns poles that does not expend the amount required in subsection F.1. of this section, or that expends more than that amount, may carry over the under expenditure or over expenditure as an adjustment to the following year's obligation.

2. The electric utility that owns poles shall notify the director, and utilities or entities with lines attached to such poles, of the approximate date that the owner plans to remove the poles. Such notice, where possible, shall be given at least four months in advance of the undergrounding except where an emergency or other unforeseen circumstances preclude such notice, in which case such advance notice as is reasonable under the circumstances shall be provided.

3. A utility shall annually submit a report of its undergrounding projects and expenditures for non-conforming lines to the director within 120 days of the end of the preceding calendar year.

4. All new service connections shall be placed underground in the same manner as required for utility distribution lines under subsections A. and B. above. New service lines may be temporarily installed above ground from October through May, if placed underground prior to the next October.

G. Lines in Municipal Right-of-Way

1. The department of project management and engineering shall furnish to a utility owning or operating utility distribution lines all planning documents for municipal road construction that will require the relocation of those utility distribution lines.

2. Once a utility installing a utility distribution line underground in material compliance with a right-of-way permit issued by the department of project management and engineering and in accordance with this chapter, the municipality shall reimburse the cost of any subsequent relocation of the utility distribution line required by municipal road construction.

3. If municipal road construction requires the relocation of a nonconforming utility distribution line, the municipality, as part of the road construction project cost, shall

reimburse the cost of the relocation. Reimbursable costs under this subsection include engineering and design, inspection, construction, and general overhead costs, but exclude utility plant betterment costs. Plant betterment costs are the costs of providing utility distribution line capacity or quality beyond what current industry standards require for the capacity or level of service existing before the relocation.

H. Conversion of Service Connections

A utility that places a nonconforming utility distribution line underground as required by subsection F. above shall bear the cost of placing underground any related service connections or other utility facilities on a customer's premises, in accordance with the utility's applicable tariff or rules or regulations of operation.

21.07.060 TRANSPORTATION AND CONNECTIVITY

A. Purpose

The purpose of this section 21.07.060 is to support the creation of a highly connected transportation system within the municipality in order to provide choices for drivers, bicyclists, and pedestrians; increase effectiveness of municipal service delivery; promote walking and bicycling; connect neighborhoods to each other and to local destinations such as employment, schools, parks, and shopping centers; reduce vehicle miles of travel and travel times; improve air quality; reduce emergency response times; mitigate the traffic impacts of new development; and free up arterial capacity to better serve regional long-distance travel needs.

B. Applicability

The standards of this section 21.07.060 shall apply to all development in the municipality.

C. Traffic Impact Mitigation

1. Traffic Impact Analysis Required

The transportation system for new development shall be capable of supporting the proposed development in addition to the existing uses in the area. Evaluation of system capacity shall be undertaken through a traffic impact analysis (TIA), which should consider the following factors without limitation: street capacity and level of service; vehicle access and loading; on-street parking impacts; the availability of transit service and connections to transit; impacts on adjacent neighborhoods; and traffic safety including pedestrian safety. At a minimum, a traffic impact analysis (TIA) shall be required with applications for development review and approval when:

a. Thresholds established in the traffic department's *Policy on Traffic Impact Analyses* are met;

b. A TIA is required by the planning and zoning commission or assembly as a condition of any land use application approved pursuant to the requirements of this title; or

c. The director, unless the traffic engineer deems it unnecessary through a waiver, requires a TIA for:

i. Any case where the previous TIA for the property is more than two years old;

ii. Any case where increased land use intensity will result in substantially increased traffic generation and reduction of the existing level of service on affected streets by at least one service level; or

iii. Any case in which the traffic engineer determines that a TIA should be required because of other traffic concerns that may be affected by the proposed development.

2. TIA and Development Review Process

a. The development and review of a TIA shall be according to the traffic department's *Policy on Traffic Impact Analyses*.

b. When state-owned roads are involved, the applicant shall coordinate with the state department of transportation and public facilities, and the development of a TIA shall follow state regulations as defined in 17 AAC 10.095.

3. Traffic Mitigation Measures

The applicant shall, as part of the traffic impact analysis, recommend measures to minimize and/or mitigate the anticipated impacts and determine the adequacy of the development's planned access points. Mitigation measures shall be acceptable to the traffic engineer and may include, without limitation: an access management plan; transportation demand management measures; street improvements on or off the site; placement of pedestrian, bicycle, or transit facilities on or off the site; or other capital improvement projects such as traffic calming infrastructure or capacity improvements.

D. Streets and On-Site Vehicular Circulation

1. Street Standards

All streets shall meet the standards and requirements set forth in subsections 21.08.030F.2., *Street Grades*, 21.08.030F.3., *Street Alignment,* and 21.08.030F.4. *Street Intersections*.

2. Parking Lots

In addition to complying with the standards in this subsection 21.07.060D., parking areas shall comply with the standards set forth in section 21.07.090, *Off-Street Parking and Loading.*

3. Street Connectivity

a. ***Purpose***

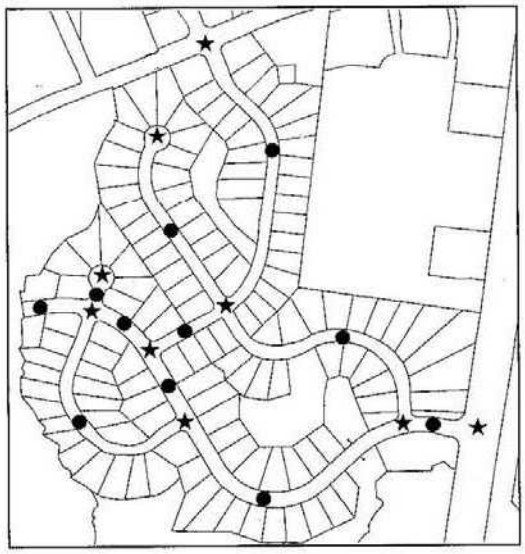
Street and block patterns should include a clear hierarchy of well-connected streets that distribute traffic over multiple streets and avoid traffic congestion on principal routes. Within each residential development, the access and circulation system and a grid of street blocks should accommodate the safe, efficient, and convenient movement of vehicles, bicycles, and pedestrians through the development, and provide ample opportunities for linking adjacent neighborhoods, properties, and land uses. Local neighborhood street systems are intended to provide multiple direct connections to and between local destinations such as parks, schools, and shopping. These connections should knit separate developments together, rather than forming barriers between them.

b. ***Internal Street Connectivity (Connectivity Index)***

i. All development shall achieve a connectivity index of 1.4 or greater.

ii. The connectivity index for a development is calculated by dividing its links by its nodes. Figure 21.07-1, *Calculation of Connectivity*, provides an example of how to calculate the connectivity index. Nodes (stars) exist at street intersections and cul-de-sac heads within the development. Links (circles) are stretches of road that connect nodes. Street stub-outs are considered as links. In the diagram, there are 11 links (circles) and nine nodes (stars); therefore the connectivity index is 1.22 (11/9 = 1.22).

FIGURE 21.07-1: CALCULATION OF CONNECTIVITY



iii. The connectivity index standard of 1.4 or greater may be reduced by the director if the developer demonstrates it is impossible or impracticable to achieve due to topographic conditions, natural features, or adjacent existing development patterns.

iv. Whenever cul-de-sac streets are created, at least one 10 foot wide pedestrian access easement shall be provided, to the extent reasonably feasible, between each cul-de-sac head or street turnaround and the sidewalk system of the closest adjacent street or pedestrian walkway. This requirement shall not apply where it would result in damage to or intrusion into significant natural areas such as stream corridors, wetlands, and steep slope areas, or if the configuration of existing adjacent development prevents such a connection.

c. ***External Street Connectivity***

i. The arrangement of streets in a development shall provide for the alignment and continuation of existing or proposed streets into adjoining lands in those cases in which the adjoining lands are undeveloped and intended for future development or in which the adjoining lands are developed and include opportunities for such connections.

ii. Street rights-of-way shall be extended to or along adjoining property boundaries such that a roadway connection or street stub shall be provided for development at least every 1,500 feet for each direction

(north, south, east, and west) in which development abuts vacant lands. The director may waive this requirement where the configuration of existing adjacent development, topography, or the presence of sensitive natural areas makes compliance impractical.

iii. At all locations where streets terminate with no street connection, but a future connection is planned or accommodated, a sign shall be installed at the location with the words "FUTURE ROAD CONNECTION" to inform property owners.

d. ***Vehicular Access to Public Streets***

Any development of more than 100 residential units or additions to existing developments such that the total number of units exceeds 100 shall be required to provide vehicular access to at least four public streets unless such provision is deemed impractical by the director and the traffic engineer, due to topography, natural features, or the configuration of existing adjacent developments.

e. ***Connections to Vacant Land***

Where new development is adjacent to land likely to be developed or redeveloped in the future, all streets, sidewalks, trails, walkways, and access ways in the development's proposed street system shall continue through to the boundary lines of the area, as determined by the director and the traffic engineer, to provide for the orderly subdivision of such adjacent land or the transportation and access needs of the community. In addition, all redevelopment and street improvement projects shall take advantage of opportunities for retrofitting existing streets to provide increased vehicular and pedestrian connectivity.

f. ***Neighborhood Protection from Cut-through Traffic***

Street connections shall connect neighborhoods to each other and to local destinations such as schools, parks, greenbelt trail systems, and shopping centers, while minimizing neighborhood cut-through vehicle traffic movements that are non-local in nature. Configuration of local and internal streets and traffic calming measures shall be used to discourage use of the local street system for cut-through collector or arterial vehicle traffic.

E. Standards for Pedestrian Facilities

1. Purpose

The purpose of this section is to provide convenient, safe, and regular pedestrian facilities along streets and within and between developments. Such facilities create a healthful built environment in which individuals have opportunities to incorporate physical activity, such as walking or bicycling, into their daily routing. Injuries and fatalities are reduced when interactions between pedestrians and vehicles are minimized. Adequate pedestrian facilities meet community goals for mobility and access, as well as for providing transportation choices.

2. Sidewalks

a. All sidewalks shall be designed to comply with the standards of the *Design Criteria Manual* (DCM) and *Municipality of Anchorage Standard Specifications* (MASS).

b. Sidewalks shall be installed on both sides of all collector streets.

c. In all class A zoning districts, sidewalks shall be installed on both sides of all new local streets (public or private, including loop streets and cul-de-sacs), and within and along the frontage of all new development or redevelopment with a minimum of 125 feet of frontage in the R-4, R-4A, mixed-use, and commercial districts.

d. In class B zoning districts, sidewalks, walkways, and trails shall be provided in accordance with the *Areawide Trails Plan* and any adopted neighborhood or district plan.

e. The requirements of 2.c. and 2.d. shall not apply in steep-slope areas where sidewalks on one side of the street may be approved by the director to reduce excessive slope disturbance, adverse impacts on natural resources, and potential soil erosion and drainage problems.

3. Through-Block Connections

Within residential and/or nonresidential developments, pedestrian ways, crosswalks, or multi-purpose trails no less than five feet in width shall be constructed near the center and entirely through any block that is 900 feet or more in length.

4. On-site Pedestrian Walkways

a. ***Continuous Pedestrian Access***

Pedestrian walkways are intended to form a convenient on-site circulation system that minimizes conflict between pedestrians and traffic at all points of pedestrian access to on-site parking and building entrances. This subsection E.4. does not apply to single- and two-family development. (Illustrate)

b. ***On-site Pedestrian Connections***

The following walkways shall be provided. Where one walkway fulfills more than one requirement, only one walkway need be provided. Public pedestrian facilities may satisfy the requirement if they can provide a relatively direct route.

i. A walkway shall connect primary entrances with each lot line that abuts a street frontage. No walkway need be provided if that frontage is a restricted access street or a frontage road, unless there is a trail or other pedestrian facility to which access can be provided along the restricted access street or frontage road, in which case a walkway shall connect to that pedestrian facility. The walkway shall be the shortest practical distance between the entrance and the street, and generally no more than 133% of the straight line distance.

ii. All primary building entrances on a site shall be connected by a walkway. This includes multiple primary entrances into one building, and primary entrances in separate buildings on a site.

iii. A walkway shall connect all primary entrances to all bus stops adjacent to the site.

iv. Where abutting property has developed or is likely to develop with a compatible use, the decision-making body may require a walkway from all primary entrances to the lot line nearest the abutting lot, in a location most likely to provide convenient pedestrian access to the (existing or anticipated future) development on the adjacent lot.

c. ***Walkway Clear Width***

The minimum width of a required pedestrian walkway shall be five feet of unobstructed clear width, excluding vehicular overhang, except where otherwise stated in this title. A walkway that provides access to no more than four residential dwelling units may provide an unobstructed clear width of three feet.

d. ***Walkways and Parking***

i. Where an on-site pedestrian walkway system or required pedestrian area buts a parking lot or internal street or driveway, the pedestrian facility shall be clearly marked and physically separated from the parking lot or drive, through the use of an upright curb of six inches in height, bollards spaced a maximum of six feet apart, or other physical buffer approved by the traffic engineer; and a change of paving materials distinguished by color, texture, textured edge, other edge, or striping.

ii. The vehicle overhang established in table 21.07-9, *Parking Angle, Stall And Aisle Dimensions*, shall not encroach into the minimum required walkway width or area.

iii. Where an on-site pedestrian walkway crosses an internal street or driveway, the crosswalk shall be clearly marked and delineated through a change in paving materials distinguished by color, texture, textured edge, other edge, or striping, and shall meet the requirements of the Americans with Disabilities Act.

5. Trails

All trails shall connect to the street system in a safe and convenient manner, and shall meet the following requirements in addition to the standards contained in the *Areawide Trails Plan*, *Design Criteria Manual* (DCM), and *Municipality of Anchorage Standard Specifications* (MASS)*:*

a. All trail connections shall be well-signed with destination and directional signing as approved by the traffic engineer.

b. All trails shall connect origin and destination points such as residential areas, schools, shopping centers, parks, etc.

c. Trails shall be designed in such a manner that motor vehicle crossings can be eliminated or significantly minimized.

6. Use and Maintenance of Sidewalks, Walkways, and Trails

a. ***Restrictions on Use***

Sidewalks, walkways, and trails are intended to provide pedestrian access. Vehicle parking, snow storage, garbage containers, merchandise storage or display, utility boxes and poles, signs, trees, and other obstructions shall not encroach into the required minimum clear width of any required sidewalk, trail, walkway, or other pedestrian way. Pedestrian amenities including bollards are exempt from this requirement.

b. ***Maintenance and Snow Removal***

Sidewalks and walkways required by this title shall be maintained in usable condition throughout the year in accordance with AMC title 24, including snow and ice removal as appropriate.

F. Pedestrian Amenities

1. Purpose

The purpose of this section is to define and provide standards for pedestrian amenities that may be required or included in a menu of choices to meet a requirement, or listed as a special feature that can count toward a bonus incentive anywhere in this title. For example, another section of this title may list a pedestrian amenity as a special feature for which bonus floor area may be granted. The standards contained in this section give predictability for applicants, decision-makers, and the community for the minimum acceptable standards for pedestrian amenities. It also ensures the amenities will improve and enhance the community to the benefit of all, and respond to the northern latitude climate. This title provides flexibility to encourage and allow for creativity and unique situations through the alternative equivalent compliance and minor modifications process.

2. Applicability

Pedestrian amenities shall meet the minimum standards of this section in order to be credited toward a requirement, menu choice, or as a special feature bonus incentive of this title.

3. Walkway

A walkway is a surface, either improved or not, for the purpose of pedestrian and other non-motorized use, which connects two points and is not aligned along a vehicular public right-of-way. A walkway may be in a publicly dedicated pedestrian easement. Examples include pedestrian connections within one development site, mid-block, between subdivisions, or leading from streets to public amenities, such as schools or parks.

a. A walkway shall have a minimum unobstructed clear width of five feet, except where otherwise stated in this title. A walkway that provides access to no more than four residential dwelling units may have an unobstructed clear width of three feet.

b. Walkways shall be hard-surfaced in accordance with subsection 21.08.050H.

4. Primary Pedestrian Walkway

A primary pedestrian walkway is designed to be wide enough for two couples to pass, with additional space incorporating features along the walkway such as storefront sidewalk space, room for residential stoops or foundation plantings, and peripheral space that accommodates landscaping, furniture, and utilities.

a. A primary pedestrian walkway shall be developed as a continuous pedestrian route extending for at least 50 feet.

b. A primary pedestrian walkway shall have an unobstructed clear width of at least eight feet. Where adjacent to a ground level building elevation it shall also have a two-foot wide sidewalk storefront zone, or seating and transition pedestrian spaces, or a foundation landscaping strip. In addition, a buffer space of at least four feet in width shall be incorporated as part of the walkway when abutting any street or vehicle area, to accommodate street trees, landscaping beds, light poles, utilities, benches, and other objects to be kept clear of the walkway.

c. A primary pedestrian walkway shall be buffered from moving vehicle traffic by on-street curb parking or a 10 foot wide landscaping/utility strip.

d. At least two of the following pedestrian features shall be provided for every 50 feet of length along a primary pedestrian walkway: formal seating, such as benches, which accommodates at least two people; informal seating, such as steps or low walls, which accommodates at least four people; and spaces suitable for standing and talking which include objects to lean against or edge spaces along irregular building facades.

e. A primary pedestrian walkway shall be illuminated with pedestrian scale lighting.

f. A primary pedestrian walkway shall directly connect to surrounding public streets and sidewalks, and be publicly accessible at all times.

5. Ice-free (Heated) Walkway

An ice-free (heated) walkway has a heated surface for the full extent of the walkway clear width. The walkway shall be maintained as ice-free at all times in areas required to be publicly accessible, and otherwise during all hours of operation of an establishment.

6. Plaza or Courtyard

A plaza is an open space which is designed to be used for relaxation, conversation, eating, or other outdoor activities.

a. A plaza shall contain at least one pedestrian feature for each 200 square feet of plaza or courtyard area. Pedestrian features include formal seating such as benches or chairs which accommodate at least two people; informal seating such as steps, pedestals, low walls, and similar areas suitable for sitting, which accommodate at least four people; 10 landscaping units; and objects such as fountains, kiosks (no more than one), and art work.

b. A plaza shall be visible and directly accessible from the public sidewalk and at no point be more than five feet above nor more than 12 feet below the curb level of the nearest street.

c. A plaza shall be unobstructed to the sky except for certain permitted obstructions such as canopies or awnings, landscaping, or ornamental features such as fountains and flag poles.

d. A plaza shall be positioned so that it receives at least four hours of direct or reflected sunlight on March 21 and September 21.

7. Housing Courtyard

A housing courtyard may be created when a multifamily building or buildings are arranged or configured to enclose and frame a common private open space. To receive credit as a housing courtyard, the space shall achieve the following:

a. The residential building(s) shall enclose a clearly defined courtyard open space. The structure(s) surrounding the housing courtyard may, for example, form an O, L, or U shaped enclosure.

b. A courtyard shall incorporate at least 50% of the common private open space required for the development by section 21.07.030, up to a maximum requirement of 2,000 square feet.

c. The minimum inside dimension of a housing courtyard shall be 15 feet on lots up to 60 feet wide, and 20 feet on all other lots, exclusive of balconies, porches, or private open spaces exclusively serving individual dwelling units.

d. A courtyard shall be easily accessed from the street. At least a portion of a courtyard shall be visible from the street. A courtyard may be up to four feet above natural grade (for example, if it is over an underground parking structure).

e. A courtyard shall comply with the plaza requirement for pedestrian features, and with the common private open space standards of section 21.07.030.

f. All individual dwelling units around the perimeter of a courtyard shall have windows, entrances, and/or transitional spaces such as porches or balconies that face the courtyard.

g. For purposes of sunlight access and wind protection, the height of the enclosing or surrounding building(s) shall not exceed 45 feet. A perimeter structure may be taller if stepped back at a ratio of at least five feet of run for every three feet of rise above 45 feet, on at least 65% of the courtyard perimeter.

h. A courtyard shall have a solar orientation as defined by this title in terms of openings in the courtyard and the lower height of surrounding buildings.

i. To attain wind protection benefits of enclosed space, the width and length dimensions of a courtyard shall be no greater than four times the height of the surrounding building(s).

8. Transit Stop or Transit Shelter

A transit stop or transit shelter shall meet or exceed the minimum design standards established by the transit facilities design guidelines in the *Design Criteria Manual*.

9. Pedestrian Shelter such as a Canopy, Awning, or Marquee

A pedestrian shelter is a roof-like structure extending out from the building face that provides year round overhead protection from precipitation and wind, and that can provide visual interest and wayfinding orientation to primary entrances, passenger loading areas, or waiting areas. Pedestrian shelter may be composed of awnings, canopies, marquees, cantilevered overhangs, colonnades, or similar overhangs along the pedestrian route.

a. A pedestrian shelter shall have a minimum dimension of six feet measured horizontally from the building wall, or shall extend to a line two feet from the curb line of the street or nearest motor vehicle area, whichever is less.

b. A pedestrian shelter shall have a minimum vertical clearance of eight feet and a maximum vertical clearance of 12 feet, except that a pedestrian shelter that projects out more than eight feet measured horizontally from the building wall shall have a maximum vertical clearance of 16 feet.

c. A pedestrian shelter may be indented as necessary to accommodate street trees, landscaping beds, street lights, bay windows, or similar building accessories. A pedestrian shelter shall not extend out to within three feet of the centerline of a street tree.

d. A pedestrian shelter shall incorporate architectural design features of the building from which it is supported.

10. Arcade (or Building Recess)

An arcade is a covered passageway created by the overhanging upper portion of the building along a sidewalk or walkway to provide a sheltered area at grade level. An arcade is usually separated from the adjacent street, sidewalk/walkway, or pedestrian space by a line of supporting columns or arches. A ground level building recess without supporting columns may also receive credit if it achieves the following standards:

a. An arcade shall be developed as a continuous covered space extending for a length of at least 50 feet along a street, plaza, or courtyard or other pedestrian open space. An arcade shall be open for its entire length to the street or pedestrian open space, except for building columns.

b. An arcade shall have a minimum vertical clearance of no less than 12 feet, and on average no greater than 18 feet.

c. An arcade shall have a minimum horizontal walkway clear width of eight feet between the building and any supporting columns, and a maximum covered width of 20 feet.

d. An arcade shall not at any point be above the level of the adjacent sidewalk, walkway, or pedestrian open space (whichever is higher). The width and spacing of the supporting columns shall be such that maximum visibility is maintained.

e. The spacing and rhythm of the supporting columns shall relate to the structural or architectural pattern of the building and shall be consistent along the length of the arcade.

f. No off-street parking spaces, passenger loading zones, driveways, or off-street loading berths are permitted anywhere within an arcade or within 10 feet of any portion thereof, unless the decision-making body determines that such activity will not adversely affect the air quality or functioning of the arcade. In no event shall such vehicular areas be eligible for credit as part of the arcade.

g. An arcade shall be publicly accessible at all times.

11. Atrium, Galleria, or Winter Garden

An atrium, galleria, or winter garden is a publicly accessible sunlit interior space suited for year-round public use, and which takes advantage of windows and sunlight access to provide brightness, orientation, and visual connections to the outdoors.

a. An atrium shall be developed and maintained as a temperature controlled, publicly accessible space furnished with features and amenities that encourage its use.

b. An atrium shall contain at least one pedestrian feature for each 200 square feet of gross floor area. Pedestrian features include formal seating such as benches or chairs which accommodate at least two people; informal seating such as steps, pedestals, low walls, and similar areas suitable for sitting which accommodate at least four people; 10 landscaping units; and objects such as fountains, kiosks (no more than one), and art work.

c. An atrium shall be co-located with primary entrances and pedestrian activity areas, and either adjoin or directly connect to a publicly accessible sidewalk or open space.

d. The publicly accessible portion of the atrium shall be at least 400 square feet, with a minimum dimension of 16 feet.

e. At least half of an atrium's ceiling area and at least a portion of its wall area shall consist of transparent glazing.

f. An atrium shall be exposed to direct an/or reflected sun for at least four hours daily for eight months of the year.

12. Sun Pocket (or Sun Trap)

A sun pocket or sun trap is a pedestrian space that captures direct and reflected sunlight. A sun pocket shall be a clearly defined open space partly sheltered by building walls, fences, or landscape features, such as a C, L, or U shaped semi-enclosure. The protected space shall contain at least 250 square feet of pedestrian area that is exposed to direct and reflected sunlight access for at least six hours on March 21 and September 21.

13. Reflected Sunlight

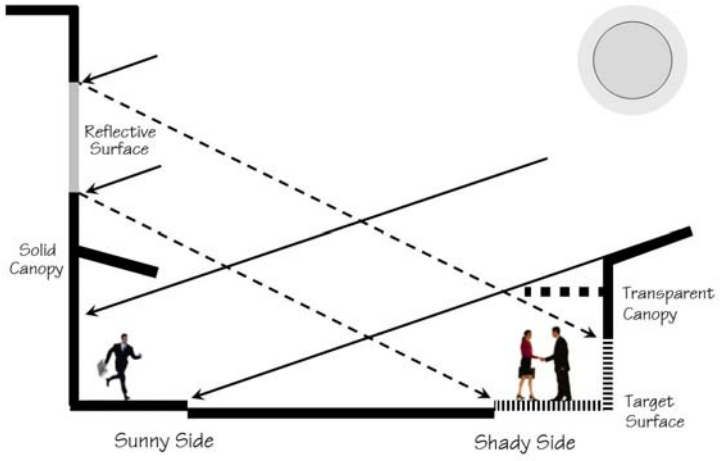
Reflected sunlight as a pedestrian amenity is created by a light-colored, partially reflective, upper-story façade surface that redirects sunlight radiation to pedestrian spaces and walkways to brighten or increase the comfort level in those spaces.

a. The reflective façade surface shall have a solar orientation.

b. The reflective façade surface shall have a reflectance of at least 50% and no greater than 75% in order to avoid excessive glare.

c. The reflective façade surface shall be an upper floor above ground-level.

d. Reflected sunlight shall fall on at least 400 square feet of a publicly accessible walkway, open space, and/or abutting ground-level wall area for at least four hours on March 21 and September 21.



14. Sheltered Transition Space

A sheltered transition space is an outdoor or glass covered space such as café seating along a building façade that provides a comfortable transition between indoor areas and unsheltered outdoor spaces.

a. A sheltered transition space shall be a minimum of 400 square feet.

b. A sheltered transition space shall comply with the dimensional standards for pedestrian shelter or arcade.

c. A sheltered transition space shall contain a minimum of one pedestrian feature, such as formal seating, informal seating, a tree, planter, fountain, kiosk, bollard to lean on, bike rack, or art work for each 80 square feet of gross floor area.

d. A sheltered transition space shall not obstruct the minimum clear width of the adjoining walkway or sidewalk.

15. Bicycle Parking Facilities

a. Bicycle parking shall be located in an area visible from a primary entrance area and no farther from a primary entrance than the closest motor vehicle parking space. It may also be located inside the building served, in a location that is easily accessible for bicycles.

b. Bicycle parking shall not obstruct pedestrian walkways, building access, or use areas.

21.07.070 NEIGHBORHOOD PROTECTION STANDARDS

A. Purpose and Relationship to Other Requirements

This section provides for transitions between nonresidential and residential uses, through discretionary approval criteria that may be applied in combination with other development standards in this chapter 21.07, in order to provide significantly more protection for neighborhoods from the impacts of adjacent development. This section makes available a menu of additional tools to use in discretionary approvals to protect residential neighborhoods from potential adverse impacts of adjacent nonresidential uses, including limitations on hours of operation, noise, and lighting.

B. Nonresidential Development Adjacent to Existing Residential Use

As a condition of the approval of any conditional use permit, site plan review, subdivision, or variance of any nonresidential use located in or within 300 feet of any residential district, the decision-making body shall be authorized to impose conditions that are necessary to reduce or minimize any potential adverse impacts on residential property. Such conditions may include but are not limited to the following:

1. Hours of operation and deliveries;

2. Location on a site of activities that generate potential adverse impacts on adjacent uses, such as noise and glare;

3. Placement of trash receptacles, compactors, or recycling;

4. Location and screening of loading and delivery areas;

5. Lighting location, design, intensity, and hours of illumination;

6. Placement and illumination of outdoor vending machines, telephones, or similar outdoor services and activities;

7. Additional landscaping and screening to mitigate adverse impacts;

8. Height restrictions to preserve light and privacy and views of significant features from public property and rights of way;

9. Ventilation and control of odors and fumes; and

10. Paving to control dust.

C. Residential Development Adjacent To Existing Nonresidential Use

When a residential development is proposed adjacent to an existing commercial or industrial use, the decision-making body may impose neighborhood protection standards, including but not limited to increased landscaping, traffic calming measures, and requiring the residential development to be configured and dwelling units located to minimize potential conflicts with or adverse impacts from the existing nonresidential development. Any required mitigation measures shall be installed and maintained by the residential development, not the existing commercial or industrial use.

21.07.080 LANDSCAPING, SCREENING, AND FENCES

A. Purpose

This section is intended to ensure that new landscaping and the retention of existing vegetation is an integral part of all development and that it contributes added high quality to development, retains and increases property values, and improves the environmental and aesthetic character of the community. It is also the intent of this section to provide flexible requirements that encourage and allow for creativity in landscape design. Specific purposes include to:

1. Improve the general appearance of the municipality, its aesthetic appeal and identity, and the image of its street corridors and urban districts;

2. Encourage a pleasant visual character for new development which recognizes aesthetics and safety issues;

3. Unify development and enhance and define public and private spaces;

4. Improve compatibility between land uses by reducing the visual and operational impacts of more intensive uses upon adjacent properties;

5. Promote the use of existing vegetation and retention of trees, woodlands, habitat, and urban forest;

6. Reduce runoff and erosion, control dust, and preserve air and water quality; and

7. Encourage use of native plants or provide landscaping that is compatible with the climate and natural setting of the municipality and can provide desired effects even during harsh urban and winter conditions.

B. Exemption for Temporary Uses

Unless required under section 21.05.080, temporary uses in accordance with section 21.05.080 are exempt from the requirements of this section.

C. Landscape Plan

All landscaping and screening required under this section 21.07.080 shall be reflected on a landscape plan. All development, except for single- and two-family homes on individual lots, shall have a landscape plan prepared by a licensed landscape architect registered by the state of Alaska or another design professional as allowed by state legislation. The landscape plan shall be reviewed and approved by the decision-making body. A landscape plan may be combined with any land clearing, vegetation protection, erosion control, or snow removal plan required for compliance with other sections of this title. Where a landscape plan is required under this title, the plan shall include the information specified in the title 21 user's guide.

D. Alternative Equivalent Compliance

Site conditions may arise where normal compliance is impractical or impossible, or where the maximum achievement of the municipality's objectives can be obtained through alternative compliance. The alternative equivalent compliance procedure set forth in subsection 21.07.010D. may be used to propose alternative means of complying with the intent of this section. Any proposed alternative landscaping and screening shall be equal to or greater than normal compliance in terms of quality, durability, hardiness, and ability to fulfill the standards of this section. In order to be considered for alternative equivalent compliance, one or more of the following landscaping-specific conditions shall be met:

1. Topography, soil, vegetation, or other site conditions are such that full compliance is impossible or impractical;

2. Improved environmental quality would result from the alternative compliance;

3. Safety considerations make alternative compliance necessary; or

4. An alternative compliance proposal is equal to or better than normal compliance in its ability to fulfill the intent of this section.

E. Cross-reference to Other Requirements

Any use required to provide landscaping or screening pursuant to the district-specific standards of chapter 21.04 or the use-specific standards of chapter 21.05 shall provide such landscaping or screening. In the event of a conflict between the requirements of chapter 21.04 or 21.05 and the requirements of this section 21.07.080, the more restrictive provisions shall govern.

F. Landscaping

1. General Description of Landscaping Requirements

Four types of landscaping may be required for a development, depending on the use and zoning district of the property and adjacent properties, and the portion of the property involved. These types of landscaping are: (1) site perimeter landscaping, (2) parking lot landscaping, (3) site enhancement landscaping, and (4) tree requirements for new residential development. Requirements for these landscaping types are set forth in subsections 21.07.080F.5., 6., 7., and 8. below.

2. Determining Required Landscaping

a. Both existing and installed landscaping are assigned a unit value in table 21.07-1. Table 21.07-3 provides the number of units per linear foot of frontage that is required for each level of site perimeter landscaping, as well as the minimum width and minimum average widths of the landscaped areas. Other types of landscaping state the units per square foot that is required to be installed in a certain area.

b. By multiplying the applicable frontage or area by the units required per linear or square foot, the total number of required units is reached. If the resultant number contains a fraction, the next highest whole number shall be used. Applying any secondary requirements of the landscaping type (for example, a minimum number of units required to be trees), the landscape designer may choose the allocation of landscape units from table 21.07-1 and arrange them in the landscape area as he or she sees fit.

c. In some instances, landscaping or screening requirements for a particular area, such as a fence requirement, may exceed the minimum perimeter unit requirement listed in table 21.07-3.

3. Shared Credit among Landscaping Types

Credit for one type of landscaping may be applied to another, within the following parameters:

a. Landscaping provided to meet a site perimeter landscaping requirement may be used to satisfy a requirement for parking lot perimeter landscaping, or vise versa, along the same lot line or street frontage;

b. Trees retained or planted as part of a tree requirement under 21.07.080F.8. may count toward other types of landscaping required under subsections 21.07.080F.5 through F.7., where the tree location coincides with the required landscape areas;

c. Where one type of required landscaping area coincides with another, the stricter provisions shall apply unless otherwise specified in this section; and

d. Site enhancement and interior parking lot landscaping may not be counted toward site perimeter or parking lot perimeter landscaping. Interior parking lot landscaping requirements may not be met by any other type of landscaping.

4. Landscape Units Awarded

To provide for flexibility, allow design creativity, and encourage retention of existing trees on a site, the required amount of planting material for site enhancement, site perimeter, parking lot, or tree retention landscaping is based on a “landscape units” point system. The number of units awarded to each landscaping element is listed in table 21.07-1 below.

TABLE 21.07-1: LANDSCAPE UNITS AWARDED

Landscape Material	Landscape Units Awarded	
	Newly Installed	Existing Retained
Landmark tree [1]	n/a	25
Evergreen tree, >10 ft high	12	15
Evergreen tree, >8 – 10 ft high	9	11
Evergreen tree, 6 – 8 ft high	6	8
Deciduous tree, >4" and greater caliper [2]	20	20
Deciduous tree, >3" caliper [2]	12	15
Deciduous tree, 2.5" caliper [2]	8	10
Deciduous Tree, 2" caliper or multi-stem (at least one stem at 2" caliper) [2]	4	5
Deciduous shrub, 36" high	1	1.2
Deciduous shrub, 24" high	0.8	n/a
Deciduous shrub, 18" high	0.5	n/a
Evergreen shrub, 10" to 18" high	1	n/a
Perennials/ground cover (per #1 container)	0.25 per container	
Topsoil (4" depth) and seeding	1.2 per 100 sq ft	
Earthen berm, minimum 18" high	0.15 per linear foot	
Hardscape Material	**Units Awarded**	
Ornamental screening fence (between 4 ft. and 6 ft. high)	0.3 per linear foot	
Ornamental metal fence (3 to 4 feet high)	1.7 per linear foot	
Ornamental wall (approx. 3 feet high)	1.6 per linear foot	
Decorative seat walls (approx. 18" high)	2 per linear foot	
Ornamental pavers	0.12 per sq ft	
Landscape boulders, with at least 3' x 3' above grade level	2 per boulder	
Landscape lighting, sculpture, art, water feature, winter city feature, and/or gazebo or similar structure/landmark	As determined by UDC	

Retained Existing Vegetation Mass [ ]	Bonus Landscaping Units Awarded
300+ square feet with a minimum of 3 trees including deciduous trees of 4" caliper or greater and/or evergreen trees of at least 6 feet in height	15%
500+ square feet with a minimum of 5 trees including deciduous trees of 4" caliper or greater and/or evergreen trees of at least 6 feet in height	20%
800+ square feet with a minimum of 8 trees including deciduous trees of 4" caliper or greater and/or evergreen trees of at least 6 feet in height	25%

NOTES:

[1] Refer to the definition of a "landmark tree" in chapter 21.14. A written statement from a municipal arborist is required to qualify a tree as a landmark tree and to indicate if the tree is healthy and will likely survive given the activities that will be occurring around it.

[2] Measurements of caliper are described in the definition of "caliper" in chapter 21.14. If a tree caliper measurement is in-between the tree caliper categories of this table, the next lower tree caliper category shall be used.

[3] Points awarded for retained vegetation may only be applied to the lot line, street frontage, or interior area where the vegetation is found. A written statement from a municipal arborist is required to indicate if the retained trees are healthy and will likely survive given the activities that will be occurring around them.

[4] In order to determine the amount of bonus landscaping units, determine the total landscape unit value of eligible trees within a retain vegetation mass. Multiply this total landscape unit value times the percentage indicated to obtain the number of bonus landscaping units.

5. Site Perimeter Landscaping

a. *Purpose*

Site perimeter landscaping separates land uses of different characteristics or intensities, to minimize the effects of one land use on another. It reduces unwanted views and other impacts of a land use on adjacent properties. Perimeter landscaping can also mark the interface between public streets and individual property, soften the visual impacts of development on public streets, and help to frame the municipality's streetscapes with trees and vegetation. Four levels of site perimeter landscaping are provided to accommodate a variety of land uses at a variety of intensities. The intent of each level is described below:

i. *L1 Edge Treatment*

Edge Treatment perimeter landscaping is used to define the perimeter of small parking lots located within the DT districts. It is applied where a minimal visual break or buffer is adequate to soften the impacts of a use. It consists of ground covers, perennials, wildflowers, shrubs, trees, fencing, walls, and/or other hardscape elements.

ii. *L2 Visual Enhancement*

Visual enhancement perimeter landscaping uses a combination of distance and low level landscaping to soften the visual impacts of a use or development, or where visibility between areas is more important than a visually obscuring screen. It is applied between certain land uses, on the perimeter of parking areas, and along streets, where it helps to frame the municipality's streetscapes with consistent treatments of trees and vegetation.

iii. *L3 Buffer*

Buffer perimeter landscaping is intended to provide physical and visual separation between uses or developments. It provides enough width so that trees may be clustered to provide greater visual buffering.

iv. *L4 Screening*

Screening perimeter landscaping is employed as the highest level separation where there are incompatible land uses. It is also used along freeways to protect major visual corridors and entrance gateways into the community.

b. *Applicability of Site Perimeter Landscaping*

Site perimeter landscaping shall be provided along the perimeter property line of development sites in accordance with table 21.07-2, except for the following:

i. At approved points of pedestrian or vehicle access;

ii. On individual single-family and two-family lots that are not being developed as part of a subdivision; and

iii. For buildings accessory to a single-family or two-family use.

TABLE 21.07-2: APPLICABILITY OF SITE PERIMETER LANDSCAPING
Required Level of Site Perimeter Landscaping (Levels 2, 3, or 4)

Abutting District or Street / District Of Proposed Development	R-6, R-8, R-9, R-10, TA	R-1, R-1A, R-2A, R-2D, R-5, R-7	R-2M, R-2F	R-3, R-4, R-4A	PLI	NMU, CMU, B-1A	RMU, MT-1, MT-2	B-3, RO	I-1, MC	I-2, MI	Freeway [1]	Arterial, Expressway	Collector	Local Street
R-6, R-8, R-9, R-10, TA						L2	L3	L3	L3	L3	L4			
R-1, R-1A, R-2A, R-2D, R-5, R-7						L3	L3	L3	L3	L3	L4	L3	L2	
R-2M, R-2F	L2	L2				L3	L3	L3	L3	L3	L4	L3	L2	
R-3, R-4, R-4A	L3	L2				L3	L3	L3	L3	L3	L4	L3	L2	L2
PLI	L2	L2	L2	L2		L2	L2	L2	L2	L2	L4	L2	L2	L2
NMU, CMU, B-1A	L2	L3	L3	L3				L2	L2	L2	L4			
RMU, MT-1, MT-2	L3	L3	L3	L3					L2	L2	L4			
B-3, RO	L3	L3	L3	L3	L2	L2			L2	L2	L4	L2	L2	L2
I-1, MC	L3	L3	L3	L3		L2	L2	L2			L4	L2	L2	L2
I-2, MI	L3	L3	L3	L3		L2	L2	L2			L4	L2	L2	L2
PR	L2	L2	L2	L2				L2	L2	L2	L4	L2	L2	L2
AF	L3	L3	L3	L3	L2	L2	L2	L2						

NOTES: [1] L4 screening landscaping requirements along freeways shall apply to any lot abutting the right-of-way of a freeway designated in the *Official Streets and Highways Plan*, on roadway sections built to freeway design standards with full grade separations of intersecting streets, or to streets functioning as frontage roads for such freeways. Lots abutting the following freeway segments are subject to L4 screening landscaping requirements of this section: 1) Seward Highway between Tudor Road and Potter Road; 2) Glenn Highway between Boniface Parkway to the military reservation boundary; and 3) Minnesota Drive/O'Malley Road between International Airport Road and the Old Seward Highway. The L4 screening landscaping requirements do not apply to the following: A) any lot whose area, less the 30 foot setback area for the L4 screening area, is less than the minimum lot area required in the zoning district; or B) any lot whose depth, excluding all setbacks required by this title, is less than 100 feet.

c. ***Specifications for Site Perimeter Landscaping***

In any area where site perimeter landscaping is required according to table 21.07-2, the planting requirements in table 21.07-3 shall apply. The amount of landscaping required in table 21.07-3 is measured per linear foot of property line or street frontage. Vehicular and pedestrian access points shall not be subtracted from the linear frontage in calculations of the amount of landscaping required. If there are driveways along the frontage or property line, required landscaping shall be condensed into the remaining site perimeter landscaping area.

TABLE 21.07-3: SPECIFICATIONS FOR SITE PERIMETER LANDSCAPING

Requirement	L1 Edge Treatment	L2 Visual Enhancement	L3 Buffer	L4 Screening
Total landscape units required per linear foot of property line or street frontage	0.40 units per linear foot	0.50 units per linear foot	1.1 units per linear foot	2.2 units per linear foot
Minimum number of landscape units that shall be trees	0.10 units per linear foot unless waived by the decision-making body [1]	0.20 units per linear foot	0.50 units per linear foot	1.2 units per linear foot
Minimum number of landscape units that shall be evergreen trees	none	Allowed but not required	0.30 units per linear foot	0.9 units per linear foot
Minimum number of landscape units that shall be shrubs	0.20 units per linear ft, utilizing a hedge, ornamental fence, and/or ornamental wall	0.12 units per linear foot	0.25 units per linear foot	0.6 units per linear foot
Planting area width (minimum average)	3 ft	8 ft	15 ft	30 ft.
Planting area width (minimum at any point)	3 ft except a minimum 100 sq ft area is required for each tree	8 ft	12 ft	25 ft

[1] The petitioner shall demonstrate to the approving authority that the space on the site is too constrained to install trees. If trees are not required by the approving authority, the landscaping units that would otherwise be used for trees shall be applied to other items listed in table 21.07-1.

d. ***Additional Standards for Site Perimeter Landscaping***

i. Minimum width of planting area shall be measured as the width of the planting beds between the back of edge curbing or landscape edging.

ii. Where there will be vehicle overhang into the required planting area along any curb edge or wheel stop, add two feet to the required minimum planting area width at these locations.

iii. Due to low sun angles and solar shadowing of abutting residential lots in the spring and fall, the director may waive the requirement that a minimum number of landscape units shall be evergreen trees along north lot lines that abut residential or mixed-use districts, where the lot line runs within 30 degrees of east-west.

iv. If perimeter landscaping includes a fence or wall and abuts a public street right-of-way, the landscape bed shall be located between the fence or wall and the street right-of-way.

v. No sign of any kind, other than one real estate sign per site no larger than six square feet, is permitted along freeways within the planting area of L4 screening perimeter landscaping.

vi. Existing natural vegetation in any required L4 screening perimeter landscaping area shall not be disturbed, but shall be augmented with planted landscaping if that vegetation does not meet the standards for L4 screening. Supplemental plantings shall not disturb existing vegetation, but in the event existing vegetation is disturbed, it shall be restored.

6. Parking Lot Landscaping

a. ***Purpose***

Parking lot landscaping softens the view and breaks up the visual impact of extensive paved surfaces associated with multifamily residential and nonresidential development. It also contributes to storm water management, provides orientation to entrances, increases outdoor comfort levels, and mitigates wind and dust in large parking areas. Parking lot landscaping is intended as a visual buffer that softens visual impacts, not a barrier that eliminates natural surveillance. It consists of perimeter and interior parking lot landscaping.

b. ***Applicability of Parking Lot Landscaping***

Parking lot perimeter landscaping requirements shall apply to parking lots with six or more parking spaces that are accessory to any multifamily or nonresidential building or use, and to parking lots that are the principal use on a site. Parking lot interior landscaping requirements shall apply to parking lots of 20 or more parking spaces.

c. ***Perimeter Parking Lot Landscaping***

Perimeter parking lot landscaping shall be required for all applicable parking lots which are adjacent to a lot line as provided below. This landscaping shall be provided along applicable lot lines except at approved points of vehicular or pedestrian access, although the entire parking lot frontage, including vehicular or pedestrian access points shall be used to calculate the required landscaping. Where there will be vehicle overhang into the required planting area along any curb edge or wheel stop, add two feet to the required minimum planting area width at these locations.

i. *General Requirement*

The perimeter of a parking area, which includes its appurtenant driveways, shall utilize the following schedule at the lot line indicated:

TABLE 21.07-4: PARKING LOT PERIMETER LANDSCAPING REQUIREMENTS	
Use Of Development Site Based On The Use Of Abutting Or Adjacent Sites	**Landscaping Requirement Along The Indicated Lot Line**
(A) Nonresidential use abutting a residential use or a nonresidential use adjacent to a residential use directly across an alley.	L3 buffer landscaping
(B) Multifamily residential use abutting a single-family residential use	L3 buffer landscaping
(C) Any side of a parking lot perimeter not addressed in (A) or (B) above. [1]	L2 visual enhancement landscaping
NOTE: [1] For parking lots with less than 40 spaces located in the DT districts, L1 edge treatment landscaping may be used to meet parking lot perimeter landscaping requirements.	

ii. *Multiple Lots Developed Together*
Where multiple lots are being developed under a common site plan or a joint parking/circulation plan, the parking lot perimeter landscaping along an interior lot line may be allowed to be shared between the two abutting uses or waived altogether, subject to approval by the director.

d. ***Parking Lot Interior Landscaping***

i. *Amount Required*
Parking lot interior landscaping shall be required for all development with 20 or more exterior surface parking spaces, as follows:

(A) *20 to 100 spaces*
An area equal to at least five percent of the surface of the parking area on the site including appurtenant driveways shall be devoted to landscaping.

(B) *More than 100 spaces*
An area equal to at least 10% of the surface of the parking area on the site, including appurtenant driveways shall be devoted to landscaping.

ii. *Minimum Landscaping Area Size*
The minimum size of any interior planting area shall be eight feet wide measured from back-of-curb and 150 square feet in area.

iii. *More Than 30 Spaces in a Single Line*
Where there are more than 30 parking spaces in a single line, a parking lot interior landscaping area of at least eight feet in width and at least the depth of a parking space shall be used to break up these lines of parking into component parts of no more than 30 parking spaces in a single line.

iv. *Landscaping Break for Every Three Drive Aisles*
In parking lots over 100 spaces, for every three drive aisles within the lot, there shall be a landscaping bed which is at least eight feet wide, parallel to the drive aisles, and which extends the length of the abutting drive aisles.

v. *Minimum Stocking Requirements*

In any required interior parking lot landscaping area, a minimum of eight landscape units per 100 square feet (0.08 units per square foot) of planting area shall be provided, with at least half of the landscape units being trees.

vi. *Natural Surveillance and Safety*

Good visibility in parking lots is important for both security and traffic safety reasons. Plants and trees that restrict visibility, such as tall shrubs and low branching trees, should be avoided. Therefore, parking lot interior landscaping shall, to the extent reasonably feasible, minimize vegetation and solid or semi-open fences between three feet and seven feet above grade. Berms used as part of interior landscaping areas shall not exceed three feet in height.

7. Site Enhancement Landscaping

a. ***Purpose***

Site enhancement landscaping increases the number of plant materials and seasonal color on open areas of a site, prevents erosion and dust by covering bare or disturbed areas, and reduces and cleans storm water runoff. It includes foundation plantings, front, side and rear-yard plantings, and common area plantings. It enhances the appearance and function of the building and site and reinforces its continuity with the surrounding properties.

b. ***Applicability of Site Enhancement Landscaping***

All ground surfaces on any development site that are not devoted to buildings, structures, drives, walks, off-street parking or other authorized facilities, and not otherwise devoted to landscaping required by this chapter, shall be planted with site enhancement landscaping.

c. ***Specifications for Site Enhancement Landscaping***

In any area where site enhancement landscaping is required, a minimum of one landscape unit per 50 square feet (.02 units per square foot) of planting area shall be provided. However, all applicable areas shall, at a minimum, be covered with landscape or hardscape material as provided in table 21.07-1.

8. Trees

a. ***Purpose***

This section is a tree requirement for residential development. It encourages the retention of trees, minimizes the impact of tree loss during construction, and promotes a sustained presence of trees and woodlands in urbanized areas of the municipality. Trees are an important characteristic of the municipality, providing economic support of local property values; enhancing the municipality's natural beauty and identity; reinforcing the pleasant physical character of residential neighborhoods; protecting anadromous fish and wildlife habitat; ameliorating impacts of development on drainage, soil erosion, air quality, and water quality; sheltering from inclement weather; and providing visual buffering of urban development.

b. ***Applicability of Tree Requirement***

The tree requirement applies to residential development except for single- and two-family lots that were platted before [effective date of this title]. Nor does it apply to the removal of dead, diseased or naturally fallen trees or vegetation, or

trees or vegetation that the director finds to be a threat to the public health, safety, or welfare.

c. ***Minimum Tree Density***
As defined in table 21.07-1, 165 tree landscape units per acre are required in new residential developments.

i. Up to 35% of the total number of required units may be located within a separate tract or tracts held in common ownership by a homeowners association or comparable entity.

ii. All individual lots in a subdivision shall have at least three trees, with at least one tree located in the front yard of each lot.

d. ***Tree Retention and Planting***
Tree density may consist of retained trees, installed trees, or a combination of retained and installed trees. Trees to be retained shall be depicted on the landscape plan. Where site characteristics or construction preferences do not support tree preservation, tree plantings may be used to satisfy this standard.

e. ***Tree Retention Priorities***
Priorities for preservation of existing trees are listed below, in order of descending priority. Landscape plans should preserve existing trees in the highest priority category of on-site location possible. No tree retention area used to meet the requirements of this section may be located in public or private rights-of-way, utility easements, or visibility clearance areas as defined in AMC title 9.

i. *Landmark Trees* (as defined in chapter 21.14)

ii. *Sensitive Environmental Areas and Existing Wooded Areas*
Sensitive environmental areas and features, including areas with large numbers of mature trees, areas containing multiple landmark trees, wetland areas, stream corridors, the margins of existing lakes or ponds, natural drainages, wildlife habitat areas, steep slopes, or geological hazard areas.

iii. *Required Perimeter Landscaping Areas*
Areas where site perimeter or parking lot perimeter landscaping is required pursuant to this section 21.07.080.

iv. *Other Individual Trees or Groups of Trees*

G. General Landscaping Requirements and Standards

All required landscaping, screening or fences shall comply with the following standards:

1. Plant Materials

a. ***Plant Choices and Quality***
All plant material utilized in meeting landscaping and screening requirements shall be hardy for its selected area as referenced in the user's guide. In all cases the plant materials shall be living and free of defects and of normal health, height, and spread as defined by the *American Standard for Nursery Stock, ANSI Z60.1*, latest available edition, American Nursery and Landscaping Association. Plants

may be nursery grown or transplanted from the wild or native stands, provided the plants meet all ANSI Z60.1 standards. Plants listed in the most current edition of the document, *Selected Invasive Plants of Alaska, USDA, Forest Service, Alaska Region*, shall not be used.

b. ***Tree Plantings***

Planted and transplanted trees shall be mulched with shredded bark mulch or rock mulch at least three inches in depth. Species selection and spacing of trees to be planted shall be such that it provides for the eventual mature size of the trees. Soil type, soil conditions, and other site constraints shall be considered when selecting species for planting or transplanting. Evergreen trees installed shall meet a minimum 5:3 height to spread ratio.

2. Planting Location

Tree planting shall take into consideration the growth habits of each species and shall allow adequate space for healthy growing conditions.

a. ***Vehicle Overhang Areas***

Only plant materials that can accommodate vehicle overhangs including low shrubs and perennials shall be used within the first three feet from back-of-curb where there will be vehicle overhang.

b. ***Utility Easements***

i. Where required landscaping areas are parallel to utility easements, 50% of the landscaping area may be located in the utility easement, provided that any required trees are planted in that part of the landscaping area that does not coincide with the utility easement. Where a utility easement crosses a required landscaping area, trees shall not be planted in the area that coincides with the utility easement.

ii. The utility must make a good faith effort to provide written notice to the affected residents at least one week prior to disturbance of the landscaping, except for power restoration or in case of emergencies involving life or safety. The utility is not responsible for replacement of disturbed landscaping within the utility easements, but the utility shall stabilize the disturbed area to prevent erosion.

c. ***Visibility Clearance Areas***

All landscaping and screening materials shall comply with the visibility clearance requirements of AMC title 9.

3. Planting Beds and Vegetation Areas

a. ***Protection of Landscaping***

All required landscaped areas, particularly trees and shrubs, shall be protected from potential damage by adjacent uses such as parking and storage areas. Concrete barrier curbs or other approved barriers at least six inches high shall be provided between vehicular use areas and landscaped areas. Landscaped areas shall be marked or otherwise made to be visible during snow removal operations.

b. ***Tree Retention Area Protection***

Tree retention areas used toward landscaping requirements under this section 21.07.080 shall be adequately protected from damage through adherence to the following:

i. *Construction Fence*
A construction fence shall be placed around each tree or grouping of trees to be retained at or beyond the edge of the tree protection zone. The fence shall be placed before construction starts and remain in place until construction is complete. The fence shall be six-foot high steel, such as chain link, on concrete blocks.

ii. *Development Limitations in Tree Retention Areas*
Within the tree protection zone of each tree or grouping of trees, the following development is not allowed:

(A) Grade change, excavations, or cut and fill, either during or after construction;

(B) New impervious surfaces;

(C) Utility or drainage field placement;

(D) Attachment of objects to a tree designated for retention;

(E) Staging or storage of materials and equipment, vehicle maneuvering areas, or other activities likely to cause soil compaction or above-ground damage;

(F) Placement, storage, or dumping of solvents, soil deposits, excavated material, concrete washout, or the like.

iii. *Subsequent Landscaping Work*
Any landscaping done in the tree protection zone subsequent to the removal of construction barriers shall be accomplished with light machinery or hand labor.

c. ***Ground Cover***
All of the landscaped area that is not planted with trees and shrubs shall be planted in ground cover plants, which may include grasses. Ground cover plants shall be planted at a density that will provide continuous ground coverage within three years. Mulch shall be confined to planting beds underneath trees and shrubs and is not a substitute for ground cover plants. Mulch may consist of shredded bark or rock mulch such as river rock with at least a three inch diameter.

d. ***Berms***
Berms may be incorporated into any required landscaping or screening area. Berms for on-site landscaping shall not be placed in a public right of way, and shall not interfere with natural drainage or cause water to be drained onto streets. No installed berm shall have a slope of greater than 3:1 for mown areas or greater than 2:1 for planted berms.

4. Installation of Landscaping

a. ***Timing***
All required landscaping and screening shall be installed by the developer. All landscaping shall be installed before a certificate of zoning compliance is issued. If a certificate of zoning compliance is requested between September and May,

then the certificate shall be conditioned upon the landscaping being installed before the following August 31.

b. ***Surety***

A letter of credit, escrow, performance bond, or other surety approved by the municipal attorney for proper installation of the landscaping and equal in value to 120% of the value of the installed landscaping, as determined by a bonded, licensed landscape contractor, shall be provided to the director prior to the installation of the landscaping. This bond shall remain in place with the director for at least 24 months after installation to ensure survival and proper maintenance of the landscaping in accordance with this section. After the landscaping has been installed for 24 months, and an inspection has found that the required landscaping is in good health, the surety shall be released. The bonding requirement established in this subsection may be waived for a landscaping area that meets the irrigation standards of subsection G.6.b. below.

c. ***Survival***

Any landscape element that dies, is removed, or is seriously damaged shall be replaced based on the requirements of this section before the following August 31.

5. Use of Landscaped Areas

Except for approved points of pedestrian or vehicular access as provided in subsection 21.07.080F.5.b. above, no structure, motor vehicle area, snow storage, or paved area may be located in areas required for landscaping.

6. Maintenance and Replacement

a. ***Maintenance***

Trees, shrubs, other vegetation, irrigation systems, fences, and other landscaping, screening, and fencing elements shall be considered as elements of a development in the same manner as other requirements of this title. The property owner shall be responsible for regularly maintaining all landscaping elements in good condition. All landscaping shall, to the extent reasonably feasible, be maintained free from disease, weeds, and litter. Plants that die shall be replaced in kind. All landscaping, screening, and fencing materials and structures shall be repaired and replaced when necessary to maintain them in a structurally sound condition.

b. ***Irrigation***

To ensure that plants will survive, particularly during the critical two-year establishment period when they are most vulnerable to lack of watering, the bonding requirement established in subsection 21.07.080G.4. above may be waived for any landscaping area that will be irrigated by one of the following:

i. A below-ground irrigation system with automatic controller that has been installed by a certified irrigation contractor; or

ii. An irrigation system designed and approved by a licensed landscape architect as part of the landscape plan, which provides sufficient water to ensure that the plants will become established.

H. Screening

1. Purpose

Screening consists of landscaping, the retention of natural vegetation, or the use of physical structures to block views of specific activities or specific parts of a property or structure. Applicants are encouraged to locate the types of features listed in this section where they are not visible from abutting public streets and abutting uses or lots as specified below, so that screening is unnecessary.

2. Refuse Collection

In order to improve the image of the municipality's streets and neighborhoods, to reduce the visual impacts of multifamily and nonresidential development, and to avoid problems with blown trash, snow, and pests, refuse collection receptacles shall be adequately screened and located in unobtrusive yet convenient locations.

a. *Residential Dwellings*

Single-family (attached and detached), two-family, townhouse, and three-unit multifamily dwellings shall not have dumpsters.

b. *Standards*

i. *Applicability*

The following standards shall apply to all refuse collection receptacles of multifamily residential, public/institutional, commercial, and industrial uses. Refuse collection receptacles that abut an alley and are not located directly across the alley from a residential zoning district are exempted from the screening standards of this subsection. For purposes of this section, the term "refuse collection receptacles" includes dumpsters, garbage cans, debris piles, or grease containers, but does not include public trash receptacles for pedestrians placed in the right-of-way, public drop-off recycling receptacles, or waste receptacles for temporary construction sites. This section also does not apply to refuse collection receptacles such as garbage cans that are normally stored indoors and brought outdoors on garbage pickup days.

ii. *Location*

Outdoor refuse collection receptacles shall not be located in a required front setback, and shall, to the extent reasonable feasible and depending on the size of the site and need for access by refuse collection vehicles, be set back from the front plane of the principal structure. Refuse collection receptacles for nonresidential uses shall not be located in any setback area which abuts a residentially zoned lot or mixed-use district with a residential use. Refuse collection receptacles shall not be located within any area used to meet the minimum landscaping or parking and loading area requirements of this chapter, or be located in a manner that obstructs or interferes with any designated vehicular or pedestrian circulation routes onsite.

iii. *Screening Enclosure*

Each refuse collection receptacle shall be screened from view from abutting public streets and abutting parcels. If a screening enclosure is necessary to meet the standards of this subsection, the screening enclosure shall, at a minimum, consist of a durable, three-sided, sight-obscuring structure consisting of a solid fence or wall no less than six feet in height. Where the access to the enclosure is visible from abutting

public streets or abutting residential properties, the access shall be screened with a sight-obscuring gate. Gates which swing open shall have a one-foot height clearance above grade to account for snow. The enclosure shall be maintained in working order, and remain closed except during the day of trash pick-up.

iv. *Maintenance of Refuse Collection Receptacle*
The lids of receptacles in screening enclosures without roof structures shall remain closed between pick-ups, and shall be maintained in working order.

c. ***Amortization of Nonconforming Refuse Collection Receptacles***
Existing dumpsters that are located at residential uses indicated in subsection 21.07.080H.2.a. shall be removed within 180 days from the effective date of this title. Sites with refuse collection receptacles that are subject to screening enclosure requirements of subsection 21.07.080H.2.b. shall meet the requirements of this section within five years from the effective date of this title.

3. Service and Off-Street Loading Areas

a. ***Applicability***
This standard shall apply to all service and off-street loading areas serving public/institutional, commercial, and industrial uses that abut a public street or a residential zoning district, including service and off-street loading areas in alleys adjacent to a residential district.

b. ***Standard***
In order to mitigate visual and noise impacts on surrounding residential uses and neighborhoods, non-enclosed service and off-street loading areas shall be screened with durable, sight-obscuring walls and/or fences of at least six feet in height. In conjunction with the screening wall or fence, L2 visual enhancement landscaping shall be used along the extent of the wall or fence. The L2 landscaping shall be placed in the area between the screening fence or wall and the property line.

4. Wall-Mounted Mechanical Equipment and Meters

a. ***Applicability***
This standard shall apply to all development except for single-family, two-family, and three-unit multifamily development.

b. ***Standard***
Wall-mounted mechanical equipment, including air conditioning or HVAC equipment and groups of four or more utility meters, but not including intake and exhaust vents, that extends more than six inches from the outer building wall shall be screened from view from abutting public streets; and from abutting residential, public, and institutional properties; through the use of (a) sight-obscuring enclosures constructed of one of the primary materials used on the primary façade of the structure, (b) sight-obscuring fences, or (c) trees or shrubs that block at least 50% of the equipment from view. Wall-mounted mechanical equipment that extends six inches or less from the outer building wall shall be designed to blend in with the color and architectural design of the subject building.

I. Fences

1. Applicability

The provisions of this subsection 21.07.080I. shall apply to all construction, substantial reconstruction, or replacement of fences, retaining walls not required for support of a principal or accessory structure, or any other linear barrier intended to delineate different portions of a lot or to separate lots from each other. The provisions of this subsection do not apply to temporary fencing for construction, emergencies, or special public events or performance areas.

2. Location

A fence may be constructed within property boundaries, or at the lot line, subject to the limitations in this section. No fence shall be installed so as to block or divert a natural drainage flow onto or off of any other property.

3. Maximum Height

Unless specifically required elsewhere in this title for screening fences, fences shall not exceed the maximum heights set forth below. Such maximum heights shall be measured from the top of any retaining wall, or if no retaining wall has been constructed, then from natural grade. Unless specifically allowed by this title, no fence shall exceed eight feet in height.

a. In the R-1, R-1A, R-2A, R-2D, R-2M, R-2F, R-3, R-4, R-4A, R-5, and R-7 districts, fences in front setbacks shall not exceed four feet in height.

b. In the R-6, R-8, R-9, and R-10 districts, fences in front setbacks shall not exceed six feet in height if the fencing material is sight-obscuring. Examples of non-sight obscuring fencing include chain-link and split rail fencing.

c. In the B-1A, B-3, R-O, DT, NMU, CMU, RMU, MT-1, MT-2, MC, and MI districts, fences in front yards shall not exceed three feet in height and shall not exceed eight feet in side or rear yards.

d. Enclosures provided as a part of a permitted tennis court, ball field, or other recreational facility shall be exempt from the height restrictions of this section.

4. Through Lots and Corner Lots

In the case of a through lot and a corner lot which abut a street of collector or greater classification, a fence may be constructed within the front setback abutting such classified street, up to a maximum of eight feet in height, provided that vehicular access to the street is prohibited.

5. Finished Appearance Outward

Whenever any fence will be visible from adjacent streets, and whenever a fence is installed as part of required site perimeter or parking lot perimeter landscaping and is visible from adjacent properties, it shall be installed so that the more finished side (i.e., the side with fewer or no visible structural framing or bracing elements) faces outward from the lot on which it is installed.

6. Prohibited Materials

Fences made of debris, junk, or waste materials are prohibited, unless such materials have been recycled and reprocessed into building materials marketed to the general public and resembling new building materials.

21.07.090 OFF-STREET PARKING AND LOADING

A. Purpose

This section establishes off-street parking and loading requirements as a necessary part of the development and use of land, to ensure the safe and adequate flow of traffic in the public street system, and to ensure that parking areas are designed to perform in a safe, efficient manner. It is also the intent of this section to attenuate the adverse visual, environmental, and economic impacts of parking areas. Specific purposes include to:

1. Ensure that off-street parking, loading, and access demands will be met without adversely affecting other nearby land uses and neighborhoods;

2. Provide for vehicle and pedestrian circulation and safety in parking areas, and create a safe and more pedestrian-friendly environment;

3. Encourage the efficient use of land by avoiding excessive amounts of land being devoted to parking and thus unavailable for other productive uses;

4. Improve the visual appearance of public street corridors by encouraging buildings and other attractive site features to become more prominent relative to parking areas;

5. Provide for better pedestrian movement and encourage alternative modes of transportation by reducing the expanses of parking that must be traversed between destinations;

6. Support a balanced transportation system that is consistent with cleaner air and water, greater transportation choices, and efficient infill and redevelopment; and

7. Allow flexibility in addressing vehicle parking, loading, and access issues, including providing alternatives to standard required surface parking.

B. Applicability

1. Generally

a. The off-street parking and loading standards of this section 21.07.090 shall apply to all development in the municipality including changes of use.

b. Except for the off-street loading requirements of subsection 21.07.090F., all other requirements of this section shall apply to Girdwood unless specifically preempted in chapter 21.09.

c. Except when specifically exempted, the requirements of this section shall apply to all temporary parking lots and parking lots that are a principal use on a site.

2. Expansions, Relocations, and Enlargements

A site to which a building is relocated shall provide the required parking and loading spaces. An expansion or enlargement that is an increase in the floor area or other measure of off-street parking and loading requirements shall provide spaces as required for the increase.

3. Regulation of Parking Space Use

The providers of required off-street parking spaces may reasonably control the users thereof by means that may include, but are not limited to, restricting all parking to the

users of the facility; parking lot attendants control gates; tow-away areas; areas for exclusive use by employees, tenants or staff; areas restricted for use by customers or visitors; and imposing time limitations on users. Prior to approval of the permit the traffic engineer may review all methods of control and may disapprove of any restriction that adversely affects the purpose of this section. The municipality may enforce any approved parking plan or restrictions through any of the code enforcement provisions set forth in chapter 21.13, *Enforcement.*

4. Use of Required Parking Spaces

Required parking spaces shall be available for the use of residents, customers, visitors, or employees of the use. Required parking spaces shall be available at no charge, except that the traffic engineer may approve charges for use of required parking spaces if in a municipally recognized parking district or in the AD, PLI, and PCD zoning districts. Required parking spaces may not be assigned in any way to a use on another site, except for shared parking situations. See subsection 21.07.090E.7. Also, required parking spaces may not be used for the parking of equipment or fleet vehicles or for storage of goods or inoperable vehicles.

5. Parking Nonconformities

When a site is out of compliance as to the number of required or allowed parking spaces, section 21.12.060, *Characteristics of Use*, applies.

C. Computation of Parking and Loading Requirements

1. Fractions

When measurements of the number of required or allowed parking spaces on the site result in a fractional number after subtracting for parking reductions or alternatives, any fraction shall be rounded up to the next higher whole number.

2. Multiple Uses

The number of parking spaces is computed based on the uses on the site. When there are two or more uses on a site, the required or allowed parking for the site is the sum of the required or allowed parking for the individual uses. For shared parking, see subsection 21.07.090E.7. below.

3. Area Measurements

Unless otherwise specified, all square footage-based parking and loading standards shall be computed on the basis of gross floor area of the use in question. Floor area dedicated for parking spaces, driveways, drive aisles, loading, or enclosed mechanical equipment located above the general roof level shall not be counted in such measurement.

4. Occupancy Load Factors

Where parking requirements for assembly rooms or other uses are based on maximum capacity under provisions of AMC title 23, the occupancy load factors of AMC title 23 shall not be adjusted.

5. Additional Computation Standards

a. *Off-Street Loading Space*

Required off-street loading space shall not be included as off-street parking spaces in computation of required or allowed number of off-street parking spaces, unless approved by the traffic engineer pursuant to subsection F.5. below.

b. ***Fleet Vehicle Parking***

For the purpose of calculating parking requirements, fleet vehicle parking shall not count against either the minimum or maximum requirements.

c. ***Areas that Count Toward Minimum but not Maximum Parking Requirements***

For the purpose of calculating parking requirements, the following types of parking spaces shall not count against the maximum parking requirement, but shall count toward the minimum requirement:

i. Accessible parking;

ii. Passenger loading zones including taxi cab stands;

iii. Vanpool and carpool parking; and

iv. Parking structures, underground parking, and parking within, above, or beneath the building(s) it serves.

D. Parking Lot Layout and Design Plan

1. Applicability

For all commercial, industrial, institutional, multifamily and townhouse residential developments, the applicant shall submit a parking lot layout and design plan for review and approval by the traffic engineer. The plan shall contain sufficient detail to enable the traffic engineer and the director to verify compliance with this section 21.07.090. Subject to approval of the traffic engineer, the parking layout and design plan may be combined with other plans required under this title, such as the landscaping plan required in 21.07.080, *Landscaping, Screening, and Fences*.

2. Minimum Plan Requirements

a. The parking lot layout and design plan shall be prepared by a design professional and stamped by a professional registered with the Alaska State Board of Registration for Architects, Engineers, and Land Surveyors, except that parking lots with fewer than 20 parking spaces shall be exempt.

b. The director and traffic engineer shall establish the minimum submittal requirements for such plans that will enable staff to adequately review and ensure compliance with the standards and requirements of this section 21.07.090. Such submittal requirements, to be included in the user's guide, shall include but not be limited to elements such as placement and dimensions of spaces, landscaping, pedestrian and vehicle circulation, snow storage, lighting, loading and trash collection areas, and drainage.

c. The traffic engineer shall ensure that provisions have been made for minimum interference with street traffic flow and safe interior vehicular and pedestrian circulation, transit, and parking.

E. Off-Street Parking Requirements

1. Minimum Number of Spaces Required

Unless otherwise expressly stated in this title, off-street parking spaces shall be provided in accordance with table 21.07-5, *Off-Street Parking Spaces Required* and subsection

E.2. below. Reductions, exemptions, and alternatives to the required minimum number of parking spaces are provided in subsection 21.07.090F. below.

2. Minimum of Three Parking Spaces

Where a nonresidential use is required to provide off-street parking and the requirement is fewer than three spaces, the use shall be required to provide at least three parking spaces including one customer or visitor parking space, one employee parking space, and one accessible parking space. Fueling stations and food and beverage kiosks that are exclusively for drive-through customers are exempt from this requirement. Where there are multiple uses located on a site, the uses may share the accessible space.

TABLE 21.07-5: OFF-STREET PARKING SPACES REQUIRED
("du" = dwelling unit; "sf" = square feet; "gfa" = gross floor area)

Use Category	Use Type	Minimum Spaces Required	See Loading Subsection 21.07.090F
RESIDENTIAL USES			
Household Living	Dwelling, multiple-family and mixed-use	1 per studio or efficiency du 1.2 per one bedroom du 1.6 per two bedroom du Add 0.5 spaces for each bedroom over 2. Add 0.25 spaces for each du with single-family style or two-family style construction. Add 0.25 guest parking spaces for each du with single-family, two-family, or townhouse style construction, and located on a private street or on a public street with no on-street curb parking available.	**X**
	Dwelling, single-family and two-family	2 per du up to 1,800 square feet; 3 per du over 1,800 square feet, including any unfinished area which may be converted to living area	
	Accessory dwelling unit (ADU)	See subsection 21.05.070D.	
	All other household living uses	2 per du	
Group Living	Assisted living facility (9+ client capacity)	1 per 4 beds plus 1 per 350 sf of office area plus requirement for dwelling, if located in a dwelling	**X**
	Correctional community residential center	1 per 2,000 sf gfa	**X**
	Habilitative care facility	1 per 400 sf gfa, and 1 passenger loading space, reserved for pickup and delivery of adults, per 800 sf gfa	**X**
	Roominghouse	1.5 per 2 guestrooms	
	Transitional living facility	1 per 2 beds plus 1 per 4 persons in principal assembly area based on maximum occupancy provisions of AMC title 23	

TABLE 21.07-5: OFF-STREET PARKING SPACES REQUIRED
("du" = dwelling unit; "sf" = square feet; "gfa" = gross floor area)

Use Category	Use Type	Minimum Spaces Required	See Loading Subsection 21.07.090F
PUBLIC/INSTITUTIONAL USES			
Adult Care	Adult care facility, 3-8 persons	1 per 400 sf gfa, and 1 passenger loading space, reserved for pickup and delivery of adults, per 800 sf gfa (plus requirement for principal use, if approved as accessory use)	
	Adult care facility, 9+ persons	1 per 400 sf gfa, and 1 passenger loading space, reserved for pickup and delivery of adults, per 800 sf gfa	**X**
Child Care	Child care home	No additional requirements beyond those required for the dwelling unit If the establishment is for fewer than 9 children and is not located in a dwelling, then the requirement is as provided in subsection 21.07.090E.2.	
	Child care center, 9-15 children	1 space in addition to what is required for the dwelling	
	Child care center, more than 15 children	1 per 400 sf gfa, and 1 passenger loading space, reserved for pickup and delivery of children, per 800 sf gfa	
Community Service	Community center or religious assembly	1 per 4 persons in principal assembly area based on maximum occupancy provisions of AMC title 23	**X**
	Cemetery or mausoleum	See subsection 21.07.090D.3.	
	Crematorium	1 per 4 persons in the main chapel based on maximum occupancy provisions of AMC title 23	
	Family self-sufficiency service	1 per 300 sf gfa	
	Government administration and civic buildings	1 per 300 sf gfa	**X**
	Homeless and transient shelter	1 per 300 sf gfa	
	Neighborhood recreation center	1 per 300 sf gfa	
Cultural Facility	Aquarium	1 per 500 sf gfa	**X**
	Botanical gardens	.75 per acre of site area, plus 1 per 1000 sf gfa	**X**
	Library	1 per 400 sf gfa	**X**
	Museum or cultural center	1 per 400 sf gfa	**X**
	Zoo	1 per 5,000 sf of site area	**X**
	All other uses	1 per 400 sf gfa or 1 per 10,000 sf of site area for outdoor uses	**X**

TABLE 21.07-5: OFF-STREET PARKING SPACES REQUIRED
("du" = dwelling unit; "sf" = square feet; "gfa" = gross floor area)

Use Category	Use Type	Minimum Spaces Required	See Loading Subsection 21.07.090F
Educational Facility	Boarding school	See subsection 21.07.090D.3.	
	College and university	1 per 600 sf gfa exclusive of dormitories, plus 1 per 4 dorm rooms	**X**
	Computer-aided learning center	1 per 300 sf of enclosed floor space	**X**
	Elementary school and middle school	1 per 5 seats in each classroom or teaching station	**X**
	High school	1 per 4 seats in each classroom or teaching station	
	Instructional services	1 per 4 seats in each classroom or teaching station based on maximum occupancy provisions of AMC title 23, plus 1 per 300 square feet of dance or other training area	
	Vocational or trade school	1 per 2 seats in each classroom or teaching station based on maximum occupancy provisions of AMC title 23	
Health Care Facility	Health services, including outpatient medical and dental offices	1 per 250 sf gfa	**X**
	Hospital/ health care facility	1 per 2 beds, based on maximum capacity, plus 1 per 350 sf of office and administrative area	**X**
	Nursing facility	1 per 4 beds, based upon maximum capacity. If the facility is used exclusively for the housing of the elderly, disabled, or handicapped, the zoning board of examiners and appeals may allow a portion of the area reserved for off-street parking to be landscaped if the board finds that the landscaping is suitable and is in the best interests of the residents of the neighborhood.	**X**
Park and Open Area	Community garden	1 per 5,000 sf of lot area	
	Park and open space, public or private	See subsection 21.07.090D.3. Playfields (soccer, baseball, etc.) shall have minimum of 30 spaces per field.	
Public Safety Facility	All uses	See subsection 21.07.090D.3.	
Transportation Facility	Airport	See subsection 21.07.090D.3.	
	Airstrip, private	See subsection 21.07.090D.3.	
	Transit center	See subsection 21.07.090D.3.	
	Heliport	2 per each helicopter based at the facility (2 spaces minimum) plus 1 per 100 sf waiting area	**X**

TABLE 21.07-5: OFF-STREET PARKING SPACES REQUIRED
("du" = dwelling unit; "sf" = square feet; "gfa" = gross floor area)

Use Category	Use Type	Minimum Spaces Required	See Loading Subsection 21.07.090F
	Railroad freight terminal	See subsection 21.07.090D.3.	
	Railroad passenger terminal	See subsection 21.07.090D.3.	
Utility Facility	All uses	1 per 1,000 sf gfa	
Communica-tion Structures	All uses	None	
COMMERCIAL USES			
Agricultural Uses	Commercial horticulture	See subsection 21.07.090D.3.	
Animal Sales, Service & Care	Animal shelter	1 per 400 sf gfa	
	Kennel, commercial	1 per 800 sf gfa	
	Large domestic animal facility, principal use	1 per 4 seats or 1 per stall, whichever is greater	
	Retail and pet services	1 per 300 sf gfa	
	Veterinary clinic	1 per 600 sf gfa	
Assembly	Civic/convention center	1 per 4 persons in assembly areas based on maximum occupancy provisions of AMC title 23	**X**
	Club/lodge/meeting hall	1 per 4 persons in assembly areas based on maximum occupancy provisions of AMC title 23.	**X**
Entertainment and Recreation	Amusement establishment Bowling Alley	Indoor entertainment facility: 1 per 300 sf gfa 4 per bowling lane	
	Entertainment facility, major	See subsection 21.07.090D.3.	
	Fitness and recreational sports center	1 per 225 sf gfa or 1 per 8 persons based on the maximum occupancy provisions of AMC title 23, whichever is greater For athletic court areas: 1 per 275 sf	
	General outdoor recreation, commercial	1 per 5,000 sf of land area, or 1 per 3 persons, whichever is greater; playfields (soccer, baseball, etc.) shall have minimum of 30 spaces per field	**X**
	Golf course	4 per green	
	Golf driving range	1 per tee	
	Motorized sports facility	1 per 2 spectator seats in a structure such as a grandstand, stadium; or 1 per 2,000 sf of site area; whichever is greater	**X**

TABLE 21.07-5: OFF-STREET PARKING SPACES REQUIRED
("du" = dwelling unit; "sf" = square feet; "gfa" = gross floor area)

Use Category	Use Type	Minimum Spaces Required	See Loading Subsection 21.07.090F
	Movie theater	1 per 4 persons based on maximum occupancy provisions of AMC title 23	
	Nightclub	1 per 3 persons based on maximum capacity under provisions of AMC title 23	X
	Shooting range, outdoor	1 per target area, or 1 per 5 seats, whichever is greater	
	Skiing facility, alpine	See subsection 21.07.090D.3.	
	Theater company or dinner theater	1 per 4 persons based on maximum capacity under provisions of AMC title 23	
Food and Beverage Service	Bar	1 per 100 sf gfa	X
	Food and beverage kiosk	1 per establishment, plus vehicle queuing spaces	
	Restaurant	1 per 100 sf gfa (plus vehicle queuing spaces if drive-through is provided)	X
Office	Financial institution	1 per 350 sf gfa (plus vehicle queuing spaces if drive-through is provided)	
	Office, business or professional	1 per 350 sf gfa	X
	Broadcasting facility	1 per 350 sf gfa	
Personal Service, Repair, and Rental	Business service establishment	1 per 500 sf gfa	X
	Pharmacy/Drugstore and Video Rental Store	1 per 400 sf gfa (plus vehicle queuing spaces if drive-through is provided)	
	Dry-cleaning, drop-off site/Mail Package Service/Locksmith Shop	1 per 600 sf gfa, (plus vehicle queuing spaces if drive-through is provided)	
	Funeral services	1 per 4 persons in main assembly areas based on maximum occupancy provisions of AMC title 23	X
	Small equipment rental	1 per 400 sf gfa	
	All other uses	1 per 300 sf gfa	X
Retail Sales	Auction house	1 per 300 sf gfa	X
	Convenience store	1 per 300 sf gfa	X
	Farmers market	1 per 250 sf, with a minimum of 6	
	Fueling station	1 per attendant for stand-alone fueling stations; also refer to subsection 21.07.090H. for queuing requirement	
	Furniture, Home Appliance, or Flooring Store	1 per 800 sf gfa	X

TABLE 21.07-5: OFF-STREET PARKING SPACES REQUIRED
("du" = dwelling unit; "sf" = square feet; "gfa" = gross floor area)

Use Category	Use Type	Minimum Spaces Required	See Loading Subsection 21.07.090F
	General retail	1 per 300 sf gfa	X
	Grocery or food store	1 per 250 sf gfa	X
	Liquor store	1 per 400 sf gfa	X
	Building materials store	1 per 300 sf gfa	X
	Pawnshop	1 per 300 sf gfa	X
Vehicles and Equipment	Aircraft and marine vessel sales	1 per 7,000 sf outdoor display/sales area; 1 per 400 sf indoor floor area	X
	Vehicle parts and supplies	1 per 400 sf gfa; 1 per 7,000 sf outdoor display/sales area	X
	Vehicle – large and small, sales and rental	1 per 7,000 sf outdoor display/sales area; 1 per 400 sf indoor floor area	X
	Vehicle service and repair, major and minor	0.5 per car wash bay; 4 per other service bay (provided that all vehicles in custody of operator of business for purpose of service, repair or storage shall be stored on premises or on a separate off-street parking lot or building)	
Visitor Accom-modations	Camper park	1.1 spaces for each recreational vehicle space	
	Extended-stay lodgings	1 per guestroom or one bedroom unit; 1.25 per two bedroom unit; 1.5 per three bedroom or more unit, plus 1 per 4 persons in meeting rooms based on maximum occupancy provisions of AMC title 23.	X
	Hostel	1 per 600 sf gfa	
	Hotel, motel and inn	0.9 per guestroom, plus 1 per 4 persons in meeting rooms based on maximum occupancy provisions of AMC title 23.	X
	Recreational and vacation camp	1 per 4 beds, or 1 per cabin or sleeping unit, whichever is greater, plus 1 per tent site	
INDUSTRIAL USES [1]			
Industrial Service [1]	Data processing facility	1 per 1,000 sf gfa	X
	Dry cleaning establishment	1 per 750 sf dry cleaning plant area plus 1 per 600 sf of customer service area	
	General industrial service	1 per 750 sf gfa (1-3,000 gfa); 1 per 1,000 sf gfa (3,001-5,000 gfa); 1 per 1,500 sf gfa (more than 5,000 gfa)	
	Governmental service	1 per 600 sf gfa	X

TABLE 21.07-5: OFF-STREET PARKING SPACES REQUIRED
("du" = dwelling unit; "sf" = square feet; "gfa" = gross floor area)

Use Category	Use Type	Minimum Spaces Required	See Loading Subsection 21.07.090F
	Heavy equipment, sales and rental	1 per 7,000 sf outdoor display/sales area; 1 per 400 sf indoor floor area	**X**
	Research laboratory	1 per 300 sf gfa	
Manufacturing and Production [1]	Cottage Crafts	1 per 600 sf gfa	**X**
	Commercial food production	1 per 400 sf gfa for catering; 1 per 800 sf gfa for food processing	
	Manufacturing (heavy and light)	1 per 750 sf gfa (1-3,000 gfa); 1 per 1,000 sf gfa (3,001-5,000 gfa); 1 per 1,500 sf gfa (more than 5,000 gfa)	
	Natural resource extraction	See subsection 21.07.090D.3.	
Marine Facility [1]	Aquaculture	See subsection 21.07.090D.3.	
	Facility for combined marine and general construction	See subsection 21.07.090D.3.	
	Marine operations	See subsection 21.07.090D.3.	
	Marine wholesaling	1 per 400 sf gfa	
Warehouse and Freight Movement [1]	Bulk storage of hazardous materials	See subsection 21.07.090D.3.	
	Impound yard	1 per 500 sf gfa, plus 1 per 5,000 sf of outdoor storage area	
	Motor freight terminal	see Warehouse	
	Self-storage facility	1 per 75 units, plus vehicle queuing spaces for security gate. Aisles suitable for temporary loading and unloading may be counted as required parking stalls in accordance with table 21.07-5 as determined by the traffic engineer.	**X**
	Storage yard	1 per 2,000 sf of outdoor storage area	
	Warehouse	1 per 1,000 sf gfa (1-10,000 sf); 1 per 1,250 sf gfa (10,001-50,000 sf); 1 per 1,500 sf gfa (more than 50,000 sf)	
	Wholesale establishment	1 per 400 sf gfa	
Waste and Salvage	All uses	See subsection 21.07.090D.3.	

NOTES: [1] The off-street parking requirements for industrial uses in this schedule A shall not include space devoted to office or other non-industrial related use. Where a warehousing or industrial facility contains office or other non-industrial related use, off-street parking for such spaces shall be computed using the requirements set forth in this table.

3. Uses Not Listed or that Have No Specific Requirement

In the case of a use or category of uses not listed in table 21.07-5, or that is listed without a specific requirement, the requirements for off-street parking facilities shall be determined by the director and the traffic engineer. Such determination shall be based upon the requirements for the use specified in table 21.07-5 that is most nearly comparable to the unspecified use, traffic engineering principles, and/or parking studies. Any parking study prepared by the applicant shall include estimates of parking demand based on recommendations of the Institute of Transportation Engineers (ITE), or other acceptable estimates as approved by the traffic engineer, and shall include other reliable data collected from uses or combinations of uses that are the same as or comparable with the proposed use. Comparability shall be determined by density, scale, bulk, area, type of activity, and location. The study shall document the source of data used to develop the recommendations.

4. Maximum Number of Spaces Permitted

a. *Purpose*

The purpose of this subsection is to establish an upper limit on the number of parking spaces allowed in order to promote efficient use of land, enhanced urban design, a safe and walkable pedestrian environment, alternative modes of transportation, and to protect air and water quality. The maximum ratios allow a percent of parking that is greater than the minimum amount of parking needed to accommodate the majority of auto trips to a site based on typical peak parking demand. Exceptions and flexibility procedures are provided where a required limit on the number of parking spaces is problematic for a certain use.

b. *Maximum Number of Spaces*

For any use categorized as a Public/Institutional, Commercial or Industrial use in table 21.05-1 or table 21.05-2, *Tables of Allowed Uses*, the maximum number of off-street vehicle parking spaces shall be as established in table 21.07-6 below. The table applies the maximum number of spaces allowed as a percentage of the minimum parking requirements established in table 21.07-5, *Off-Street Parking Spaces Required*. Temporary parking, commercial parking lots, and uses in the Parks and Open Areas, Transportation Facility, and Utility Facility use categories are exempt.

TABLE 21.07-6 MAXIMUM NUMBER OF ALLOWED PARKING SPACES

Number of Off-Street Parking Spaces Required	Maximum Allowed (% of minimum required in Table 21.07-5, *Off-Street Parking Spaces Required*)
< 40 spaces	150% [1]
40 – 160 spaces	125% [1]
> 160 spaces	110% [1] [2]

NOTES: [1] Restaurant Uses: restaurant and bar establishments that do not include customer drive-throughs may, in any use district, have up to 200% of the minimum parking required in Table 21.07-4, *Off-Street Parking Spaces Required*.

[2] Establishments with more than 160 required parking spaces that wish to provide more than 110% of their required parking, may provide more than 110% of their required parking when they increase the parking lot interior landscaping by one percent as a percentage of parking lot surface area for every one percent increase in parking over 110%, up to a maximum of 125%.

c. ***Exceptions***

i. If application of the maximum parking standard would result in fewer than six parking spaces, the development shall be allowed six parking spaces.

ii. Spaces provided as the required parking for a use on another parcel through a municipally approved shared parking or off-site parking agreement do not count toward the maximum number of spaces permitted.

iii. Exceptions to the maximum parking requirement may be allowed by the traffic engineer and the director in situations that meet all of the following criteria:

(A) The proposed development has unique or unusual characteristics which create a parking demand that exceeds the maximum ratio and which typically does not apply to comparable uses; and,

(B) The parking demand cannot be accommodated by on-street parking or shared parking with nearby uses; and,

(C) The request is the minimum necessary variation from the standards; and,

(D) If located in a mixed-use district, the uses in the proposed development and the site design are, in the judgment of the director, highly supportive of the mixed-use concept and support high levels of existing or planned transit and pedestrian activity.

5. Proximity of Parking to Use

Except as provided in subsection 21.07.090F., all required parking shall be on the same site as the use served. However, required parking may be on an abutting or adjacent lot provided the zoning district in which the lot is located allows for off-street parking as a permitted principal use, site plan review use, or conditional use. There shall be a parking agreement which meets the requirements of subsection F.1. below.

F. Parking Reductions and Alternatives

The traffic engineer and director may approve reductions and alternatives to providing the number of off-street parking spaces required by table 21.07-5, in accordance with the following standards.

1. Parking Agreement

A parking reduction or alternative shall require a written parking agreement between the property owner(s) and the municipality, except where expressly stated otherwise.

a. ***Recordation***

The applicant shall record the parking agreement at the district recorder's office as a covenant that runs with the land and is binding on the owner and all successors and assigns for as long as the required number of off-street parking spaces is not provided as a result of the parking reduction or alternative. All parties involved in the parking reduction or alternative shall participate in the parking agreement. Recordation of the agreement shall take place and an

attested copy submitted to the department before issuance of a land use permit or building permit requiring a parking reduction or alternative.

b. ***Content***

The form and content of the parking agreement shall be approved by the director. It shall guarantee installation and maintenance of any required improvements by the owner, and/or the owner's continued participation in any parking management strategy required for a parking reduction. The parking agreement shall assure future implementation of a contingency plan by the owner if so ordered by the director. The contingency plan may include strategies such as installation of parking, payment to the municipality for the full cost of providing the required parking, transportation demand management programs, or other parking management strategies identified in the parking reductions or alternatives of this section.

c. ***Termination***

If for any reason the parking agreement terminates, owners who were parties to the parking agreement shall comply with all provisions of this title governing the required number of off-street parking spaces.

2. Calculation of Parking Reductions

a. ***Multiple Reductions***

A development may be eligible for multiple reductions from the required number of parking spaces. The total impact of parking reductions shall be calculated as being multiplicative and not additive where a development is eligible for more than one. For example, if one reduction is 20%, and a second reduction is an additional 15%, their combined reduction shall be calculated as 80% x 85% = 68%, or a 32 percentage point total reduction, rather than adding 20% + 15% = 35%. This is because the 15% reduction applies to a base that is already reduced 20%.

b. ***Minimum Reduction Credit of One Space***

If the total approved reduction from the required number of parking spaces for a development is calculated to be a reduction of less than one parking space, it shall be credited as a reduction of one parking space.

3. Qualifying Site Development

Uses shall provide the following enhancements to be eligible for any reduction in the number of required parking spaces, except where stated otherwise.

a. ***Street Oriented Building***

Primary entrances and/or windows providing visual access shall comprise at least 15% of the area of any street facing building elevation. For nonresidential uses, windows providing visual access and/or primary entrances shall comprise at lest 50% of the length and 25% of the area of the ground-level wall of any street facing building elevation.

b. ***Separated Walkway to the Street***

A walkway not routed through a parking facility or crossed by a driveway shall connect at least one primary entrance to a street.

c. ***Parking Facility Location***

Parking facilities including driveways shall comprise no more than one-third of the area between the street property line and the street facing building elevation,

and garage doors shall comprise no more than one-third of the length of the street facing building elevation. These requirements apply to no more than two street frontages.

d. ***Private Open Space***
An additional 40 square feet of private open space that meets the requirements of subsection 21.07.030 shall be provided for each reduction of one parking space. This shall be common private open space in multifamily uses.

e. ***Cross Access to Adjacent Properties***
The director and the traffic engineer may determine there is potential for driveway or walkway cross-access to abutting properties and may require a cross-access facility and/or easement within the subject property to the site boundary.

4. Downtown
Uses located in DT-1, DT-2, and DT-3 districts are exempt from providing off-street parking spaces. However, if parking is provided, all other standards of this section shall apply in the DT districts. Notwithstanding the provisions of F.1. and F.2. above, parking agreements and qualifying site criteria shall not be required for this exemption.

5. Residences in Walking Distance to Downtown
Residential uses located near the DT districts, and specifically north of 15th Avenue, west of Gambell Street, east of L Street, and south of Ship Creek are eligible for a reduction of up to 40% of the minimum number of required parking spaces.

6. Mixed-Use Districts
Uses located in the NMU, CMU, RMU, MT-1, MT-2, and R-4A districts are eligible for a reduction of up to 10% of the minimum number of required parking spaces.

7. Residences in Center City Neighborhoods

a. Residential uses located in center city neighborhoods are eligible for a reduction of up to 10% of the minimum number of required parking spaces.

b. For the purposes of this provision, the center city area is bounded to the north by Elmendorf Air Force Base, to the south by Tudor Road, to the east by Ingra Street and the Seward Highway, and to the west by Minnesota Drive. Any part of Fairview, South Addition, Government Hill, or Mountain View community council is also in the eligible area.

c. This reduction recognizes proximity to employment centers, characteristics such as traditional street grids and development patterns, demographic characteristics, emphasis on walkable northern city environments, and lower parking demand in these areas.

8. Uses Adjacent to Transit Service
A use is eligible for a reduction of up to five percent of the minimum number of required parking spaces if it is located within 800 feet of the street right-of-way centerline of any one of municipal transit routes 1 through 75, subject to approval by the traffic engineer, the director, and the public transportation department. The public transportation department may required a public use easement or transit stop and/or transit shelter improvements if the subject property abuts an existing or planned transit stop.

9. Rideshare Programs

A nonresidential use is eligible for a substitution of participation in municipal rideshare programs for up to a maximum of five percent of the minimum number of required parking spaces. The land area that would otherwise be needed in order to provide the required number of parking spaces shall be set aside on the site to provide for the future construction of a parking area in conformance with subsection 21.07.090F.13., *Land Banked Parking*.

a. *Carpool*

Every certified carpool space may count as 1.8 spaces toward meeting the minimum number of required spaces. The carpool spaces shall be those closest to the primary entrance or elevator, but not closer than accessible spaces or those signed for exclusive customer/visitor use. Signs shall be posted indicating these spaces are reserved for carpool use. The traffic engineer shall consult with the public transportation department in certifying carpool spaces and the location of carpool parking.

b. *Vanpool*

For every certified vanpool purchased or leased by the applicant for employee use operated through the municipal rideshare program, the number of required parking spaces shall be reduced by up to six spaces.

10. Transit Pass Benefits

A use in which the owner or employer offers transit passes cost-free to all employees or residents is eligible for a parking reduction of up to 10% of the minimum number of required parking spaces. The use shall be located within 800 feet of the street right-of-way centerline of any one of municipal transit routes 1 through 75. The public transportation department may require a public use easement or transit stop and/or transit shelter improvements if the subject property abuts an existing or planned transit stop.

11. Parking Cash-outs

A use is eligible for a reduction of up to 10% of the minimum number of required parking spaces if it implements a parking cash-out program by which commuters are provided the option to choose between free parking and its equivalent cash value for using an alternative mode of travel.

12. Land Banking

Subject to approval by the traffic engineer and the director, the land area that would otherwise be needed in order to provide up to 25% of the minimum number of required parking spaces may be set aside on the site to provide for the future construction of a parking area. The applicant shall submit an alternate site plan that accommodates the parking that would be required without the land banked parking reduction. The area set aside shall be landscaped with site enhancement landscaping and/or pedestrian amenities approved by the director. The parking agreement shall guarantee that, if the director and the traffic engineer determine at some point in the future that additional parking spaces are needed, the owner shall construct parking on the land banked area in conformance with the alternate site plan.

13. Affordable Housing

Affordable housing units that are deed-restricted for extremely low income households having an income at the time of initial occupancy of 30% or less of median family income are eligible for a reduction of up to 40% of the minimum number of required parking spaces. Affordable housing units for low income households having an income at the

time of initial occupancy of 60% or less of median family income are eligible for a reduction of up to 20% of the minimum number of required parking spaces. The affordable housing units shall be consistent with the following standards:

a. The affordable housing units shall be intermingled with all other dwelling units in the development;

b. The type of tenure and ownership of the affordable housing units shall be the same as that of the rest of the housing units in the development; and

c. The exterior appearance of the affordable housing units shall be indistinguishable from the other units in the development.

14. Senior Housing and/or Supportive Housing

Senior housing units or supportive housing units are eligible for a reduction of up to 40% of the minimum number of required parking spaces. The agreement to provide a dwelling as a senior and/or supportive housing unit is an obligation that runs with the land and is binding on subsequent property owners for as long as the required parking is not provided.

15. Housing Density

Residential uses are eligible for a reduction of one percent of the minimum number of required parking spaces for every two dwellings per acre above a net density of 40 dwellings per acre on the site, up to a maximum reduction of 20% of the minimum number of required parking spaces.

16. Shared Parking

Shared use of required parking spaces may occur where two or more uses on the same or separate sites are able to share the same parking spaces because their peak parking demands occur at different times. The traffic engineer and director may approve shared parking facilities for uses with different peak business periods if the shared parking complies with all of the following standards:

a. ***Shared Parking Study***

The applicant shall submit a shared parking analysis to the director that demonstrates the feasibility of shared parking. The study shall be provided in a form established by the traffic engineer and shall be made available to the public. It shall address, at a minimum, the size and type of the proposed development, location of required parking, the composition of tenants, the anticipated rate of parking turnover, and the anticipated peak parking and traffic loads for all uses that will be sharing off-street parking spaces. The applicant shall also demonstrate that any parking reduction requested as part of the shared parking study will not result in the spillover of parking onto other properties or public streets.

b. ***Calculation of Parking Spaces Required***

The shared parking study shall follow the most current published procedures of the Urban Land Institute, or the Institute of Transportation Engineers, or other procedures as specifically approved by the traffic engineer, or, the method under subsection 16.c. below may be used to calculate the number of shared parking spaces required for two or more land uses.

c. ***Alternative Calculation Method***

Multiply the number of off-street parking spaces required for each individual use by table 21.07-5 by the appropriate percentage indicated in table 21.07-7, *Shared Parking Credit*, for each of the eight designated time periods. Add the resulting sums for each of the designated time period columns. The minimum number of required shared parking spaces shall be determined by totaling the resulting numbers in each time period column. The column total that generates the highest number of parking spaces then becomes the shared parking requirement. This represents the time period with the highest total parking demand.

TABLE 21.07-7: SHARED PARKING CREDIT

Land Uses [1]	Weekday Time Periods				Weekend Time Periods			
	7 am to 6 pm	6 pm to 1 am	1 am to 3 am	3 am to 7 am	7 am to 6 pm	6 pm to 1 am	1 am to 3 am	3 am to 7 am
Residential	65%	100%	100%	100%	75%	90%	10%	100%
Religious Assembly	25%	50%	0%	0%	100%	50%	0%	0%
Health Services	100%	30%	5%	5%	100%	0%	0%	0%
Assembly	100%	50%	5%	5%	100%	50%	5%	5%
Fitness Center	90%	100%	60%	60%	100%	100	80%	80%
Movie Theater	60%	100%	0%	0%	80%	100%	0%	0%
Bar or Nightclub	40%	100%	90%	0%	50%	100%	90%	0%
Restaurant	80%	100%	50%	50%	85%	100%	25%	25%
Restaurant - Fast Food	100%	90%	15%	15%	100%	80%	15%	15%
Office or Financial	100%	10%	0%	5%	15%	0%	0%	0%
Retail Sales / Services	100%	80%	0%	0%	100%	60%	0%	0%
Visitor Accommodations	75%	100%	100%	100%	75%	100%	100%	100%

NOTES: [1] If one or more of the land uses proposed to make use of shared parking facilities do not conform to the land use classifications in this table, as determined by the director, then the applicant shall submit sufficient data to indicate the periods of peak parking demand for the uses. Based on this information, the traffic engineer shall determine the appropriate shared parking requirement.

d. ***Distance to Parking Spaces***

Shared parking spaces for residential units shall be located within 500 feet of the dwelling unit entrance they serve. Shared spaces for other uses shall be within 800 feet of a primary entrance of the uses served. The traffic engineer and the director may approve a portion of shared parking spaces at a greater distance based on factors such as the pedestrian environment, availability of attendant parking, weather protection, and the type of use served.

e. ***Pedestrian Connection***

Clear and safe pedestrian walkways shall connect the shared parking facility and the primary entrances of the uses it serves.

f. ***Separation by Streets***

Separation of a use and its shared parking facility by a local street is allowed. Separation by a collector street shall be subject to approval by the traffic

engineer. Separation by a street designated in the *Official Streets and Highways Plan* as a higher classification street than a collector is prohibited.

g. ***Residential Neighborhoods***
A nonresidential use shall not participate in a shared parking facility that is located in a residential district, if the use itself is not permitted in the residential district. A shared parking facility located within or adjacent to a residential district and serving nonresidential uses shall be limited to hours of operation from 8:00 a.m. to 10:00 p.m.

h. ***Instructional Signs***
The shared parking facility shall provide instructional signs on the premises indicating the availability of the facility for patrons of the uses it serves.

i. ***Shared Parking Plan***
A shared parking plan shall be submitted for review and approval by the traffic engineer and the director. The shared parking plan may be combined with other parking plans required by this title.

j. ***Changes in Use or Shared Parking Facility***
Any subsequent change to the shared parking facility or in use type shall require a review by the department and the traffic engineer for compliance with this section, including proof that sufficient parking will be available. Any change shall be approved prior to being implemented.

17. Off-Site Parking
The traffic engineer and the director may approve the location of required parking spaces on a separate lot that is not adjacent to the lot on which the principal use is located if the off-site parking complies with all of the following standards:

a. ***Accessible Parking Spaces***
Required accessible parking spaces shall not be located off-site.

b. ***Location***
No off-site parking space may be located more than 600 feet from a primary entrance (measured along the shortest legal pedestrian route). Off-site parking spaces shall not be separated from the use served by a collector or greater class right-of-way, unless approved by the traffic engineer.

c. ***Pedestrian Connection***
Clear and safe pedestrian walkways shall connect the off-site parking facility and the primary entrance(s) of the uses served. The traffic engineer may require sidewalk or pedestrian crossing improvements to enhance pedestrian safety or mobility to and from the off-site parking.

d. ***Instructional Signs***
Instructional signs shall be posted on the principal site providing notice of the availability and location of additional parking. The off-site parking facility shall provide instructional signs indicating the availability of the facility for patrons of the uses it serves.

e. ***Residential Neighborhoods***
A nonresidential use shall not participate in an off-site parking facility that is located in a residential district, if the use itself is not permitted in the residential

district. An off-site parking facility located within or adjacent to a residential district and serving nonresidential uses shall be limited to hours of operation from 8:00 a.m. to 10:00 p.m.

18. On-street Curb Parking

If approved by the traffic engineer, on-street curb parking spaces in the right-of-way along the property line, of the site and/or within one block of the site may be counted toward the minimum required off-street parking requirements. Upon approval, one on-street curb space may be substituted for one required off-street space. The provisions apply only to street frontages where on-street curb parking is allowed. Determination of the location and dimensions of on-street curb parking spaces to be counted toward the parking requirement shall be the authority of the traffic engineer based on a review of the situation. The street curb next to on-street parking spaces shall be a vertical curb (not a rolled curb), and a sidewalk shall extend the full length of the subject property.

19. Stacked and Tandem Parking

a. *Nonresidential Uses*

Stacked and tandem parking spaces for nonresidential uses are allowed to count toward the minimum number of required spaces if the owner ensures through the parking agreement that attendant parking is provided for such spaces. An accessible passenger loading zone shall be provided with attendant parking services at or near a primary entrance.

b. *Residential Uses*

Two required parking spaces for any residential dwelling may be arranged in tandem or stacked one above the other using a car stacker, so long as parking required for the dwelling unit is arranged independently from parking serving any other dwelling unit, with unobstructed vehicle access for at least one of the spaces required for each dwelling unit, and the owner assigns the two spaces toward the same dwelling and enforces their assigned use.

20. Compact Parking

a. *General Parking Spaces*

If approved by the traffic engineer, up to 10% of the total number of required parking spaces may be compact spaces.

b. *Employee and Resident Parking*

If approved by the traffic engineer, up to 25% of the total number of required parking spaces may be compact spaces, provided the parking spaces shall be signed for employee or resident parking only.

c. *Compact Space Standards*

Compact spaces shall be a minimum of eight feet four inches wide and meet the requirements of table 21.07-9, *Parking Angle, Stall, and Aisle Dimensions*. All spaces with a width of less than nine feet shall be signed for compact cars only.

21. Other Eligible Reductions or Alternatives

The traffic engineer and the director may approve any parking reduction or other alternative in addition to the choices above, or that increases the by-right percentage reduction from the choices above, if the applicant demonstrates to the satisfaction of the traffic engineer and the director that the proposed parking management strategy will protect surrounding neighborhoods, maintain traffic circulation patterns, and improve urban design to at least the same extent as would strict compliance with otherwise applicable off-street parking standards. Additional parking management strategies may

include, for example, transportation demand programs, car sharing, unbundled parking, or a combination of strategies. The applicant shall provide a parking demand study prepared by an independent licensed traffic engineering professional that demonstrates a reduction is appropriate based on the expected parking needs of the development, availability of transit, and similar factors. The parking evaluation shall be prepared in a form and manner prescribed by the traffic engineer. It shall be determined that:

a. The use will be adequately served by the proposed parking due to project location, transportation characteristics of the persons residing, working, or visiting the site, or because the applicant has undertaken a program or strategy that will reduce parking demand at the site; and

b. Parking demand generated by the project will not exceed the capacity of or have a detrimental impact on the supply of on-street parking in the surrounding area.

G. Off-Street Loading Requirements

No building or structure used for any use specified in the loading column of table 21.07-5 shall be erected, nor shall any such existing building or structure be altered so as to increase its gross floor area by 25% or more, without prior provision for off-street loading berth in conformance with the following minimum requirements:

1. Types of Loading Berths

Required off-street loading shall be provided in berths that conform to the following minimum specifications:

a. Type A berths shall be at least 60 feet long by 10 feet wide by 14 feet six inches high, inside dimensions.

b. Type B berths shall be at least 30 feet long by 10 feet wide by 14 feet six inches high, inside dimensions.

c. Type C berths shall be located in the rear of a lot and utilize part of an adjacent alley. The building setback shall be a minimum of five feet from the property line along the alley for the entire width of the lot.

2. Number of Spaces

The following numbers and types of berths shall be provided for the specified uses in table 21.07-8, *Off-Street Loading Berths*; provided, however, that, in any mixed-use district, one type C berth may be substituted for one type B berth. The uses specified in this subsection shall include all structures designed, intended, or arranged for such use.

TABLE 21.07-8: OFF-STREET LOADING BERTHS

Use	Aggregate Gross Floor Area (square feet) or Number of Dwelling Units	Berths Required	Type
Residential Uses			
Multiple-family dwellings	50-149 dwelling units	1	B
	150-249 dwelling units	2	B
	Each additional 100 dwelling units or portion thereof	1 additional	B

TABLE 21.07-8: OFF-STREET LOADING BERTHS

Use	Aggregate Gross Floor Area (square feet) or Number of Dwelling Units	Berths Required	Type
Public/Institutional Uses			
Cultural facilities	24,000--50,000	1	B
	50,001--100,000	2	B
	Over 100,000, each additional 50,000 or fraction thereof	1 additional	B
Educational facilities	Over 14,000	1	B
Health care facilities	10,000--100,000	1	B
	Over 100,000	2	B
Railroad freight terminals and other transportation facilities	12,000--36,000	1	A
	36,001--60,000	2	A
	60,001--100,000	3	A
	Each additional 50,000 or fraction thereof	1 additional	A
Commercial Uses			
Assembly uses	25,000--150,000	1	B
	150,001--400,000	2	B
	Each additional 250,000 or fraction thereof	1 additional	B
All commercial establishments not otherwise specified	12,000 --24,000	1	B
	24,001--50,000	2	B
	50,001--100,000	3	B
	Over 100,000, each additional 50,000 or fraction thereof	1 additional	B
Visitor accommodations, health services, and office uses	25,000--40,000	1	B
	40,001--100,000	2	B
	Each additional 100,000 or fraction thereof	1 additional	B
Industrial Uses			
All industrial uses	12,000--36,000	1	A
	36,001--60,000	2	A
	60,001--100,000	3	A
	Each additional 50,000 or fraction thereof	1 additional	A

3. Uses Not Specifically Mentioned

In the case of a use not specifically mentioned in this section, the requirements for off-street loading berths shall be the same as the use mentioned in this section which, in the opinion of the director, is most similar to the use not specifically mentioned.

4. Concurrent Different Uses

When any proposed structure will be used concurrently for different purposes, the loading requirements shall be the total requirements for each use based upon its aggregate gross floor area, unless otherwise approved by the traffic engineer and the director.

5. Location of Off-Street Loading Facilities

Off-street loading facilities required under this title shall be in all cases on the same lot or parcel of land as the structure they are intended to serve, except as provided in subsection 21.07.090G.1.c. for type C loading berths. Where parking areas are not allowed between a building and a street, loading berths are not allowed.

6. Manner of Using Loading Areas

No berth for loading or unloading of vehicles shall be so located that a vehicle using such loading berth projects into any public street. Loading berths shall be provided with access to an alley, or, if no alley adjoins the lot, with access to a street. Any required front, side, or rear yard may be used for loading unless otherwise prohibited by this title. Design and location of entrances and exits for required off-street loading berths shall be subject to the approval of the traffic engineer.

7. Signs

The owners of the property shall provide, locate, and maintain loading signs as specified by the traffic engineer. Such signs shall not be counted against allowed advertising sign area or number.

H. Parking and Loading Facility Design Standards

1. Purpose

The parking and loading facility design standards promote vehicle areas which are safe, efficient, convenient, and attractive for motorists and pedestrians. Parking facility locations within a site are encouraged to be located elsewhere than the front area between the building and its street frontage, in order to enhance the function, character, and walkability of the area.

2. Applicability

These standards apply to any parking facility or loading facility including all parking spaces in a development, except where stated otherwise.

3. Landscaping and Screening

Parking and loading facilities shall comply with the landscaping provisions of section 21.07.080. Provisions for location and screening of refuse containers and other elements are in section 21.07.080. No parking shall be permitted in any required landscaping area.

4. Drainage and Storm Water Management

Parking and loading facilities shall comply with the parking and loading related provisions of section 21.07.040, *Drainage, Storm Water Treatment, Erosion Control, and Prohibited Discharges*.

5. Exterior Lighting

Parking and loading areas shall comply with the exterior lighting provisions of section 21.07.130.

6. Pedestrian Access and Circulation

Parking and loading facilities shall comply with the provisions of subsection 21.07.060E., *Pedestrian Facilities*.

7. Relationship to Buildings

a. *Non-residential Buildings*

Parking spaces and maneuvering aisles shall be separated from any nonresidential building on the same site by a walkway or landscaped area, or both, at least five feet in width, not including vehicle overhang as defined in table 21.07-9.

b. *Multifamily Residential Buildings*

Parking spaces, driveways, and driveway aisles shall be separated from any multifamily residential building façade by a landscaped area of at least five feet in width, not including vehicle overhang as defined in table 21.07-9, and allowing breaks for garage entrances. The area shall be planted with 0.4 units of landscaping material per linear foot.

8. Location of Parking Lots within the Site

The location of parking and vehicle areas within the proposed development site shall be in accordance with the following standards for each use specified, except when an alternate configuration is approved by the traffic engineer and the director.

a. *Single-Family, Two-Family, and Townhouse Dwellings*

Single-family, two-family, and townhouse dwellings shall comply with parking, driveway, and garage related provisions of section 21.07.100.

b. *Multifamily Development*

No more than 50% of the land area between the front lot line and the front residential building elevation shall be used for parking facilities and driveways. Multifamily uses shall comply with the parking, driveway, and garage related provisions of subsection 21.07.100F.

c. *Development in Mixed-Use Districts*

Vehicle areas are not allowed between the street and the portion of the building that complies with any of the maximum street setbacks established in section 21.06.010, *Tables of Dimensional Standards*.

9. Vehicular Access and Circulation

Parking lots and structures shall be designed for a safe and orderly flow of traffic throughout the site. Plans shall be reviewed and approved by the traffic engineer. Applicants shall submit a vehicular circulation plan for all parking lots and structures that demonstrates compliance with the following standards. Single-family and two-family dwellings are exempted.

a. *Key Elements*

The vehicular circulation plan shall address the following elements as they relate to parking lots, including but not limited to: fire lanes, emergency access, drive-throughs, drop-offs, pedestrian circulation, and loading areas.

b. *Circulation Patterns*

Circulation patterns within parking areas shall be well defined with vertical curbs, landscaping, landscaped islands, and other similar features. In order to define circulation and provide better site distance, islands shall be required at the end of each aisle. Where loading facilities are required, commercial truck circulation shall be considered, and truck turning radii shall be shown on the vehicular circulation plan when required by the traffic engineer.

c. ***Parking Spaces Along Main Circulation Drives***
Parallel parking stalls along a primary circulation driveway that serves as an entry or exit for a parking lot shall not have a parking stall angle of 90 degrees. The design and dimensions of a primary circulation driveway with parking stalls that also serves as an entry or exit for a surrounding parking lot shall conform to municipal standards for local streets with on-street parking.

d. ***Dead-End Parking Aisles***
Dead-end parking aisles may be allowed only with the approval of the traffic engineer.

e. ***Relationship to Adjacent Properties and Parking Lots***
The plan shall show existing parking and circulation patterns on adjacent properties and potential connections.

f. ***Parking Area Entries/Driveways***
Entries and driveways providing access to parking areas shall conform to the municipal driveway standards currently established by the traffic engineer. Access to roads owned by the state of Alaska requires department of transportation and public facilities approval and a current valid driveway permit.

g. ***Parking and Maneuvering***
All parking spaces and vehicle maneuvering areas required by this section, except those that serve single-family and two-family residences, shall be located entirely on private property unless specifically provided otherwise by this section.

h. ***Alleys***
Subject to safety approval by the traffic engineer, the usable portion of an alley may be credited as aisle space.

i. ***Parking Lot Connections***
Required parking areas serving a site, whether located on that same lot or on an adjacent lot, may be connected by means of a common access driveway within or between the interior of such lots.

j. ***Ingress and Egress Points***

i. Ingress and egress to parking facilities shall be designed to maintain adequate sight distance and safety and as prescribed in municipal driveway standards.

ii. Adequate ingress to and egress from each parking space shall be provided without backing more than 25 feet.

10. Dimensions of Parking Spaces and Aisles
The parking configuration stated in the following table shall apply to all required off-street parking, except as stated elsewhere in this section.

TABLE 21.07-9 PARKING ANGLE, STALL, AND AISLE DIMENSIONS

Parking Angle	Stall Width	Vehicle Projection	Aisle Width 1-way	Aisle Width 2-way	Typical Module	Curb Length	Interlock Length	Interlock Reduction	Over-hang
A	S_W	V_P	A_1	A_2	M	C	I_L	I_R	O
0	8' 4"	8' 4"	12' 6"	24	40' 8"	23' 0"	0' 0"	0' 0"	0' 0"
	9' 0"	9' 0"	12' 0"	24	42' 0"	23' 0"	0' 0"	0' 0"	
	9' 6"	9' 6"	12' 0"	24	43' 0"	23' 0"	0' 0"	0' 0"	
	10' 0"	10' 0"	12' 0"	24	44' 0"	23' 0"	0' 0"	0' 0"	
20	8' 4"	14' 0"	12' 6"	24	52' 0"	24' 4"	22' 11"	1' 11"	1' 3"
	9' 0"	15' 4"	12' 0"	24	54' 7"	26' 4"	24' 9"	4' 3"	0' 8"
	9' 6"	15' 9"	12' 0"	24	55' 6"	27' 9"	26' 1"	4' 6"	
	10' 0"	16' 3"	12' 0"	24	56' 6"	29' 3"	27' 6"	4' 8"	
30	8' 4"	16' 3"	12' 6"	24	56' 6"	16' 8"	14' 5"	1' 10"	1' 5"
	9' 0"	17' 10"	12' 0"	24	59' 7"	18' 0"	15' 7"	3' 11"	1' 0"
	9' 6"	18' 3"	12' 0"	24	60' 5"	19' 0"	16' 5"	4' 1"	
	10' 0"	18' 8"	12' 0"	24	61' 4"	20' 0"	17' 4"	4' 4"	
40	8' 4"	17' 11"	12' 6"	24	59' 11"	13' 0"	9' 11"	1' 7"	1' 7"
	9' 0"	19' 9"	12' 0"	24	63' 6"	14' 0"	10' 9"	3' 5"	1' 4"
	9' 6"	20' 2"	12' 0"	24	64' 3"	14' 9"	11' 4"	3' 8"	
	10' 0"	20' 6"	12' 0"	24	65' 0"	15' 7"	11' 11"	3' 10"	
45	8' 4"	18' 7"	12' 6"	24	61' 3"	11' 9"	8' 4"	1' 6"	1' 9"
	9' 0"	20' 6"	12' 0"	24	65' 0"	12' 9"	9' 0"	3' 2"	1' 5"
	9' 6"	20' 10"	12' 0"	24	65' 9"	13' 5"	9' 6"	3' 4"	
	10' 0"	21' 3"	12' 0"	24	66' 5"	14' 2"	10' 0"	3' 6"	
50	8' 4"	19' 2"	12' 6"	24	62' 3"	10' 11"	6' 12"	1' 4"	1' 11"
	9' 0"	21' 1"	12' 0"	24	66' 3"	11' 9"	7' 7"	2' 11"	1' 6"
	9' 6"	21' 5"	12' 0"	24	66' 10"	12' 5"	7' 12"	3' 1"	
	10' 0"	21' 9"	12' 0"	24	67' 6"	13' 1"	8' 5"	3' 3"	
60	8' 4"	19' 9"	18' 6"	24	63' 6"	9' 7"	4' 10"	1' 0"	2' 2"
	9' 0"	21' 10"	18' 0"	24	67' 8"	10' 5"	5' 2"	2' 3"	1' 8"
	9' 6"	22' 1"	18' 0"	24	68' 2"	10' 12"	5' 6"	2' 5"	
	10' 0"	22' 4"	18' 0"	24	68' 8"	11' 7"	5' 9"	2' 6"	
70	8' 4"	19' 9"	19' 6"	24	63' 6"	8' 10"	3' 0"	0' 9"	2' 4"
	9' 0"	21' 10"	19' 0"	24	67' 9"	9' 7"	3' 3"	1' 6"	1' 11"
	9' 6"	22' 1"	18' 6"	24	68' 1"	10' 1"	3' 5"	1' 7"	
	10' 0"	22' 3"	18' 0"	24	68' 5"	10' 8"	3' 8"	1' 9"	
80	8' 4"	19' 2"	22' 6"	24	62' 4"	8' 6"	1' 6"	0' 4"	2' 6"
	9' 0"	21' 3"	22' 0"	24	66' 6"	9' 2"	1' 7"	0' 9"	2' 0"

TABLE 21.07-9 PARKING ANGLE, STALL, AND AISLE DIMENSIONS

Parking Angle	Stall Width	Vehicle Projection	Aisle Width 1-way	Aisle Width 2-way	Typical Module	Curb Length	Interlock Length	Interlock Reduction	Over-hang
A	S_W	V_P	A_1	A_2	M	C	I_L	I_R	O
	9' 6"	21' 4"	22' 0"	24	66' 8"	9' 8"	1' 8"	0' 10"	
	10' 0"	21' 5"	22' 0"	24	66' 10"	10' 2"	1' 9"	0' 10"	
90	8' 4"	18' 0"	23' 6"	24	60' 0"	8' 4"	0' 0"	0' 0"	2' 6"
	9' 0"	20' 0"	23' 0"	24	64' 0"	9' 0"	0' 0"	0' 0"	2' 0"
	9' 6"	20' 0"	22' 0"	24	64' 0"	9' 6"	0' 0"	0' 0"	
	10' 0"	20' 0"	22' 0"	24	64' 0"	10' 0"	0' 0"	0' 0"	

a. ***Parking Spaces Abutting a Wall, Fence, or Obstruction***
When the length of a parking space abuts a wall, fence, or other obstruction, the required width of the parking space shall be increased by one foot for each side with an obstruction.

b. ***Minimum Vertical Clearance***
The minimum vertical clearance for a parking facility shall be seven feet four inches, except as follows:

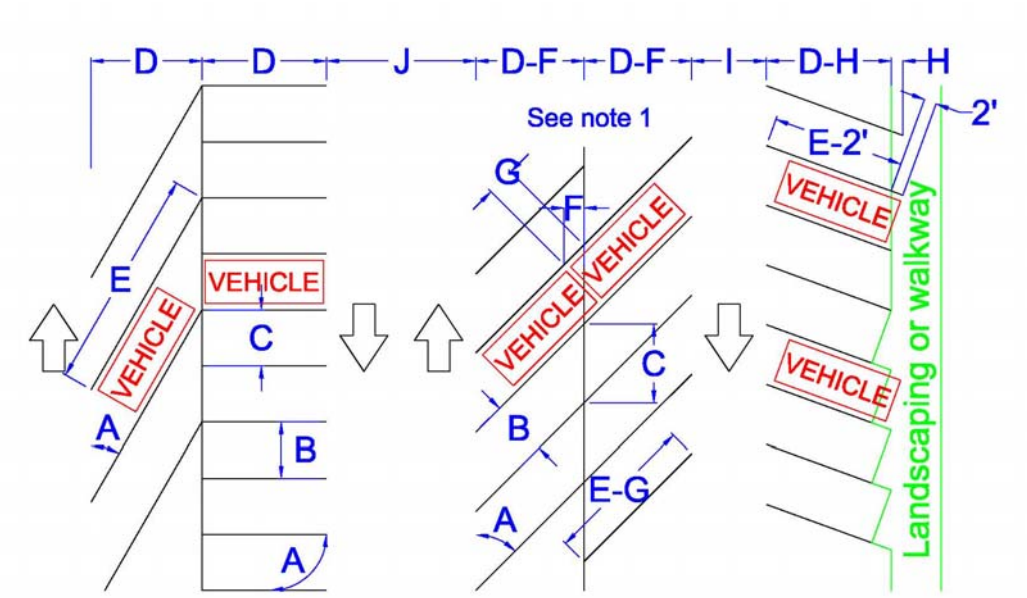
i. The minimum vertical clearance for van accessible parking spaces, access aisles serving them, and vehicle routes to the van accessible spaces shall be eight feet two inches.

ii. The minimum vertical clearance for passenger loading zones including vehicular pull-up spaces, access aisles serving them, and a vehicular route between an entrance and exist and the passenger loading zone shall be nine feet six inches.

c. ***Compact Parking Spaces***
Compact parking spaces may be approved by the traffic engineer pursuant to subsection F.21. above.

d. ***Recreational Vehicle Spaces***
Parking spaces for recreational vehicles, if provided and delineated, shall be a minimum of 10 feet wide by 40 feet long.

e. ***Calculation of Parking Space Dimensions***
The spatial relationships described in table 21.07-9 shall be calculated in the manner depicted in the following diagram:



1. The parking angle must be equal for both bays to utilize interlock.
2. Either method of overhanging the landscaped area or walkway is acceptable.
3. Where the parking angle differs across a 1-way aisle, the greater required aisle width shall be provided.

11. Snow Storage and Management

a. ***Snow Storage in All Zoning Districts***

i. No snow shall be stored in required site perimeter or parking lot landscaping areas or on pedestrian walkways or sidewalks.

ii. No snow pile (not including snow sculpture) shall be taller than 15 feet, except as allowed by 21.05.060E.6., *Snow Disposal Site*.

iii. Snow shall not be stored on any required parking stall for more than 48 hours.

iv. Temporary and long-term snow storage areas shall be depicted on the site plan. Snow melt runoff shall be directed toward a water treatment feature such as a grit or oil and water separator device, biofiltration trench, or other water treatment feature approved by the municipal engineer.

b. ***Snow Storage in Multifamily Developments of Five or More Units***

In addition to the general requirements of 11.a. above, multifamily developments of five or more units shall meet the following requirements:

i. In addition to the area set aside to meet the off-street parking requirements of this chapter, a portion of the site equal to a minimum of 20% of the area devoted to uncovered and unheated surface parking and driveways shall be set aside for snow storage. No parking credit

shall be given for snow storage areas. The snow storage area shall be clearly indicated on the parking lot plan.

ii. The designated snow storage area may overlap with 50% of the private open space required in section 21.07.030C, provided that:

(A) No trees or shrubs exist in that portion of private open space which overlaps with the snow storage area; and

(B) All areas of the private open space used for snow storage are within 15 feet of a paved area.

12. Parking Facility Maintenance

a. Paved surface parking lots with 20 or more spaces shall be swept using tandem mechanical/vacuum or mechanical/regenerative air sweepers, brooms, or other sweepers approved by the municipal engineer. Lots shall be swept two times annually at a minimum, including once following spring melt and prior to May 15, and once between August 15 and October 15. Such parking lots shall not be cleaned using air blowers or water producing run-off.

b. On-site storm water detention and runoff facilities serving parking facility runoff shall be cleaned and maintained annually.

c. Winter trash accumulation from snow storage areas shall be removed when the snow melts and no later than May 15. Grit or oil and water separator devices shall be cleaned and maintained two times annually at a minimum, including once between May 1 and June 15, and once between September 1 and October 15.

13. Maximum Grade of Surface Parking Lots

The maximum grade for any parking space or interior drive lanes shall be five percent, except that for accessible spaces the maximum grade shall be two percent, as required by the Americans with Disabilities Act. Drive lanes that are covered or heated may have an increased maximum grade with the approval of the traffic engineer.

14. Paving

a. ***Material***

Except as provided below, all parking spaces, loading berths, driveways, and points of ingress and egress shall be paved and maintained with impermeable materials such as a asphaltic concrete to standards prescribed by the traffic engineer, or other non-impervious surface as provided below.

b. ***Exceptions for Residences in Class B Districts***

Single- and two-family developments in class B districts may instead use a layer of crushed rock of no more than one inch in diameter, to a minimum depth of three inches.

c. ***Paving Alternatives***

Pervious alternatives to the specified surface may be used, subject to approval by the municipal engineer. All surfacing shall control dust, treat storm water to municipal standards, and be such that rock and other debris is not tracked off-site. If, after construction, the municipal engineer determines that the alternative is not adhering to these requirements, the surface shall be replace.

d. *Landscaping in Lieu of Paving*

The overhang portion of the parking stall depth as defined in table 21.07-9, *Parking Angle, Stall, and Aisle Dimensions*, may be landscaped with a low-growth, hardy plant material in lieu of paving, allowing a bumper overhang while maintaining the required parking dimensions.

e. *Temporary Parking Lots*

Temporary parking lots shall not be paved, unless required by the traffic engineer.

I. Passenger Loading Zones

All institutional, entertainment, and commercial uses such as schools/daycare, stadiums, and theaters that have high-volume peak traffic volumes shall provide an area for drop-offs and pick-ups that meets the following requirements:

1. Passenger Loading Zone

The traffic engineer may require one or more passenger loading zone spaces, depending on the type, intensity, and traffic patterns of the proposed use. The passenger loading zone for large commercial establishments or other intensive uses may be required by the traffic engineer to include one or more spaces dedicated to taxi cabs and/or other specialized high occupancy vehicles.

2. Passenger Loading Zone Dimensions

Any passenger loading zone that is provided for a development shall consist of one or more vehicular pull-up spaces each 20 feet in length and eight or more feet in width, with an access aisle at least five feet wide abutting the full length of the space. As an alternative, subject to approval of the traffic engineer, a passenger loading zone may consist of one or more parking spaces that meets the accessible parking space dimensional standards of 21.07.090J.

3. Plan

The vehicle access and circulation plan for parking facilities shall show the location and design of proposed passenger loading zones. For certain intensive uses, the traffic engineer may require the plan to include a traffic control plan addressing projected usage, hours of operation, peak loading/unloading time, plans for directing traffic, safety measures, and other information deemed necessary by the traffic engineer to designing a safe and well-functioning drop-off area.

4. Schools

Drop-off and pick-up areas shall be required for schools (public or private). Drop-off and pick-up areas may be adjacent to a primary driveway access or aisle, but shall be located far enough off the roadway so that they do not cause traffic to stop. Length and design of the drop-off and pick-up areas shall be approved by the traffic engineer.

J. Accessible Parking Spaces

1. Required Number of Accessible Parking Spaces

A portion of the total number of parking spaces provided in each parking facility for commercial, industrial, public and institutional, multifamily, and mixed-use residential uses shall be accessible parking spaces. The number of accessible parking spaces shall be determined based on the total number of parking spaces provided, in accordance with table 21.07-10, *Accessible Parking Spaces*, except where otherwise stated in this section.

TABLE 21.07-10: ACCESSIBLE PARKING SPACES		
Total Parking Spaces Provided	**Total Accessible Spaces Required**	**Number of Accessible Spaces that shall be Van-Accessible**
1 to 25	1	1
26 to 50	2	1
51 to 75	3	1
76 to 100	4	1
101 to 150	5	1
151 to 200	6	1
201 to 300	7	2
301 to 400	8	2
401 to 500	9	2
501 to 1000	2 percent of total	1 for every 6 accessible spaces
1001 and over	20 plus 1 for each 100 over 1000	1 for every 6 accessible spaces

2. Passenger Loading Zones Attendant Parking

If passenger loading zones are provided, then at least one passenger loading zone shall be an accessible passenger loading zone. The requirements of table 21.07-10 do not apply to attendant parking spaces.

3. Multifamily and Mixed-use Residential

Two percent, but not less than one space, of the parking spaces provided for a multifamily or mixed-use residential development with type A and type B dwelling units as defined in AMC title 23 shall be accessible.

4. Medical Facilities

At least 10% of patient and visitor parking spaces provided to serve hospital outpatient facilities shall be accessible. At least 20% of patient and visitor parking spaces provided to serve rehabilitation facilities and outpatient physical therapy facilities shall be accessible.

5. Location

Accessible parking spaces shall be located on the shortest accessible route of travel from adjacent parking to an accessible primary entrance. The accessible route of travel shall not pass behind parking spaces. In parking facilities that do not serve a particular building, accessible parking spaces shall be located on the shortest accessible route of travel to an accessible pedestrian entrance of the parking facility. In buildings with multiple accessible primary entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances.

6. Location—Exceptions

In multilevel parking structures, van accessible parking spaces are permitted to be located on one level. Accessible parking spaces shall be permitted to be located in different parking facilities if it is demonstrated to the traffic engineer that substantially equivalent or greater accessibility is provided in terms of distance from an accessible entrance(s), parking fee, and user convenience.

7. Dimensions

Car accessible spaces shall be at least eight feet four inches wide with an access aisle at least five feet wide abutting the space. Van accessible spaces shall be at least eight feet four inches wide with an abutting access aisle at least eight feet in width. Accessible parking space access aisles shall be part of an accessible walkway route to the building or facility entrance as specified in subsection J.8. below, *Accessible Routes*. Two accessible parking spaces may share a common access aisle. Accessible parking spaces and access aisles shall have surface slopes not exceeding two percent in all directions.

8. Accessible Routes

a. *Location*

At least one accessible route to the building or facility entrance shall be provided from accessible parking and accessible passenger loading zones.

b. *Surface Textures*

Ground surfaces along accessible routes shall be stable, firm, and slip-resistant.

c. *Changes in Levels*

Changes in level up to one-fourth inch may be vertical and without edge treatment. Changes in level between one-fourth inch and one-half inch shall be beveled with a slope no greater than one to two. Changes in level greater than one-half inch shall be accomplished by means of a ramp.

d. *Gratings*

If gratings are located in walking surfaces on an accessible route, then they shall have spaces no greater than one-half inch wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

e. *Ramps*

ADA ramps cannot protrude into the ADA access aisle. Ramp details shall be included on the plans.

9. Signs and Striping

Each accessible parking space shall be designated as reserved by a sign showing the symbol of accessibility. Van-accessible spaces shall have an additional sign reading "Van-Accessible" mounted below the symbol of accessibility.

a. Eight-foot van accessible aisles require a no-parking sign.

b. Signs shall be located so that they do not obstruct the ramps or other pedestrian access.

c. A handicapped sign detail shall be included in the plan submittal per M.A.S.S.

d. All accessible spaces and aisles shall be striped with handicap blue, including the total length of the curb encompassing the accessible parking space and accessible aisle.

10. Implementation of ADA

Regulations may be promulgated under section 21.03.220, *Title 21 – Text Amendments,* to implement the requirements of Americans with Disabilities Act of 1991 as it may be amended or interpreted by federal regulation.

11. Standards for Parking as Principal Use

Where a parking structure or lot is a permitted principal or conditional use and is not providing required parking for another principal use, accessible parking spaces in accordance with this section shall be provided.

K. Bicycle Parking Spaces

All nonresidential, multifamily, and mixed-use dwelling developments with more than 40 parking spaces required in table 21.07-5, or that use a parking reduction or alternative in subsection 21.07.090F., shall provide at least four bicycle parking spaces, or a number of bicycle parking spaces equal to three percent of the number of required parking spaces, whichever is greater.

L. Vehicle Queuing Spaces

The vehicle queuing space requirements of this section shall apply unless otherwise expressly approved by the traffic engineer:

1. General

Uses of land and structures requiring vehicles and customers waiting in vehicles for service at drive-through facilities, pump stations, auto service bays, or similar uses, shall provide sufficient queuing spaces within the site to avoid vehicles waiting within the public right-of-way. Such uses shall demonstrate to the traffic engineer that sufficient in-line waiting spaces are provided as part of the parking plan to avoid encroachment into the public rights-of-way, and that queuing minimizes interference with parking area maneuvering aisles.

2. Queuing Space Use

Queuing spaces shall not count toward the number of parking spaces or loading berths required by this section.

3. Minimum Number of Queuing Spaces

Off-street queuing spaces shall be provided as follows:

TABLE 21.07-11: VEHICLE QUEUING SPACES

Activity Type	Minimum Queuing Spaces	Measured From
Bank teller lane	4	Teller or window
Automated teller machine drive-through	3	Teller machine
Restaurant drive-through	6	Order box
Restaurant drive-through	4	Order box to pick-up window
Car wash stall, automatic	6	Entrance
Car wash stall, self-service	3	Entrance
Food and Beverage Kiosks	4	Pick-up Window
Fueling station pump island	2 (one on each side)	Pump island
Security gate entrance for self storage or vehicle storage facility	[1]	Security gate

TABLE 21.07-11: VEHICLE QUEUING SPACES		
Activity Type	**Minimum Queuing Spaces**	**Measured From**
Pharmacy/Drugstore drive-through, Dry Cleaning drop-off, Mail Package Service, and Other	Determined by traffic engineer.	
NOTES: [1] The required on-site queue lane shall measure no less than 50 feet in length and 24 feet in width. The width of the self-storage facility gate is excluded from this requirement.		

4. Design and Layout

Required queuing spaces are subject to the following design and layout standards.

a. ***Size***

Queuing spaces shall be a minimum of eight feet by 20 feet in size, except as noted above in table 21.07-11, *Vehicle Queuing Spaces*, for self-storage and vehicle storage facilities.

b. ***Location***

Queuing spaces may not impede on- or off-site traffic movements or movements into or out of off-street parking spaces.

c. ***Design***

Queuing spaces shall be separated from other internal driveways by raised medians if deemed necessary by the traffic engineer for traffic movement and safety.

M. Parking Structure Design Standards

1. Purpose and Applicability

Parking structures and structured parking within occupied buildings shall comply with the provisions of this subsection, in order to be compatible with the architectural character and quality of adjacent buildings; avoid adverse impacts to abutting sidewalks or residential properties; use color, massing, and other architectural features to reduce apparent bulk; and screen potential visual impacts from garage lighting or parked vehicles. The requirements which follow do not apply to garages for individual dwellings.

2. Ground Floor Use

A ground-floor parking structure located along a street designated by adopted plan as a main street, transit street, pedestrian-oriented street, or mixed-use street in the CMU, RMU, MT-1, MT-2, R-4, or R-4A districts shall provide a first-floor space that:

a. Has a minimum depth of 25 feet;

b. Faces on each street, except alleys, for the full length of the building elevation, excluding pedestrian and vehicle entrances and exits, stairwells, elevators, and centralized payment booths;

c. Is designed and used for residential, public/institutional, office, retail, restaurant, and other non-vehicle related commercial uses otherwise permitted or approved in the zoning district; and

d. Includes ground floor windows providing visual access and/or primary entrances that comprise at least 25% of the ground level wall area.

3. Incentives for Active Uses on Second and Third Floor

Occupied habitable spaces in stories near street level are encouraged in order to contribute activity and vitality to city centers, neighborhoods, and mixed-use districts. If the second and third floor of a parking structure in the CMU, RMU, R-4, or R-4A districts has a space that meets the requirements of subsection M.2. above, then the floor area devoted to parking areas behind the second and/or third floor active use shall not count toward calculation of floor area ratio, and shall instead count as a special feature allowing for an increase of 0.25 FAR above the maximum FAR, where applicable.

4. Façade Treatment

The street-facing façade of a parking structure shall have a repeating pattern that includes no less than three instances of either (1) color change, (2) texture change, (3) material module change, or (4) expression of an architectural or structural bay through a change in plane no less than 12 inches in width, such as an offset, reveal, or projecting rib. At least one of these elements shall repeat at an interval of not more than 30 feet. The director may approve an alternative design to this standard if the applicant can demonstrate an alternative building design that significantly articulates a wall plane.

5. Screening

Ground level structured parking within a building shall be screened by a wall or façade or other architectural treatment consistent with the rest of the building in terms of style, detail, and materials. The perimeter of each parking structure floor above ground level shall have an opaque screen or other screening mechanism to shield vehicles from public view. The screen shall be at least 3.5 feet high measured from the finished floor elevation. An architectural treatment, such as a finished fascia, shall be provided to shield any unfinished structural elements such as electrical elements, exposed metal beams, and mechanical appurtenances. Lights visible from the exterior of the structure shall be covered or screened with a diffusing lens and oriented to minimize the visual impact on adjacent streets and properties.

6. Landscaping

The perimeter of a parking structure shall be planted with L1 edge treatment landscaping in any downtown or mixed-use district, or with L2 visual enhancement landscaping in any other district, except at points of vehicular and pedestrian entrance and exit, where the structure abuts an alley right-of-way, where the structure directly abuts another building, or where there is a ground floor use that meets the standards of subsection M.2. above.

7. Ingress and Egress

a. Non-automated parking structures designed to provide more than 100 parking spaces for residential units shall have at least two vehicle entrance/exit points.

b. Vehicle entrance/exits shall be a minimum of 18 feet wide if one-way, and 24 feet wide if two-way.

c. Parking structures shall provide a minimum of 30 feet of on-site vehicle queuing that does not interfere with any parking stalls, rights-of-way, access easements, or private streets.

d. Structures that contain vehicle areas are subject to the building setbacks of the base zone. However, structures that contain vehicle areas where there is no

forward ingress and egress from the street are subject to a garage entrance setback of 20 feet.

8. Maximum Gradients

The maximum gradient of driving aisles within parking stalls shall be six percent. The maximum grade of non-parking ramps shall be 12%. Where special circumstances warrant, the traffic engineer may approve steeper grades according to accepted engineering practices, subject to special conditions of approval such as a ice-free (heated) ramp surface.

9. Layout and Internal Circulation

The configuration of parking within a non-automated parking structure shall be subject to the requirements of table 21.07-9, except as described here: a modified layout and internal circulation pattern may be approved by the traffic engineer when it can be shown that a structure meets the design guidelines of the latest Urban Land Institute, Parking Institute, or Institute of Transportation Engineers manuals.

10. Parking Stall Dimensions

The parking stall angle and dimension requirements of this section shall apply to the inside dimension of structured parking spaces.

11. Automated Parking Structures

a. Automated parking structures are exempt from the parking stall and aisle dimensions and vertical clearance requirements of this section.

b. Automated parking structures shall be located wholly within an enclosed building and shall not be visible from outside the building or facility.

c. Automated parking structures shall be operated as attendant parking.

21.07.100 RESIDENTIAL DESIGN STANDARDS

A. Purpose

The standards of this section 21.07.100 are intended to promote high-quality residential development and construction; protect property values; encourage visual variety and architectural compatibility; and promote an integrated character for the municipality's neighborhoods. Specifically, the standards:

1. Promote new residential developments that are distinctive, have character, and relate and connect to established neighborhoods;

2. Provide variety and visual interest in the exterior design of residential buildings;

3. Provide for a variety of lot sizes and housing types for a range of households and age groups;

4. Enhance the residential streetscape and diminish the prominence of garages and parking areas;

5. Enhance public safety by preventing garages from obscuring main entrances or blocking views of the street from inside residences;

6. Locate active living spaces, entrances, and windows to improve the physical and visual connection from residences to the street, and foster opportunities for casual surveillance of the street and outwardly expressed proprietorship of the neighborhood; and

7. Improve the compatibility of attached and multifamily residential development with the residential character of surrounding neighborhoods.

B. Alternative Equivalent Compliance

The alternative equivalent compliance procedure set forth in subsection 21.07.010D. may be used to propose alternative means of complying with the intent of this section.

C. Prohibited Structures

Quonset huts are prohibited in all residential districts.

D. Driveway Width

Unless otherwise provided in this title, the total width of driveway entrances to a residential lot from a street shall not exceed 40% of the frontage of the lot on the street at the property line and 30% at the curb. However, a driveway may always be a minimum of 14 feet wide at the curb, and the maximum width of a driveway at the curb is 20 feet. Flag lots or townhouse lots are exempt from the percentage limitations, but shall have a maximum driveway width at the curb of 20 feet.

E. Standards for Single-Family and Two-Family Residential Dwellings

1. Purpose

This subsection 21.07.100E. is intended to promote building design that contributes to a sense of neighborhood and to the overall streetscape by carefully relating buildings, yards, and garages in relation to public streets and adjacent properties. The standards support visual variety, avoid monotony in home designs and layouts, and protect property values of both the subject property and surrounding development.

2. Design Standards

a. *Standards for All Single- and Two-Family Residential Structures*

i. *Applicability*

The standards of this subsection E.2.a. apply to all single- and two-family residential structures.

ii. *Permanent Foundation*

All dwellings shall be on a permanent foundation.

iii. *Aspect Ratio*

The dimensions of a rectangle, drawn to encompass the whole structure measured at 30 inches above the ground, shall be as follows: the shorter dimension of the rectangle shall be more than 30% of the longer dimension of the rectangle.

iv. *Roof Design*

If all of the dwelling is single-storied, it shall have a pitched roof of at least three to 12 (rise to run), unless waived by the director.

b. ***Standards for Limited Single- and Two-Family Residential Structures***

i. *Applicability*

The standards of this subsection E.2.b. apply to all residential development except for single-family residential development on lots of one acre or greater. This section does not apply in Girdwood.

ii. *Mix of Housing Models*

Any subdivision or development of five or more units shall have a mix of housing models according to the following table:

TABLE 21.07-12 MIX OF HOUSING MODELS

Number of units	Number of different models required
5-10	2
11-30	5
31 or more	6

Each housing model shall have noticeably different floor plans and at least two of the following variations:

(A) Noticeably different window placement, entrance location, and façade details;

(B) Noticeably different placement of the building footprint on the lot;

(C) Noticeably different garage placement; or

(D) Noticeably different roof lines.

The development shall be arranged to avoid placing identical housing types, including mirror image floorplans, on adjacent lots.

iii. *Primary Entrance*

The location of the primary pedestrian entrance of each residence shall be clearly visible from the street or public area adjacent to the front lot line and either:

(A) On the front elevation facing the street from which access is taken;

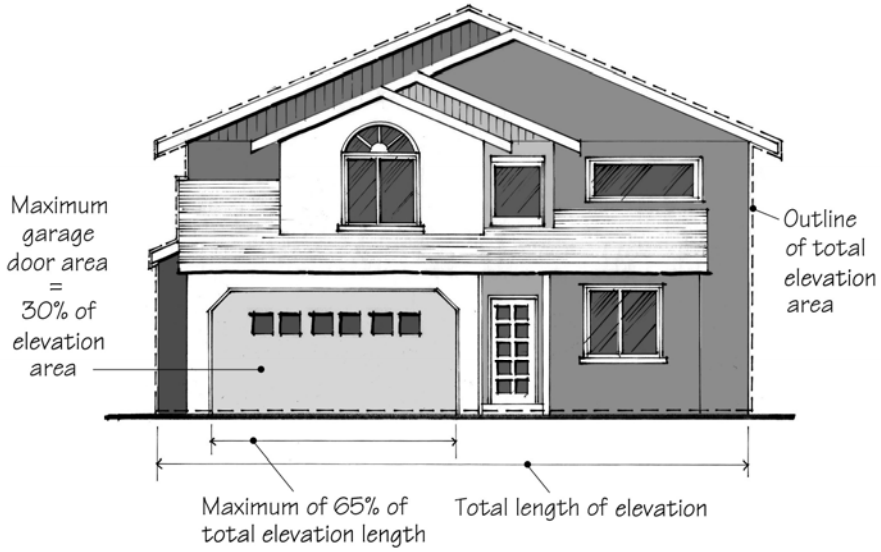
(B) On a front or side façade within 10 feet of the front façade closest to the street, and incorporating a covered porch which extends at least two feet from that façade; or

(C) On a front or side façade within 28 feet of the front façade closest to the street, and incorporating a covered porch which extends at least six feet from that façade.

A paved pedestrian walkway shall be provided from the street, sidewalk, or driveway to the primary entrance.

iv. *Garages*

(A) Garage doors facing the street shall comprise no more than 65% of the total length of a dwelling's elevation and no more than 30% of the overall square footage of the dwelling's front elevation that faces the street. Single-story homes are exempted from the overall square footage limitation.



(B) Dwelling units with garage doors that face the street and comprise more than 50% of the width of the elevation shall be either on a plane with or recessed behind the front elevation and shall feature at least one design element from list A and one design element from list B:

(1) *List A:*

- Balcony over the garage
- Eyebrow mansard over the entire length of the garage door extending a minimum of two feet
- Entry is pronounced using a porch, columns, or other similar features

(2) *List B:*

- Windows in the garage door
- At least two different materials used on the front elevation
- Special paving patterns in the driveway

(C) The minimum front building setback may be reduced by five feet when there is a detached garage located in the rear of the lot behind the principal dwelling structure, or a garage attached to the principal dwelling where the front wall of the garage is located at least 10 feet behind the front façade of the house.

v. *Alleys*

(A) If a development includes alleys, the lot depth requirement is reduced by half the width of the alley.

(B) In situations where a group of lots fronting on one side of a street between two intersections are all owned by the same person, and the lots have alley or rear yard access to a garage, the front setback for the living portion of the houses (but not the garages) may be reduced to 10 feet.

(C) If a residential unit is served by an alley and has a garage or driveway that faces the street, the garage door shall be no wider than 10 feet, and the driveway no wider than 12 feet.

F. Standards for Townhouse Residential

1. Purpose

The purpose of these standards is to provide a distinctive architectural character in new townhouse residential development that avoids featureless design.

2. Applicability

These standards shall apply to all townhouse structures as well as to townhouse-style construction on a single lot.

3. Building Articulation and Architectural Variety

a. No more than 10 townhouse units may be attached in a single row or building cluster.

b. The building, which is the aggregation of up to 10 townhouse units, shall be given architectural and visual interest through two or more of the following methods:

i. Providing a projection, recess, or reveal at least every twenty feet, with a minimum change of plane of two feet;

ii. Use of two or more distinct materials on each facade;

iii. Use of distinct variations in architectural style or features, such as a balcony or similar feature, between individual units;

iv. Use of distinct variations in roof form.

4. Entryway Treatment

The main entry of each unit shall be emphasized by the use of at least two of the following:

a. A porch or landing of at least nine square feet;

b. A roofed structure such as a portico, awning, or marquee of at least nine square feet; or

c. The inclusion of side-lights (glazed openings to the side of the door), and transom-lights (glazed opening above the door with the glazing at least one foot high and extending the width of the door) in the entry design.

5. Garages

a. If a development abuts an alley, the garages shall be accessed from the alley, and the front setback may be reduced by 5 feet.

b. If the development does not include alleys, garages on the street-facing side of the building shall be recessed at least two feet behind the remaining façade.

c. If the development does not include alleys, the width of the driveway at any given point shall not exceed the width of the garage door. The remaining lot width shall consist of lawn/landscaping, except that a pedestrian walkway of no more than three feet in width may be provided from the street or sidewalk to the primary entrance.

G. Standards for Multifamily Residential

1. Purpose

The purpose of these standards is to improve the appearance of design and functionality of multifamily development, recognizing the importance of design in the economic success of neighborhood areas, the need for more efficient land use, and the need to ensure the adequate protection of the surrounding area. More specifically, these standards are intended to:

a. Provide a distinctive architectural character in new multifamily residential developments that avoids featureless design, and large building masses;

b. Promote sensitive design and planning of multifamily housing units that preserves or improves the characteristics of surrounding development;

c. Promote building design, placement, and orientation that contributes to public safety, attractive street frontages, and a sense of neighborhood and community;

d. Promote building design, placement, and orientation that considers Alaska's northern climate in terms of weather protection and access to sunlight;

e. Protect property values of the subject property and surrounding development and promote economic investment in neighborhoods; and

f. Improve the quality of life of residents of multifamily residential dwellings.

It is also the intent of this section to provide flexible standards that allow for creativity and innovation.

2. Applicability

All development or redevelopment of multifamily residential structures shall comply with the following requirements. In the case of mixed-use buildings, these standards shall apply to the residential portion of the structure, and the standards of section 21.07.110, *Public/Institutional and Commercial Design Standards*, shall apply to the nonresidential portion of the structure. In case of overlap and/or conflict, the more stringent standard shall control.

3. Minimum Daylighting and Spacing of Buildings

a. Except for facades built on side lot lines, at least 10% of the wall area of all building elevations shall be comprised of windows. For the purposes of this

section 21.07.100, window area may include window frames, mullions, and trim, but shall not include shutters.

b. When more than one multifamily structure is constructed on a site:

i. No side, end, or rear wall of a multifamily structure shall be located within 20 feet of a side, end, or rear wall of any other multifamily structure;

ii. No side, end, or rear wall of a multifamily structure shall be located within 30 feet of the front wall of any other multifamily structure; and

iii. No front wall of a multifamily structure shall be located within 40 feet of the front wall of any other multifamily structure.

For purposes of measurement in this subsection, projections such as decks and bay windows shall not be counted.

4. Menu of Design Choices

To provide for flexibility and allow design creativity, the standards of this section are arranged into menus of design feature choices. The applicant shall select the minimum number of design features required from each menu.

5. Design Innovation Credit

The decision-making body may approve a design innovation that is not covered by the menu choices to be used as credit for up to one design feature in this section. The applicant shall demonstrate a specific feature that realizes the intent of the subsection, and that:

a. Achieves an equal or better design solution for the development than would result from application of the basic menu choices; and

b. Does not materially affect adjacent properties or streets.

6. Building and Site Orientation Choices

Multifamily buildings shall provide at least three orientation features from the following menu.

a. ***Courtyard Housing***

Credit for an orientation feature shall be granted for multifamily buildings arranged or configured to enclose and frame a housing courtyard as described in subsection 21.07.060F.

b. ***Orientation of Living Spaces and Windows***

A site may receive a credit if at least 50% of the ground-floor front elevation of all buildings fronting streets is habitable living space, and all buildings provide windows and/or primary entrances for at least 20% of the wall area of any elevation fronting on a street or having a primary entrance serving multiple dwellings.

c. ***Street Frontage***

A development that achieves item a.ii. above may receive an additional credit for an orientation feature if the vehicle parking spaces are no closer to the primary access street than a front building elevation.

d. ***Street Corner Building***
Frame a neighborhood intersection corner with residences, pedestrian amenities, and landscaping by achieving items a.i. and a.ii. above on both street frontages at an intersection, and by locating vehicle parking spaces at least 40 feet from the lot corner.

e. ***Street Oriented Entrance with Separated Walkway***
Provide a primary entrance on each street-facing building elevation, connected to the street by a clear and direct walkway. The walkway shall be separated from and not routed through a parking facility.

f. ***Courtyard Entrance with Separated Walkway***
As an alternative to option a.v. above, provide a primary entrance that faces a housing courtyard or private common open space that meets the standards of section 21.07.030. The open space shall have a connection to an adjacent street by a walkway which is separated from and not routed through a parking facility.

g. ***Site Entry Feature***
Highlight and define a pedestrian and vehicle entrance to a development site using three or more of the following elements:

i. Landscape treatment with seasonal color and trees, which clearly distinguishes and highlights the site entry.

ii. Plaza or courtyard as described in subsection 21.07.060F.

iii. Identifying building entrance form including a covered entry.

iv. Special paving, unique pedestrian scale lighting, or bollards.

v. Ornamental gate and/or fence.

7. Building Massing Choices
Multifamily buildings shall earn credit for at least three massing features from the following menu:

a. ***Wall Modulation***
Modulate each building elevation greater than 50 feet in length, measured horizontally, by incorporating wall plane projections or recesses having a depth of at least 10% of the length of the building elevation, extending at least 20% of the length of the building elevation, for at least 60% of the building height. No uninterrupted façade shall exceed 50 horizontal feet.

b. ***Roofline Modulation***
Provide a modulated roof on each building elevation, using features such as a terracing parapet, multiple peaks, jogged ridge lines, and dormers, with a maximum of 50 feet of uninterrupted roofline between roof modulation elements. Each element shall provide a minimum two foot vertical change in roofline, and the combined modulation elements shall equal at least 20% of the roofline on each building elevation.

c. ***Roof Forms and Attic Living Spaces***
The incorporation of a variety of roof forms such as dormers is strongly encouraged, and the incorporation of upper floors within roof features can reduce

the apparent height and mass of buildings. Buildings can achieve a massing design credit for sloped roof with dormers at intervals and a pitch no greater than 12:12 that incorporates living spaces within the roof form. Such living spaces shall not be considered in determining maximum FAR, pursuant to section 21.06.030C.2.

d. ***Upper Story Setback and Terracing***
Provide building step backs above the second or third story on a building elevation facing the street, public park, or private open space, such that the upper floors of the building adhere to a daylight plane having a ratio of horizontal step-back to vertical rise of at least 1:1.

e. ***Variation in Building Type or Scale***
Combine a minimum of two building types within each development phase and/or two building scales (which include varying the number of stories) within the same building. Larger and smaller buildings or buildings that vary in the number of stories shall be mixed. A minimum of two out of every eight dwellings shall be a distinct or separate building type or scale. In larger developments of 30 dwellings or more, provide at least three or more different changes in building type or scale.

f. ***Courtyard Housing***
Credit for an orientation feature shall be granted for multifamily buildings arranged or configured to enclose and frame a housing courtyard as described in subsection 21.07.060F.

8. Façade Articulation and Detail Element Choices
The facades on each multifamily building elevation shall be articulated through the incorporation of three or more of the following menu choices for every 50 feet in wall length or every dwelling unit:

a. Balconies;

b. Bay or box windows;

c. Porches or arctic entries;

d. Dormers;

e. Variations in color, texture, and/or materials;

f. Variations in type of roof forms;

g. Projections, recesses, and reveals, expressing structural bays or other aspects of the architecture with a minimum change of plane of 12 inches;

h. Variation in window sizes and shapes; or

i. Vertical elements that demarcate building modules.

9. Entrances Feature Choices
Each building shall incorporate at least three of the following massing, façade, or detail elements to define and emphasize a primary entrance visible from the adjacent street:

a. Entrance on a porch or landing and sheltered by a roof, canopy, portico, marquee, or similar weather protection roof feature;

b. Double doors;

c. Massing features such as architectural bays that define or emphasize entry locations;

d. Side-lights (glazed openings to the side of the door), and transom-lights (glazed opening above the door) in the entry design;

e. Outdoor entrance patio, plaza, or courtyard; or

f. Integrated planters or wing walls that incorporate landscaped areas and/or seating areas.

10. Weather Protection and Sunlight

The menu choices for weather protection and sunlight address Alaska's northern climate, including the effects of snow, ice, low temperatures, wind exposure, and low and seasonal sunlight conditions. Multifamily development is encouraged to maximize comfort and convenience and to consider the microclimate impacts of the development. Multifamily development shall earn credit for at least four features from the following menu:

a. ***Weather Protected Entrance***

Provide outdoor shelter that covers at least 36 square feet for any primary entrance that serves one dwelling, 48 square feet for any primary entrance that serves up to four dwellings, and 64 square feet for any primary entrance that serves more than four dwellings.

b. ***Sheltered Passenger Loading Zone, Bicycle Parking, or Transit Stop***

Provide pedestrian shelter over a passenger loading zone, accessible parking aisle or route, bicycle parking, or a transit shelter.

c. ***Ice-free Walkway***

Provide an ice-free (heated) walkway for a required walkway connection to a primary entrance.

d. ***Orientation for Sunlight Access***

Credit shall be granted if buildings provide windows and/or primary entrances for at least 20% of the wall area with a solar orientation.

e. ***Year-round Access to Sunlight***

Credit shall be granted if every dwelling in the development has sunlight access for at least one hour on December 21.

f. ***Sunlight Access for Neighbors***

Credit shall be granted for preserving sunlight access at least six hours daily for half the year to any adjacent lot zoned PR, any sidewalk across the street, and neighboring residentially zoned property, through building placement, massing, and height.

g. ***Daylighting***

Credit shall be granted for apartment daylighting and building spacing as follows. Locate at least one window in the main living area of each dwelling such that an imaginary daylight plane extending from the window and formed by an angle of 60 degrees that is unobstructed for a horizontal distance of 60 feet. The plane angle shall be measured horizontally from the center of the bottom of the window. As an alternative, two angles with a sum of 60 degrees may be used. [Illustrate]

h. ***Sun Trap***

Incorporate a sun trap or "pocket" that captures direct and reflected sunlight as part of a common private open space.

i. ***Atrium***

Provide an atrium interior sunlit common private open space or primary entrance area which takes advantage of direct and/or reflected sunlight.

j. ***Stepped or Terraced Building Forms***

Provide a stepped or terraced building form that complies with item 7.e. of the building massing menu, to reduce the wind turbulence effects of a tall building, by which the roof of the lower floor(s) deflect the highest downward wind drafts.

k. ***Sunlit and Wind Protected Courtyards***

Credit shall be granted for a housing courtyard as described in subsection 21.07.060F.

11. Accessory Elements

a. ***Storage***

A multifamily project shall provide at least 40 square feet of covered, enclosed, and secure bulk storage area per dwelling unit for bicycles and other belongings that typically cannot be accommodated within individual dwelling units. Storage areas shall not include closets accessed from within the dwelling, but may include garage floor area not required for vehicle maneuvering or parking. Storage and other accessory buildings shall be designed with materials and/or architectural elements that are related to the principal building(s).

b. ***Trash Receptacles/Dumpsters***

Where dumpsters are allowed, they shall comply with the requirements of 21.07.080H. Where dumpsters are not provided, multifamily developments shall provide covered storage for trash receptacles. Such storage shall not be located between any building and the primary adjacent street frontage.

c. ***Garages***

i. *Attached or Detached Garages*

To the maximum extent feasible, garage entries and carports shall not be located between a principal multifamily building and a required street frontage, but shall instead be internalized in building groups so that they are not visible from adjacent streets.

ii. *Size*

Garages and carports shall be limited to six spaces per structure to avoid a continuous row of garages. No more than six garage doors may appear on any multifamily building elevation containing front doors, and

the plane of each garage door shall be offset at least two feet from the plane of the garage door adjacent to it.

iii. *Design*
Detached garages and carports shall be integrated in design with the principal building architecture, and shall incorporate similar and compatible building and roof forms, scale, materials, color, and details.

12. Snow Storage
Snow storage areas shall be indicated clearly on all site plans. Location and design of snow storage areas in parking lots shall comply with the provisions of subsection 21.07.090H.11., *Snow Storage and Management*.

21.07.110 PUBLIC/ INSTITUTIONAL AND COMMERCIAL DESIGN STANDARDS

A. Purpose

This section is intended to promote high-quality building design that actively considers the surrounding context in nonresidential and mixed-use areas, encourages visual variety in such areas, ensures building layout and design suitable for the municipality's northern climate, fosters a human scale and accessible and attractive street fronts, projects a positive image to encourage economic development in the municipality, and protects property values of both the subject property and surrounding development. It is also the intent of this section to provide flexible standards that allow for creativity and innovation.

B. Applicability

Development of any use categorized in table 21.05-1 or table 21.05-2, *Tables of Allowed Uses*, as a public/institutional or commercial use shall comply with the standards of this section 21.07.110. However, special-purpose public facilities such as schools, airports, and fire stations with highly unique design and functionality requirements shall be exempt from this section, if approved by the director. In the case of a mixed-use residential building, these standards shall apply to the nonresidential portion of the structure and the standards of section 21.07.100, *Residential Design Standards*, shall apply to the residential portion of the structure. In case of overlap and conflict, the more stringent standard shall apply.

C. Alternative Equivalent Compliance

The alternative equivalent compliance procedure in subsection 21.07.010D. may be used to propose alternative means of complying with the intent of this section. Applicants for alternative equivalent compliance shall demonstrate design strategies that address each of the core subject areas set forth below in subsection E.

D. Prohibitions and Requirements

1. Inflatable Domes
Inflatable domes are prohibited in all commercial and mixed-use districts.

2. Rooftop Mechanical Equipment
Rooftop mechanical equipment, including HVAC equipment and utility equipment that serves the structure, but not including telecommunications equipment or solar collectors, shall be screened through the use of parapet walls or a sight-obscuring enclosure around the equipment. The screening shall be constructed of one of the primary materials used on the primary facades of the structure, and be an integral part of the building's architectural design.

E. Menu of Design Choices

To provide for flexibility and allow design creativity, the standards of this section 21.07.110 are arranged into menus of design feature choices. The applicant shall select a minimum number of design features from each menu. The menus are organized into three subject areas that affect the community/public realm: (a) building orientation (b) massing and articulation, and (c) northern climate response.

1. Minimum Number of Design Features

The minimum number of design feature choices required from each menu is provided in Table 21.07-13. Depending on building size, the applicant shall also provide between one and three additional design features, which the applicant may select from any of the menus.

2. Shared Credit Among Menu Choices

Achievement of a design feature choice in a menu may count toward other design features in the same menu or other menus if the feature also achieves the requirements of the other design feature choice(s).

3. Design Innovation Credit

The decision-making body may approve a design innovation that is not covered by the menu choices to be used as credit for up to one design feature in this section. The applicant shall demonstrate a specific design quality that realizes the intent of the subsection, and

a. Achieves an equal or better design solution for the development than would result from application of the basic menu choices; and

b. Does not materially affect adjacent properties or streets.

A design innovation shall not be used to satisfy the minimum required number of design features in a menu if the minimum requirement is one design feature.

TABLE 21.07-13: BUILDING SIZE AND MINIMUM NUMBER OF DESIGN FEATURES

Design Feature Menus	Less than 7,000 square feet of gross floor area	7,000 to 25,000 square feet of gross floor area	Greater than 25,000 square feet of gross floor area
Building Orientation Choices	2	3	3
Building Massing Choices	0	1	2
Façade Articulation Choices	2	3	3
Weather Protection Choices	2	2	2
Sunlight and Wind Mitigation	0	1	2
Additional Choices (any menu)	1	2	3
Total Number Required:	7	12	15

4. Building Orientation

a. ***Purpose***

The design choices for building orientation address the building's relationship to surrounding streets, walkways and parking, and the overall public realm. Building orientation features should encourage pedestrian accessibility and views to indoor activity, enhance public street safety and natural surveillance

opportunities and provide a comfortable street environment using windows, entrances and active uses at or near the ground-level.

b. ***Orientation Design Choices***

Windows on the ground level that are used to achieve the choices below shall be windows providing visual access. The sills of qualifying windows on ground-level walls shall be no more than four feet above the adjacent exterior grade. Ground-level wall areas are defined as exterior wall areas up to nine feet above finished grade.

i. *Windows and Entrances*

Provide windows and/or primary entrances on street-facing building elevations on the ground floor for at least 35% of the length and 15% of the ground-level wall area. In mixed-use districts, the minimum percentage is increased to at least 50% of the length and 25% of the ground-level wall area for that portion of the building that is 20 feet or closer to the street lot line.

ii. *Building Placement to the Street*

A building that achieves item b.i. above may receive credit for an additional orientation feature if at least 50% of the length of at least one ground-level street-facing building elevation is within a 20 foot maximum setback area that is to be free of motor vehicles. In mixed-use districts, at least 75% of the building elevation length shall be within a 20 foot maximum setback.

iii. *Corner Building*

Frame an intersection corner by locating the first and second floor building facade within 20 feet of the front lot line on both street frontages, with both ground-level wall areas achieving item b.i. above and including windows and one or more primary entrances within 25 feet of the lot corner. Vehicle parking and driveways shall be at least 40 feet from the lot corner.

iv. *Street Oriented Entrances*

Provide at least one primary entrance within 60 feet of a street sidewalk, or 90 feet for buildings over 25,000 square feet of gross floor area. The entrance faces and opens onto a clear and direct connecting walkway to the street sidewalk, and is clearly visible from the street and principal walkway and vehicular approaches. Two such primary entrances on separate building elevations and at least 30 feet apart may count as two orientation features.

v. *Upper Level Windows*

Provide a combination of windows or openings and façade articulation that visually demarcates each floor on every building elevation facing a street or having a primary entrance for customers or visitors. Windows shall comprise an average of 35% or more of the length all upper floor building elevations with nonresidential uses, and 20% with residential uses. Exterior wall areas of building mechanical rooms are exempt.

vi. *Screening Vegetation*

In areas not zoned for mixed-use, L4 screening landscaping along abutting streets may count as an orientation feature.

5. Building Massing and Articulation

a. ***Purpose***

The design choices for building massing / articulation are intended to reduce the apparent bulk of large buildings, encourage compatible building scale with surrounding community and achieve a comfortable human scale by providing variation in large building volumes and visual variety on façade surfaces, especially at or near ground level. Articulation should express elements such as floor and ceiling levels, window heights, structural column spacing, or internal divisions.

b. ***Building Massing Choices***

i. *Upper Story*

Buildings with a maximum footprint of 7,000 square feet gross floor area, that do not exceed 14,000 square feet gross floor area, may count use of a second story as a building massing feature. The gross floor area of the second floor shall be a minimum of 65% of the first floor.

ii. *Wall Modulation*

Modulate the length of each building elevation abutting a street, a PR zone, or residentially zoned lots. Offset the wall and foundation line at intervals so that there is at least one offset every 140 feet of wall length that varies the depth of the building wall by a minimum of 12 feet. Offsets shall comprise at least 20% of the length of the building elevation, for at least 60% of the building height.

iii. *Roof Forms*

(A) Option A: Provide a modulated roof on each building elevation facing a street or abutting residentially zoned lots, using features such as a terracing parapet, multiple peaks, jogged ridge lines and dormers, with a maximum of 140 feet uninterrupted roofline between roof modulation elements, each such element providing a minimum three foot vertical change in roofline, and with modulation elements equaling at least 20% of the roofline on each building elevation.

(B) Option B: A sloped roof with a pitch no less than 4/12 and no greater than 12/12. Rounded, gambrel, mansard and irregular roof forms shall be averaged.

iv. *Height Transition with Upper Story Step Back*

Provide a building form that is terraced down using a building wall step back above the first, second, or third floor along the full length of at least one of its elevations facing abutting streets, public parks, or shorter buildings on abutting lots. The building mass shall not penetrate a daylight plane that rises inward over the building at an able of one foot of run for every two feet of rise, and starting at the building wall at the height at which the step back beings. The high rise portion of a building is exempt.

v. *Upper Story Step Back—Corner Building*

A building that achieves item 5.b.iv. above on two building elevations that meet at the corner of two streets or of a street and an open space may receive credit for an additional building massing feature.

vi. *Plaza or Courtyard*
Provide a publicly accessible plaza or courtyard of at least 2,000 square feet of gross floor area and a minimum dimension in length or width of 40 feet. The plaza shall be located in a courtyard or a walkway connection between the street and a primary entrance of the use, within 50 feet of and visible to the entrance.

vii. *Housing*
Provide upper story residential dwelling units, with upper story residential uses comprising at least 35% of the total gross floor area of the building.

c. ***Façade Articulation Choices***

i. *Façade Surface Articulation*
Incorporate two or more of the following detail elements at least every 50 feet in wall length on each building elevation facing a street or abutting residentially zoned lots:

(A) Changes in color, texture, and/or material;

(B) Projections, recesses, and reveals, expressing structural bays or other aspects of the architecture with a minimum change of plane of 12 inches;

(C) Windows and primary entrances;

(D) Projections or breaks in the vertical rise of the building elevation

ii. *Entrance Feature*
Incorporate changes in architectural mass, surface or finish to provide a clearly defined primary entrance that is easily visible from streets and sidewalks. Feature at least three of the following elements:

(A) Permanent canopies, porticos, overhangs, arcades or similar permanent pedestrian shelter;

(B) Recessed or projected entrance;

(C) Arches;

(D) Peaked roof forms;

(E) Outdoor patios or plazas;

(F) Transom or sidelight windows;

(G) Architectural tilework or moldings integrated into the building design; or

(H) Integrated planters or wing walls that incorporate landscaped areas or seating areas.

iii. *Base, Middle, and Top*
At least two building elevations consist of a recognizable base, middle and top. The base portion rises to at least two feet above grade and is

distinguished from the rest of the building such elements as a cornice, an arcade, clerestory-level windows, or other differences in color, texture and/or material, changes in material or texture. The top consists of cornice treatments with integrally textured materials such as masonry or differently colored materials (more than color painted stripes or bands), a sloping roof with overhangs, or stepped parapets.

iv. *Ground Level Expression*
The objective of this design choice is to create the greatest amount of visual interest at the pedestrian level and reinforce the character of the streetscape through use of familiar-sized, human-scale design elements. Provide at least three of the following on ground-level, street-facing facades:

(A) Individual primary entrances and windows providing visual access for two or more uses on any ground floor street facing building elevation;

(B) Kickplates for windows and/or projecting window sills,

(C) Architectural bays and mullions dividing windows;

(D) Pedestrian scale building signs and/or building lighting;

(E) Canopies or similar pedestrian shelter;

(F) Tilework;

(G) Belt courses or masonry strips of distinct color or texture;

(H) Plinths for columns; or

(I) Ornamental details integrated into the façade design.

v. *Ground Level Transparency and Activity*
Achievement of both 4.b.i., *Windows and Entrances* and 4.b.iv., S*treet Oriented Entrances* from the building orientation menu may be used as credit for one articulation feature.

vi. *Four-Sided Design*
Architectural features and treatments are not restricted to a single façade of any primary structure. All sides display the same level of quality and architectural interest, by including the same varieties of materials, trim, and horizontal and vertical articulation.

6. Northern Climate Design

a. ***Purpose***
The design choices for northern climate address the combined effects of Alaska's northern climate, including snow, ice, rain, temperature, wind exposure, long and dark winters, and the low and seasonal sunlight conditions. Building design should maximize the use, comfort, convenience and accessibility of public spaces and walkways, optimize relationships to sunlight and wind, and consider microclimatic impacts on the site and surrounding community.

b. ***Weather Protection Design Choices***

i. *Weather Protected Entrance*

Provide outdoor pedestrian shelter that covers at least 60 square feet for any primary entrance that serves a building less than 7,000 square feet gross floor area, at least 120 square feet for any primary entrance that serves a building 7,000 to 25,000 gross floor area, and at least 200 square feet for any primary entrance that serves a building greater than 25,000 square feet gross floor area.

ii. *Weather Protected Passenger Loading Zone, Bicycle Parking, or Transit Shelter*

Provide a pedestrian shelter along a portion of building facade over a taxi cab stand, valet or passenger loading zone, bicycle parking, or transit stop.

iii. *Sheltered Façade Walkway*

Provide pedestrian shelter or a pedestrian arcade over a minimum of 35% of the length of ground level building facades that contain a primary entrance or abut a street sidewalk or pedestrian walkway. The minimum percentage is 50% in mixed-use districts.

iv. *Ice-free Walkway*

Provide an ice-free (heated) walkway for a required walkway connection to a primary entrance.

v. *Weather Protected Transition Space*

Provide an outdoor, publicly accessible sheltered transition space such as café seating along a building façade that faces the street or publicly accessible open space, as a transition between indoor areas and unsheltered outdoor spaces.

c. ***Sunlight and Wind Mitigation Choices***

i. *Sunlight Access for Neighbors*

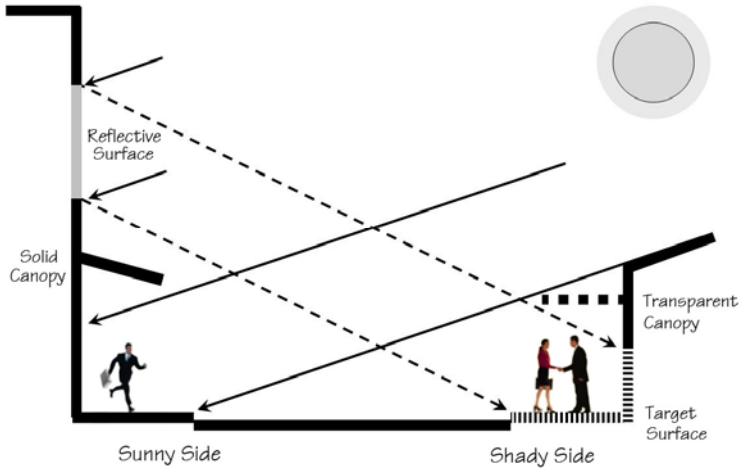
The objective of this choice is to allow credit for preserving direct sunlight access to neighboring areas. Preserve or maximize sunlight access to adjacent public parks, sidewalks across the street, and neighboring properties through building placement, height and/or massing. The building placement, massing and height shall be such that these areas receive at least four hours of sunlight access on March 21 and September 21.

ii. *Sun Trap*

Preserve or create a publicly accessible sun trap or “sun pocket” that captures direct and reflected sunlight.

iii. *Reflected Sunlight as an Amenity*

The objective of this choice is to allow credit for the use of reflected sunlight radiation. Provide reflected sunlight as described in subsection 21.07.060F. into publicly accessible pedestrian spaces and walkways, and/or any ground level wall areas abutting such public spaces, to brighten or increase the microclimatic comfort of those spaces.



iv. *Transparent Sheltering Roof*

Provide a transparent roof on one of the design choices from the weather protection menu above. The transparent roof shall allow sunlight to penetrate through to the sheltered pedestrian area.

v. *Atrium*

Provide a publicly accessible atrium, galleria or similar kind of sunlit interior space which takes advantage of direct and/or reflected sunlight to provide brightness, orientation, and reduce the need for artificial lighting.

vi. *Protective Wall Projections*

Provide balconies, marquees or similar features that project out at least four feet or 10% of the building height, whichever is greater, to protect public spaces and building entrances on building facades that contain a primary entrance or that abut a street sidewalk or pedestrian walkway. The sum of the horizontal length of all projections on the building facade shall equal or exceed the total length of the building elevation at the ground level.

vii. *Height Transition*

Provide building massing menu feature v. with the addition that there be a step back from the lower façade wall to the high rise tower portion of the building of at least 20 feet for effective wind downdraft mitigation at the ground level.

7. Tall Buildings

The following provisions are intended to mitigate undesirable impacts of proposed tower development in Alaska's northern climate, including wind impacts on pedestrians at the ground level and shadowing and temperature impacts on the development site and surrounding community. These provisions also encourage high rise design of the highest quality to enhance the image of the community through modulated or articulated tower massing, and facades with windows.

a. ***Wind Impact Study and Mitigation.***

Buildings over 120 feet in height shall provide a wind study conducted by a licensed design or engineering professional that evaluates the wind impact of a proposed development, and implement the appropriate design measures to

reduce or mitigate undesirable wind conditions on streets, open spaces and other pedestrian areas. Subject to approval by the director.

b. ***Shadow Impact Study and Mitigation.***

Buildings over 75 feet in height shall provide a shadow impact study by a licensed architect to evaluate the impact of shadows potentially cast, and implement appropriate design measures to reduce or mitigate undesirable shadow conditions. Measures may include repositioning the tower on the lot, increasing setbacks, reducing or shifting a building's height or mass, redesigning a building's shape using a narrow east-west profile, or angled or terraced roof forms. Subject to approval by the director.

c. ***Tall Buildings in R-4A District***

i. *Access to Sunlight in Residential Areas*

Any portion of a building above a building height of 60 feet in the R-4A district shall be subject to the shadow impact study provisions of 7.b. above for the purposes of protecting residential neighborhoods and living areas. Subject to the results of the study, mitigation may be required in addition to the minimum provisions established in subsections c.i. and c.ii. below.

ii. *Slender Residential Towers*

This provision encourages slender towers that are visually lighter and more elegant than wider and bulkier towers, and that reduce wind, shadow, and viewshed impacts. The maximum plan dimension for the portion of a building above 60 feet in height in the R-4A district shall be 100 feet, and the maximum average floor area shall be 8,000 square feet.

iii. *Minimum Tower Step Backs from Residential Streets and Open Spaces*

There shall be an upper floor step back on building elevations abutting a street or public park. The step back shall be such that the building elevation does not penetrate a daylight plan that rises inward over the building at an angle of one foot of run for every two feet of rise, and starting at a height of 60 feet at the building wall.

iv. *Incentive for Lower Step Backs*

If the step back occurs at a lower building height than 60 feet, the applicant may add one foot of rise to the angle of the daylight plane for every 10 feet in building height below 60 feet. In no case shall the angle be less than one foot of run for every five feet of rise.

21.07.120 LARGE COMMERCIAL ESTABLISHMENTS

A. Purpose

Large commercial establishments often have high visibility from major public streets, a large physical scale, and a great volume of use by many residents and visitors. As a consequence, their design determines much of the character, function, and image of this community and its streetscapes and commercial areas. The purpose of this section is to encourage major commercial developments to contribute to and respect the municipality as a unique place and to physically integrate with the community in a positive and architectural and site design sensitive manner. The standards of this section augment existing basic standards for development found elsewhere in this chapter with more specific interpretations that apply to large commercial

establishments. These standards promote: a basic level of architectural variety and interest; a compatible appearance and scale; pedestrian and parking lot access; orientation of buildings and entrances in relation to surrounding streets; provisions for adaptive reuse of prominent vacant buildings; and mitigation of negative impacts of large scale commercial developments.

B. Applicability

The standards of this section 21.07.120 shall apply to any use in the Retail Sales; Personal Service, Repair, and Rental; Vehicles and Equipment; Animal Sales, Service, and Care; Food and Beverage Services; or Entertainment and Recreation use categories, or any combination thereof, occupying more than 25,000 gross square feet of floor area, but not including any secondary buildings or pad lots as part of the same development site that are less than 25,000 gross square feet of floor area.

C. Relationship to Other Standards

The provisions of this section shall replace the provisions of section 21.07.110, *Public/Institutional and Commercial Building Standards*, but shall apply in addition to all other generally applicable standards found elsewhere in this chapter and title. Where there is a conflict with generally applicable standards in this chapter, the standards of this section shall apply. Where there is a conflict with district-specific standards in chapter 21.04 of this title, the district-specific standards shall apply.

D. Alternative Equivalent Compliance

The alternative equivalent compliance procedure in subsection 21.07.010D. may be used to propose alternative means of complying with the intent of this section. Applicants for alternative equivalent compliance shall demonstrate design strategies that address each of the mandatory standards set forth below in subsection E.

E. Mandatory Standards

1. Vehicular Access

Primary vehicular access shall be from a street designated collector or greater on the *Official Streets and Highways Plan*. Secondary vehicular access may be from a street designated less than a collector, provided the applicant demonstrates that any traffic and visual impacts on adjacent residential and commercial areas are sufficiently minimized.

2. Weather Protection for Pedestrians

a. Buildings and roofs shall be designed so that drainage from the roof shall not fall on sidewalks, walkways, or building entrances.

b. All primary entrances shall have a roof, canopy, arcade, overhang, or similar weather protection that is a minimum of eight feet and a maximum of 16 feet above the ground surface.

c. Building elevations that face public streets or customer parking areas and that have a walkway along the façade shall provide a canopy, arcade, overhang, or similar weather protection along at least 60% of such building elevation.

3. Adjacent Residential Development

Level 4 screening landscaping shall be provided along property lines that are adjacent to a residential district. The landscaping shall allow for any pedestrian connections provided by this section.

4. Community Space

The establishment shall provide at least one public space, such as a plaza, patio, courtyard, or atrium, either indoors or outdoors, at or near the principal customer building entrance. Each public space shall be no less than 2,000 square feet in gross floor area and no dimension shall be less than 40 feet. The public space shall meet the standard for plaza or courtyard in section 21.07.060F. Common spaces are encouraged to have good solar access and/or provide views of the Chugach mountains or other major landmark(s).

5. Wall Modulation

Each building elevation that faces a street, a customer parking area, or a residentially-zoned lot shall be modulated. The wall and foundation line shall be offset at intervals so that there is at least one offset every 140 feet of wall length that varies the depth of the building wall by a minimum of 12 feet. Offsets shall comprise at least 20% of the length of the elevation, for at least 60% of the building height.

6. Ground Level Expression

Each building elevation that faces a public street shall provide, along at least 60% of the building length, three of the following features:

a. Windows with kickplates or projecting sills;

b. Architectural bays and mullions dividing windows;

c. Pedestrian scale ornamental lighting;

d. Tilework, masonry or stone veneer, glass block, or other similar accent materials;

e. Belt courses or masonry strips of distinct color or texture;

f. Plinths for columns; or

g. Ornamental details integrated into the façade design.

7. Roofs

Provide a modulated roof on each elevation facing a street or residentially zoned lot, using features such as a terracing parapet, multiple peaks, jogged ridge lines and dormers, with a maximum of 140 feet of uninterrupted roofline between roof modulation elements. Each modulation element shall provide a minimum of three feet of vertical change in the roofline for at least 20% of the roofline.

8. Entryways

Entryways shall incorporate changes in architectural mass, surface, or finish to provide a clearly defined primary entrance that is easily visible from streets and sidewalks. At least two of the following features shall be provided:

a. Recessed or projected entrance;

b. Peaked roof form;

c. Transom or sidelight windows;

d. Ornamental architectural features such as tilework, moldings, or lighting; or

e. Integrated planters or wing walls that incorporate landscaped and/or seating areas.

9. Prohibited Materials

Exterior building materials shall not include the following as a general field material:

a. Plywood;

b. Unstained or untreated wood, except for cedar or redwood; and

c. T-111 siding.

Neon tubing shall not be an acceptable building/roofline outline feature.

10. Rooftop Mechanical Equipment

Rooftop mechanical equipment, including HVAC equipment and utility equipment that serves the structure, but not including telecommunications equipment or solar collectors, shall be screened through the use of parapet walls or a sight-obscuring enclosure around the equipment. The screening shall be constructed of one of the primary materials used on the primary facades of the structure, and be an integral part of the building's architectural design.

11. Outdoor Sales, Display, and Storage

a. ***Intent Statement***

To screen storage and display areas of large commercial establishments from adjacent properties, public streets, and customer entrances, and to mitigate visual and noise impacts.

b. ***Permanent Outdoor Display, Sales, and Storage of Merchandise***

i. This subsection E.10. shall not apply to uses in the Vehicles and Equipment use category.

ii. Any outdoor storage, display, or sales location shall be permanently defined on a site plan.

iii. The size of permanent outdoor storage, display, and sales areas shall be 10% of the footprint of the principal building, or 15,000 square feet, whichever is less.

iv. Permanent outdoor storage, display, and sales areas shall be contiguous to the building and shall not be within 100 feet of residential property.

v. All outdoor storage, display, and sales areas shall have permanent walls and/or screening fences, no more than 15 feet high, made of materials and colors designed to be complementary to those used as predominant materials and colors on the building. Merchandise shall not be stacked above the height of the screening wall or fence. Any chain link fencing used shall be dark-colored and covered with a windscreen, which shall be maintained in good repair.

vi. Outdoor storage, display, and sales areas shall be counted when calculating required parking.

c. ***Temporary Outdoor Display and Sales***
Temporary outdoor display and sales of merchandise shall not be located in required parking areas, on pedestrian walkways or sidewalks, or in required landscaping.

12. Master Site Plan and Secondary Buildings

a. ***Intent***
To integrate the location, orientation, and appearance of all structures and improvements within a large commercial establishment as a unified, coherent and accessible site development.

b. ***Master Site Plan***
Large commercial establishments on sites that include more than one building, or that include multiple pad lots or platted lots for separate commercial establishments, shall, at the time of plat review or major site plan review, be required to establish a master site plan for the location, design and orientation of principal and secondary buildings on site.

c. ***Applicability of Large Commercial Establishment Regulations***
Building and site design standards for large commercial establishments in this section, unless stated to apply specifically to principal buildings, apply to both principal and secondary buildings on any commercial tract within a large commercial establishment site or site master plan area.

d. ***Secondary Building Orientation to Public Streets***
Peripheral secondary buildings located at the edge of the site next to a public street or street corner shall provide at least one customer entrance facing each abutting public street. A corner entrance facing both streets may meet this requirement. In such a case, for purposes of design requirements in this section for facades with customer entrances, the entrance shall be considered to be on both facades.

F. Optional Standards Menu

In addition to the mandatory standards of subsection E. above, establishments shall choose three features from the options below.

1. Location of Parking Lots
No more than 50% of vehicle parking spaces provided shall be located in the front parking area (defined in chapter 21.14).

2. Multiple Entrances
The principal building(s) shall have customer entrances on at least two sides of the building that face an abutting street from which access to the site is taken, with at least one of the required entrances facing the street to which the building is closest. A corner entrance shall be counted as an entrance on either façade.

3. Pedestrian-Friendly Entrance
At least one customer entrance of the principal building is located within 100 feet of the property line abutting the street from which the main access to the site is taken.

4. Building Façade Walkways
Walkways at least six feet wide (at least eight feet if abutting a parking lot without wheel stops to prevent vehicle overhang into the walkway) shall be provided along the full

length of every building façade that has a customer entrance or abuts a customer parking lot.

5. Upper Level Windows
Elevations facing streets and residentially zoned lots shall provide windows along 35% of each upper floor façade. For the purposes of this section only, floors shall be considered 15 foot increments in height, and rooftop mechanical penthouses are exempt.

6. Screening Vegetation
In areas not zoned mixed-use, L4 screening landscaping shall be provided along one lot line that abuts a public street.

7. Foundation Landscaping
Planting beds at least six feet wide shall be provided along at least 50% of each building elevation that faces public streets and/or parking areas.

8. Ice-free Walkway
Provide an ice-free (heated) walkway along a minimum of 35% of the length of the building elevation that contains a primary entrance. The walkway shall be a minimum of six feet wide.

21.07.130 EXTERIOR LIGHTING

A. Purpose

The intent of this section is to foster outdoor lighting for development in the municipality that is: adequate for safety and convenience; in scale with the activity to be illuminated and its surroundings; directed to the surface or activity to be illuminated; designed to make people and objects clearly visible; and designed to help create a pleasant nighttime environment. Specific purposes include:

1. Provides safety and personal security as well as convenience and utility in areas of public use or traverse, for municipal, commercial, industrial, multifamily residential, and institutional uses where there is outdoor public activity during hours of darkness;

2. Controls glare and excessive brightness to improve visual performance, allow better visibility with relatively less light intensity, and protect residents from nuisance and discomfort glare;

3. Controls trespass light onto neighboring properties to protect inhabitants from the consequences of stray light shining in inhabitants' eyes or onto neighboring properties;

4. Results in cost and energy savings to establishments by carefully aiming and directing light only at the surface area or activity to be illuminated, using only the amount of light necessary;

5. Fits the needs and tolerances of the surrounding district, to provide adequate illumination levels in commercial districts while protecting residential areas and places of sleep from excessive light; and

6. Controls light pollution to minimize the negative effects of misdirected light and recapture views to the winter night sky.

B. Applicability

1. Outdoor Site Lighting

All outdoor lighting shall comply with the standards of this section, unless exempted in subsection C. below.

2. Sign Illumination

Sign illumination is subject to standards of subsection 21.11.090A.

C. Exempt Lighting

The following luminaires and lighting systems are exempt from the requirements of this section:

1. Decorative seasonal lighting, provided that individual lamps do not exceed a light output of 200 lumens;

2. Temporary lighting for emergency or nighttime work and construction;

3. Temporary lighting for theatrical, television, and performance areas, or for special public events;

4. Lighting for a special district or building that, according to an adopted municipal plan or ordinance, is determined to require special lighting aesthetics as part of its physical character;

5. Lighting required and regulated by the Federal Aviation Administration;

6. Public street and right-of-way lighting;

7. Interior lighting, including lighting of covered parking areas in a parking structure, unless such lighting is not in compliance with light trespass provisions of subsection E.2. below;

8. Emergency egress lighting as required by building codes;

9. Lighting of the U.S., State of Alaska, and municipal government flags; and

10. Lighting of public monuments and statuary.

D. Site Lighting Plan

For all lighting subject to this section, a site lighting plan, which is stamped and signed by a registered engineer or certified lighting professional who prepared the plan, shall be submitted to the decision-making body for review and approval. A site lighting plan is not required for single-family, two-family, and three-family residential buildings on individual lots. The site lighting plan shall include the following:

1. Lighting zone assignments;

2. Location of all exterior lighting by type;

3. A luminaire schedule which includes but is not limited to catalog cut sheets by manufacturers and drawings of the illuminating devices, fixtures, lamps, supports, reflectors, BUG ratings of all luminaires and initial lamp lumens, and other devices proposed; and

4. Mounting height of all luminaires.

E. Lighting Zones Established

1. Using table 21.07-14, the municipality shall determine and maintain lighting zones to ensure that lighting standards fit the needs and tolerances of Anchorage's broad range of urban and rural, commercial and residential, and low versus high intensity use areas. Lighting zones are intended to allow for relatively higher illumination intensities in commercial districts, while protecting the more light-sensitive neighborhoods and residential areas from excessive or misdirected light.

2. The lighting zone (LZ) of a site or project shall determine the standards for lighting as specified in this section. An increase of one LZ number may be granted to a specific site or project through the variance process.

TABLE 21.07-14: LIGHTING ZONE CHARACTERISTICS

Lighting Zone	Ambient Light Level	Lighting Zone Description	Representative Locations [1]
LZ-3	Moderately high	Areas where the vision of residents and users is adapted to moderately high light levels. Lighting is generally desired for safety, security, and/or convenience, and it is often uniform and/or continuous. After curfew, lighting may be extinguished or reduced in most areas as activity levels decline.	Medium to high intensity commercial and industrial districts.
LZ-2	Moderate	Areas where the vision of residents and users is adapted to moderate light levels. Lighting may typically be used for safety and convenience but it is not necessarily uniform or continuous. After curfew, lighting may be extinguished or reduced as activity levels decline.	Medium to high density residential neighborhoods, and institutional uses that are typically located within or near residential areas such as schools.
LZ-1	Low	Areas where the vision of residents and users is adapted to low light levels. Lighting may be used for safety and convenience but is not necessarily uniform or continuous. After curfew, most lighting should be extinguished or reduced as activity levels decline.	Rural areas, low-density urban areas, natural open spaces.
LZ-0	No ambient lighting	Areas in which human activity is subordinate in importance to nature. The vision of human residents and users is adapted to total darkness, and little or no lighting is needed except for safety and security. When not needed, lighting should be extinguished.	Undeveloped areas of Chugach State Park and Chugach National Forest

Additional Standards:

[1] Lighting zones 1, 2, and 3 are shown on the Anchorage Bowl Lighting Zone map. Within the Turnagain Arm Area Plan area, all areas designated residential are in LZ-1, while areas designated commercial are in LZ-2. Girdwood is exempt from the standards of this section. Undeveloped portions of Chugach State Park and Chugach National Forest are within LZ-0. Proposed development with special lighting applications such as ski resorts or outdoor stadiums, which may exceed allowable lighting limits, shall be submitted for review under the provisions of subsection J. below.

F. General Lighting Standards

All outdoor lighting systems, except for illuminated signs which are regulated in chapter 21.11, shall comply with the following general standards and trespass provisions of this subsection, in addition to the standards, as applicable, of subsection G. below.

1. Sites shall be lighted according to the current recommended practices of the Illuminating Engineering Society of North America (IESNA).

2. Directional light sources, such as LED sources, shall be shielded or limited to a maximum nighttime luminance (sunset to sunrise) of 800 candelas per square meter.

3. Exterior exposed neon tube lighting is prohibited in residential zoning districts.

4. All fixtures for area lighting in areas accessible to the general public shall use white light sources that have a color rendering index (CRI) of 65 or greater.

5. The lighting of a building façade for architectural, aesthetic, or decorative purposes is permitted subject to the following restrictions:

a. Upward aimed building façade lighting shall not exceed 1800 lumens. All upward aimed light shall be fully shielded, fully confined from projecting into the sky by eaves, roofs, or overhangs, and mounted as flush to a wall as possible.

b. Building façade lighting exceeding 1800 lumens shall be fully shielded, aimed downward, and mounted as flush to a wall as possible.

c. Building façade lighting shall be fully contained within the vertical surface of the wall being illuminated.

d. Building façade lighting that is measurable at the ground level shall be included in the maximum allowable light limits.

6. All luminaires shall be properly and permanently installed and maintained to meet the required standards of this section.

7. The illuminance levels provided in table 21.07-15 shall be used for enforcement should concerns of obtrusive lighting or questions of compliance arise. Maximum light levels shall be measured at a height of five feet six inches in a plane perpendicular to the line-of-sight when looking at the brightest source in the field of view. This provision shall apply to all exterior lighting and to interior lighting if the light source is visible off-site. The illuminance values provided in table 21.07-15 shall be measured at the lot line. If a lot line serves as a dividing line between two lighting zones, the stricter of the two light trespass limitations shall apply.

8. Exterior lighting shall conform to the light trespass limitations of table 21.07-15 within 12 months from the effective date of this section.

TABLE 21.07-15: LIGHT TRESPASS LIMITATIONS

Lighting Zone of Neighboring Property	Maximum Light Levels at the Property Line
LZ-0	0.1 foot-candles
LZ-1	0.1 foot-candles
LZ-2	0.3 foot-candles
LZ-3	0.8 foot-candles
NOTE: The listed maximum illuminance levels are not intended to be measured during conditions of high reflectance, such as immediately after a fresh snowfall.	

G. Requirements for Multifamily Residential and Nonresidential Outdoor Lighting

1. Lumen Limits

For multifamily residential uses and nonresidential uses, all outdoor lighting shall comply with the following requirements:

a. *Total Site Lumen Limit*

The total installed initial lamp lumens of all lighting systems on the site shall not exceed the total site lumen limit. The total site lumen limit shall be determined using one of the three methods listed in table 21.07-16. Only one method shall be used per permit application, and for sites with existing lighting, existing lighting shall be included in the calculation of total installed lumens.

b. *Limits to Off-site Impacts*

All luminaires shall be rated and installed according to table 21.07-19.

2. Alternate Performance Method

[RESERVED]

TABLE 21.07-16: ALLOWED TOTAL LUMENS PER SITE FOR MULTIFAMILY RESIDENTIAL AND NONRESIDENTIAL OUTDOOR LIGHTING

METHOD	LIGHTING ZONE	LUMEN ALLOWANCE	RESTRICTIONS
1. Per Parking Space	LZ-0	500 lm/space	May only be applied to properties with up to 10 parking spaces (including accessible spaces)
	LZ-1	700 lm/space	
	LZ-2	900 lm/space	
	LZ-3	1200 lm/space	
2. Simple Hardscape	LZ-0	1.5 lm/sf of hardscape	Any project
	LZ-1	2.5 lm/sf of hardscape	
	LZ-2	4.0 lm/sf of hardscape	
	LZ-3	8.0 lm/sf of hardscape	
3. Complete Site	LZ-0	10 lumens per lineal foot of hardscape perimeter; plus	Any project
		1.0 lm/sf of hardscape; plus	
		Specific use allowance(s) from table 21.07-18	
	LZ-1	22,000 lumens per site; plus	
		20 lumens per lineal foot of hardscape perimeter; plus	
		2.0 lm/sf of hardscape; plus	
		Specific use allowance(s) from table 21.07-18	
	LZ-2	33,000 lumens per site; plus	
		30 lumens per lineal foot of hardscape perimeter; plus	
		3.0 lm/sf of hardscape; plus	
		Specific use allowance(s) from table 21.07-18	

TABLE 21.07-16: ALLOWED TOTAL LUMENS PER SITE FOR MULTIFAMILY RESIDENTIAL AND NONRESIDENTIAL OUTDOOR LIGHTING			
METHOD	**LIGHTING ZONE**	**LUMEN ALLOWANCE**	**RESTRICTIONS**
	LZ-3	55,000 lumens per site; plus	
		65 lumens per lineal foot of hardscape perimeter; plus	
		7.0 lm/sf of hardscape; plus	
		Specific use allowance(s) from table 21.07-18; plus	
NOTE: When lighting intersections of site drives and public streets, the effective property line for the purposes of this section may be extended to include the public right-of-way (i.e., determination of hardscape areas in methods 2 and 3).			

1

TABLE 21.07-17: ADDITIONAL LUMEN ALLOWANCE FOR SPECIFIC APPLICATIONS WHEN USING THE COMPLETE SITE METHOD				
Lighting Application [1]	**LZ-0**	**LZ-1**	**LZ-2**	**LZ-3**
Building entrances or exits. Per door. Luminaires qualifying for this allowance must be within 20 feet of the entrance.	750 lumens	2,000 lumens	4,000 lumens	6,000 lumens
Entrances at senior care facilities, police stations, hospitals, fire stations, and emergency vehicle facilities. Per primary entrance(s) only. May be used in lieu of building entrance allowance only for these facility types. Luminaires qualifying for this allowance must be within 100 feet of the entrance.	N/A	4,000 lumens	8,400 lumens	12,000 lumens
Building facades. Areas of building façade that are illuminated. Luminaires qualifying for this allowance must be aimed at the façade and capable of illuminating it without obstruction.	N/A	N/A	12 lumens/ sf	25 lumens/ sf
Outdoor sales lots. Uncovered sales lots used exclusively for the display of vehicles or other merchandise for sale. May not include driveways, parking, or other non sales areas. Luminaires qualifying for this allowance must be within 10 mounting heights of the sales lot area.	N/A	10,000 lumens plus 10 lumens/ sf	10,000 lumens plus 40 lumens/ sf	15,000 lumens plus 60 lumens/ sf
Outdoor sales frontage. Frontage immediately adjacent to the principal viewing location(s) and unobstructed for its viewing length. A corner sales lot may include two adjacent sides provided that a different principal viewing location exists for each side. Luminaires qualifying for this allowance must be located between the principal viewing location and the frontage outdoor sales area.	N/A	N/A	1,650 lumens/ ft	2,850 lumens/ ft
Hardscape ornamental lighting. For the total illuminated hardscape area.	N/A	N/A	1.2 lumens/ sf	2.4 lumens/ sf
Drive up windows. Per window. Luminaires qualifying for this allowance must be within 2 mounting heights of the sill of the window.	N/A	2,700 lumens	4,000 lumens	8,000 lumens
Guard stations. Area of guardhouse plus 2,000 sf per vehicle land. Qualifying luminaires must be within two mounting heights of a vehicle lane or the guardhouse.	N/A	10 lumens/ sf	25 lumens/ sf	50 lumens/ sf

TABLE 21.07-17: ADDITIONAL LUMEN ALLOWANCE FOR SPECIFIC APPLICATIONS WHEN USING THE COMPLETE SITE METHOD

Lighting Application [1]	LZ-0	LZ-1	LZ-2	LZ-3
Outdoor dining. For the total illuminated hardscape of outdoor dining. Qualifying luminaires must be within two mounting heights of the hardscape area of outdoor dining.	N/A	1 lumen/ sf	10 lumens/ sf	15 lumens/ sf
Vehicle service station hardscape. For the total illuminated hardscape area less area of buildings, under canopies, off property, or obstructed by signs or structures. Luminaires qualifying for this allowance must be illuminated the hardscape area and must not be within a building, below a canopy, beyond property lines, or obstructed by a sign or other structure.	N/A	5 lumens/ sf	10 lumens/ sf	25 lumens/ sf
Vehicle service station canopies. For the total area within the drip line of the canopy. Luminaires qualifying for this allowance must be located under the canopy.	N/A	30 lumens/ sf	60 lumens/ sf	80 lumens/ sf
Vehicle service station uncovered fuel dispenser. Per fueling side (two max) per dispenser. Luminaires qualifying for this allowance shall be within two mounting heights of the dispenser.	N/A	7,500 lumens	15,000 lumens	20,000 lumens
All other sales canopies. For the total area within the drip line of the canopy. Luminaires qualifying for this allowance must be located under the canopy.	N/A	10 lumens/ sf	40 lumens/ sf	65 lumens/ sf
Non-sales canopies. For the total area within the drip line of the canopy. Luminaires qualifying for this allowance must be located under the canopy.	N/A	5 lumens/ sf	12 lumens/ sf	25 lumens/ sf
NOTES: [1] All area and distance measurements in plan view unless otherwise noted.				

1

TABLE 21.07-18: PRESCRIPTIVE METHOD MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT, AND GLARE (BUG) RATINGS [1]

Lighting Zone	Backlight Rating				Uplight Rating	Glare Rating
	>2 mounting heights from property line	1 to 2 mounting heights from property line and properly oriented	0.5 to 1 mounting height to property line and properly oriented	<0.5 mounting height to property line and properly oriented		
LZ-0	B0	B0	B0	B0	U0	G0
LZ-1	B0-B1	B0-B1	B0	B0	U0-U1	G0-G1
LZ-2	B0-B2	B0-B2	B0-B1	B0	U0-U2	G0-G2
LZ-3	B0-B3	B0-B3	B0-B2	B0-B1	U0-U3	G0-G3
NOTES: [1] A luminaire may be used if it is rated as follows according to the lighting zone of the site. If the luminaire is installed in other than the intended manner, the rating shall be determined to account for the actual photometric geometry. Luminaire equipped with adjustable mounting devices permitting alteration of luminaire aiming in the field shall not be permitted. The luminaire must be mounted with backlight toward the property line.						

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H. Reduced Lighting Period

The intent of this subsection is to reduce unnecessary exterior lighting levels during nighttime hours when a business or institution is not open, while maintaining safety and security. Except as provided in H.2. below, exterior lighting systems for nonresidential uses shall be turned off or lighting levels reduced by at least 50% during time periods specified below. The reduction shall be determined as an overall average for a site.

1. The reduced lighting period shall be as follows:

a. LZ-1: beginning at 10:00 p.m. and continuing until dawn or one hour before the start of business, whichever is earlier.

b. LZ-2: beginning at 10:00 p.m. or one hour after the close of business, and continuing until dawn or one hour before the start of business, whichever is earlier.

c. LZ-3: beginning at midnight or one hour after the close of business and continuing until dawn or one hour before the start of business, whichever is earlier.

2. Exceptions to a reduced lighting period:

a. When there is only one luminaire on the site, provided it conforms to the standards of this section.

b. Other code-required lighting for steps, stairs, walkways, and building entrances.

c. Security lighting controlled by motion sensor and connected to a security system.

I. Installation of Lighting

Following installation of exterior lighting on a site, a registered engineer or certified lighting professional shall certify in writing that the location, type, mounting height, and photometric data all meet the approved site lighting plan of subsection D. above. No final certificate of zoning compliance shall be issued before receipt of the required certification.

J. Special Purpose Lighting

1. The director may approve exterior lighting systems for unique land uses that do not comply with the technical requirements of this section but are consistent with its intent. This administrative review shall performed unless the exterior lighting is already being reviewed as part of a major site plan review or conditional use approval. Each request for approval shall be evaluated based on the standards and criteria set forth in subsection J.2. below. Lighting systems subject to this provision may include installations such as:

a. Outdoor athletic fields and recreation areas; or

b. Industrial sites having special requirements such as the Port of Anchorage, Alaska Railroad corporation facilities, or Ted Stevens Anchorage International Airport.

2. To obtain approval under this subsection, applicants shall provide the following:

a. Information which documents that the proposed lighting installation is not within LZ-1, except for outdoor recreational uses, ornamental lighting or necessary construction lighting; and

b. A lighting plan as required in subsection D. above with a statement from a registered engineer or certified lighting professional which provides alternate designs that approach the standards of this section to the maximum extent possible while mitigating the adverse effects of the proposed lighting such as glare and light trespass.

21.07.140 OPERATIONAL STANDARDS

A. Purpose

The purpose of these operational standards is to prevent land or buildings within the municipality from being used or occupied in any manner so as to create any dangerous, injurious, noxious, or otherwise objectionable condition that would create adverse impacts on the residents, employees, or visitors on the property itself or on nearby properties.

B. Applicability

The provisions of this section 21.07.140 shall apply to all land within the municipality. The director may authorize temporary exemptions from one of more of the standards in this section during construction.

C. Standard

No use may cause excessive noise, vibrations, smoke, dust or other particulate matter, toxic or noxious matter, humidity, heat, or glare at or beyond any lot line of the lot on which it is located. No equipment or process shall be used which creates visual or audible interference in any radio or television receivers off the premises, or causes a fluctuation in line voltage off the premises.

The term “excessive” is defined for the purpose of this subsection as to a degree exceeding that generated by uses permitted in the district in their customary manner of operation, or to a degree injurious to the public health, safety, welfare, or convenience.