



# Compatible-Scale Infill Housing (R-2 Zones) Project

*An Update to Anchorage's Zoning Rules for Residential Development  
in the R-2A, R-2D, and R-2M Zoning Districts*



PZC Case No. 2019-0009  
Public Hearing Draft



## Compatible-Scale Infill Housing (R-2 Zones) Project:

The Compatible-Scale Infill Housing (R-2 Zones) project is updating Anchorage's R-2A, R-2D, and R-2M zoning code rules for the height and bulk of residential development, in order to allow more housing opportunities while ensuring that the scale of new development complements existing neighborhoods.

This project helps carry out implementation Action 4-4 of the *Anchorage 2040 Land Use Plan's* **Goal 4: Housing and Neighborhoods**. It is related to other ongoing code amendment projects and actions that seek to achieve the goals of the *Anchorage 2040 Land Use Plan*.

## For More Information:

Visit the project website: [www.muni.org/Planning/2040actions.aspx](http://www.muni.org/Planning/2040actions.aspx)

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Public Hearing Draft Documents: (under separate covers)

**Adopting Ordinance**

**Exhibit A: Staff Report**

**Exhibit B: Zoning Code Amendments**

**Exhibit C: Planning and Zoning Commission Resolution**

**Exhibit D: Policy Guidance from the Comprehensive Plan**

**Exhibit E: Public Comments Received**

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# Compatible-Scale Infill Housing (R-2 Zones) Project

## Staff Report

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Appendices are on the project website at: [www.muni.org/Planning/2040actions.aspx](http://www.muni.org/Planning/2040actions.aspx)

- Appendix A-1: FAR Research
- Appendix A-2: Site Testing
- Appendix A-3: Solar Access Step-Back



## 1. Introduction

The Planning and Zoning Commission (PZC) is being asked to review and make its recommendations to the Anchorage Assembly regarding the Compatible-Scale Infill Housing (R-2 Zones) Project, a text amendment to the Title 21 land use regulations of the Anchorage Municipal Code (AMC). The Commission’s recommendations will be forwarded to the Assembly for consideration in that body’s deliberations and action.

An earlier, *Community Discussion Draft* of this text amendment was presented to the Commission on October 1, 2018 for comments and questions. The Public hearing Draft amendment was presented to the Commission on December 10, 2018.

The Public Hearing Draft materials for the Commission’s review and consideration include an adopting ordinance and Exhibits A through F as listed on the inside cover. This **Exhibit A: Staff Report** provides the project summary, public process, and analysis and recommendations regarding the proposed text amendments, which are presented in **Exhibit B**. This Staff Report also references its own Appendices, which contain more detailed research and are available online on the project web page.

### 1.1 Project Objectives

This project is a targeted amendment to the bulk and height regulations in the R-2A, R-2D, and R-2M zoning districts. Its objective is to allow more housing opportunities and design options while ensuring the height and scale of new development complements existing neighborhoods:

- 1. Replaces an existing 2.5-story construction limit with a more flexible standard for the size of new housing in proportion to the size of its lot;
- 2. Reduces height exemptions for rooftop stairwell and elevator towers; and
- 3. Mitigates three-story building design with added protections for abutting neighboring properties.

The current 2.5-story limitation makes it harder for some lots to fit the actual number of allowed housing units, and constrains design. The proposed code changes replace this barrier and better address bulk, privacy, and sunlight issues where a bigger, taller residential building is built next to smaller neighboring buildings in the R-2 zones. New construction may be bigger than nearby older homes, but it should avoid overwhelming these neighboring properties.

This project seeks to achieve the direction of Anchorage’s *Comprehensive Plan* to accommodate housing development needed by all household types, and ensure development is compatible with its neighborhood context.

### Approval Criteria for Title 21 Text Amendments

AMC Title 21 Section 21.03.210C. establishes that Zoning Ordinance text amendments may be approved if the Assembly finds that all three of the following approval criteria are met:

- 1. The proposed amendment will promote the public health, safety, and general welfare;
- 2. The proposed amendment is consistent with the *Comprehensive Plan* and the stated purposes of Title 21; and
- 3. The proposed amendment is necessary or desirable because of changing conditions, new planning concepts, or other social or economic conditions.



2. Context

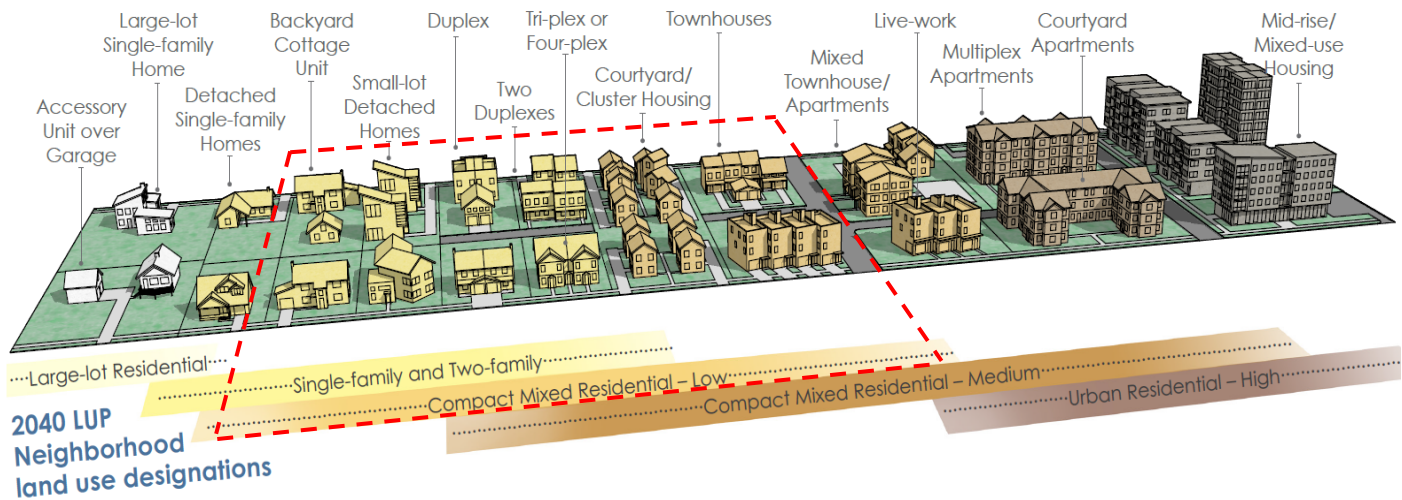
2.1 Anchorage’s Changing Housing Needs

The Anchorage 2040 Land Use Plan Map (2040 LUP) forecasts that the Anchorage Bowl population will grow by up to 21,000 households by the year 2040. Construction of new housing is not keeping pace. There is a shortage of housing that is affordable to most families. To fill this shortage, more new housing will need to occur as **infill** and **redevelopment** in existing neighborhoods. “Infill” is new housing on vacant lots. “Redevelopment” is the replacement of older structures with new housing.

The composition and needs of Anchorage’s households are also changing. The number of people per household is forecast to become smaller with fewer children per household. Household incomes have not kept pace with rising housing costs. Smaller households are likely to prefer or afford more compact homes and live in older neighborhoods near jobs, services, and amenities.

2.2 Why Are R-2 Zones Important?

The R-2A, R-2D, and R-2M zoning districts are unique among Anchorage’s residential zones. They accommodate a variety of compact housing types: single-family homes, duplexes, townhouses, and (in the R-2M only) small multifamily structures. The range of R-2 housing types within the full spectrum of Anchorage housing is shown in the **red-dashed box** below. The illustration shows how the size of the various R-2 housing types can fit with their low-scale R-2 neighborhood context that includes existing single-family homes.



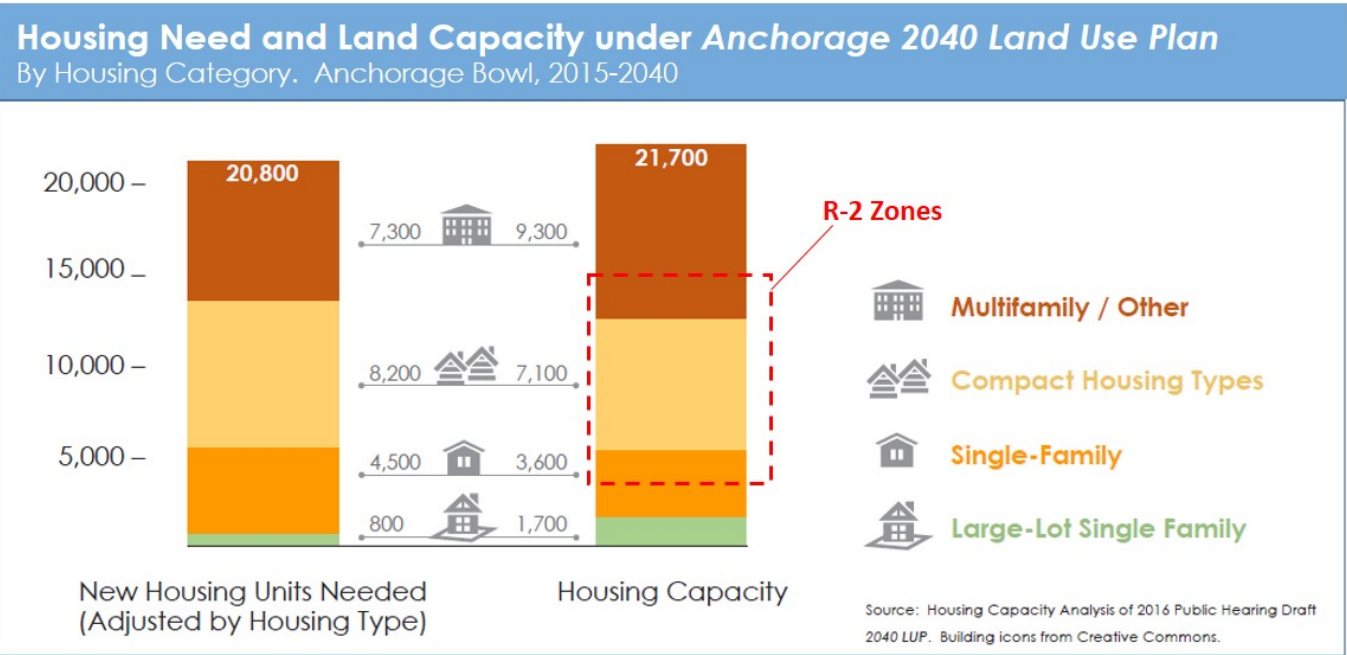




2.3 Housing Capacity of R-2 Zoned Lands

The R-2 zoning districts are expected to provide approximately 20 percent of the forecast new housing needed in the Bowl. Most of this R-2 capacity is from infill and redevelopment lots within built-up neighborhoods. Pages 10 through 12 of the *Anchorage 2040 Land Use Plan (2040 LUP)* describes the city’s land capacity in more detail.

The R-2 zones’ housing capacity is concentrated in the “compact” housing types in the **red-dashed box** in the figure below. These include single-family homes on small lots, accessory dwelling units, duplexes, townhouses, and (in the R-2M only) small-scale multifamily structures. This is critical because the forecast demand for this range of housing types is greater than the estimated capacity for housing. In particular, “Compact Housing Types” in the diagram below show a land capacity shortage of 1,100 housing units by 2040.



2.4 Recent Pace of Housing Construction

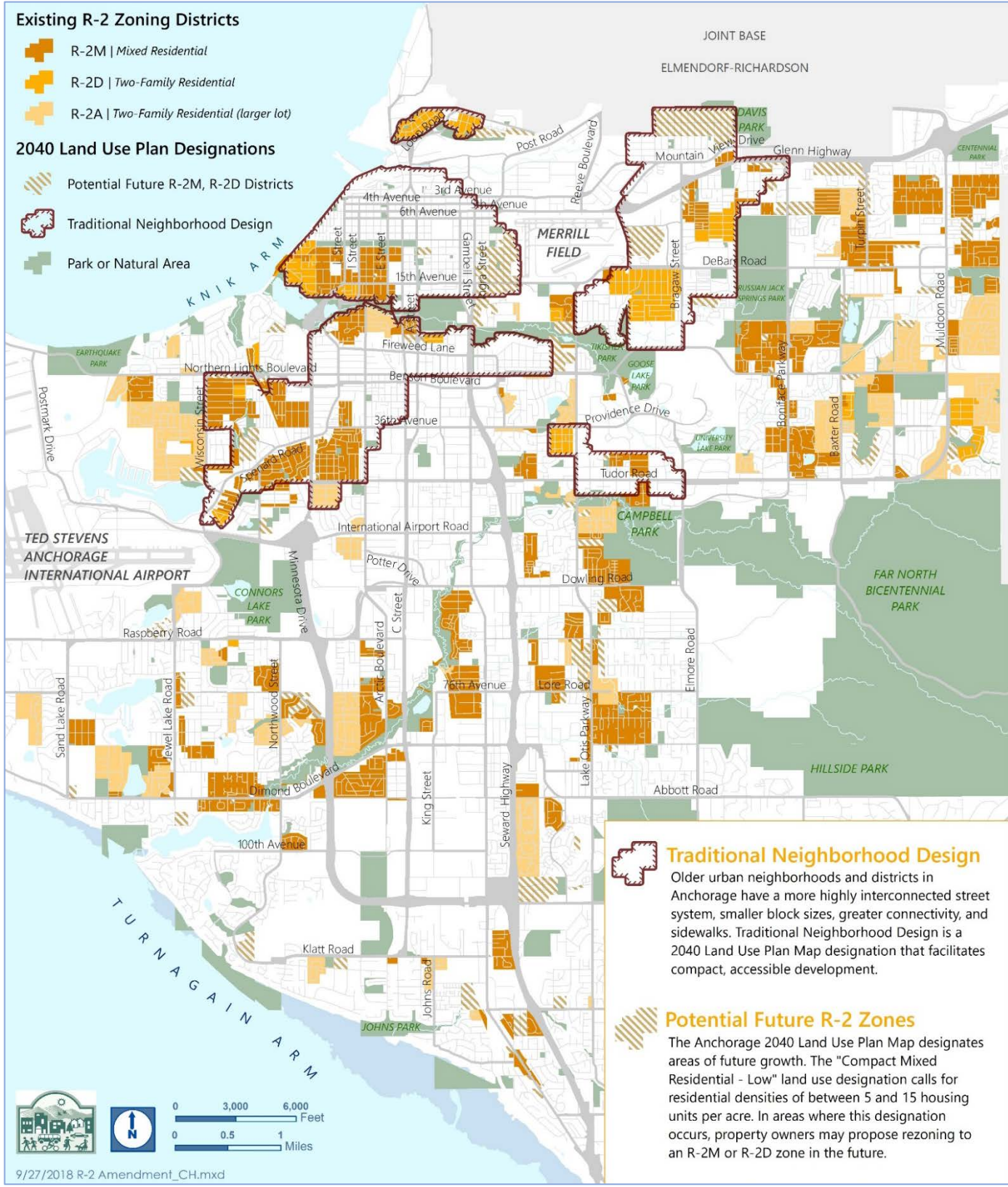
To meet the forecast housing demand for the Anchorage Bowl, an average of 840 new housing units would have to be built annually from 2015 to 2040. By comparison, the Municipality has received permit applications for an average of 548 new housing units annually since 2014—and 404 units on average since 2016. Housing development in Anchorage faces significant challenges: the ongoing recession since 2015, higher construction costs, a limited supply of buildable residential land, and stagnant household incomes in the local buyer market.

As a further comparison, in order for the R-2 zones to accommodate their expected 20 percent share of the forecast housing need in the Bowl, an average of nearly 170 new housing units would be built annually from 2015 to 2040 in the R-2 zones. However, in the recent five years from 2013 – 2017, the number of housing units built yearly in the R-2 zones was: 48, 66, 37, 48, and 24, respectively. Most of these new units were duplexes, and occurred in the R-2M zone.

Development regulations that add cost to or reduce the number of housing units can also impact the number of housing starts. In January 2016, the current title 21 zoning regulations became mandatory, including the R-2 zones 2.5-story construction limit in the Anchorage Bowl. Given all the other factors, it is not clear if or how much the changes in zoning regulations contributed to lower housing starts in the R-2 zones. Additionally, building codes and engineering regulations have also changed in recent years.

## 2.5 Where are Anchorage's R-2 Zones?

The R-2A, R-2D, and R-2M districts are distributed across the Anchorage Bowl. They comprise approximately **one-third** of the city's urban residential zone land, and include more than **30,000** properties. They are also primarily in built-up neighborhoods, and include few large sites available for new development.







2.6 Current Zoning Allowances for the Scale of Housing

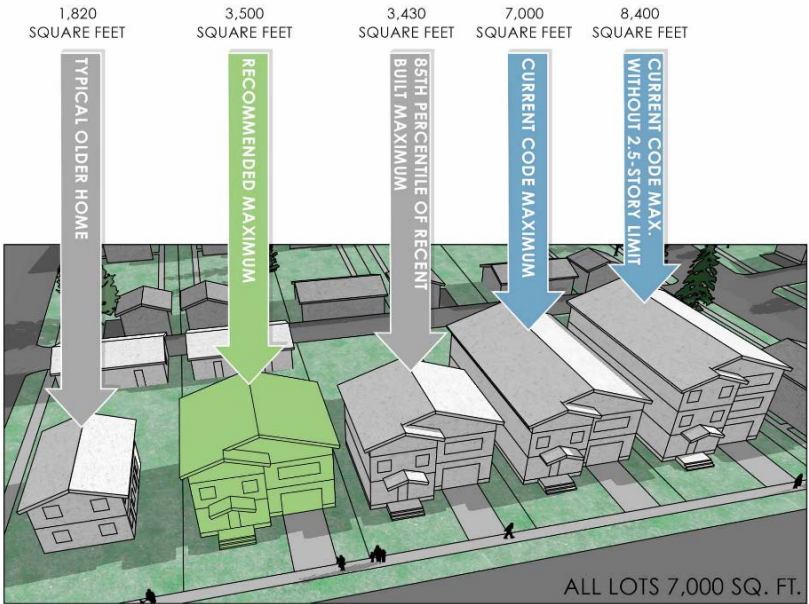
The scale of a house, duplex, or multi-unit structure is the combination of the space in the building, the size of its footprint on the lot, and its allowed height. The current land use regulations in the R-2 zones limit the maximum size of housing structures by “lot coverage” and by the maximum height allowed.

Following the current zoning standards that address the scale of housing in the R-2 zones:

Standard	Current Code (R-2A, R-2D, and R-2M Zones)
Allowed Lot Coverage	Building lot coverage measures the two-dimensional “footprint” of a structure. It is the percentage of the lot covered by the building. The maximum allowed building lot coverage is 40 percent of the lot size.
Allowed Height	30 feet to the midpoint of a pitched roof or top of a flat roof, <b>not to exceed 2-1/2 stories.</b>
Required Setbacks	20 feet in front, except 10 feet in secondary front (e.g., a corner lot) 5 feet on the sides, except 10 feet for multifamily housing in R-2M zone 10 feet in the rear  No side setback at the party wall of attached housing units Eaves and bay windows may project 2 feet into setbacks Roofed porches and landings may project 5 feet into front setback
Resulting Maximum Building Size	The maximum building envelope, or “buildable area” is the three-dimensional space that created by the allowed lot coverage, allowed height, and required setbacks above.  The buildable area can also be reduced by easements, required site elements like parking areas, and other development requirements.

For example, the current maximum size of houses on a 7,000 square-foot lot in the R-2M zone is illustrated by the fourth building from the left. Its lot coverage is 40% and it fits 7,000 square feet of floor area into its 2-1/2 stories.

Recent analysis shows that most housing is not built to the maximum allowed size. The largest recent duplex in the R-2M zone was 5,784 square feet of floor area. The 85<sup>th</sup> percentile of the largest recent built size is illustrated by the middle building. (The recommended FAR limits are shown second building from left, in green, and are discussed in the analysis section.)





## 2.7 History of R-2 Height Limits

The height limit in the R-2, R-2A, and R-2D zoning districts was 25 feet with a two-and-one-half (2.5) story standard until 1985. A 1985 ordinance replaced the R-2 district with the R-2M district. The Assembly then revised the height limit to allow 30 feet if at least 30 percent of the lot was open space. In 1999, the Assembly changed the height limit again, to 30 feet by right, to allow new homes to have steeper roof pitches and taller ceilings, allow more diversity in design, and fit more living area within homes on smaller buildable lots.

As part of the Title 21 Rewrite project (2002-2013), the Assembly Title 21 Committee recommended adding the current 2.5-story standard to supplement the 30-foot height limit in response to Anchorage Bowl neighborhood concerns about trends toward construction of larger scale, taller multi-dwelling housing structures, including flat-roofed buildings with stairwell towers and parapet walls. The objective for the 2.5-story standard was for new residential structures to fit in better with the prevailing two-story scale of existing older neighborhoods, reduce the bulk impacts of large multi-unit building walls, and protect neighbors’ sunlight access.

The Assembly adopted the 2.5-story standard with the Title 21 Rewrite in 2013. It did not apply the 2.5-story standard to Chugiak-Eagle River. Since the new Title 21 came into full effect in 2016, newly permitted structures are limited to two full stories above grade, and any third floor must be tucked under a sloping pitched roof and have only half as much floor area as the second floor. Basements do not count toward the 2.5-story limit.

## 2.8 Problems with the Current 2.5-Story Standard

Homebuilders have raised concerns and questions about the 2.5-story standard, including its impact on housing projects and its effectiveness. Concerns that the Planning Department has heard include:

1. It makes it more difficult and costly to fit the actual number of allowed housing units on R-2M-zoned lots that would otherwise be large enough to have more than two dwelling units. Other site development needs (e.g., parking) tend to squeeze housing units into a three-story design. Builders may dig daylight basements, but at a cost in dollars and flexibility.
2. It restricts building design flexibility which is in conflict with the 2040 LUP “Compact Mixed Residential—Low” land use designation. 2040 promotes allowing “innovative” housing projects in R-2M-zoned areas. (See right.) The 2.5-story standard is one-size-fits-all: it applies regardless of lot size, configuration, or location relative to surrounding residential properties.
3. It does not actually provide an effective or consistent height/bulk/solar access protection for the neighboring lots, for multiple reasons:
  - Ceiling heights and floor beam widths vary from one home to another. A home may have 7’6”, 8’, 9’, or even 10-foot ceilings. Some 2.5-story homes may not differ much in height from a 3-story home.
  - Daylight basements that stick up partially above grade do not count as stories. So a 2.5-story home will be taller if it has a daylight basement.
  - There is no limit on the actual height of the attic half story living space or its side walls. So the half-story can actually also be quite tall.
  - The maximum allowed size of the half-story varies based on the size of the house. It can be no more than half the area of the second floor below it. So a large structure with big second floor actually gets to have a bigger “half-story” than its smaller neighbors.



Small-lot Single-family Homes with Three-story Modern Design Can Fit in the Compact Mixed Residential—Low Land Use Context (2040 LUP, p. 38).



Two-story House with a Daylight Basement and an Attic Living Space.



3. Public Involvement Process

This project complies with the Title 21 procedures for review and approval of text amendments as set forth in AMC 21.03.210. Additionally, the *Anchorage 2040 Land Use Plan* directs the Municipality to facilitate proposed changes to Title 21 regulations for housing development projects through a collaborative public process that involves the affected stakeholders and communities.

This project is being completed in three public involvement steps as follows:



Step #1: Community Discussion Draft

This project arose from a request by builders in early 2018 to reevaluate the 2.5-story standard. Planning staff held two pre-consultations with an initial group of builders and architects in June 2018 in order to explore the issue and potential options for how to amend the code. It consulted with PZC in June and also made 14 initial appearances at other organizations, including Community Councils, builders, and other housing and economic development organizations.

A Community Discussion Draft was released on September 27, 2018 and posted to the project web page for a five-week review period. A list of stakeholder groups was informed of the release, and copies were provided to Community Councils. Planning staff had 13 consultations or meeting appearances with stakeholder organizations.

Written public comments regarding the Community Discussion Draft are provided in **Exhibit E: Public Comments Received**, Section E-1. Written comments from a total 14 organizations and individuals were received. Four Community Councils supported the proposed amendments, two of which identified one or more specific concerns and recommended changes. Other individuals and organizations including AHBA, Live.Work.Play Housing Committee, and the Chamber of Commerce Municipal Activities Committee, provided verbal comments in consultation meetings.

**Exhibit F: Comment-Issue Response**, summarizes nearly 40 issues and topics raised by the public regarding the Community Discussion Draft, and the Planning Department’s response to these issues. These issue-responses set the direction for 21 substantive changes to develop the Public Hearing Draft. Responses to public comments also resulted in held four additional private sector technical expert consultations, plus four public agency expert consultations, and completed more research on housing size trends and other issues raised by public comments.

Step #2: Public Hearing Draft

The Public Hearing Draft was released on December 10, 2018 and posted to the project web page. A public Open House took place on December 11. A list of stakeholder groups was informed of the release, and copies were distributed to the agency review list and to Community Councils. The Department held nine further stakeholder and expert consultation meetings, including five appearances at Community Council or Federation Board of Delegates meetings.

(Public process continued next page...)



In response to concerns raised in late January 2019, the Planning Department extended the public comment period to March 4 and reached out to organizations and individuals expressing concern during February. At the request of representatives from the Anchorage Homebuilders Association (AHBA), the Planning staff undertook more extensive site testing.

***Exhibit E: Public Comments Received***, in Section E-2, documents written comments received from 28 individuals and organizations as of February 21, 2019 regarding the Public Hearing Draft. In summary, five municipal agencies and two state agencies provided written comments. All but one agency (International Airport) had no objections. Other municipal agencies provided technical input in expert consultation meetings.

***Exhibit F: Comment-Issue Response***: Following the March 4 public hearing, at the request of PZC, Planning staff can update Exhibit F, Comment-Issue Response, to analyze and provide written responses to these issues.

## Step #3: PZC-Recommended Draft for Assembly Action

Following the March 4 public hearing, the PZC may amend the proposed code changes before making recommendations to the Anchorage Assembly. Upon Assembly Introduction, the PZC-recommended changes will become available for public review and then a public hearing at the Anchorage Assembly. The Assembly will then deliberate and take final action on the draft code amendments.





## 4. Policy Direction from the Comprehensive Plan

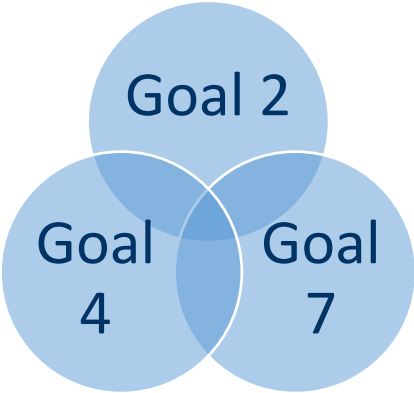
### 4.1 Anchorage 2040 Land Use Plan Goals and Policies

The **Anchorage 2040 Land Use Plan (2040 LUP)** coordinates with other elements of the city’s *Comprehensive Plan* to direct how and where land is developed in order to accommodate population and job growth. Following is a summary of the most relevant Goals and Policies of the *2040 LUP* for the R-2 zone amendments. More policy direction is in *Exhibit D: Policy Guidance from the Comprehensive Plan*.

**Goal 1: Plan for Growth and Livability**, envisions that *Anchorage achieves residential and commercial growth, which improves citizen’s quality of life*. The policies under Goal 1 direct the Municipality to use the *2040 LUP* (including its **Land Use Plan Map**) to guide decisions on future development patterns, and accommodate the forecast housing demand of **21,000 additional households** by 2040.

2040 Goals 2 through 10 are topical. Most relevant to this project are **Goals 2, 4, and 7** and their **Policies** which guide municipal decisions toward achieving the Goals. Goals 2, 4, and 7 display the range and variety of city objectives and potential for tensions between them.

The *2040 LUP* acknowledges the potential for conflicts between multiple objectives. It does not prioritize its Goals in order of importance. Instead, it calls for actions that bring these Goals together and carry out all of their Policies. In its discussion of Goal 7, for development to be compatible with its neighborhood context, the *2040 LUP* states that “**compatible design is a key part of growing successfully through infill and redevelopment.**”



**Goal 2: Infill and Redevelopment**, envisions that *infill and redevelopment within existing neighborhoods and business districts will meet Anchorage’s needs for housing and employment growth*. Relevant Policies include:

- **LUP 2.3.** Remove barriers to desired infill development and incorporate flexibility in development requirements to promote adaptive reuse of older buildings and compact infill/redevelopment, including that which reflects traditional urban neighborhood design contexts.

**Goal 4: Neighborhood Housing**, envisions that *Anchorage’s neighborhoods provide a range of places to live, and meet the housing needs of residents for all income levels and household types*. Relevant Policies include:

- **LUP 4.2.** Allow and encourage innovative compact housing types and a variety of housing options that respond to changing preferences.
- **LUP 4.4.** Encourage property owners to preserve, rehabilitate, or redevelop properties in ways that minimize housing displacement and maintain affordability. Related **Policy 57** from *Anchorage 2020* calls for encouraging the maintenance and upkeep of existing housing stock.
- **Policies 14, 16, and 58** from the *Anchorage 2020 Comprehensive Plan* also apply. Policy 14 discourages development at densities less than called for in the city plans. Policy 16 calls for standards to ensure residential development provides for a variety of lot sizes and housing types for a range of households. Policy 58 encourages more affordable housing.

(continued next page)



**Goal 7: Compatible Land Use**, envisions that *infill development is compatible with the valued characteristics of surrounding properties and neighborhoods*. Relevant Policies include:

- **LUP 7.1.** Preserve, accommodate, and contribute to the character, scale, and identity of established neighborhoods as new infill housing development occurs.
- Related **Policies 11, 46, and 49** of the *Anchorage 2020 Comprehensive Plan* also apply. Policy 11 calls for requiring mixed-density development to improve the functional and aesthetic characteristics of the surrounding development. Policy 46 calls for protecting and enhancing the unique appeal of individual residential neighborhoods. Policy 49 calls for site plan layout and building design for new development to consider the character of adjacent development.

## 4.2 Direction from Area-specific Plans

Neighborhood and District Plans include housing, redevelopment, and neighborhood compatibility policies which tend to reinforce Goals 2, 4, and 7 of the *2040 LUP*. Following are highlights of relevant policies from the three area-specific plans that include the most neighborhoods with R-2A, R-2D, or R-2M zoning:

### Related to Housing:

- **East Anchorage District Plan Strategy 1.3:** Promote housing that reflects changing needs and preferences. (1.3.2.: Amend Title 21 as needed to allow for the variety of new housing types recommended in this plan.)
- **West Anchorage District Plan Objective 2:** Maintain an adequate supply of residential housing of varying densities and affordability levels that promote quality residential living and stable long-term land values.

### Related to Compatibility:

- **East Anchorage District Plan Strategy 1.1:** Maintain and strengthen existing neighborhoods by creating places where residents want to stay and new residents are attracted to live. (1.1.1.: Ensure that new development does not compromise the unique characteristics and stability of existing neighborhoods.)
- **West Anchorage District Plan Objective 4:** Preserve and enhance the physical character of land uses valued by the local community, including established residential neighborhoods...
- **Anchorage Original Neighborhoods Historic Preservation Plan**, Policies 5.5 and 5.11 (South Addition): Mitigate any infill projects, large or small, that do not enhance or support existing neighborhood character...New construction should reinforce existing scale and character.
- **Anchorage Original Neighborhoods Historic Preservation Plan**, Policies 7.6 and 7.12 (South Addition): Create neighborhood-specific design guidelines to influence future development projects and ensure the continued preservation of neighborhood character and historic resources...Create zoning and land use policies that maintain the unique character and scale of existing streetscape in South Addition.

### What is "Compatibility"?

Compatibility refers to the characteristics of different uses, activities, or buildings which allow them to be located near or next to each other in harmony. Some elements affecting compatibility include the height, scale, massing, and setbacks of buildings. Other characteristics can include traffic, parking, landscaping, noise, and lighting.

Compatibility does not mean, "keep things the same as they are today". Rather, it refers to the sensitivity of development to maintaining the character of the surrounding context and avoiding adverse impacts on neighboring uses, even if it is different from neighboring uses. Compatibility allows for new residential buildings that are larger than their older neighbors, within limits so that they do not overwhelm the existing residences. (See also definition in AMC 21.14.040.)



## 4.3 Direction from 2040 LUP Land Use Plan Designations

The *Comprehensive Plan* Policies direct municipal land use decisions to follow the land use designations of the 2040 LUP **Land Use Plan Map** as to housing types, densities, and neighborhood character. The following highlights the most relevant characteristics from the two land use designations of the 2040 LUP that correspond to the R-2A, R-2D, and R-2M zoning districts.

The **Single-family and Two Family** land use designation (2040 LUP, page 37) provides for low-density residential neighborhoods. Its implementing zoning districts include the **R-2A** and **R-2D** zones (along with the R-1 and R-1A zones). The allowed uses listed under this designation include attached single-family, “small-lot” homes, and duplexes at a density of 5 to 8 dwelling units per gross acre. The neighborhood character is a “low-intensity residential environment”.

The **Compact Mixed Residential—Low** land use designation (2040 LUP, p. 38) provides for a compatible, diverse range of single-family, two-family, attached townhouses, and smaller-scale apartment housing at neighborhood densities of 5 to 15 units per gross acre. Its primary implementing zoning district is the **R-2M** zone. Allowed uses include: single-family, “small-lot” homes, duplexes, townhomes, and small apartment structures that are consistent with the area’s scale and intensity. The physical characteristics described in this designation give direction for how to manage compatibility:

- Retains single-family neighborhood characteristics such as building height.
- The building scale of new multi-unit/attached housing development is compatible with a neighborhood that includes single-family homes.
- Infill and redevelopment is compatible with height, scale, and massing of adjacent homes and overall character of the street frontage.
- Infill and redevelopment protects front-side-, and rear-yard setbacks to provide open space, play space, landscaping, and sunlight access.



Single-family and Two-family:  
Duplexes with Garage/ADU  
(2040 LUP, p. 37).



Compact Mixed Residential—Low:  
Small-lot Single-family Homes  
(2040 LUP, p. 38).

## 5. What this Project Does/Does Not Do

This project is a targeted amendment to the city’s land use regulations (Title 21), so that new housing fits within existing R-2 neighborhoods, and the full number of housing units as allowed by zoning can be built.

### 5.1 Summary of Proposed Amendments:

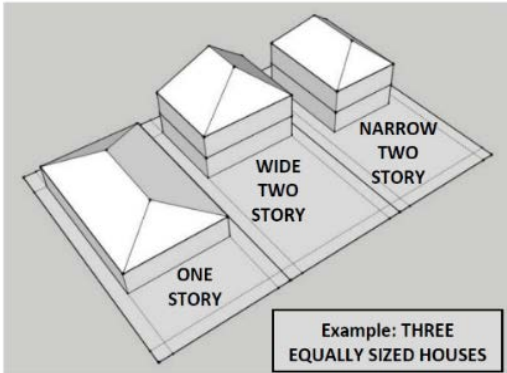
The proposed amendment covers the following three topics:

#### 1. Height and Scale of Houses.

*Change the limits on the size of housing structures in order to increase design flexibility and to allow three stories:*

- a. Remove the 2.5-story limitation, and replace it with a limit on the overall size of buildings in proportion to the size of the lot, using a *floor area ratio* (FAR).
- b. Exclude daylight basements, and attic living spaces with low ceiling heights, from the new FAR housing size limits.
- c. Partially exclude detached accessory structures (e.g., garages and ADUs) and home additions from the new FAR limits.

*(Note: This project does not change the current 30-foot height limit.)*



Three possible configurations of equally sized structures, under an FAR size limit. The FAR closely links building height and building coverage. Housing could either be taller or more spread, but not both.

#### 2. Height of Rooftop “Appurtenances” on Three-story Buildings.

*Revise the height exceptions for large rooftop “appurtenances” on top of housing structures in the R-1 and R-2 zones:*

- a. Reduce the maximum exempted height for rooftop access stairwells, mechanical penthouses, and elevator enclosures.
- b. Reduce the height exception for solid parapet walls while continuing to allow railings to exceed the height limit.
- c. Exempt most dormers from building height measurement.



Rooftop access stairwell enclosures and railing on a rooftop deck.

#### 3. Three-story Building Design and Placement.

*Improve 3-story building design on infill lots adjacent to existing homes:*

- a. Require flat, blank, 3-story facades that face neighboring residences to be divided into smaller sections (wall planes).
- b. Limit the height of exterior, above-grade stairs that lead to main entrances.
- c. Require three-story building walls to stay below a solar access setback or step-back from neighboring lots located to the north, east, and west.



Architectural interest on a 3-story façade.



## 5.2 What this Project Does Not Do

1. Does not change the 30-foot height limit.
2. Does not change the 40 percent maximum lot coverage or any required setback.
3. Does not change how many housing units or what types of housing are allowed on any lot.
4. Does not rezone any property or propose a new development project on any site.
5. Does not make any existing, legally constructed building a “nonconforming structure” as a result of the proposed FAR building size limits.
6. Does not apply the Anchorage R-2 zoning districts’ proposed building height, FAR, or district-specific standards to Chugiak-Eagle River’s CE-R-2A, CE-R-2D, or CE-R-2M zoning districts.
7. Does not change other site plan development standards for housing developments, such as landscaping, width of driveways in the front yard, garage placement, orientation of living spaces and front entries to face the public street, and the quality of the pedestrian walking conditions along the street frontage.

Some public comments recommended that this project address these other residential site planning issues that impact neighborhood character and the street experience for pedestrians. In fact, the R-2 bulk/height amendment is only a part of implementation Action (4-4) in 2040 Land Use Plan. There are other near-term Actions involving housing and neighborhood development, including Title 21 amendment projects to address these other contextual site design issues.

**A list of some upcoming changes to development regulations for housing is on the next page.**

More information will become available online on the *2040 LUP* implementation web page as these projects progress.

## 5.3 Related *Anchorage 2040* Implementation Projects

*Anchorage 2040 Land Use Plan* calls for improving land use regulations for infill housing. The Compatible-Scale Infill Housing project dovetails with the related code amendment projects below.

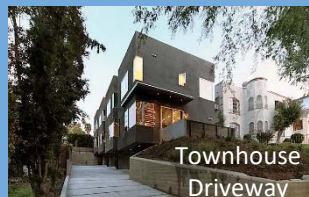
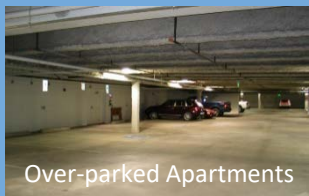
**Draft code amendments for these projects will come forward separately, each on its own schedule:**

### Completed

1. **Unit Lot Subdivisions** (2040 Action 4-17)
2. **Accessory Dwelling Units** (2040 Action 4-7)
3. **R-3A Mixed-use Residential Zone** (2040 Action 2-6)

### Upcoming:

1. **Parking Reductions** (2040 Action 4-3):
  - Streamlined approvals for a reduced number of parking spaces.
  - Increase some percentage reductions.
  - Delete duplicative parking requirements for multiple buildings.
2. **Mixed-use Development** (2040 Actions 3-1 and 3-5):
  - Make the R-4A mixed-use urban residential zone easier to use.
  - Simplify regulations for mixed-use residential projects.
  - Fix the CCO zone to better implement goals for town centers.
3. **Residential Driveways and Private Streets** (Action 4-6):
  - Reduce width of driveways and vehicle on-site circulation.
  - Clarify and consolidate duplicative vehicle access requirements.
4. **Additional Housing Units by Design** (2040 Action 4-4):
  - Allow lots in multifamily zones to have 1 or 2 additional units.
  - Incorporate standards for neighborhood compatibility.
5. **Reinvestment Focus Areas (RFAs)** (Actions 2-1 to 2-4):
  - Establish RFA approval process and development incentives.
  - Initiate the first RFA area, potentially in Spenard/Midtown.
6. **Small-area Implementation Plans** (2040 Action 2-11):
  - Create a master small-area/site master planning procedure.
  - Approve more flexible rules through the SAIP public process.



6. Height and Scale of Housing

6.1 Recommendation #1: Replace 2.5-story Standard with FAR

- Replace the 2.5-story construction limit in the R-2 districts with a more flexible limit on the overall size of residential buildings in proportion to the size of the lot, using a **floor area ratio (FAR)**, as shown on page 3 of Exhibit B.
- Exempt daylight basements and attic and half-story living spaces with low ceiling heights with ceiling heights less than 7’6”, from the new FAR housing size limits.
- Partially exclude detached accessory structures (e.g., garages and ADUs) – up to 0.15 FAR; and up to 400 sq. ft. or 0.10 FAR for one addition to an existing single- or two-family home.

Affects: R-2A, R-2D, and R-2M zoned properties in the Anchorage Bowl. Changes to FAR exemptions and exclusions also affect all zoning districts that currently use FAR.

**General Discussion:** FAR is a simple tool for keeping the bulk of large structures in proportion to the size of the lot. Applying an FAR prevents disproportionately large buildings, while retaining flexibility that does not create design barriers to new development or remodels. FAR does not limit or increase the number of housing units allowed by the district, however replacing the 2.5-story standard with FAR makes it easier to fit the actual number of units allowed on the site.

FAR is already used by some Title 21 residential and commercial zoning districts. It coordinates with maximum height and lot coverage so that the building scale fits the lot and is in context with the neighborhood scale. How the building square footage is allocated on the lot (either spread out or stacked up) remains flexible.

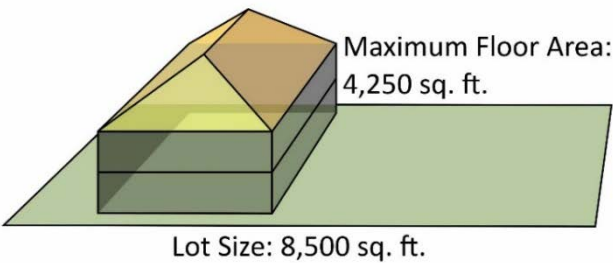
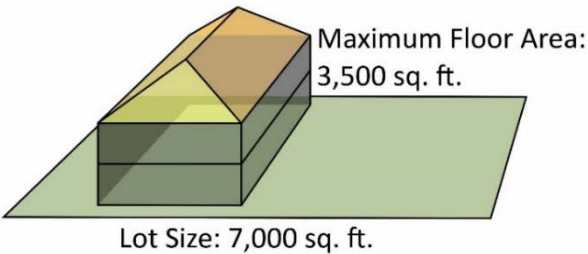
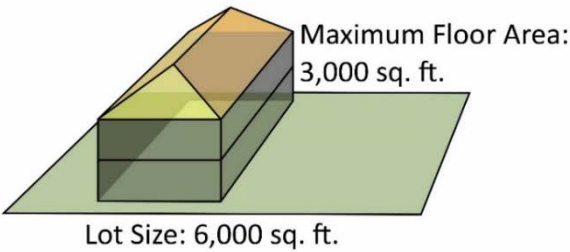
The pages that follow highlight the essential features of FAR that were subject to public comments.

Three example lots for a maximum FAR of 0.50

(1 square foot of building floor area per 2 square feet of lot area.)

To calculate FAR, simply divide the total gross floor area of the building(s) by the area of the lot. For example, if the FAR limit is 0.5, then the building gross floor area (GFA) must be less than or equal to half of the lot area.

The definition of FAR from AMC 21.14.040 is provided on page 11 of Exhibit B.



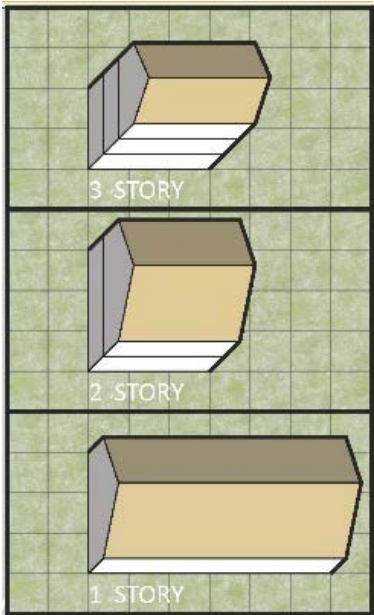
6.2 FAR Design Flexibility

FAR allows any massing configuration up to the 30 foot limit, and within the existing setbacks and maximum lot coverage. How the building square footage is allocated on the lot (either spread out or stacked up) remains flexible. **This gives more discretion to the designer in building placement, form, massing.**

To illustrate, at right are three possible configurations of equally sized structures, all with the same floor area. FAR closely links to building height and coverage. Housing can either be taller like the three-story building on the top, or more spread out like the single-story building on the bottom, but they cannot not be both.

FAR allows the site and building design to respond to site conditions or a neighbor (e.g., topography, backyard sunlight). **FAR makes it easier to fit all of the housing units allowed by the district, especially on constrained sites or larger sites with multiple site requirements.**

The figure below shows the additional building form types made possible by replacing the 2.5-story limit with FAR. The FAR system allows all of the forms currently allowed (in black background) plus five additional forms.

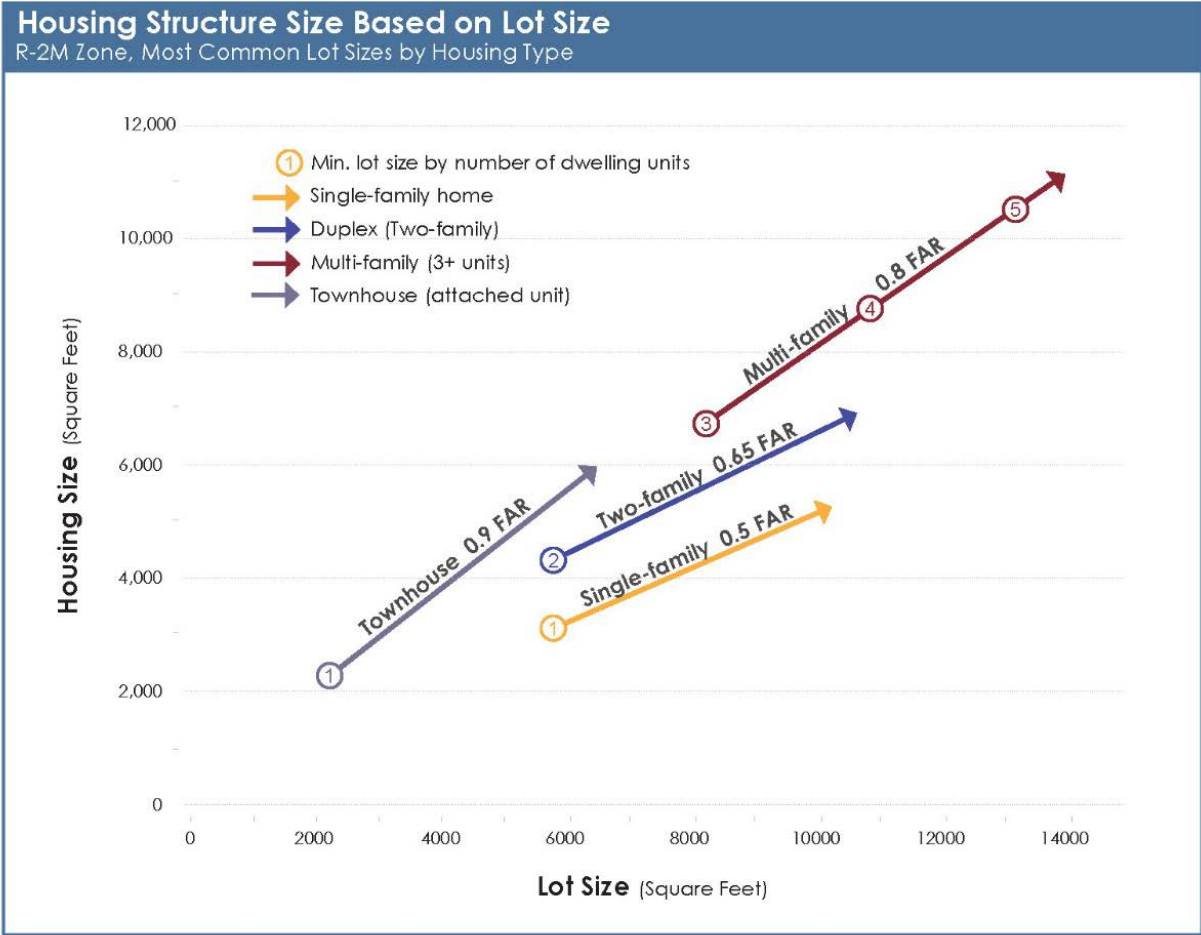


		STYLE				NUMBER OF STORIES
		FLAT ROOF	FLAT ROOF WITH DAYLIGHT BASEMENT	PITCHED ROOF	PITCHED ROOF WITH DAYLIGHT BASEMENT	
PROPOSED ALLOWED						3
						2 ½
CURRENTLY ALLOWED						2
						1 ½
						1



6.3 FAR Allows Structure Size to Increase Proportionate with Lot Size

The maximum housing structure size would be linked to lot size and zoning district. The graph below shows the allowed housing sizes increasing in correlation to the size of the lot in the R-2M zone.



6.4 FAR Allowances Tailored by Housing Type and Neighborhood

The recommended FARs increase for denser housing types that have more dwelling units relative to the minimum lot size. The **arrows** in the graph correspond to the **range of most common lot sizes** for each housing type:

- **Townhouse** lots are smaller than lots for other housing. Each dwelling is on its own narrow lot and attached at the lot line to dwellings on adjacent lots. A townhouse must have a high FAR (0.9) to provide adequate floor space.
- **Two-family (duplex)** and **Attached Single-family** lots are larger than townhouse lots because of side setbacks and a minimum lot area requirement of 3,000 square feet per dwelling unit.
- **Single-family detached home lots** are the largest relative to the number of dwellings allowed on the lot. Because a home does not share its lot with other units, a limit of 0.5 FAR provides for ample floor space and discourages replacing existing homes with very large homes out of proportion to the lot.
- **Multifamily** lots must have a higher FAR (a bigger building) in order to allow for marketable unit sizes while accommodating the full number of housing units allowed on the lot. The circled numbers in the arrows indicate the minimum lot size by number of dwelling units on the lot. The numbers show that multifamily has more units per given lot size than single- or two-family uses and therefore needs a higher FAR of 0.8.

# ANALYSIS OF AMENDMENTS

The recommended FAR limits accommodate the primary range of dwelling unit sizes desired on the market. They also accommodate recent trends in built dwelling unit sizes and FARs. The Planning Department analyzed Property Appraisal data to find the size and FAR of every housing structure built in the R-2A, R-2D, and R-2M zones. Staff grouped the resulting FARs by housing use type, lot size, and era (before 1971, after 2008, and all years). For each group, Planning staff determined the minimum, median, and mean FARs, the 85th and 95th percentile FARs, and the maximum FAR for each group. Broadly, the recommended FAR limits accommodate the 85<sup>th</sup> percentile size of recent construction (after 2008). The FAR analysis is provided Appendix A-1, available online.

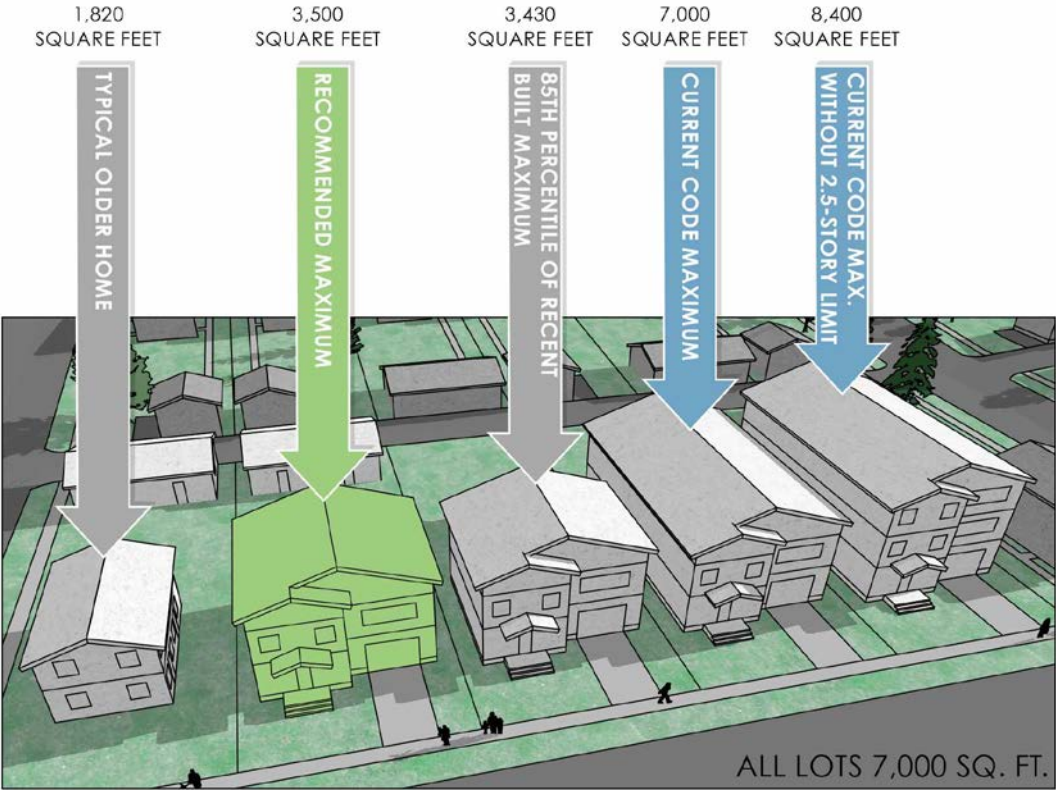
The analysis shows that most housing is not built to the maximum allowed size. For example, the illustration below shows the current maximum size of houses on a 7,000 square-foot lot in the R-2M zone on the fourth building from the left. Its lot coverage is 40 percent and it fits 7,000 square feet of floor area into its 2-1/2 stories.

The middle building in the illustration below (third from left) shows the 85<sup>th</sup> percentile of the largest recently built house size. The recommended FAR limits (second building from left, in green) reduces the maximum allowed size as compared to current code, yet accommodates the 85<sup>th</sup> percentile size of recent homes built.

The single-family maximum FAR of 0.50 provides for a relatively large home (e.g., 3,500 square feet on a 7,000 square foot lot), but not as large as the maximum allowed by current code. In comparison to current code, the draft amendments result in housing sizes that are less likely to overwhelm older neighbors, and provide less incentive to tear-down and replace existing homes with expensive, mansion-sized new houses that detract from neighborhood character and affordable housing objectives. Design options are available to add more floor area in non-bulky type spaces. (See Section 6.6.)

## Comparison of Allowed Single-family House Sizes

on 7,000 square-foot lots in R-2M zone



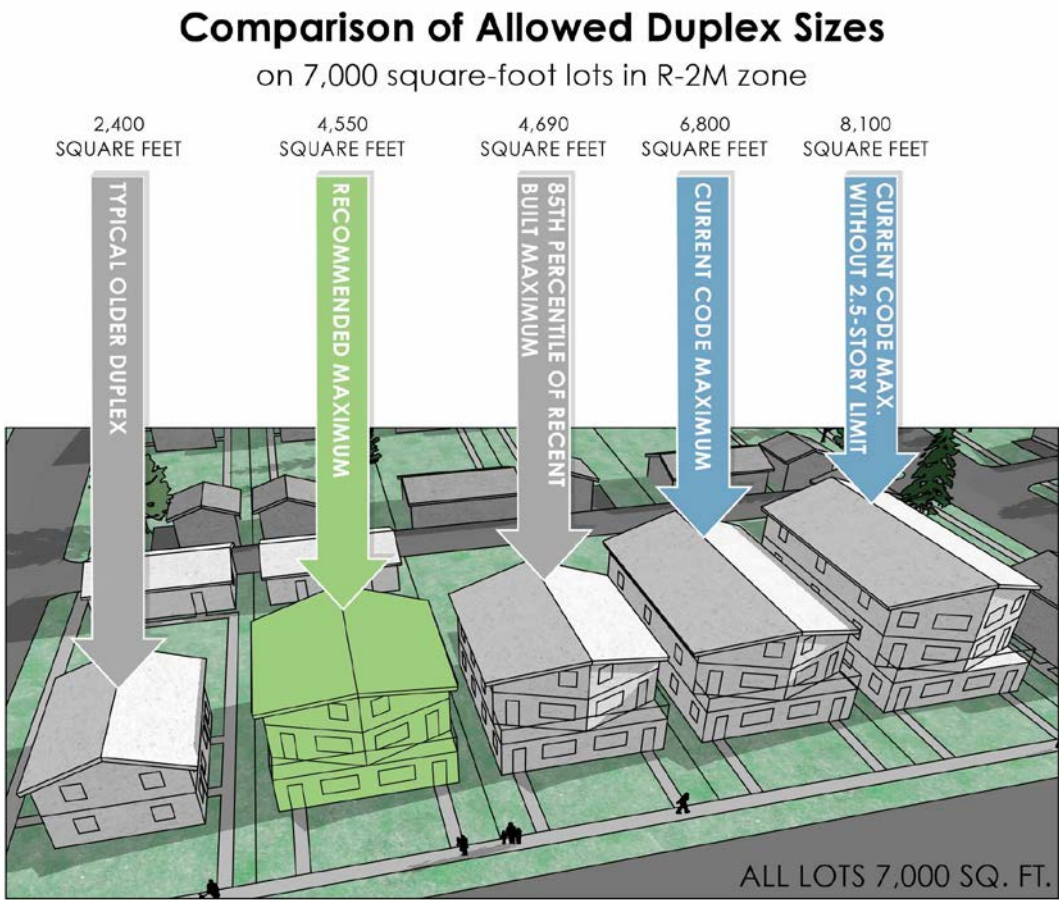
Two-family and Attached Single-family Unit Sizes

Consultations with real estate brokers in the residential market indicate that market demand for duplexes and attached townhouses is for three-bedroom, two-bath, two-car garage units, generally in the size range of between 1,500 – 1,850 square feet of living space. Adding 500 square feet for the two-car garage, this would increase the size of the unit to approximately 2,000 to 2,350 square feet gross floor area. Recently-built duplexes also include units with 1,900 square feet of gross floor area.

The recommended FAR limits for duplexes and attached housing accommodate recently-built dwelling unit sizes and FARs. Broadly, the recommended FAR limits accommodate the 85<sup>th</sup> percentile size of recent construction.

The 85<sup>th</sup> percentile of the largest recent built duplex size is illustrated by the middle building (illustration below). The recommended duplex FAR limits (second building from left, in green) reduces the maximum allowed size as compared to current code, but are comparable to the 85<sup>th</sup> percentile maximum size.

Several duplexes constructed recently are out of scale with the neighborhoods and have resulted in negative public comments, including several that reach nearly 0.70 FAR and one with an FAR of 0.78. These units exceed the main bell curve for unit size demands from the market. The recommended FAR limit of 0.65 accommodates the 85<sup>th</sup> percentile and the size range of units in demand—e.g., nearly 2,300 square feet GFA per unit on a 7,000 square-foot lot. Design options are available to add even more floor area in non-bulky type spaces. (See Section 6.6.)



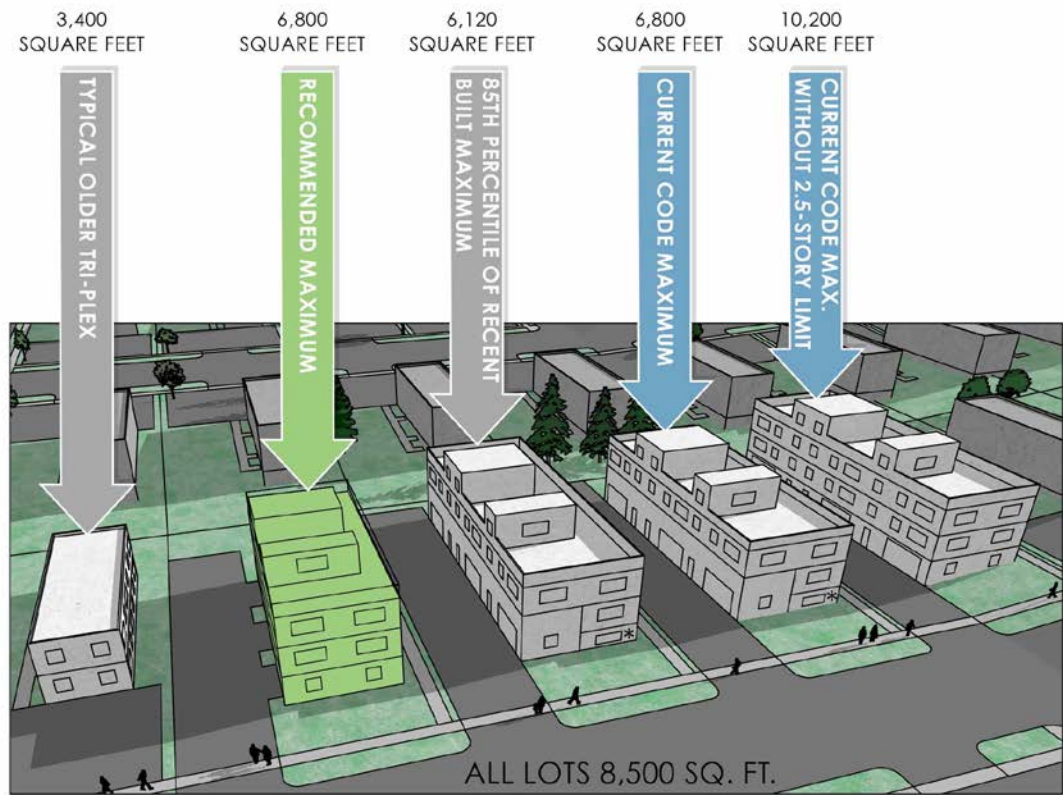


Multifamily Building Sizes

The intent of the R-2M zone (the only R-2 district that allows multifamily uses) is to provide a transition from single-family and two-family neighborhoods to the denser multifamily neighborhoods of R-3 and R-3A. Although multifamily is permitted, it must be compatible with the scale of the other residential uses. FAR provides additional protection from incompatible construction size that may negatively impact neighborhoods and their residents. Some built housing projects do not fit within some neighborhoods, and have too much bulk or appear uncharacteristic for the area. While the buildings do provide the housing allowed, the dimensions of the units could be different.

In response to comments regarding the Community Discussion Draft from builders recommending higher FAR limits for townhouse and multifamily housing, Planning staff re-evaluated the historical and recent trends FARs of existing housing stock. The Public Hearing Draft was changed to increase the multifamily and townhouse FAR limits to 0.80 and 0.90, respectively. For multifamily, 0.80 FAR accommodates up to the 85th percentile unit sizes for the most common lot sizes. For townhouses, 0.90 FAR does the same. This reduces the lot coverage bulk of three-story multifamily buildings (second building from left below) in comparison to current code (fourth building from left). Accepting higher FAR values than these would not reflect recent development, the intent of the zoning district, or the policies of the *Comprehensive Plan*. The revised limits do not prevent construction, rather they accommodate more varied housing types.

Comparison of Allowed Multifamily (Tri-plex) Building Sizes  
on 8,500 square-foot lots in R-2M zone



\* Daylight basement floor area is not included, as it is not counted toward FAR.



6.5 FAR: A Simple and Familiar Tool

FAR is a simple zoning tool for keeping the bulk of structures in proportion to the lot. It is easier and more straight-forward than the 2.5-story standard. The 2.5-story standard includes the characteristics of a design standard for constraining a building’s design or roof style. By comparison, FAR is a clear and objective dimensional standard that supports predictable, efficient over-the-counter permit reviews.

FAR is a single number: a ratio of building floor space to the area of the lot. It is a ratio between two known quantities: the building’s gross floor area (GFA) and lot area. It is calculated using area measured in square footage, which is a familiar and preferable measure in the building industry (as compared to ½ stories). It is also more consistent with the measurement of most other Title 21 regulations.

FAR is a familiar zoning tool for the Municipality. It has been used for decades by the R-4 district and for apartments by the RO and B-3 districts. Since 2005, it is also been administered successfully in Girdwood’s gR-1, -2, -3, -4 single-family, two-family, and multi-family zoning districts. Girdwood essentially provides Anchorage with a limited-area test-case for applying FAR in review and approval of low-density residential homes and multi-unit building land use permits. The experience of municipal front-counter land use administrators is that FAR has not affected permit review times for residences in Girdwood.

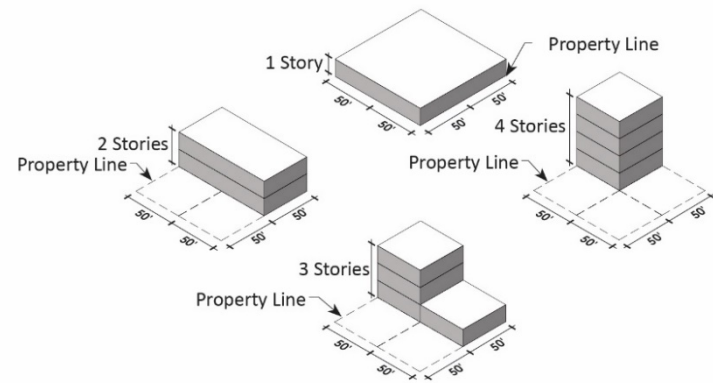
While FAR is already familiar to architects, municipal land use reviewers, and a few local builders, replacing the 2.5-story limit with FAR in the R-2 zones does introduce FAR to a much broader set of homebuilders and permit reviews. Homebuilders have expressed concerns in public comments and consultation meetings that the FAR calculation is too complicated. In response, the Planning Department conducted site tests applying all the Title 21 regulations along with the recommended R-2 amendments on a set of multifamily development scenarios. (Appendix A-2 available on the project web site provides the site tests.) The site tests found:

- FAR compliance was easy to determine and had a negligible effect in comparison to current code requirements on the time needed to design and review for code compliance.
- FAR had little to no effect on the ability for developments to meet unit sizes and types currently in demand.
- FAR worked in tandem with the other dimensional standards to create well-proportioned buildings that did not crowd the lots.

The code provides the user with definitions of gross floor area and FAR in AMC 21.14.040., and identifies which parts of a building are exempted in AMC 21.06.030E. Other Title 21 definitions such as “story below grade plane” also help define parts of a building exempt from FAR calculations. An informational how-to sheet with illustrations and examples can assist first-time users in finding and applying this information.

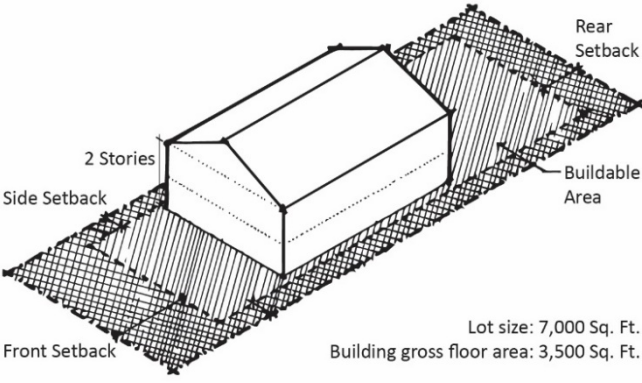
Floor Area Ratio (FAR) Example 1

Figures each depict a FAR of 1.0



Floor Area Ratio (FAR) Example 2

Figure depicts FAR of 0.5



6.6 FAR: Exempting Non-bulky Floor-spaces

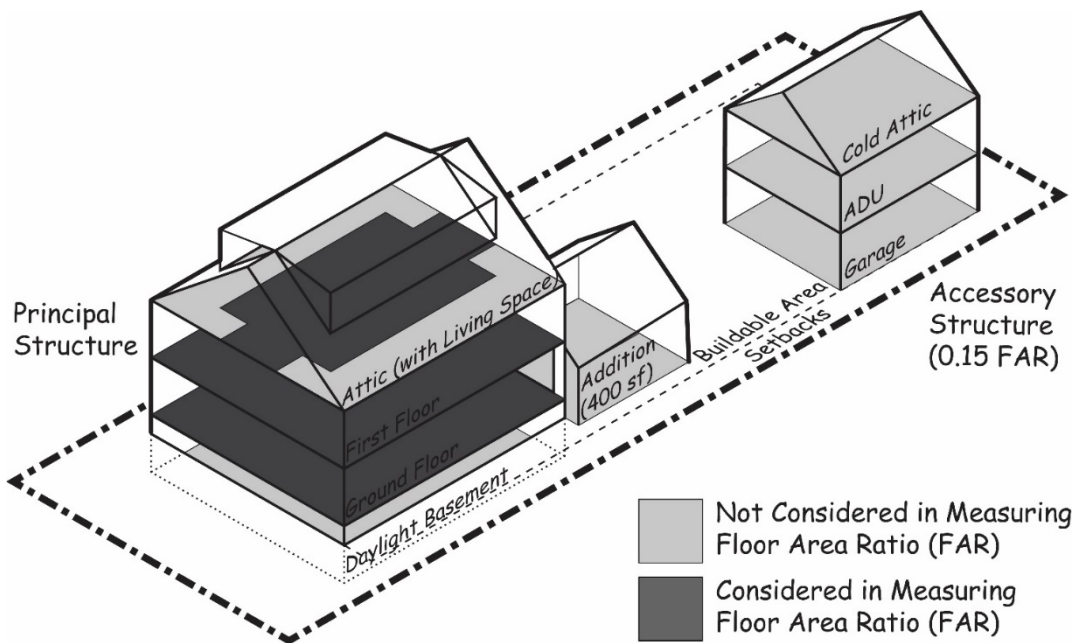
These amendments exempt and partially exclude floor spaces that do not contribute as much bulk. These exemptions recognize and reward designs that reduce the impacts of bigger buildings, and provide a creative option for builders and property owners who want more floor space than the basic FAR limitation would allow. They also provide an incentive for the retention and expansion of existing housing stock, as opposed to tear-downs and replacement with bigger buildings. These changes revise the current FAR exemptions to better address the smaller lots and structures that characterize the R-2 residential zones.

The recommended amendments broaden the current exemption for attics to include half-stories, and they remove the design standard for roof pitch. The changes exempt the portion of the attic/half-story living space that have ceiling heights less than 90,” which are not counted as habitable area per the building code.

The current exemption for “stories below grade plane” (aka., basements and daylight basements) is carried forward with no change. AMC 21.14.040 defines a story below grade plane as a story in which the finished floor of the story above it is no more than six feet above the grade plane, and no more than 12 feet above the finished grade at any point. Daylight and full basements are an option for significantly increasing unit size without impacts to building bulk/FAR.

The amendments revise the current detached accessory structure exception in item d. to exempt the first 0.15 FAR worth of floor area. This balances the incentive to break up the massing of buildings on the site with the objective to address the bulk impacts that large accessory structures could have in low-rise residential zones. The proposed FAR limits accommodate all types of accessory structures, including garages and ADUs. These complement the recent easing of regulations on backyard ADUs and mother-in-law apartments. The intended benefits include to make Anchorage more affordable and reduce teardowns of older houses.

An exception to floor area limits is provided for existing houses to have one addition that exceeds FAR limits.





## 7. Height of Rooftop “Appurtenances”

### 7.1 Recommendation #2: Revise the Height Exceptions for Rooftop Appurtenances

- Reduce the maximum height exemption for rooftop access stairwell enclosures on residential buildings from 15 to 11 feet.
- Reduce the maximum height exemption for rooftop elevator access enclosures on residential buildings from 25 to 16 feet.
- Reduce the height exception for solid parapet walls, fire-resistant rated walls, and skylights from four to three feet in all zoning districts.
- Continue to allow open or transparent railings to exceed the height limit by more than three feet.
- Exempt dormers from building height measurement, provided they meet specified size limits.

Affects: R-1, R-1A, R-2A, R-2D, and R-2M zoned properties in Anchorage and Chugiak-Eagle River, except the revised height exceptions for parapets and dormers affects all zoning districts.

**General Discussion:** Title 21 Section 21.06.030D.6.c. allows building appurtenances to not be counted toward the maximum allowed building height in the district, and sets the rules for these exceptions. Appurtenances include things like antennas, chimneys, and rooftop stairwell enclosures. While not counted, appurtenances do contribute to the bulk and scale of buildings. The recommended changes to appurtenance height exceptions respond to other amendments in this ordinance that enable construction of three-story, flat-roofed buildings with parapet walls and rooftop access enclosures.

Sections 7.2 and 7.3 that follow address the appurtenance height amendments that were subject to the most change and public comments.

### 7.2 Rooftop Stairwell and Elevator Enclosures

Currently, Title 21 allows stairwells and mechanical enclosures to exceed the 30-foot height limit by 15 feet. Elevator enclosures may exceed by 25 feet. The proposed changes reduce the exemption for stairwells to 11 feet, and for elevators to 16 feet, on residential buildings in the R-1 and R-2 zoning districts.

The current exceptions were written for multi-story apartment complexes and commercial office buildings in higher intensity districts, and not for the scale of the R-1 and R-2 zones. Historically, this was not a problem because three-story flat-roofed residential buildings with stairwell towers were rare in these zones. But recent trends are toward taller buildings with greater massing and height, which have impacted their neighbors.

The recommended 11-foot and 16-foot height exceptions reflect expert consultations with local residential and commercial elevator installation companies, and with municipal elevator inspectors. They accommodate the height needs of rooftop access stairwells and elevator models commonly used in residential buildings of three stories or less. Staff also reviewed other communities’ regulations for context.

Public comments regarding the initial draft ordinance expressed concerns that allowing three-story buildings will cause shadowing and bulk impacts from rooftop stairwell and elevator access towers to occur more often, and the reduced heights of these enclosures are not enough to mitigate. As a result, the Public Hearing Draft includes a provision (G) that requires rooftop enclosures to adhere to the solar access step-back/setback. This provision moves forward with allowing the stairwell and elevator towers on top of three story buildings, but with thoughtful placement of these rooftop towers with respect to neighboring properties.

- Site testing of multifamily townhouse structures developed under the proposed code showed the proposed limits on stairwells did not alter or complicate the configuration of units.

7.3 Parapets

Parapets are a low wall or protective barrier surrounding a flat roof or roof terrace. Parapet walls may extend above the 30-foot building height limit. Solid parapets effectively increase the façade wall height of flat-roofed buildings, and can contribute to bulk or shadowing impacts.

Allowing three-story flat-roof construction with parapets extending four feet above the 30-foot height limit could create shadowing and bulk conditions not previously experienced in the the R-2 neighborhoods. To mitigate these conditions, the R-2 amendment proposes that parapet walls extend no higher above the allowed building height than functionally necessary.

At the suggestion of homebuilders, Planning staff held consultations with a local architect and building permit reviewers, and conducted other research. The Public Hearing Draft recommends reducing the height exemption for solid parapet walls in Title 21 from four feet to three feet. The recommended new parapet limit reflects the consultations and research into how much clearance parapets need above the roof surface. These clearance needs are consistent across building types.

A three-foot exemption is adequate in all zones not just the R-1 and R-2, and for both residential and commercial building types. Three feet appears to be adequate even when a safety railing bracket needs to be attached to the parapet wall. Consultations indicated that three feet is also enough for required fire-resistant safety walls. In residential zones, an extra foot of wall height matters a great deal, especially in reducing shading and increasing visual access to the sky.

The research and consultations also suggested completely exempting open railings from maximum building heights, and to clarify the definition of “open and transparent railing” without regulating material type.

Homebuilders expressed concerns about homebuyer preferences for privacy, such as for walls around hot tubs. Staff researched this concern and found that enclosures around rooftop hot tubs or other activity areas are not subject to the parapet height limits. Additionally, privacy on the roof-top patio is a secondary concern to bulk/shadow impacts, especially if the patio is one or two stories above its neighbors, and therefore out of sight.



Transparent railing on left and solid parapet at right.  
Roof access enclosures in both.





## 8. Three-story Building Placement and Design

### 8.1 Recommendation #3: Mitigate Impacts of 3-story Buildings

- In the R-2M district, change the building height threshold for applying the 150-foot maximum building length requirement from 2.5 stories to 25 feet.
- In the R-2M district, require three-story multifamily façade walls that face abutting properties to be divided into smaller sections (wall planes) or provide other ways to visually break up large, flat, blank walls.
- In the R-2M district, limit the height of exterior stairs that lead to main entrances of multifamily residential units to no more than six feet above grade.
- In the R-2A, R-2D, and R-2M districts, require buildings to stay below a solar access setback or step-back from neighboring lots to the east, west, and north.
- Allow use of the Alternative Equivalent Compliance administrative procedure for design alternatives to the requirements above.
- Exclude Chugiak-Eagle River from the R-2M district-specific standards and R-2 zones solar access step-back.

**General Discussion:** These amendments respond to the deletion of the 2.5-story limit. They mitigate the impacts of three-story structures constructed on lots abutting other properties. This ordinance seeks to ease construction of multi-family buildings, especially by more efficiently accommodating living space on constrained sites, while respecting the scale and character of the neighborhood.

Sections 8.2, 8.3, and 8.4 that follow address the three-story building design mitigation amendments that are most significant or received the most public comments.

### 8.2 Maximum Building Length

Subsection b. in the R-2M District-specific standards in current code limits 2.5-story tall buildings to a maximum length of 150 feet. This standard addresses bulk and shadowing effects of taller buildings.

The purpose of the R-2M zone is to provide “a transition between single-family, two-family, and higher density multifamily”. New buildings should be “complementary” to, not out-of-scale with, existing buildings. Lot size patterns in R-2 zoned neighborhoods are such that buildings usually will be no more than 100 to 130 feet in length. Most buildings actually built in the R-2M are less than 70 feet in length. A single large building can quickly overwhelm a street in the R-2M zones.

The R-2M district allows up to eight units in a building. Historically, multi-unit structures efficiently grouped or stacked units within a structure. Recent trends toward larger, townhouse-style units are resulting in bigger buildings with fewer units. The current 2.5-story/150-foot building length limit keeps taller townhouse structures from becoming as large as 12-unit apartment complexes—i.e., out of scale with the R-2M neighborhood. A 150-foot long building can accommodate six 24-foot wide townhouse units or seven to eight smaller townhouse units.

The proposed amendment changes the building height threshold for applying the 150-foot maximum building length requirement to a 25-foot building height threshold. Changing the measurement to 25 feet is consistent with other changes in the ordinance that delete the 2.5-story standard.



Coho Way Townhouses. Three-story, nine-unit building in foreground is around 144 feet in length.



Park Strip Lofts. Four units, two stories with daylight basement, and 98 feet length.

## 8.3 Three-story Wall Articulation

New subsection c. in the R-2M District-specific standards is a wall articulation requirement for tall façade walls that face abutting properties. It mitigates flat, blank three-story multi-family façades walls constructed on lots abutting other residential properties in R-2M neighborhoods. It arises from the concern that if the 2.5-story limit is removed, then walls like that shown to the right will be constructed facing neighboring homes. The objective is to promote thoughtful design of long three-story façade walls when in view of other residential properties.



The proposed standard applies the existing building articulation menu from the Title 21 residential design standards in AMC 21.07.110C.7. The menu currently applies to street-facing and primary entry facades. The R-2 amendment extends this articulation requirement to three-story, side walls that face a neighboring residential property. This menu provides choices for how to visually “break up” flat, blank walls. Some menu choices are simply detail elements or variations in siding materials.



The amendment requires one façade to choose wall plane modulation (projections and recesses) to divide it into smaller, distinct sections (“wall planes”). This may come in minor modulations, in step-backs or cantilevers, or other means. This is an effective way to break-down the visual scale of a large blank wall. The middle bottom photos at right are examples of breaking up a three-story multifamily wall facing a side lot line.



Public comments raised concerns regarding the consistency of building articulation requirements across a multi-building development, redundancy with the current façade articulation requirements, and requiring articulation of facades where not necessary to protect neighboring residential properties. In response, Planning staff tested the combined applicability of the current code and proposed R-2 building articulation standards on several existing multi-building residential developments. *The tests indicated:*

- Wall articulation should apply only to side walls, because the current code’s residential design standards for multifamily and townhouse developments already require any building elevation that faces a street or has a front entry provide articulation.
- Facades that are obscured from the neighboring lot by topography or vegetation should not be subject to the proposed three-story façade articulation requirement.
- Wall articulation should apply only to walls that face an abutting residential-zoned lot.
- The wall height threshold should be re-phrased from 3 stories to its close equivalent of 25 feet in wall height, for clarity.

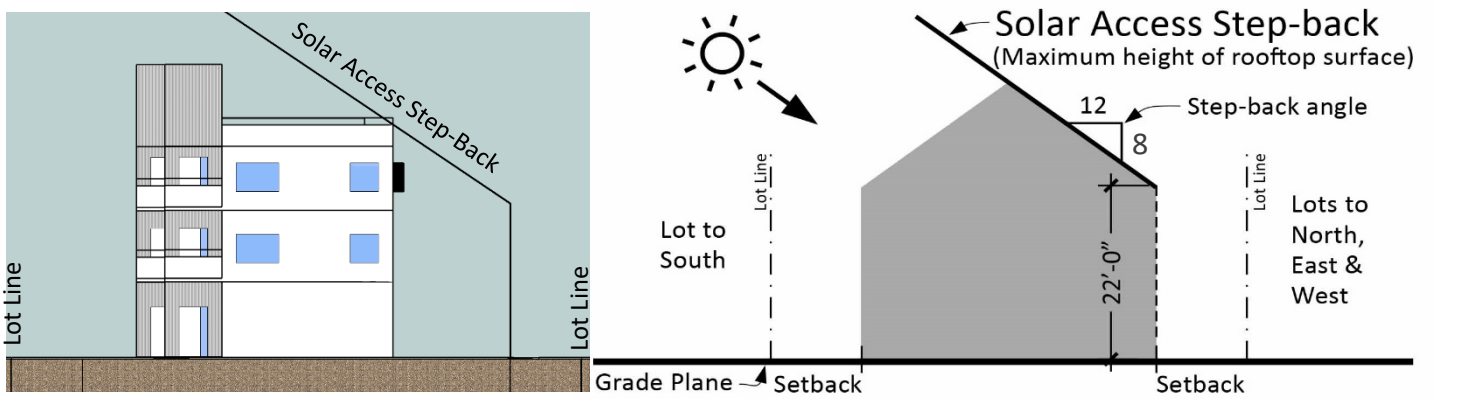


The existing Title 21 Alternative Equivalent Compliance procedure is recommended in the Public Hearing Draft to provide administrative flexibility. It adds an exemption for buildings screened from view because of topography, vegetation, or other reasons.

8.4 Solar Access Step-back

This new subsection is intended to retain an equivalent level of solar access protection for residences in the R-2A, R-2D, and R-2M districts as existed under the 2.5-story limit. The level solar access protection is limited to addressing the increase in potential shadowing that would otherwise result from the R-2 amendment removing the 2.5-story standard.

The step-back re-creates the approximate height of a 2.5-story building built to the minimum side yard setback next to an existing home. Its height and incline approximate a sloping roof pitch over a half-story living space above the second floor. This effectively retains a similar building entitlement for the builder along the shared lot line as existed under the 2.5-story limit.



The step-back’s advantage over the 2.5-story limit for the builder is that it applies only along lot lines shared with a residential property to its north, east, or west—i.e., where it would shadow the neighbor. It does not apply along a southern property boundary (any property line oriented within 30 degrees of south). The builder can reach the full three stories to the 30-foot height limit within the rest of the building site. By comparison, the 2.5-story standard limits heights and controls roof slope across the builder’s entire development site.

Homebuilders raised concerns regarding the solar access step-back standard and its inclusion in this ordinance. Section 9.4 of this analysis discusses the policy considerations for including the solar step-back in this ordinance.

In response to homebuilders public comments and concerns expressed in consultation meetings, the Planning Department reassessed the solar access step-back standard. The Planning Department also consulted with homebuilders to conduct a comprehensive test of the combined effect of all Title 21 zoning regulations on four hypothetical multifamily 4-unit townhouse development scenarios, using an 11,200 square-foot urban redevelopment site, under the recommended R-2 amendments. Findings regarding the solar access step-back:

- In all test case development scenarios, the solar access step-back had no effect on building or unit sizes or configurations, and allowed for three-story buildings.
- The primary effect of the step-back was to shift the building placement relative to parking and other site requirements.
- The step-back standard was simple to use. It is brief, clear, and objective, comprising a single sentence on two lines (lines 18-19) on page 6 of Exhibit B, and accompanied by a pair of illustrations.

A review of the step-back dimensional requirements as compared to typical construction dimensions found that the 22-foot starting height for the step-back allows for two-story buildings to be placed at the side setback. However, the 6:12 incline in the Public Hearing Draft should be increased to 8:12 to accommodate half-story attic spaces particularly on 50-foot wide standard lots. An edit is proposed in the recommendations section of this report.





## 9. Other Policy Considerations

### 9.1 Why Not Simply Delete the 2.5-story Limit?

Builders have demonstrated that the 2.5-story standard has inherent weaknesses, and have suggested its deletion. However, the 2.5-story standard does have a specific function. It carries out the 2040 LUP policy direction that the scale of infill housing be compatible with the R-2 zoned neighborhoods. The coexistence of multi-unit housing types in the R-2 zones increases the need for district-specific ground rules for all housing types to be built in context with the bulk, scale, and height of the neighborhood. Simply deleting the current standard and building out to the remaining dimensional entitlements would enable buildings that are out of scale with not only the existing homes, but also the intended future neighborhood scale as envisioned in the 2040 LUP. The far right-hand buildings in the diagrams on pages 18-20 illustrate this negative outcome.

*By comparison, the recommended amendments address neighborhood compatibility even as they improve the code’s flexibility to allow for innovative, compact infill housing design and the full number of units allowed by zoning.*

### 9.2 Why Not Simply Retain the 2.5-story Limit on just the Smaller Lots?

This ordinance proposes to remove the 2.5-story standard and replace it with a more flexible, consistent standard that works at all lot sizes. Some commenters suggested retaining the 2.5-story limit on small lots and exempting larger lots. The Planning Department examined lot sizes throughout the R-2A, R-2D, and R-2M zoning districts. The map on page 30 shows the analysis of lot sizes. Based on that analysis, the Department finds that:

- a. **Exempting larger lots would not provide predictability and would result in an arbitrary application of Title 21 compatibility standards.** Larger lots (e.g., lots larger than either 14,000 or 21,000 square feet) are widely distributed in smaller-scale R-2 neighborhoods (map page 30). Many large lots are found within neighborhoods near smaller lots and structures. Furthermore, developers can combine smaller lots to create larger lots. Or subdivide large lots into smaller lots. Because the range of lot sizes varies within neighborhoods and even individual street blocks, the effect of a lot size-based dual system of standards would be unpredictable, and create arbitrary regulations and development patterns.

Lot size does not determine how much a building’s height will impact its neighbors. Lot location and the building’s location on the lot determine a building’s impact on its neighbors. For example, in the scenario illustrated below, only lots 14,000 square feet or larger are exempt from the 2.5-story limit. The two homes in the middle labelled with a “1” are shadowed by the 3-story building labelled “3” which is on a 14,000 square-foot lot. Meanwhile the building labelled “2”, which is on a 11,200 square-foot lot to the north, is subject to a 2.5-story standard, even though it shadows nobody. The system fails to protect the houses from building “3” and arbitrarily applies more stringent height limits on building “2”.

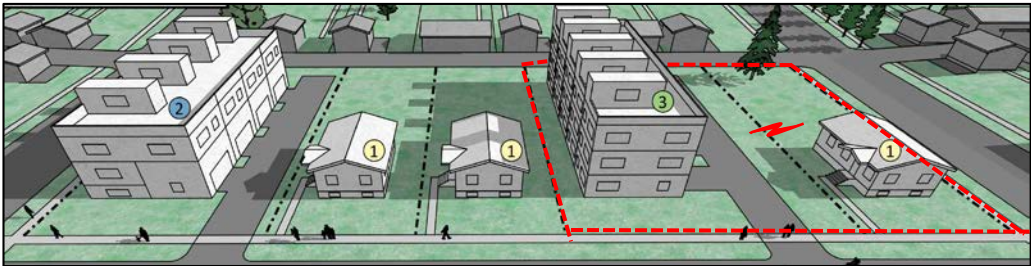


- ① Existing Older Home on 7,000 Square-foot Lot
- ② 2-story Four-plex with Basement on 11,200 Square-foot Lot, Subject to 2.5-story Height Limit in this Scenario
- ③ 3-story Five-plex on 14,000 Square-foot Lot, Exempt from 2.5-story Height Limit in this Scenario



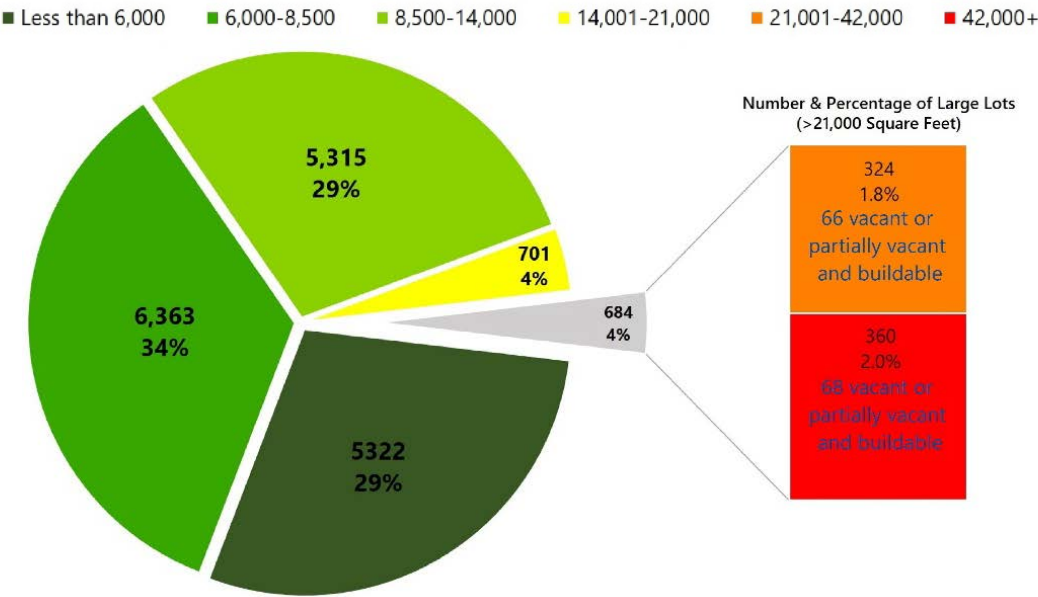
# ANALYSIS OF AMENDMENTS

**But what about increasing the lot size threshold to 21,000 square feet?** The diagram below shows a 21,000 square foot threshold would not solve the problem. A simple platting action can combine the 7,000 square foot lot on the far right with the 14,000 square-foot lot. The builder can still build the three-story structure up close to the middle house. The lot size exemption is an incentive for builders to aggregate lots, which could accelerate changes in the neighborhood’s lot patterns and housing types.



- b. **Exempting only larger lots would limit development/design flexibility and new housing units, especially in areas where new housing is needed most.** While scattered through the neighborhoods, the number of lots that are larger than 21,000 square feet, make up only about four percent of the total number of lots with existing R-2 zoning districts. Nine out of 10 R-2 zoned lots are smaller than 14,000 square feet. Many of the larger lots are located in outlying areas of town that are not priority areas for growth per the *2040 Land Use Plan Map*.

Number & Percentage of Parcels by Size  
(Square Feet)



- c. **There are inherent problems with the 2.5-story standard, regardless of what lot size it is applied to.** The current 2.5-story standard limits design flexibility and does not ensure a consistent maximum building height or level of sunlight access protection for neighbors. Keeping it for small lots would retain these inherent problems and then compound inconsistencies in a more complicated, arbitrary two-track application of Title 21 standards.
- d. **The recommended FAR limits, in combination with the solar access protections discussed in section 8.4, can more consistently (a) reduce building scale in proportion to lot size, (b) ensure graceful height/scale transitions to smaller adjoining properties, and (c) protect greater solar access to neighbors than does the 2.5-story standard.**

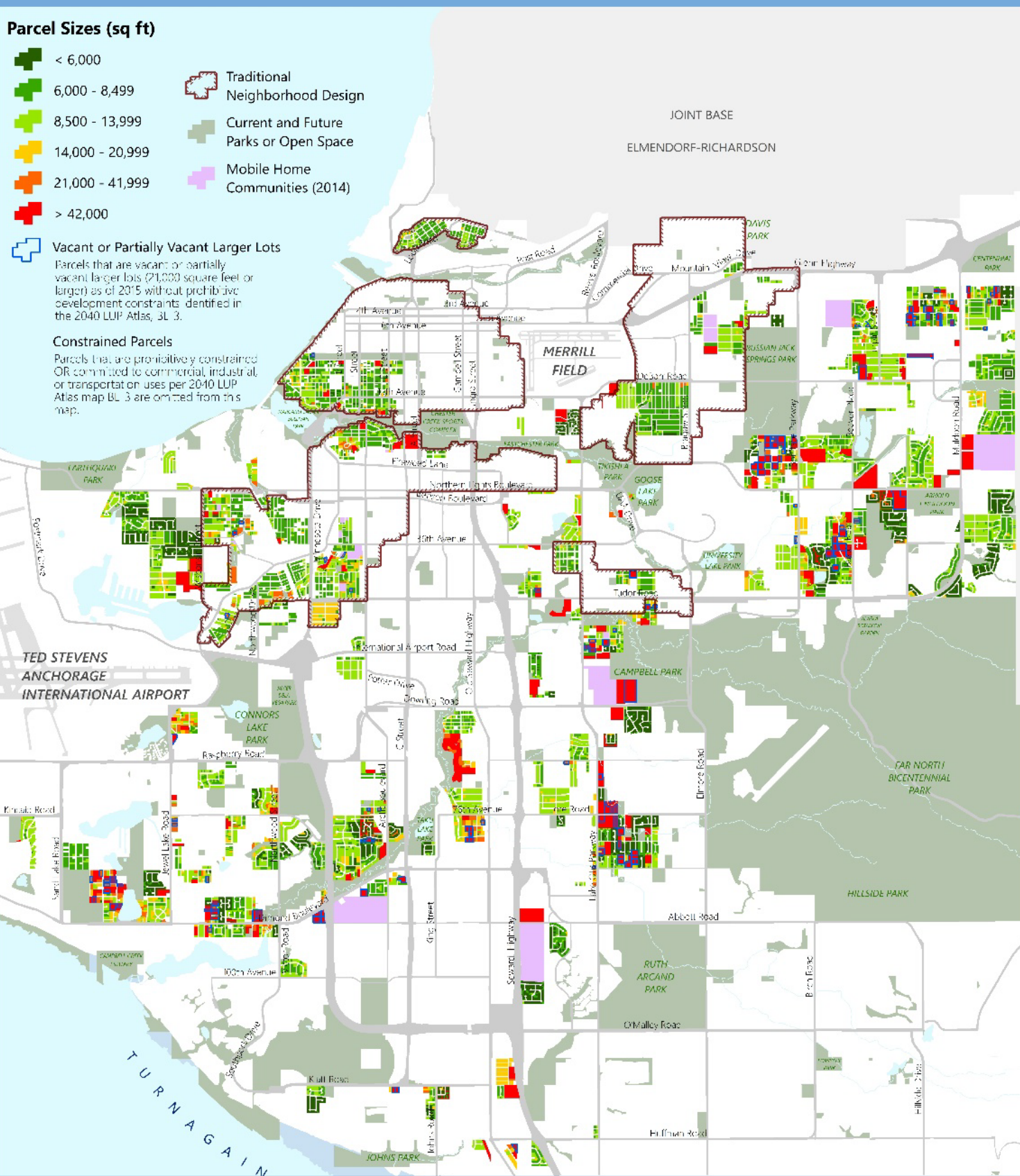
R-2 Zoning District Lot Sizes and Development Constraints

Parcel Sizes (sq ft)

- < 6,000
  - 6,000 - 8,499
  - 8,500 - 13,999
  - 14,000 - 20,999
  - 21,000 - 41,999
  - > 42,000
- Traditional Neighborhood Design
- Current and Future Parks or Open Space
- Mobile Home Communities (2014)

**Vacant or Partially Vacant Larger Lots**  
Parcels that are vacant or partially vacant larger lots (21,000 square feet or larger) as of 2015 without prohibitive development constraints identified in the 2040 LUP Atlas, 3L 3.

**Constrained Parcels**  
Parcels that are prohibitively constrained OR committed to commercial, industrial, or transport on uses per 2040 LUP Atlas map 3L 3 are omitted from this map.





## ANALYSIS OF AMENDMENTS

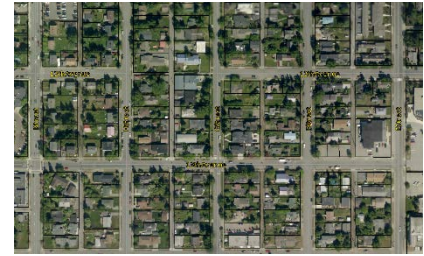
### 9.3 Why Not Keep the 2.5-story Limit for Just Older Neighborhoods?

Commenters also suggested retaining the 2.5-story limit in “Traditional Neighborhood Design” areas from the *Anchorage 2040 Land Use Plan*. **Traditional Neighborhood Design (TND)** is a “growth-supporting feature” in the *2040 LUP* that promotes new development. TND in *2040* is not a historic preservation tool for retaining older-era building scales. Rather, it calls for reinforcing the interconnected streets, sidewalks, and urban patterns of development in older parts of town to catalyze new development and redevelopment.

The photo at right of a modern, three-story townhouse development is from the TND section of the *2040 LUP*. The recommended R-2 zones amendment advances the goals of the TND growth-supporting feature by introducing more flexible opportunities for compact development through FAR.

One of the biggest concerns raised by the public about the R-2 amendments is conservation of historic neighborhood scale and character, particularly in South Addition. The *Anchorage Original Neighborhoods Historic Preservation Plan*, an area-specific element of Anchorage's *Comprehensive Plan*, recognizes the special characteristics of South Addition and several other neighborhoods. **But South Addition comprises less than four percent (4%) of all R-2 zoned area in the Bowl.**

To address conservation of historic characteristics of specific neighborhoods, overlay zones and other tools are available to carry out area-specific plans. For example, the Anchorage Original Neighborhoods Historic Preservation Plan calls for an historical overlay zone for parts of South Addition that can address scale, massing, setbacks, frontages, architectural character, and materials.



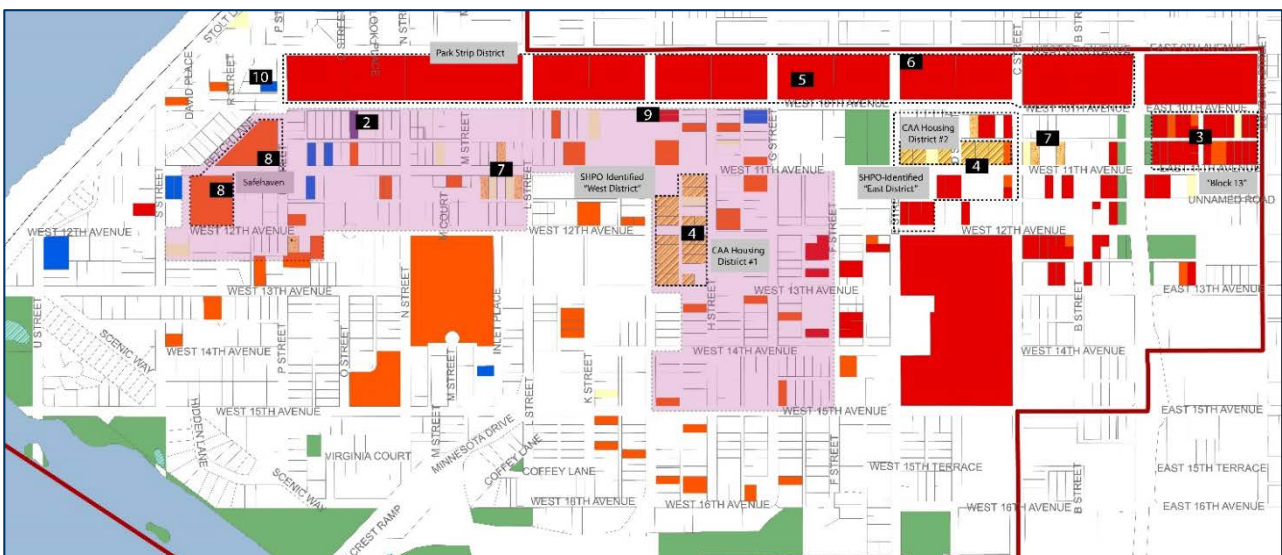
TND: Walkable urban street grid.



TND includes modern, 3-story infill housing such as these townhomes.

*Anchorage Original Neighborhoods Historic Preservation Plan* (p. 198):  
Opportunities for Preservation in South Addition

 **Potential West Historic District** (primarily comprises R-2D and R-2M zoned areas)



The overlay zoning tool is available in zoning code (AMC 21.04.070) to create an overlay zone to protect historic characteristics of an area. The “West Historic District” could also be nominated for the National Historic Register. Anchorage is also developing a Local Landmarks Ordinance to provide for a local historic districts and resources.

9.4 Why Not Simply Use FAR without a Solar Access Step-back?

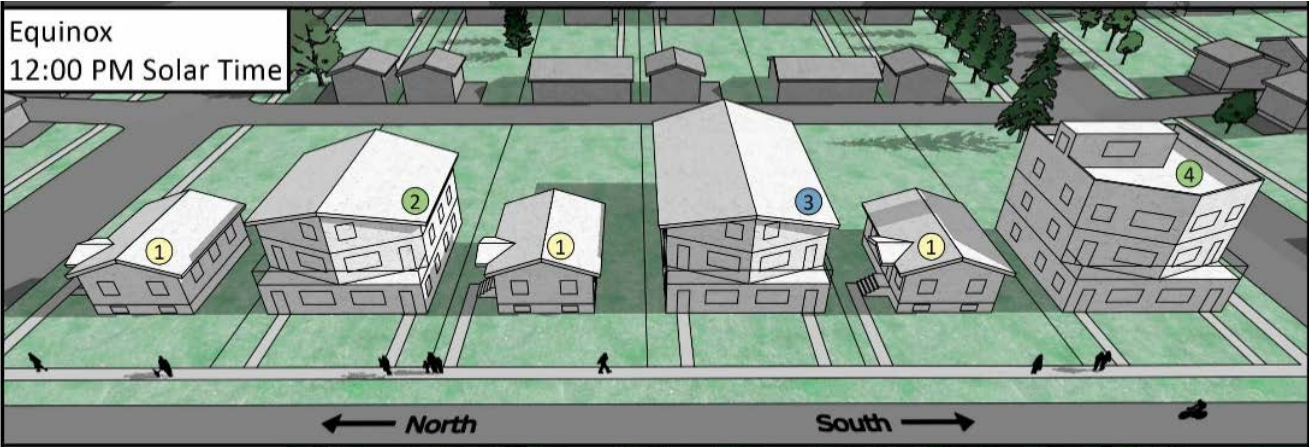
The R-2 amendment arose from a request by builders to remove the 2.5-story limit and simply allow the 30-foot height limit and lot coverage requirements to govern maximum allowable building sizes. The inclusion of a solar access step-back along with other mitigating standards for deleting the 2.5-story limit is of concern to builders. Builders in public comments and in consultations have expressed that the new standards are complicated and unproven, will be severely limiting to development and unworkable, and run counter to the policies of the Comprehensive Plan goals for providing affordable housing options.

The Community Discussion Draft amendments released on September 27, 2018 did not include a solar access step-back. Public comments from Community Councils and residents raised the concern about shadowing impacts on sunlight access to homes in the R-2 districts should the 2.5-story standard be eliminated. Sunlight access concerns include: usability of yards and gardens, livability, health, higher home energy bills, and potential new shadow impacts on the growing number of rooftop photovoltaic (PV) energy systems.

The Planning Department examined the solar access issue and tested the potential shadowing impacts of changing from a 2.5-story to an FAR standard, as shown in the two diagrams below and next page. (A full set of solar access study diagrams can be found in Appendix A-3, available on the project website.) The Department found:

- 1. Going to FAR may increase the total area sunlight access for neighboring properties because it limits the overall bulk and volume of a building more so than does current code. Even if a new house or duplex is taller it will cover less of the lot, which means the some part of the neighboring lot may receive sunlight for longer periods.
- 2. Going to FAR will allow a new building to shadow at least part of the neighbor’s lot more than under current code, by being taller, as the diagrams below illustrate. The middle building (“3”) below shows the 2.5-story limit typically results in a pitched-roof building with side walls 22-25 feet tall. Building “4” on the right shows how going to FAR enables a flat-roofed building with 33 foot tall sidewalls (including parapets) plus a rooftop stairwell.
- 3. A solar access step-back can re-create an equivalent level of sunlight access protection for residences in the R-2A, R-2D, and R-2M districts as existed under the 2.5-story standard without reducing the entitlement to build housing. Building “2” shows the FAR maximum building size with the solar step-back.

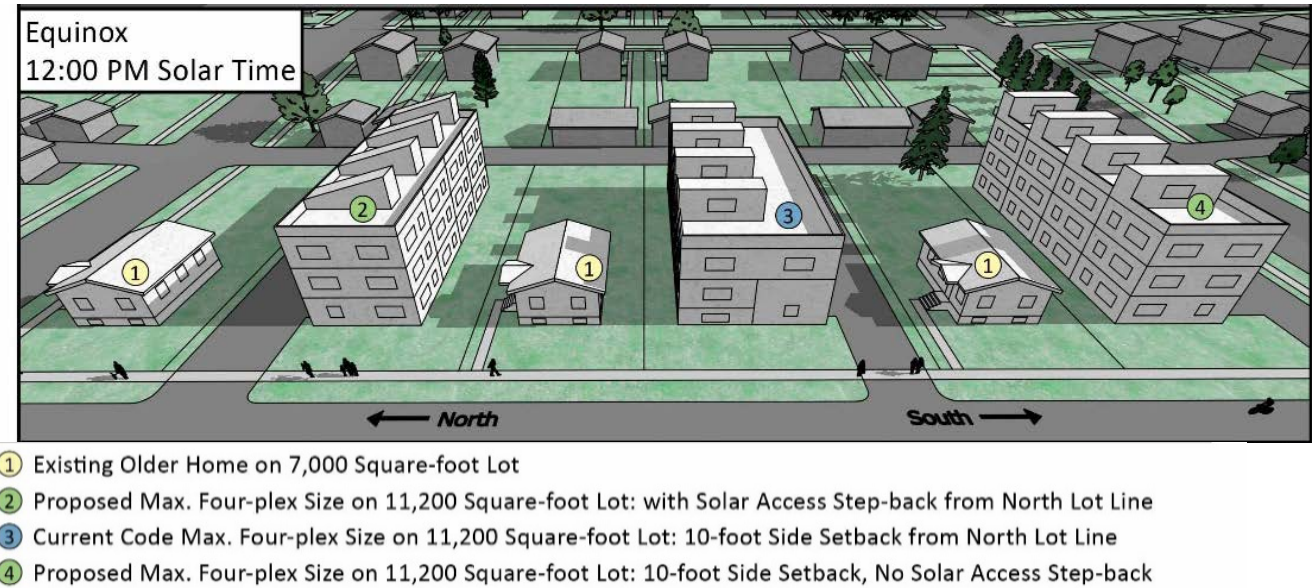
Shadow Analysis of Maximum Allowed Duplex Sizes, R-2M Zone



- ① Existing Older Home
- ② Proposed Max. Duplex Size: Half-story Under a Pitched Roof Design Scenario
- ③ Current Code Max. Duplex Size: Typical Ceiling Heights Under 2.5-story Height Limit
- ④ Proposed Max. Duplex Size: 3-story, Flat Rooftop Deck Design Scenario



Comparison of Potential Shadow Impacts of Four-plex Multifamily Buildings on 11,200 Square-foot Lots, R-2M Zone



As part of the comprehensive testing of the combined effect of all Title 21 zoning regulations and R-2 zone amendments on four hypothetical multifamily 4-unit townhouse development scenarios, the Department finds that despite the site size and development density, the solar access step-back had no effect on building or unit sizes or configurations in any of the scenarios tested. It allowed for three-story buildings. Its primary effect was that it shifted the building placement relative to parking and other site requirements.

The policies of the 2040 LUP and the stated purposes of the Title 21 Zoning Ordinance do in fact support preserving a level of solar access as the city grows through infill and redevelopment. The level of solar access is closely related to land use, building heights, and setbacks of buildings. Protection of access to light, air, and views is a longstanding part of the intent behind having zoning regulations, including building height limits. The purposes of Title 21 also include promoting development that reflects the Municipality’s northern environment.

Compatibility in context of northern climate design, means to take into account how proposed buildings will affect neighboring lots. Sunlight access is a basic need for human health, comfort, and livability. Seasonal sunlight with low sunlight angles, prolonged seasons of darkness, and inhospitable temperatures in areas of shadow is a real and serious challenge for livable and desirable city in northern latitudes. Sunlight access is also growing in importance for building energy efficiency and energy collection, due to rising heating costs and emerging PV energy production. As solar installations become more common, and as the new housing is constructed through infill and redevelopment, the potential for one neighbor to shade another’s PV solar panels will occur more often and conflicts will become more common.

However, the Municipality should be avoid rushing into any kind of ordinance that would establish strong, comprehensive protections for solar access. Strong solar protections could impact housing development. They could require higher costs to mitigate impacts on existing or potential solar installations and discourage, delay, or prevent needed housing development. A solar access requirement that is included in discretionary reviews or introduces comment opportunity regarding by-right developments could be used as a weapon by existing neighbors who express opposition to taller, more intense development in general (even if such development is supported by city policies). For these reasons, the proposed solar access step-back has a limited purpose, to address shadow impacts only to a level of solar access protection equivalent to what the current 2.5-story limit provides, through the existing by-right administrative land use permit review and approval procedure.



## 10. Department Recommendations

### 10.1 Conclusions

The proposed text amendment meets all of the approval criteria specified in AMC 21.03.210C.1-3.

**1. The proposed amendment will promote the public health, safety, and general welfare.**

The proposed amendment promotes efficient infill development in R-2 zoning districts that will help meet Anchorage's housing goals, while protecting neighborhood character by retaining adequate protections from non-contextual bulk and preserving sunlight access. Sections 1.1, 2.1-2.8, 6.1-6.4, and 9.4 describe this balance.

**2. The proposed amendment is consistent with the comprehensive plan and the stated purposes of this title.**

Comprehensive Plan

The proposed amendment advances the *Anchorage 2040 Land Use Plan (2040 LUP)* through Goal 1: Plan for Growth and Livability, Goal 2: Infill and Redevelopment, Goal 4: Neighborhood Housing, and Goal 7: Compatible Land Use described in Section 4.1 of this report. Sections 6, 7, 8, and 9 of this report describe these Goals in detail.

Stated Purposes of Title 21

The proposed amendment is consistent with AMC 21.01.030A-L, which are the stated purposes of Title 21. Stated purposes that are most applicable to this text amendment include:

- A. Encouraging the efficient use of existing infrastructure and the available land supply in the municipality, including redevelopment (*addressed in Sections 6.1, 6.2, 6.3, 6.4, 9.2, and 9.3 of this report*);
- B. Encouraging a diverse supply of quality housing located in safe and livable neighborhoods (*addressed in Sections 6.2, 6.3, 6.4, and 6.6 of this report*);
- D. Promoting well-planned development that reflects the municipality's unique northern setting, natural resources, and majestic surroundings (*addressed in Sections 8.4 and 9.4 of this report*);
- I. Promoting development in city centers and infill areas so as to create efficient travel patterns (*addressed in Sections 6.1, 6.2, 9.2, and 9.3 of this report*);
- J. Promoting development patterns and site designs that protect and enhance the surrounding community character and a variety of appealing and distinctive neighborhoods (*addressed in Sections 7.1, 7.2, 7.3, 8.1, 8.2, 8.3, 8.4, and 9.4 of this report*);
- K. Promoting a pattern of land use and development upon which to provide for adequate transportation, water supply, sewerage, and other public facilities (*addressed in Sections 6.1, 6.2, and 6.3 of this report*); and
- L. Encouraging land and transportation development patterns that promote public health and safety and offer transportation choices (*addressed in Sections 6.1, 6.2, 6.3, 8.1, 8.2, 8.3, 8.4, and 9.4 of this report*).

The proposed amendment is consistent with the most applicable stated purposes of the dimensional standards of Title 21 in AMC 21.06.010, which include the following (*addressed in Sections 6, 7, 8, and 9 of this report*):

- 1. Preserving light and air, and avoiding congestion in residential zoning districts.
- 6. Controlling the overall building bulk and lot coverage to help define the character of different zones.
- 7. Promoting a reasonable building scale that is consistent with...the character of surrounding neighborhoods.

**3. The proposed amendment is necessary or desirable because of changing conditions, new planning concepts, or other social or economic conditions.**

The proposed amendment is necessary to respond to several changing conditions: the increased need to accommodate infill housing to meet the housing production targets described in the *2040 LUP* (see Sections 2.1-2.4), the identified inadequacy of the existing 2.5-story height limit (see Section 2.8), and the need to ensure neighborhoods have protection from non-contextual developments (see Sections 2.8, 7.1-7.3, and 8.1-8.4).



## 10.2 Department Recommendation

The Planning Department recommends **approval** of the Public Hearing Draft adopting ordinance and the text amendment language in *Exhibit B: Zoning Code Amendments*, with the recommended edits provided in section 10.3 (below) of this Staff Report.

## 10.3. Recommended Edits to the Public Hearing Draft

Additional reviews, consultations, and site testing through February 2019 have identified typographical errors and improvements to the proposed amendments. Following are nine recommended language edits and corrections to Exhibit B:

1. Page 2, Line 22: Change the first phrase, “Three-story building elevations that are street-facing or that face an abutting residential zoned lot shall...” to instead read, “Building elevation walls greater than 25 feet in height that face an abutting residential-zoned lot shall...”  
*Reason for change: This change clarifies the applicability of the articulation requirement for tall façade walls that face abutting properties. Building height measured at 25 feet is clearer and more consistent. Applying it only to side walls reflects that current code already requires street facades to be articulated.*
2. Page 2, Line 26: Change the phrase “a primary front entrance” to read, “the primary front entrances”.  
*Reason for change: This is a clarification. Subsection d. applies to all of the primary front entrances on a building that has more than one dwelling with a primary front entrance.*
3. Page 4, Line 13, first word: Change the word “Enclosed” to “Enclosure”.  
*Reason for change: This is a grammar correction.*
4. Page 4, Lines 38-39: Amend provision (F) to read, “Any railing or portion of a railing that exceeds by more than three feet (e.g., above the parapet) shall be an open or transparent railing...”  
*Reason for change: This is a clarification.*
5. Page 4, Line 40: Change “R-2 districts” to “R-2A, R-2D, and R-2M districts”.  
*Reason for change: This is a clarification.*
6. Page 6, line 15-16: Change the end of line 15 to read, “...south; or” and insert a new subsection iii. that reads: “iii. The development is located in Chugiak-Eagle River.”  
*Reason for change: This is a clarification to reflect that the standard is meant to apply to the R-2 zones only in the Anchorage Bowl, and not to the CE-R-2A, CE-R-2D, or CE-R-2M zones in Chugiak-Eagle River.*
7. Page 6, line 19: Change the end of the sentence from “6:12 rise-to-run” to read, “...and rises inward over the development lot at an 8:12 rise-to-run incline.” Change the diagram below line 19 to show an 8:12 angle.  
*Reason for change: Testing indicates that an 8:12 incline is necessary for builders to be able to construct a half-story above the second floor on a standard 50-foot wide lot. This reflects the existing entitlement under the current 2.5-story standard, and allows two stories to fit above daylight basements.*
8. Page 6, line 27: Edit exception iii. to instead read, “Gable ends of sloping roof forms, provided the portion of the gable end that penetrates above the solar access step-back, including any roof overhang, has a maximum width of 40 feet.”  
*Reason for change: This is a technical correction/clarification.*
9. Page 9, line 9: Change the code section reference, “21.04.020F.2.b.” to instead read, “21.04.020F.2.”  
*Reason for change: This is a correction to an erroneous section reference. Line 9 is meant to completely exempt the CE-R-2M zone in Chugiak-Eagle River from the Anchorage R-2M district-specific standards.*