



MEMORANDUM

Plan, Policies, and Code Evaluation Beaverton Housing Options Project (HOP)

DATE February 14, 2019
TO Rob Zoeller and Cassera Phipps, City of Beaverton
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CC File

This memorandum is part of an effort to review City development rules to identify provisions that allow or potentially hinder accessory dwelling units (ADUs) or new potential housing types in residential areas of the city. Through previous planning projects and other studies, the City of Beaverton has concluded that there is not a sufficient range of housing options available in the community, especially—but not exclusively—for households with lower or moderate incomes. Many households either cannot afford or do not desire to live in a detached, single-family home. Apartment units in large multifamily buildings help meet the needs of many of these households; however, there are limitations to this housing type, including land availability, construction costs, household preferences, and concerns about neighborhood impacts. Given this context, there is an opportunity for the city to better meet stated goals and policies of the Comprehensive Plan—and Oregon Statewide Planning Goal 10—to provide a variety of housing types, such as ADUs, duplexes, triplexes, fourplexes, townhomes, and cottage clusters, that meet the needs and preferences of current and future residents

The remainder of this memo summarizes policies and standards that affect the viability of developing ADUs and missing middle housing, including:

1. Comprehensive Plan policies
2. Development Code standards
3. Engineering Design Manual provisions
4. Covenants, Conditions, and Restrictions (CC&Rs) from selected subdivisions and planned unit developments (PUDs) in Beaverton

EXECUTIVE SUMMARY

This section of the memo summarizes the key findings of this evaluation of the city's policies and code regulations pertaining to a variety of housing types. Broadly, the city's Comprehensive Plan, Development Code, and Engineering Design Manual include significant barriers to development of a wider variety of housing types in many of the city's residential zones. Additionally, most private CC&R agreements reviewed include restrictions that would prevent property owners in those developments from building housing types that are not single-family dwellings. More specifically, this evaluation found that some policies or standards are more significant barriers than others, as summarized below.

- **Comprehensive Plan Policies.** Most Comprehensive Plan policies that apply to housing and land use are broadly supportive of the city allowing a variety of housing types. However, some policies may restrict or direct how this broad goal is achieved. These policies generally relate to three key issues: (1) residential density and how it is measured and regulated, (2) the scale, form, and character of new development in relation to existing neighborhood patterns, and (3) the capacity of public facilities to serve a wider variety of housing types.
- **Use Regulations and Development Standards.** The most significant barrier to development of a wider variety of housing types are use regulations and development standards of the city's six residential zones, established by Chapter 20 of the Development Code.
 - Attached Dwellings, a category that includes a wide variety of housing types, are generally prohibited in three of the six residential zones (R5, R7, and R10). These zones account for approximately 50 percent of city's total land area with city zoning and 78 percent of the land area of all residential zones. If Attached Dwellings were permitted, it would likely not be economically feasible to develop most of these housing types while meeting maximum density standards of the zones.
 - Although Detached Dwellings are permitted in the R5, R7, and R10 zones, most small-scale detached housing formats, such as narrow lot homes or cottage clusters, would exceed the maximum density standards of these zones.
 - Where Attached Dwellings are permitted, in the R1, R2, and R4 zones, many small-scale multifamily developments would either exceed the maximum density of the R4 zone or fall short of the minimum density of the R1 zone. The density standards of the R2 zone is most closely aligned with the housing types under consideration.
 - Minimum setbacks and maximum building height standards are less significant barriers than use regulations and minimum and maximum density requirements.
- **Permits, Applications, and Procedures.** Generally, all housing types are provided a path to approval through a Type 1 or Type 2 review procedure, provided the use is permitted and can meet all development and design standards. This is a relatively straight-forward review process for developments that can meet these criteria. There are several situations in which

this Type 1 or Type 2 procedure would not be available, however, and the development would either be simply prohibited or subject to relatively more complex, costly, and uncertain Type 3 review procedure. These situations include:

- An ADU that does not meet all the specific size, siting, and design standards could not be approved under the Type 1 review procedure and there is no alternative review process.
 - A duplex in the R5 zone, the only type of Attached Dwelling permitted in the zone, is required to submit a Conditional Use application, to be reviewed under a Type 3 procedure.
 - All Attached Dwellings, where permitted, that cannot meet any one specific Design Standard in Chapter 60, must meet the corresponding Design Guideline, and the entire development is elevated to a Type 3 procedure.
 - Any development that cannot meet any specific development standard of Chapter 20 and does not meet the thresholds for a Minor Adjustment (generally a less than 10 percent adjustment from a development standard), must be approved through a Type 3 procedure, either as a Major Adjustment, Variance, or Planned Unit Development.
 - Any development that is under two acres in size and would require more than three adjustment or variance applications would be effectively prohibited because it cannot be reviewed as a PUD. This situation would apply to many smaller cottage cluster developments.
- **Design Standards and Special Requirements.** Several of the Design Standards, Design Guidelines, and other special requirements of Chapter 60 may present barriers to development of some housing types or present opportunities to improve design outcomes. The most significant barrier in this chapter are the off-street parking requirements, which require disproportionately greater number of off-street parking spaces for Attached Dwellings than for Detached Dwellings.
 - **Engineering Design Manual.** Generally, the EDM does not require a significantly higher level of standards for single-family vs. multifamily development; however, there are a few specific requirements that may be more relatively more expensive to comply with for smaller-scale multifamily housing types and therefore present a barrier to development.
 - **Private CC&Rs.** Five of the ten CC&R agreements reviewed include restrictions that could be generally interpreted to prohibit more than one dwelling unit being located on a lot, including an ADU. Only one development expressly allows ADUs. The remaining four developments do not expressly prohibit ADUs or the conversion of a house to a duplex. All CC&Rs included architectural review requirements that may present barriers to development of some housing types.

1. COMPREHENSIVE PLAN

The Beaverton Comprehensive Plan sets out a framework of goals and policies that are intended to shape development and land use decisions throughout the City. The Comprehensive Plan is organized into 10 chapters, as follows. This review will focus on the chapters in bold, as they are most pertinent to the goals of the Housing Options Project.

Chapter 1 – Procedures

Chapter 2 – Community Involvement

Chapter 3 – Land Use Element

Chapter 4 – Housing Element

Chapter 5 – Public Facilities and Services Element

Chapter 6 – Transportation Element

Chapter 7 – Natural, Cultural, Historic, Scenic, Energy, and Groundwater Resources Element

Chapter 8 - Environmental Quality and Safety Element

Chapter 9 – Economy Element

Chapter 10 - Community Health Element

Chapter 3 – Land Use Element and Chapter 4 – Housing Element

Chapter 3 and Chapter 4 of the Comprehensive Plan establish important guiding goals and policies for the Housing Options Project. As many of the goals and policies address similar themes, they are reviewed as a whole in this section. The Land Use Element includes goals and policies intended to apply citywide (Sections 3.1 through 3.5) and goals and policies for each land use designation in the plan (Sections 3.6 through 3.9). The land use designations of the Comprehensive Plan are illustrated in Figure 1.

Figure 1. Comprehensive Plan Land Use Designations



While residential development occurs in other areas, this project is focused on residential development in areas within the Neighborhoods designation, which are further classified into four types of neighborhoods based on density levels (Low, Standard, Medium, and High Density). The goals and policies pertaining to development in the Neighborhood areas will provide important direction for this project. Further, the goals and policies of Chapter 4 – Housing Element are also directly relevant to this project. Several overall policy directions or themes connect multiple goals and policies in Chapter 3 and 4. These policy directions are summarized in Table 1, along with relevant goals and policies.

Table 1. Summary of Policy Direction: Land Use and Housing Element

Policy Direction	Goals and Policies
<p>1. Maintain overall density levels for each zone, while allowing for flexibility on a site-by-site and lot-by-lot basis.</p>	<p><u>Goal 3.8.1: Complete and livable Neighborhoods:</u></p> <p>Policy (a): Regulate maximum residential density by zone to maintain a balance between planned land uses and infrastructure capacity.</p> <p>Policy (b): Regulate minimum residential density to ensure efficient use of residential land and meet regional housing needs.</p> <p>Policy (c): Allow flexibility through lot size averaging and other tools to provide flexibility and housing variety while maintaining an overall density consistent with the Comprehensive Plan designation and zoning.</p> <p><u>Goal 3.8.2: Low and Standard Density Neighborhoods and Goal 3.8.3, Medium and High-Density Neighborhoods</u></p>

Policy Direction	Goals and Policies
	<p>Policy (b): Establish zoning regulations that allow housing at generally the following residential densities, while allowing for flexibility as described under Goal 3.8.1:</p> <ul style="list-style-type: none"> i. Low Density Neighborhoods: one dwelling unit per 10,000-12,500 square feet of residential land area. ii. Standard Density Neighborhoods: one dwelling unit per 5,000-10,000 square feet of residential land area. [...] i. Medium Density Neighborhoods: one unit per 2,000-5,000 square feet of residential land area. ii. High Density Neighborhoods: one unit per 1,000-2,000 square feet of residential land area.
<p>2. Provide a variety of housing types in all zones.</p>	<p><u>Goal 3.8.1: Complete and livable Neighborhoods:</u></p> <p>Policy (e): Provide opportunities for a variety of housing types in all residential plan designations while maintaining a scale and character consistent with the intent of each plan designation.</p> <p><u>Goal 3.8.2: Low and Standard Density Neighborhoods</u></p> <p>Policy (a): Allow and encourage a variety of housing types that respond to the scale and form of existing neighborhoods as a way to increase housing options within established neighborhoods while recognizing neighborhood character.</p> <p><u>Goal 3.8.3: Medium and High-Density Neighborhoods</u></p> <p>Policy (b): Provide for a variety of housing types, with an emphasis on multifamily and attached single family housing.</p> <p>Policy (f): Allow for innovative housing types and designs that are consistent with the other policies for these neighborhoods to accommodate projected growth and meet the diverse housing needs of the community.</p> <p><u>Goal 4.2.1: Provide a variety of housing types that meet the needs and preferences of residents</u></p> <p>Policy (a): Ensure that sufficient land is appropriately zoned to meet a full range of housing needs, including an adequate amount of detached single family housing to meet projected demand.</p> <p>Policy (c): Identify and research emerging housing types and regularly consider appropriate updates to the Development Code to allow for their development.</p> <p>Policy (d) Incentivize the development of housing types that are needed but not currently being provided in adequate numbers by market forces, such as single level detached homes and larger multifamily rental units.</p>

Policy Direction	Goals and Policies
<p>3. Align density levels with access to infrastructure, services, and amenities</p>	<p><u>Goal 3.1.1: Encourage development and land use patterns that support a variety of transportation options</u></p> <p>Policy (d): Apply land use designations and development regulations that support high-density development near transit and services, in order to provide greater opportunities to live, work, and meet daily needs near transit.</p> <p><u>Goal 3.8.2: Low and Standard Density Neighborhoods</u></p> <p>Policy (d): The Standard Density Neighborhood designation may be applied in areas that have limited access to transit and are not located at a major intersection or highway interchange; or areas that are presently developed with predominately single family homes.</p> <p><u>Goal 3.8.3: Medium and High-Density Neighborhoods</u></p> <p>Policy (c): Focus the highest density housing closest to transit, commercial services, parks, and/or other amenities, to provide convenient access to these amenities by as many households as possible.</p> <p>Policy (h): The Medium and High Density Neighborhood designations may be applied in areas that have walkable access to transit, commercial services, parks, and/or other amenities. The Medium Density Neighborhood may serve as a transition between Standard Density or Low Density Neighborhoods and higher density neighborhoods or commercial or mixed use designations.</p>
<p>4. Allow flexibility in development standards in exchange for public benefits.</p>	<p><u>Goal 3.8.1: Complete and livable Neighborhoods:</u></p> <p>Policy (d): For development that achieves a public benefit or goal (i.e. increased housing options, public space or affordable housing) the city may provide opportunities in the Development Code to allow additional housing units that exceed the ranges listed for each Comprehensive Plan designation.</p> <p><u>Goal 4.5.1: Ensure that Beaverton continues to be one of the most livable communities in the region</u></p> <p>Policy (f): Provide flexible development standards for projects that exceed the minimum requirements for natural resource protection, open space and public gathering places, and energy efficiency.</p>
<p>5. Minimize the impacts of new development on the form and function of existing neighborhoods</p>	<p><u>Goal 3.2.1: Provide for thoughtful and strategic infill and redevelopment</u></p> <p>Policy (a): Provide a set of residential infill guidelines and standards that encourage compatible infill development, consistent with the following principles:</p> <ul style="list-style-type: none"> i. Provide flexibility on development standards when it can help preserve trees and natural resources. ii. Allow a wider variety of housing choices that can accommodate a range of ages, household sizes and/or income levels while ensuring the new housing responds to the scale and form of the neighborhood.

Policy Direction	Goals and Policies
	<p>iii. Manage transitions between different uses and housing types.</p> <p>iv. In areas well-served by transit, amenities and services, offer more flexibility for infill housing and innovative housing types that meet city goals for affordability and livability, and provide housing for diverse household sizes, types, and age ranges.</p> <p>v. Encourage site and building design features, including setbacks and sight lines, that minimize impacts to sunlight and privacy for existing adjacent homes</p> <p><u>Goal 4.1.1: Provide an adequate supply of housing to meet future needs</u></p> <p>Policy (b) Support higher density infill development that capitalizes on existing infrastructure and where impacts can be mitigated.</p> <p><u>Goal 4.5.1: Ensure that Beaverton continues to be one of the most livable communities in the region</u></p> <p>Policy (a): Encourage quality design throughout the city that acknowledges neighborhood character, provides safe and direct connections for pedestrians and bicyclists to a variety of destinations, and integrates open space, natural resources and scenic view corridors.</p> <p>Policy (d) Engage the community in a continuing dialogue about the city’s anticipated population growth, limited land supply, and current housing trends.</p> <p>Policy (e): When considering comprehensive plan and zoning map amendments, address the potential impacts of densification, including increased traffic and noise, on established neighborhoods.</p> <p>Policy (i): Provide adequate opportunities for residents to be involved in decisions affecting their neighborhoods</p> <p>Policy (j): Review and reconsider minimum parking standards for new multiple family development.</p>

Chapter 5 – Public Facilities and Services Element and Chapter 6 – Transportation Element

Chapters 5 and 6 address the public facilities needed to support residential development. For the purposes of this review, these chapters are considered as a whole in order to identify key overall policy directions for the project. These policy directions are summarized in Table 2 , along with relevant goals and policies.

Table 2. Summary of Policy Direction: Land Use and Housing Element

Policy Direction	Goals and Policies
<p>6. Ensure residential development can be served by the storm</p>	<p><u>Goal 5.4.1: Ensure long-term provision of adequate storm water management within existing City limits and areas to be annexed in the future.</u></p> <p>Policy (c): All new land development will be connected to a storm water drainage system. Each new development will be responsible for the</p>

Policy Direction	Goals and Policies
<p>water, sanitary sewer, and water systems.</p>	<p>construction or assurance of construction of their portion of the major storm water run-off facilities that are identified by the SWM program as being necessary to serve the new land development.</p> <p><u>Goal 5.5.1: The City shall continue to participate in the Joint Water Commission and work with the West Slope, Raleigh and Tualatin Valley Water Districts to ensure the provision of adequate water service to present and future customers in Beaverton.</u></p> <p>Policy (a); All new land development (residential subdivisions, multiple family dwelling development, and industrial and commercial developments) shall be connected to a public water system.</p> <p>Policy (b) All new development served by the Beaverton Water Division shall be reviewed by the City to determine that the pressure of water available to serve the proposed development meets City standards.</p> <p><u>Goal 5.6.1: The City shall continue to cooperate with CWS to ensure long-term provision of an adequate sanitary sewer system within existing City limits and areas to be annexed in the future.</u></p> <p>Policy (a): All new land development (residential subdivisions, and multiple family dwelling, industrial, and commercial developments) shall be connected to the City sewer system.</p>
<p>7. Ensure residential development connects to a multi-modal, safe, and efficient transportation system.</p>	<p><u>Goal 6.2.2: A balanced multimodal transportation system that provides mobility and accessibility for users.</u></p> <p>Policy (j): Require developers to include pedestrian, bicycle, and transit-supportive improvements within proposed developments and adjacent rights-of-way in accordance with adopted policies and standards.</p> <p><u>Goal 6.2.4: An efficient transportation system that reduces the percentage of trips by single occupant vehicles, reduces the number and length of trips, limits congestion, and improves air quality.</u></p> <p>Policy (e): Maintain mobility and performance standards that meet the needs of the City and are consistent with regional and State standards.</p>
<p>8. Coordinate residential development with school capacity and facilities.</p>	<p><u>Goal 5.7.1: Cooperate with the Beaverton School District in its efforts to provide the best possible educational facilities and services to Beaverton residents.</u></p> <p>Policy (a): The City shall encourage the School District to provide facilities that will adequately accommodate growth while recognizing the limited supply of buildable land in the city for such facilities.</p> <p>Policy (f): The City shall notify the School District when considering Comprehensive Plan or land use regulation amendments that may significantly impact school capacity.</p>
<p>9. Coordinate residential development with parks and recreation facilities.</p>	<p><u>Goal 5.8.1: Cooperate with THPRD in implementation of its 20-Year Comprehensive Master Plan and Trails Master Plan in order to ensure</u></p>

Policy Direction	Goals and Policies
	<p data-bbox="565 262 1393 325"><u>adequate parks and recreation facilities and programs for current and future City residents.</u></p> <p data-bbox="597 342 1393 468">Policy (a): The City shall support and encourage THPRD efforts to provide parks and recreation facilities that will accommodate growth while recognizing the limited supply of buildable land in the city for such facilities.</p> <p data-bbox="597 489 1393 583">Policy (c): The City shall support and encourage acquisition of park and recreation sites in advance of need so that the most appropriate sites are available for these vital public facilities.</p> <p data-bbox="597 604 1393 762">Policy (e): A number of financial incentives exist to encourage private property owners to donate, dedicate, or provide easements for resource preservation, park, trail or open space use. The City shall work cooperatively with property owners and THPRD to maximize the use of these tools for the benefit of the community.</p>

2. DEVELOPMENT CODE

The Beaverton Development Code is divided into seven chapters. This section of the memo is organized around these chapters. Within each chapter, the provisions that apply to various housing types are identified and evaluated. The seven chapters of the Development Code are:

- Chapter 10 - General Provisions
- Chapter 20 – Land Uses
- Chapter 30 - Nonconforming Uses
- Chapter 40 - Permits and Applications
- Chapter 50 – Procedures
- Chapter 60 - Special Requirements
- Chapter 90 - Definitions

Chapter 10 - General Provisions

Chapter 10 of the BDC covers a range of provisions that are largely related to administration of the code. Some specific provisions relate to the goal of this project in promoting a variety of housing types, however, and these are noted below.

Purpose (10.10). This section identifies the general purposes of the code. These statements serve to reinforce some of the City’s relevant Comprehensive Plan policies but are not used as formal approval standards for any development applications. The following purpose statements are generally supportive of the goals of the project.

To encourage innovations in residential development and renewal so that the demand for housing may be met by a greater variety in the type and design of dwellings and by the conservation and more efficient and attractive use of open space. (10.10.4.C)

To safeguard and enhance the appearance of the City through advancement of effective land use, architectural design and site planning which reflect improvements in the technology of urban development. (10.10.4.D)

The following statement contains language that is somewhat vague and could be interpreted to be inconsistent with the goals of the project. The phrase “avoid uses and development which might be detrimental to the stability and livability of the City” is unclear. Other Comprehensive Plan policies may clarify how the City should interpret this statement; however, more clear terms about the intended outcomes of the code would be beneficial.

To achieve a balanced and efficient land use pattern, to protect and enhance real property values, to promote safe and uncongested traffic movement and to avoid uses and development which might be detrimental to the stability and livability of the City. (10.10.4.B)

Relationship to Other Regulations and Restrictions (10.45). This section establishes that the Development Code is not intended to supersede any easements, covenants, or other agreements between private parties, except under these two conditions:

- The code imposes a greater restriction on use or height of a building than the private agreement.
- The code imposes a requirement for larger open spaces than the private agreement.

Therefore, any Covenants, Conditions & Restrictions (CC&Rs) that prohibit missing middle housing types or place more restrictive standards than the code will supersede the code standard. A review of a sampling of 10 subdivision CC&Rs is included in Section 4 of this memo. If there is policy directive to change this provision so the code would supersede CC&Rs that are a barrier to housing options, then the City Attorney should be consulted to better understand any relevant legal issues.

Chapter 20 – Land Uses

Chapter 20 of the BDC establishes both use regulations and basic development standards for the City’s residential zones that would apply to Missing Middle housing and ADUs. These regulations determine where these housing types can be built and the basic form they must take; therefore, they are essential to understanding the opportunities and challenges for wider development of these housing types.

Residential Zones

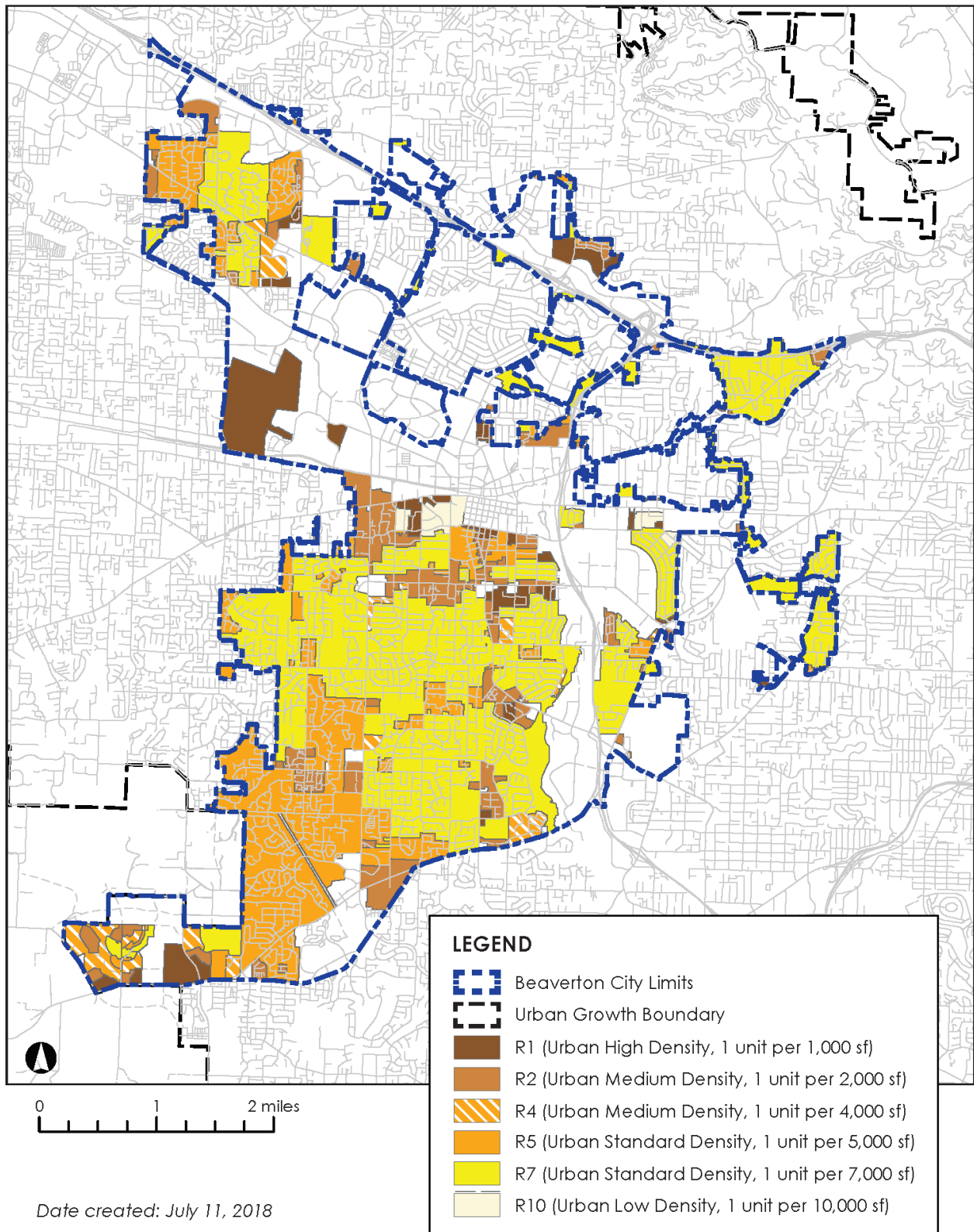
There are six residential zones in the City of Beaverton. Use regulations and development standards vary across each zone; however, the primary feature that distinguishes each zone is the maximum permitted density. The zones are named based on the maximum density—square feet of land area per dwelling unit—that is permitted in the zone. As summarized in Table 3, zones implement the four types of “Neighborhood” Comprehensive Plan designations, which provide a range of density levels. The zones are intended to implement the goals and policies for Neighborhood areas, as described in the Comprehensive Plan, and summarized in Section 1 of this memo.

A map of the residential zones in the City is provided in Figure 2. Generally, as called for by the Comprehensive Plan, the Medium and High Density residential zones are located closer to transportation infrastructure—both major roadways and transit—and other amenities, such as commercial areas, schools, and parks. According to the Land Use Element of the Comprehensive Plan, the City’s Low and Standard Density residential zones are mostly developed with subdivisions built in the second half of the 20th century and nearly all of the residential development in these zones are single-family, detached houses.

Table 3. Comprehensive Plan Designations and Residential Zones “Crosswalk”

Comprehensive Plan Designation	Implementing Zoning District
<i>Low Density Neighborhoods</i>	R10, Residential Urban Low Density District (10,000)
<i>Standard Density Neighborhoods</i>	R7, Residential Urban Standard Density District (7,000)
	R5, Residential Urban Standard Density District (5,000)
<i>Medium Density Neighborhoods</i>	R2, Residential Urban Medium Density District (2,000)
	R4, Residential Urban Medium Density District (4,000)
<i>High Density Neighborhoods</i>	R1, Residential Urban High Density District (1,000)

Figure 2. Map of Residential Zones



Housing Prototypes

To better understand how ADUs and Missing Middle housing types are regulated within and across each of the residential zones, a set of prototypical developments was defined and tested against the use regulations and development standards of Chapter 20. These prototypes were created based on the example developments compiled for the Housing Landscape Summary and a range of other resources.¹ The prototypes approximate typical dimensions of buildings (width, depth, height), number of dwelling units in the building(s), amount and type of off-street parking provided, and the minimum lot dimensions needed to accommodate the building and off-street parking. This information is summarized in Table 4.

The prototypes represent a finite set of potential developments within the range of Missing Middle housing types; there are many possible variations on the prototypes. Additionally, some prototypes may be less likely to develop than others based on market conditions and trends. The intent of the prototypes is to develop an initial understanding of the opportunities and challenges for development of these housing types across each of the City's residential zones, given existing use regulations and development standards. In future phases of the project, when it is determined which housing types may be appropriate to permit in which zones, the prototypes can be refined and re-evaluated to test if proposed code changes would improve the feasibility of developing each Missing Middle housing type.

¹ Sources included:

1. Eli Spevak and Madeline Kovacs, "Character-Compatible, Space-Efficient Housing Options for Single-Dwelling Neighborhoods", Oregon Transportation Growth Management Program/Department of Environmental Quality. Available at <https://www.oregon.gov/lcd/UP/Documents/space-efficient-housing-full-report.pdf>
2. UrbsWorks and Oregon Transportation Growth Management, "Housing Choices Guidebook". Available at https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet_DIGITAL.pdf
3. Opticos Design, "Missing Middle Housing". Available at <http://missingmiddlehousing.com/>
4. Bruinier & Associates, an Oregon-based firm that produces stock house plans in a variety of formats. Available at: <https://www.houseplans.pro/>
5. City of Portland Bureau of Planning and Sustainability, "Residential Infill Project, Proposed Draft, Appendix D - 2015 New Construction Data, R2.5 Zone". Available at <https://www.portlandoregon.gov/bps/article/657696>

Table 4. Housing Prototypes

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Stories	Bldg. Height (ft)	Structured Parking ²	Surface Parking ¹	Needed Lot Width (ft) ³	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/sq. ft.)
ADU (Detached)	1	14	28	392	1.5	20	0	1	40	100	4,000	N/A ⁴
ADU (Attached)	1	14	28	392	1.5	20	0	1	40	100	4,000	N/A ²
ADU (Internal)	1	N/A	N/A	N/A	N/A	N/A	0	1	35	80	2,800	N/A ²
Narrow Lot Detached (3-Story)	1	15	65	975	3	35	1 (garage)	0	25	80	2,000	2,000
Narrow Lot Detached (2-Story)	1	15	65	975	2	25	1 (garage)	0	25	80	2,000	2,000
Duplex Stacked	2	25	60	1,500	2	25	0	2 (rear)	40	100	4,000	2,000
Duplex Side-by-Side	2	35	50	1,750	2	25	2 (garage)	0	50	80	4,000	2,000
Triplex Stacked	3	25	60	1,500	3	35	0	2 (rear)	40	100	4,000	1,333
Triplex Side-by-Side	3	60	50	3,000	2	25	3 (garage)	0	70	80	5,600	1,867
Fourplex Stacked	4	35	60	2,100	3	35	0	2 (rear)	50	100	5,000	1,250
Fourplex Side-by-Side	4	80	50	4,000	2	25	4 (garage)	0	90	80	7,200	1,800
Courtyard Apartments	8	Varies (U-Shape)		6,200	1	15	0	6 (rear/side)	120	120	14,400	1,800
Townhome Row (3-Story)	5	100	80	8,000	3	35	5 (garage)	0	120 (site) 20 (ea. lot)	100	12,000	2,400
Townhome Row (2-Story)	5	100	80	8,000	2	30	5 (garage)	0	120 (site) 20 (ea. lot)	100	12,000	2,400
Cottage Cluster (Small)	6	Varies		5,600	1.5	20	0	6 (rear/side)	150	100	15,000	2,500
Cottage Cluster (Large)	16	Varies		19,200	1.5	20	16 (shared garage)		300	200	60,000	3,750

² Note that some of the prototypes may not meet the City's existing requirement for off-street parking, pursuant to Section 60.30, depending on the number of bedrooms in the development. The prototypes were designed to represent a relatively high-density format of each housing type as an initial benchmark for this analysis.

³ Needed lot dimensions are based only on the minimum dimensions needed for each prototype as observed in example developments. The city's current development standards may require larger lot dimensions.

⁴ Per BDC 60.50.03, density standards do not apply to ADUs.

Use Regulations

Perhaps the most important regulatory issue for ADUs and Missing Middle housing is whether the housing type is a permitted use in the zone. Section 20.05.20 establishes the use regulations for residential zones. These regulations were applied to the housing prototypes, defined above, in Table 5. Each housing prototype fits into an existing category of residential use, as defined in Chapter 90 of the BDC. The existing classification of each housing prototype is presented in Table 5.

Generally, one challenge for any future amendments to Section 20.05.20 is that the use tables group together many of the Missing Middle housing types into the broad category of Attached Dwellings and Detached Dwellings. This is not a significant issue today as all the various housing types within these two categories are generally regulated in the same way. Footnotes are used to clarify exceptions to specific regulations, such as the allowance for duplexes in the R5 zone. In the future, it may be necessary to break up Attached Dwellings and Detached Dwellings into narrower categories to avoid excessive footnotes.

Use regulations can present a significant barrier to wider development of many Missing Middle housing types. The specific findings for each housing type are summarized below.

- **ADUs.** ADUs are permitted outright in all residential zones, as is required by state law for cities with a population greater than 2,500.⁵
- **Narrow Lot Detached.** Narrow lot detached housing would be classified as a Detached Dwelling. Detached Dwellings are permitted in all residential zones; however, as demonstrated below, narrow lot detached housing will not meet certain development standards in some zones, such as the minimum lot width or maximum density.
- **Duplex.** Duplexes are classified as Attached Dwellings but are defined separately in Chapter 90 of the code. Duplexes are permitted outright in the R1, R2, and R4 zones and with a conditional use approval in the R5 zone. They are prohibited in the R7 and R10 zones. As described in the section on applications and procedures in Chapter 40, below, the cost and complexity of a Type 3 procedure for a conditional use application may present an obstacle to development of duplexes in the R5 zone. The prohibition on duplexes in the R7 and R10 zones is also a significant barrier to more widespread development of this housing type.
- **Triplex/Fourplex/Courtyard Apartments.** These housing types, which all include at least 3 units in the same development, are classified as Attached Dwellings, but meet the definition of Multi-Dwelling Structures in Chapter 90. They are permitted in the R1, R2, and R4 zones and prohibited elsewhere. Development standards in some of these zones may also present barriers for these housing types, as described below.
- **Townhomes.** Townhomes are also classified as Attached Dwellings, but meet the definition of Single-Family Attached Dwelling in Chapter 90. Townhomes are regulated in the same way as Triplexes/Fourplexes/Courtyard Apartments as both are classified as Attached Dwellings. This regulation makes sense as these types are of a similar form and density,

⁵ See ORS 197.312(5).

even if the ownership arrangements are structured differently. Still, these housing types can take quite different forms depending on how they are designed, and there may be an opportunity to allow specific forms of these housing type in certain zones or locations.

- **Cottage Cluster.** The use regulations that apply to cottage cluster housing are somewhat unclear. The individual units in a cottage cluster housing development would be classified as Detached Dwellings, however, as specified in Note 12 in Section 20.05.25:

Compact Detached Dwellings on lots fronting common greens, shared courts, or public streets may be permitted on sites that are two acres or greater in size through the Conditional Use-Planned Unit Development process.

The definition of Compact Detached Housing is consistent with the cottage cluster concept.⁶ Therefore, it is assumed that cottage clusters are required to be greater than two acres in size in order to be eligible for the Planned Unit Development (PUD) process. For larger cottage cluster developments that meet this threshold, see the relevant section on the PUD process for a review of the potential barriers associated with this process. Cottage cluster developments on less than two acres are not permitted in the residential zones.

Table 5. Use Regulations for Housing Prototypes

Housing Prototype	Residential Use Category	R1	R2	R4	R5	R7	R10
ADU (Detached)	Accessory Dwelling Unit	P	P	P	P	P	P
ADU (Attached)							
ADU (Internal)							
Narrow Lot Detached (3-Story) Narrow Lot Detached (2-Story)	Detached Dwelling	P	P	P	P	P	P
Duplex Stacked Duplex Side-by-Side	Attached Dwelling (Duplex)	P	P	P	C	N	N
Triplex Stacked Triplex Side-by-Side Fourplex Stacked Fourplex Side-by-Side Courtyard Apartments	Attached Dwelling (Multifamily Structure)	P	P	P	N	N	N
Townhome Row (3-Story) Townhome Row (2-Story)	Attached Dwelling (Single-Family Attached)	P	P	P	N	N	N
Cottage Cluster (Small) Cottage Cluster (Medium)	Detached Dwelling (Compact Detached Housing)	N/C ¹	N/C ¹	N/C ¹	N/C ¹	N/C ¹	N/C ¹

P = Permitted, C = Allowed with a Conditional Use approval, N = Prohibited

¹ Cottage cluster developments are permitted as Compact Detached Housing if the development is over two acres in size and is approved through a Conditional Use-Planned Unit Development application.

⁶ Definition from Chapter 90: **Compact Detached Housing.** *Dwelling units that front onto a shared court, common green, or public street and meet the minimum density requirements of the underlying Residential or Multiple Use zone.*

Minimum and Maximum Density

Section 20.05.15 sets out site development standards that control the density and form of development in residential zones. Minimum and maximum density standards in the residential zones may be a significant barrier to wider development of Missing Middle housing types.

Figure 3 plots the estimated density levels of each of the housing prototypes compared to the minimum and maximum density standards for each zone.

Pursuant to Section 20.25.05, minimum density equates to 80% of the maximum density of the zone. Pursuant to Section 20.25.15.B, maximum density is calculated based on gross acreage, including any areas that are environmentally constrained, dedicated to open space, or dedicated for streets. In larger developments, this can represent a substantial portion of the site – up to 20-25% of the site area. On smaller infill sites, this is likely to represent a smaller area of the site, or none. For the purposes of this analysis, it is assumed that the minimum land area per unit required in the zone is roughly equal to the maximum density of the zone.

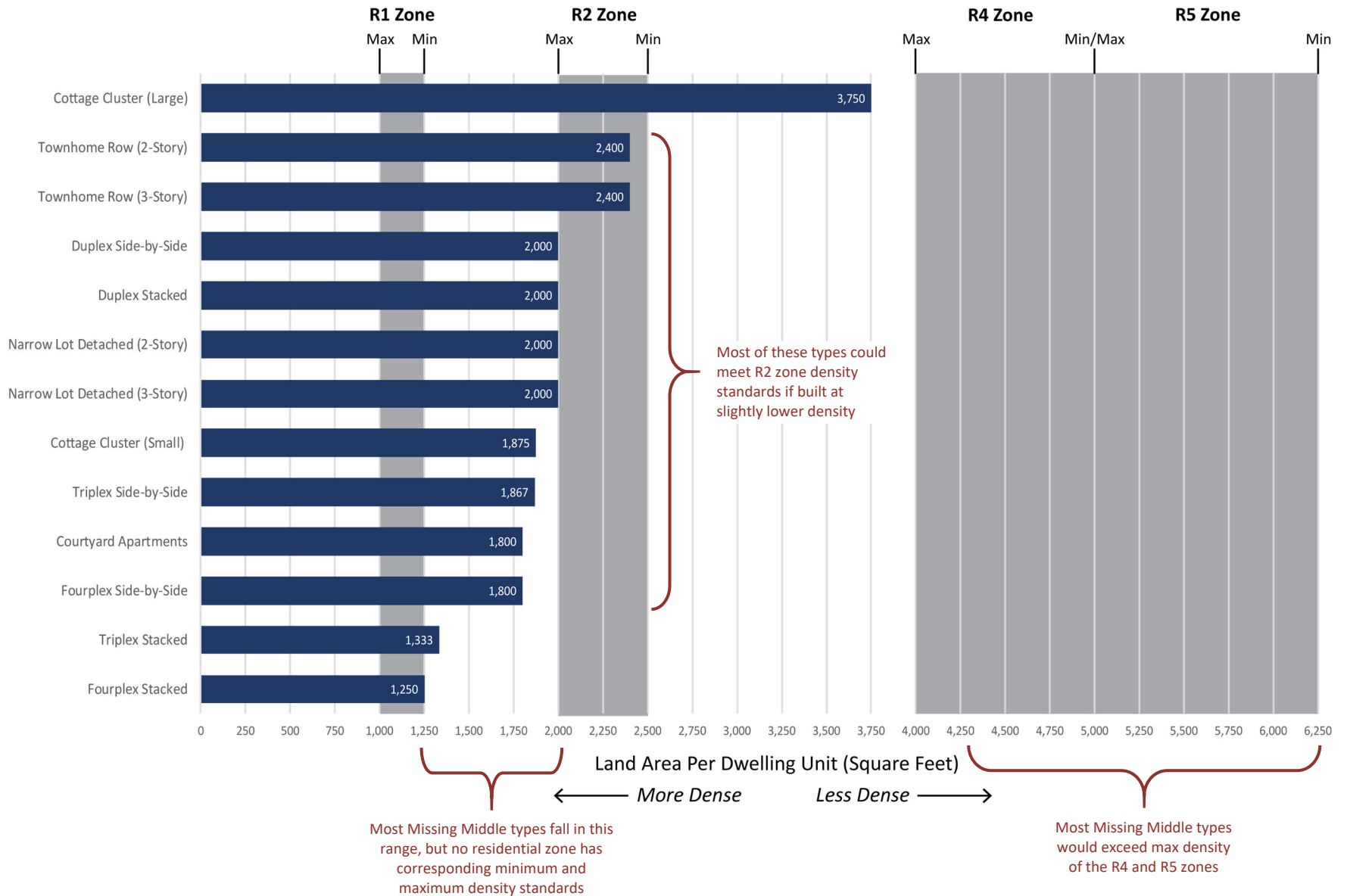
R1 zone. *As illustrated in*

Figure 3, only one housing prototype (stacked fourplex) could meet the minimum density standard of the R1 zone (1,250 square feet per dwelling unit). The stacked triplex housing type was relatively close to meeting the minimum density standard. This indicates that the R1 zone is generally intended to provide for higher density multifamily housing types than for housing types which would meet the definition of Missing Middle housing. Missing Middle housing types may be permitted within the R1 zone as part of a PUD that includes higher density housing, which would raise the average density of the development up to meet the minimum density standard. However, standalone infill Missing Middle developments will not be widely feasible in the R1 zone. One housing type not included in the prototypes is a two-story courtyard apartment, which could increase the density of the development by 1.5 to 2 times the density level of a one-story courtyard apartment and would likely be able to meet the minimum density standard of the R1 zone.

R2 zone. The minimum and maximum density standards of the R2 zone are supportive of Missing Middle housing types. Six of the prototypes could meet the R2 standard as specified: townhome rows (2 and 3 story), duplex (side-by-side or stacked), and narrow lot detached. Four additional prototypes could meet the standard on a slightly larger lot or with dedication of open space: cottage cluster (small), triplex (side-by-side), fourplex (side-by-side), and courtyard apartments.

R4 zone. The maximum density standard of the R4 zone may be difficult to meet for some Missing Middle housing types. A lower density cottage cluster development would likely be able to meet the maximum density standard. A townhome development that includes open space or requires local street dedications would also be likely to meet the maximum density standard. Generally, the maximum density standard of the zone is likely to require larger lot sizes than specified in the prototypes. In turn, this may encourage development of larger individual dwelling units, which can be sold or rented for higher rates in order to offset land acquisition costs.

Figure 3. Density Levels of Housing Prototypes and Minimum/Maximum Densities (R7 and R10 zones not shown)



R5 zone. The maximum density standard of the R5 zone reflects the intent for the zone to be largely limited to detached, single-family houses. A low-density cottage cluster development may be able to meet the maximum density standard. A duplex is permitted as a conditional use in the R5 zone but would require a 10,000 square foot lot. Lots this size may be difficult to acquire. Additionally, a duplex on this size lot may contrast with the scale of nearby homes that are on smaller lots, as the development will likely maximize the size of the structure. Further, as noted above, the size of the individual dwelling units will be maximized, which increases the cost of the units, making them unaffordable to many households which might otherwise seek this form of housing. No other Missing Middle housing types are permitted in the R5 zone. If they were permitted, all the remaining housing types would be relatively difficult to develop without exceeding the maximum density standard of the zone.

R7 and R10 zones. Outside of cottage cluster housing, no Missing Middle housing types are permitted in the R7 and R10 zones. If permitted, the maximum density standard of the R7 and R10 zones would require significantly larger lot sizes than specified in the prototypes, which may be economically infeasible or would require very large individual dwellings.

Lot Dimensions

Section 20.05.15 also establishes minimum lot dimension standards that would apply to Missing Middle housing types. These standards are summarized in Table 6. The minimum lot width and depth standards in the R1 and R2 zones are generally supportive of all Missing Middle housing types. There are no minimum lot dimension standards in the R5 zone. This is supportive of Missing Middle housing types as it provides for flexibility while meeting other development standards.

Table 6. Minimum Lot Dimensions, Residential Zones

Zone	Minimum Width		Minimum Depth	
	Interior	Corner	Interior	Corner
R1	14	20	None	None
R2	14	20	None	None
R4	24 (Attached) 40 (Detached)	24 (Attached) 40 (Detached)	80	80
R5	0	0	0	0
R7	65	70	90	80
R10	80	90	120	110

The minimum lot width standards of the R4 zone present a barrier for some more compact townhome developments, narrow lot detached housing, and cottage cluster housing. Some townhome formats can be narrower than 24 feet. These formats can provide for smaller individual dwelling units, which may be more affordable in some cases. Additionally, narrow lot detached houses only need lots that are 25-35 feet wide, so the minimum width standard of 40 feet for detached dwellings presents a barrier for this housing type. This standard would also be very

difficult to meet if applied to individual lots in a cottage cluster development, as these houses are intended to be relatively small (1,000-1,200 square feet maximum).

The minimum lot dimension standards in the R7 and R10 zones would be challenging to meet for most Missing Middle housing types, except for a side-by-side triplex/fourplex, courtyard apartment, or the parent parcel in a cottage cluster development. Most of these housing types would greatly exceed the maximum density of the zone, however.

Setbacks

The yard setback standards of Section 20.05.15 may present some challenges in specific circumstances but are relatively less difficult to meet than density or lot dimension standards. The side setback standard, which is usually 5 feet in all zones, with exceptions for attached dwellings (townhomes) in the R1, R2, and R4 zones, will not be difficult to meet for Missing Middle housing types. If attached dwellings were permitted in the R5, R7, or R10 zones then an exception would be needed to allow for zero side setbacks for townhomes. Currently, a Flexible Setback application allows for the side setbacks to be reduced to only 5 feet. Further reductions require PUD or Variance application.

The front setback standards of the R1, R2, and R4 zones (10 feet) are generally supportive of Missing Middle Housing types. The front setback standard of the R5, R7, and R10 zones (15 to 25 feet) may present an obstacle for Missing Middle housing types if located on lots less than 100 feet deep.

The rear setback standard in all zones (15 to 25 feet) may also present a barrier for Missing Middle housing types on shallower lots (less than 100 feet deep). As shown in Table 4, the depth of the buildings identified in the housing prototypes ranges from 50 to 80 feet. Assuming a 10-foot front setback, providing a rear setback of 15 feet or more may be difficult, but not infeasible, on lots that are between 80 and 100 feet deep.

The rear setback standard in all zones will present a barrier to development of attached and detached ADUs. Most ADUs will be sited in the rear yard and, in many cases, the homeowner will prefer to place the ADU as far back as possible in order to preserve useable yard space and privacy. The rear setback may require the ADU be placed closer to the main house (and no closer than 6 feet per other Chapter 20 development standards) than would be otherwise desirable, or require a smaller ADU, which could discourage ADU development.

Building Height

The maximum height standard in residential zones ranges from 35 feet to 60 feet. As shown in Table 4, all housing prototypes are less than 3 stories or 35 feet in height; thus, the maximum height standard is not anticipated to be a significant barrier for ADUs and missing middle housing. In some cases, a three-story building may exceed 35 feet, particularly if the building has a pitched roof. The BDC requires building height to be measured at the highest point on the building. For

taller buildings, this requirement may discourage pitched roofs, which are the most common roof type in residential neighborhoods. An alternative approach is to measure the height of the building at the mid-point of the roof pitch, though, this change may necessitate adjusting the maximum building height in some zones.

Chapter 30 - Nonconforming Uses

Chapter 30 of the BDC regulates non-conforming uses, structures, and characteristics. Generally, the purpose of Chapter 30 is to prohibit or limit the expansion of a non-conforming use or changes to a non-conforming structure or site characteristic that would increase its non-conformity. This may present a barrier to renovation or expansion of an ADU or Missing Middle housing type that is either not a permitted use or does not meet current development standards.

Section 20.05.25(1) provides that duplexes that existed prior to June 17, 2010 in the R5, R7, and R10 zones are permitted uses; therefore, they are exempt from the Sections in Chapter 30 that regulate non-conforming uses. If other non-conforming ADUs or Missing Middle housing types exist in residential zones, such as townhomes or triplexes, Chapter 30 regulations may present a barrier to renovating or improving these uses to the extent that those changes increase their non-conformity.

Chapter 40 - Permits and Applications

Chapter 40 of the BDC defines the land use applications that are required depending on the type of development. The chapter specifies thresholds for when an application is required, the procedure type the application will be reviewed under, and approval criteria.

Application Types

The applications that would be required for ADUs and Missing Middle housing types depend on several factors, including the zone where the development is proposed, the size of the development, and whether it is a permitted or conditional use. Figure 4 illustrates these variables in a flow chart and the implications of these application types are described below. This review is primarily focused on the Design Review applications required for each housing type. Any developments that also proposed to reconfigure or create new lots would require a Land Division application. The approval criteria of a Land Division application are relatively straightforward, however, provided that the development meets Chapter 20 and Chapter 60 standards.

ADUs. A separate application is required for an ADU, regardless of the zone where the development is proposed. This makes for a relatively simple process for homeowners. The approval criteria for an ADU application include several very specific standards that are evaluated in the following section.

Detached Dwellings in the R1, R2, and R4 Zones. Detached dwellings in these zones are exempt from Design Review; therefore, no land use application is required. Conformance with development standards will be checked through the site development or building permit review process. Therefore, cottage cluster and narrow lot detached housing would not be subject to Design Review. Given existing development standards, it may be difficult for these housing types to be developed in

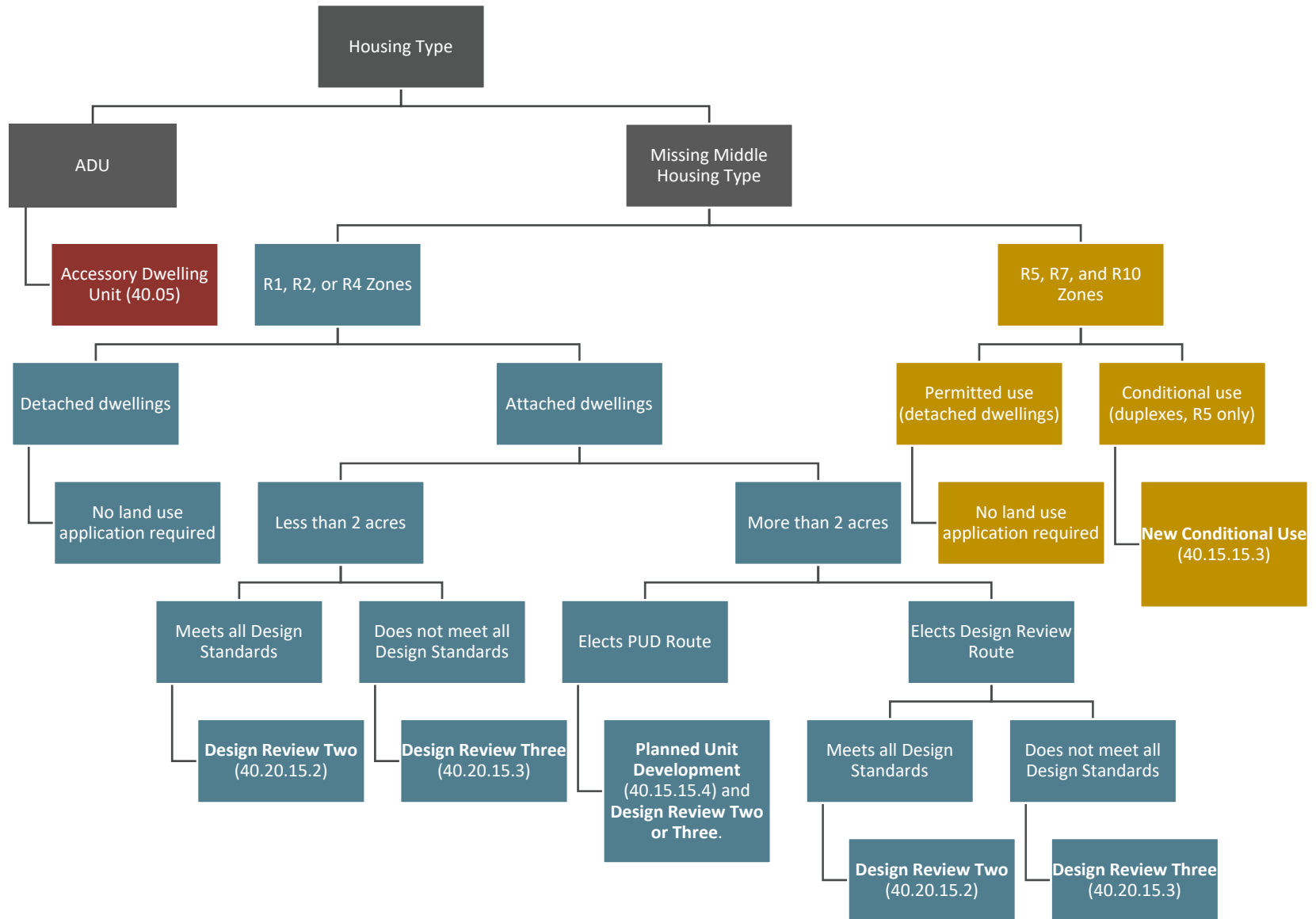
these zones, except for potentially in the R2 zone. If the project is over two acres in size, then it is eligible for a PUD application, which would provide for flexibility in meeting Chapter 20 development standards. There is no PUD option for projects under two acres in size that do not meet development standards. There may be an opportunity to provide this option, which might encourage smaller cottage cluster or narrow lot detached developments in these zones.

Attached Dwellings in the R1, R2, and R4 Zones. All attached dwellings in these zones are subject to a Design Review application. The application required for attached dwellings will vary based on the design of the project and the preferences of the applicant. At a minimum, a Design Review Two application is required, which is reviewed through a Type 2 procedure and requires conformance with all Design Standards of Chapter 60. If the project does not meet one or more Design Standards, then it must demonstrate compliance with applicable Chapter 60 Design Guidelines through a Type 3 procedure, adding time and uncertainty to the development process. If the project is over two acres in size, the applicant may elect to file a PUD application in addition to a Design Review application, which allows for flexibility in meeting development standards of Chapter 20, including minimum density and lot dimensions, in exchange for additional design requirements and provision of open space in the development. These application types generally provide flexibility and a clear and objective review path for attached dwellings in these zones.

Detached Dwellings in the R5, R7, and R10 Zones. As with the higher density zones, no Design Review application is required for detached dwellings in the R5, R7, and R10 zones. Cottage clusters and narrow lot detached houses, the Missing Middle housing types that include detached dwellings, are not permitted in these zones. If they were permitted, then some type of Design Review application would be appropriate for ensuring these housing types meet certain design standards and fit within lower density neighborhoods.

Duplexes in the R5 Zone. Duplexes are permitted as conditional uses in the R5 zone. No other types of attached dwellings are permitted in the R5, R7, or R10 zones. This application would be reviewed under a Type 3 procedure, which requires a neighborhood meeting and Planning Commission review. The complexity and uncertainty associated with a Type 3 review may discourage duplexes in the R5 zone. Additionally, the application fees would present a significant cost for a smaller project such as a duplex; the fee for a Conditional Use application is \$4,262.

Figure 4. Application Type Flowchart



Approval Criteria and Standards for ADUs (Chapter 40 and Chapter 60)

The approval criteria for an ADU application, found in Section 40.05.15.1.C, include a number of specific standards related to the size, siting, and design of the ADU. For other housing types, these types of specific standards are typically found in Chapter 60 – Special Requirements. There are several standards for ADUs also found in Chapter 60, in Section 60.50.03. Including standards in two separate sections may be confusing for applicants, so consolidation in one section may make the code more user-friendly.

More importantly, some of the standards found in both Chapter 40 and Chapter 60 may present a barrier or discourage development of ADUs in some cases. An assessment of these standards is provided in Table 7.

Table 7. Assessment of ADU Standards

Standard	Code Section	Assessment
Limit of one ADU per detached dwelling.	40.05.15.1.C.6 and Planning Division memo dated 7/1/18	<p>The Chapter 40 standard allows one ADU per site, but a memo dated 7/1/18 from the Planning Division clarifies that one ADU is allowed per detached dwelling.</p> <p>There may be locations where an ADU is appropriate with an attached dwelling, such as an internal ADU within a townhome or a detached ADU with a duplex. Also, two ADUs may be appropriate with a detached dwelling if one of the ADUs is internal/attached and one is detached. Current state guidelines recommend allowing two ADUs in these situations.</p>
One off-street parking space required.	60.50.03.B.2	<p>In many cases, it may be difficult to provide an additional off-street parking space for the ADU. Driveways can count toward this requirement if the primary dwelling has a garage and the driveway is deep enough. The area next to the driveway, but outside the side yard setback, can also be used under some conditions (see 60.30.10.D). If there is no garage or alley access, then meeting this standard may be challenging because the front yard cannot be used for parking.</p>
Maximum floor area of 800 square feet or 50% of primary dwelling.	40.05.15.1.C.7	<p>Generally, the limit of 800 square feet is appropriate and not a significant barrier. There are some specific situations where this standard may become a barrier:</p> <ul style="list-style-type: none"> • A basement conversion ADU where the existing basement exceeds 800 square feet. The code could allow the floor area to be up to the size of the existing basement. • A detached ADU with a smaller house. If the primary house is as small as 1,000-1,200 square feet, it may make sense to allow the ADU to be up to 60-75% of the main house.

Standard	Code Section	Assessment
Exterior materials; roof pitch; trim; window proportion and orientation; and depth of eaves must match primary dwelling.	40.05.15.1.C.9-12	<p>This set of standards essentially requires that the ADU match the style of the primary dwelling. Generally, this will result in ADUs that visually blend in with the existing neighborhood. However, this standard may not be desirable if the style of the primary dwelling is outdated, uses low quality materials, or is not aesthetically appealing. Additionally, the requirement to “match” the style of these elements may not be a clear and objective standard. Some potential modifications to this standard may address this issue:</p> <ul style="list-style-type: none"> • Only require the matching standards for ADUs that are more visible, such as those that are taller, visible from the street, or sited in the rear yard without screening. • Only require the matching standards for attached ADUs. • Limit the matching standards to a narrower set of key features, such as roof pitch and exterior materials.

If privacy or adjacent neighbors are important to the city, this project could consider what design solutions could enhance privacy. In this scenario, the city should explore solutions and update Chapter 40 and Chapter 60 accordingly.

Chapter 50 – Procedures

Chapter 50 defines the procedures under which land use applications are reviewed. Applications are assigned a procedure type to define how they will be reviewed. The typical application types and information on the associated procedure type for ADUs and Missing Middle housing is summarized in Table 8 (and Figure 3).

Table 8. Procedure types for ADUs and Missing Middle housing

Procedure Type and Applicable Applications	Housing Types	Decision Making Authority	Notice Requirements	Neighborhood Meeting?
Type 1 Accessory Dwelling Unit	ADUs	Planning Director	None (limited to applicant)	No
Type 2 Design Review Two	All attached dwellings in the R1, R2, R4 zones.	Planning Director	<ul style="list-style-type: none"> • NAC chair • Property owners within 300 feet 	No
Type 3 New Conditional Use Planned Unit Development Design Review Three	Duplexes in the R5 zone. Attached dwellings in R1, R2, and R4 zones that elect PUD route or cannot meet Design Standards.	Planning Commission	<ul style="list-style-type: none"> • NAC chair • Property owners within 500 feet • Newspaper notice 	Yes

Generally, applicants will prefer a Type 1 or Type 2 procedure because it costs less, is processed more quickly, and may provide more certainty of outcome. A Type 3 procedure could present a barrier for smaller projects and less experienced developers, for two reasons:

- **Cost of application fees.** If multiple applications are required, the land use application fees may reach as high as \$7,000-\$10,000. This could affect economic feasibility for a smaller project with a low profit margin/rate of return.
- **Uncertainty of approval or conditions of approval.** The applicant may perceive that the requirement for a neighborhood meeting and Planning Commission hearing could make denial of the project more likely or lead to imposition of conditions of approval that are difficult to satisfy. This perception may be unwarranted, as there are limits on the conditions of approval and denials must be based on specific criteria, but it may still act as a barrier.

These are not significant barriers for larger projects and more experienced developers. However, if it is the City's goal to ensure that smaller infill projects can be developed by a wide range of developers, then the cost and complexity of a Type 3 procedure should be considered when determining when it will be required.

Chapter 60 - Special Requirements

Chapter 60 includes a wide range of standards that apply to ADUs and Missing Middle housing types. Sections of Chapter 60 that apply to these housing types and may present a barrier or design challenge are reviewed below.

Design Standards and Guidelines

All Missing Middle housing types that are subject to a Design Review Two or Three application must demonstrate conformance with either Design Review Standards (Sections 60.05.15-30) or the Design Review Guidelines (Sections 60.05.35-50). Generally, applicants will prefer the Design Standards as they provide a more objective path to approval and are administered through a staff review. The Design Guidelines allow for flexibility in different methods of achieving a design intent; however, the outcome is less certain than following the clear and objective standards because the guidelines are interpreted by the Planning Commission. For the purposes of this review, we focus on the Design Standards, as most Missing Middle housing types will be eligible for a Type 2 review and most applicants would prefer this procedure.

The following is a list of standards that may present a barrier or a design challenge for Missing Middle housing types. Further, several design issues are highlighted that are not well-addressed by the Design Standards and may necessitate modifying or adding to the standards

- **Building articulation and variety (60.05.15.1).** These standards are essential for attached housing types that may have long building walls. They do not necessarily represent barriers

to missing middle housing but they could be improved to better address potential negative outcomes that would conform with the standard:

- Windows, loading doors, and “changes in material type” count as an articulating feature, but these features may do little to provide façade articulation. For example, an improved standard may require windows to be recessed and only allow a change in material type to count if it includes a change in the plane of the wall.
 - Section 60.05.15.1.C includes an additional standard for attached and detached housing that limits “undifferentiated blank walls” to 150 square feet. This standard supplements the base articulation standard above, but the list of features that provide articulation in this section is less specific. This may lead to features being used to provide articulation that do not meet the intent of the standard.
 - Articulation is not required on side walls. Though side walls are not street-facing, they may be highly visible from the street and from backyards of neighboring properties.
- **Roof forms (60.05.15.2).** The standard that allows for a flat roof if the parapet wall is at least 12 inches in height or “architecturally treated” is not clear and objective. A clearer and more objective standard could specify multiple types of flat roof treatments that are acceptable, for example.
 - **Primary building entrances (60.05.15.3).** Attached (side-by-side) housing can be more appealing if the main entrance to each dwelling unit is emphasized and distinct. Porches, stoops, patios, and porticos achieve this effect. This standard requires a canopy over primary entrances but could be improved for attached dwellings by requiring other features that would ensure the main entrance is a prominent feature of the façade. Alternatively, the city could adopt a menu approach where the developer could choose from a variety of features that would meet the intent of the standard.
 - **Parking location and garage design.** Outside the standards that apply to Compact Detached Housing, no Design Standards specify the location of off-street parking or the design of garages and driveways. Rear access parking is generally preferable for creating pedestrian-friendly streetscapes, but not feasible in many circumstances. Front driveways leading to rear surface parking or garages is a potential alternative, but this design consumes a lot of space in side and rear yards for circulation. If the units are front-loaded (garages served from the street) then driveways and garages will be a prominent feature of the façade. Paired driveways can create a more appealing streetscape and design standards that apply to garages, such as those that apply for Compact Detached Housing, can ensure that garages are less prominent and more attractively designed.
 - **Compact Detached Housing design (60.05.15.9).** These standards address many key issues associated with the design of cottage cluster developments. The standards are relatively comprehensive but allow for flexibility in implementation. The standards are only available to projects over two acres in size that are eligible for the PUD process. If a review path is

made available for smaller developments, then these standards should be reviewed to determine if they need to be modified to work for smaller sites.

- **Landscape buffering and screening (60.05.25).** A buffer area and landscape screening is required where a development is on a lot that abuts or is across the street from a property in other zoning district. The width of the buffer and the degree of landscape screening required is determined by a matrix (Table 60.05-2), which arrays the district of development against the district that abuts or is across the street. Generally, development in residential zones is required to have either a 5-foot buffer with low-screen landscaping (B1 standard) or a 10-foot buffer with the moderate-screen landscaping (B2 standard).⁷ In some specific cases, a 30-foot buffer with high-screen landscaping is required (B3 standard). In most cases, a 5-foot/B1 buffer will not present a barrier to development as most setbacks are at least 5 feet wide (the buffer can be in the setback area). A 10-foot/B2 or 20-foot/B3 buffer may present a barrier, particularly if the buffer is required along a side lot line, where the minimum setback is often 5 feet. There may be an opportunity to lessen buffer requirements between residential zones that allow broadly similar density levels and uses in order to reduce this barrier.

Off-Street Parking - Vehicles

Section 60.30 specifies off-street parking requirements that would apply to ADUs and Missing Middle housing types. The requirements are applied to the housing prototypes in Table 9. The code requires one space per unit for detached dwellings and 1.25-1.75 spaces per unit for attached dwellings, depending on the number of bedrooms in the unit (1.25 for 1 bedroom, 1.5 for 2 bedrooms, and 1.75 for 3 bedroom).

Scaling the standard by number of bedrooms for attached dwellings makes sense because units with more bedrooms correlate with more vehicles owned by the household. The requirement is not scaled by number of bedrooms for detached dwellings. This reflects that more on-street parking space is available per unit for detached dwellings, which are built at a lower density, so parking needs beyond one space per unit can be more easily accommodated with on-street parking. Higher density attached dwellings could not accommodate that surplus parking along the lot's street frontage, though on-street spaces may be available throughout the wider neighborhood.

As illustrated in Table 7, the scaled standards for attached dwellings may make it difficult for some developments to meet the standard. Additionally, the standard sometimes results in disproportionate requirement between functionally similar housing types. For example:

- A house with an ADU would require 2 spaces, while a duplex would require between 3 and 4 spaces.

⁷ The B1 standard requires one tree very 30 lineal feet and live ground cover in between the trees. The B2 standard requires the same number of trees but also requires a 4-6 foot evergreen shrub. The B3 standard requires a 6-foot sight obscuring fence or wall in addition to the trees and shrubs of the B2 standard.

- A row of five narrow lot detached units would require 5 spaces, while a row of 5 attached townhomes would require between 6 and 9 spaces.
- A cottage cluster with 8 units would require 8 spaces, while a courtyard apartment with 8 units would require between 10 and 14 spaces.

Table 9. Off-street parking requirements for housing prototypes

Housing Type	# of Units	Structured Parking Spaces	Surface Parking Spaces	Total Spaces	Parking Ratio (spaces/unit)	Minimum Parking Requirement	
						Min (all 1 BR units)	Max (all 3 BR units)
Accessory Dwelling Unit	1	0	1	1	1.00	1	1
Narrow Lot Detached	1	1	0	1	1.00	1	1
Duplex Stacked	2	0	2	2	1.00	3	4
Duplex Side-by-Side	2	2	0	2	1.00	3	4
Triplex Stacked	3	0	2	2	0.67	4	5
Triplex Side-by-Side	3	3	0	3	1.00	4	5
Fourplex Stacked	4	0	2	2	0.50	5	7
Fourplex Side-by-Side	4	4	0	4	1.00	5	7
Courtyard Apartments	8	0	6	6	0.75	10	14
Townhome Row	5	5	0	5	1.00	6	9
Cottage Cluster (Small)	6	0	6	6	1.00	6	6
Cottage Cluster (Large)	16	16	0	16	1.00	16	16

This higher parking standard for attached dwellings may incentivize developers to build detached dwellings, in some cases. The higher standard could also present a substantial barrier for some projects or even make a project physically or economically infeasible. A few potential modifications might reduce the discrepancy between low-density attached dwellings and detached dwellings and make these projects viable in more locations:

- **Scale the standard by number of units in structure.** For example, attached dwellings with 2-8 units may only require one parking space per unit. This recognizes that on-street parking can help meet the need for these smaller, lower density buildings.
- **Provide a credit for on-street parking.** This provision allows development to reduce the minimum parking requirements based on the number of spaces that can be accommodated along the street frontage of the development. The credit could be provided in addition to lowered requirements noted above or for existing standards. Lower density developments benefit most from this credit because there is more likely street frontage per unit. This credit recognizes that on-street parking will be used and allows for more efficient utilization of site area.

- **Enhance reductions for sites near transit.** For sites within ¼ mile from transit, Section 60.30.10.11.E allows for the number of required vehicle spaces to be reduced by one for every two long-term bike parking spaces provided, up to a maximum of 5% of the vehicle parking spaces. Almost all Missing Middle housing types would not be eligible for this reduction, as a reduction of one space would represent more than 5% of the required on-street parking. This standard could be improved by:
 - Scaling the reduction so smaller developments, between 2-8 units, could reduce the requirement by at least one vehicle space with two bike parking spaces.
 - Do not require a parking analysis for smaller developments.
 - Expand the radius to ½ mile from transit, as this is more likely to benefit properties in residential zones, which tend to be further from transit than commercial or mixed-use zones.

Location of vehicle parking (60.30.10). The location of vehicle parking is regulated by section 60.030.10 of the Development Code. Generally, the standards require that vehicle parking be provided on the same property as the use, not require backing on to a street from larger parking areas (more than two spaces), and prohibit parking in required front yard areas, except in driveways that lead to garages. Most Missing Middle housing types can be designed to accommodate parking in a garage with driveway, a side yard, or the rear yard, so these standards do not present a significant barrier. Further, parking in the front yard creates a less appealing street frontage and should be limited.

One situation where these standards may present a barrier are paired or combined driveways for townhome-style developments. In this design, two driveways directly abut each other and share one curb cut. This reduces the number of curb cuts and creates larger areas of green yard space. However, if the two driveways and two garage spaces create a total of four parking spaces, then this arrangement would not conform to the requirement that parking areas serving more than two spaces not require backing on to the street.

There may be cases where these standards would present a barrier for an additional parking space for an ADU, as most ADUs are added to an existing site and parking may have not been considered as part of the original site design. There may be an opportunity to provide more flexibility in location of parking for ADUs.

Off-Street Parking - Bicycles

Section 60.30.10.5.B specifies bicycle parking requirements. Bicycle parking is not required for detached dwellings and single-family attached (townhome) dwellings but is required for multifamily structures with 4 or more units. It is unclear whether bicycle parking would be required for a duplex or a triplex. This requirement should be clarified. Given that these developments are likely to occupy smaller lots with space constraints, it may make sense to exempt duplexes and triplexes from minimum bike parking standards.

Planned Unit Development

The provisions for Planned Unit Developments (PUDs) are found in Section 60.35. The PUD concept is well-suited to encouraging a variety of housing types and creative site design that is called for by the Missing Middle housing concept. A PUD application allows for modification of base zone standards, including both use regulations and development standards such as density and lot dimensions, in exchange for additional requirements for common open space and architectural design. The PUD provisions also offer relief from open space and setback requirements in exchange for specific features, such as playgrounds, green roofs, or affordable housing.

As noted in the assessment of minimum and maximum density standards, a PUD application would likely allow Missing Middle housing types to be incorporated into a development in a zone where such housing would otherwise be prohibited by minimum or maximum density standards. However, there are two constraints on more widespread utilization of the PUD option:

- **Minimum development size of 2 acres.** There may be locations where a PUD smaller than 2 acres would be appropriate, such as where multiple existing lots can be assembled for a redevelopment project or one large infill or redevelopment lot that is 1-2 acres in size. The cost and complexity of the PUD process may be prohibitive for some smaller developments, however.
- **Type 3 review process.** A PUD requires both a Conditional Use-PUD application and a Design Review Two/Three application, reviewed through a Type 3 process. The PUD standards are relatively complex. For smaller projects or less experienced developers, the PUD process may be perceived as overly costly or complex.

Given these constraints, the City may consider developing an application review track that provides some flexibility and relief from base zone standards, similar to a PUD, but is intended for smaller sites and a narrower set of housing types and site design arrangements. This might allow the application to be reviewed as a Type 2 procedure. For example, this track might allow for small cottage cluster or townhome developments in certain locations and under a specific set of clear and objective standards that can be administered by staff. While the standards may be more prescriptive than a PUD, they would also offer simplicity and certainty for applicants.

Solar Access Protection

Section 60.45 establishes standards for preserving solar access in the R5, R7 and R10 zones. The standards are intended to (1) promote energy conservation by allowing for access to natural light, (2) implement policies of the Comprehensive Plan related to supporting solar energy, and (3) encourage investment in residential solar energy generation. The standards achieve these purposes by requiring special building setbacks, height limits, and orientation of lots and buildings to maximum solar access.

The standards work in conjunction with the development standards of the R5, R7, and R10 zones, which are intended primarily for detached dwellings on lots between 5,000 and 10,000 square feet. Thus, the standards may present a barrier to ADUs and Missing Middle housing types to the extent that the housing types would be permitted in these zones. For example, the special setback standards or height limits may constrain the feasibility of developing certain housing types.

Still, the solar access standards are not entirely incompatible with lower density attached housing types. The degree to which the standards will present a barrier is difficult to judge without applying the standard to specific housing types. Therefore, any changes to permitted housing types or development standards in the R5, R7, and R10 zones should be reviewed for consistency with these standards, and modifications or exemptions to the standards may be necessary.

Accessory Uses and Structures

Section 60.50.05 establishes standards pertaining to accessory uses and structures. The section seems to specify that all the standards in this section do not apply to ADUs; however, some clarification may be necessary. For example, one standard specifies that the “lot coverage by all accessory structures shall be no more than twenty-five (25) percent of a rear yard area”. If all accessory structures includes an ADU, this may present a significant barrier to development of ADUs on smaller lots. The section makes clear that the standards pertaining to a proposed accessory structure do not apply to ADUs, but it does not make clear whether this site calculation includes ADUs.

Tree Removal and Preservation

Section 60.60 sets out standards to preserve trees and require mitigation for tree removal, where appropriate. Generally, mitigation for removal of a tree is only required for Significant Individual Trees, Historic Trees, Trees within Significant Natural Resource Areas, Trees within Significant Groves and Landscape Trees (trees planted as part of a previously approved landscape plan). These preservation and mitigation standards are appropriate and likely not a significant barrier to most ADUs or Missing Middle housing types.

The standards do not require mitigation for Community Trees, which are trees at least 10-inch DBH that do not meet one of the other classifications of Protected Trees, listed above. Many existing, mature trees in residential neighborhoods would be classified as Community Trees. Where an ADU or Missing Middle housing type is proposed in these areas, there are no standards that require preservation or mitigation for removal of these trees. There may be instances where preservation of these trees is desirable. To the extent that allowances for additional housing types are permitted, the City may consider adopting either requirements or incentives for preservation of Community Trees. The requirements or incentives should be designed to preserve high-value, mature trees and should be balanced with the need for flexibility in accommodating the new housing types.

Utility Undergrounding

Section 60.65 establishes requirements for new developments or redevelopments subject to a Design Review or Land Division application to place existing overhead utilities underground or pay a fee-in-lieu to the City. ADU developments would not be subject to this standard as ADUs do not require Design Review. Most Missing Middle housing types would be subject to this standard. The cost of undergrounding utilities can be substantial and may present a barrier for smaller projects. To ensure this requirement is balanced with the desire to provide for these housing types, the City may consider an exemption for small projects (such as between 2-8 units) or a scaled fee-in-lieu structure that lowers the cost for smaller projects.

Chapter 90 - Definitions

Chapter 90 of the BCD establishes definitions for various terms used throughout the code. The definitions of housing or “dwelling” types in Chapter 90 are important because they affect how other provisions of the code can regulate various types of housing. A summary of the classification of housing types is presented in Figure 5. The existing classification and definitions may present challenges for future code provisions that are designed to regulate these housing types differently:

- **Duplexes.** Duplexes have a separate definition in Chapter 90, but they also meet the definition for the broader category of *Attached Dwelling*, though this is not clear from the definition of *Duplex*. It is useful for duplexes to have a separate definition so they can be regulated differently from other housing types, but the definition should be amended to clarify that duplexes are a form of Attached Dwelling.

Duplex. A building designed or used exclusively for occupancy of two families living independently of each other and having separate entrance doors, cooking, bathroom and other housekeeping facilities for each family. A duplex is considered a two-family dwelling. [ORD 3293; November, 1982]

- **Cottage Cluster.** There are two definitions, as shown below, that describe a cottage cluster development. Cluster Housing seems to be limited to detached dwellings in a PUD. However, the provision of Chapter 20 that allows for cottage cluster developments in PUDs used a slightly different term: “Compact Detached Dwellings”.⁸ There is an opportunity to clarify any distinction between these two definitions or to consolidate into a single definition.

Cluster Housing. [ORD 4430; April 2007] Detached dwelling units located within a Planned Unit Development where detached housing is located in close

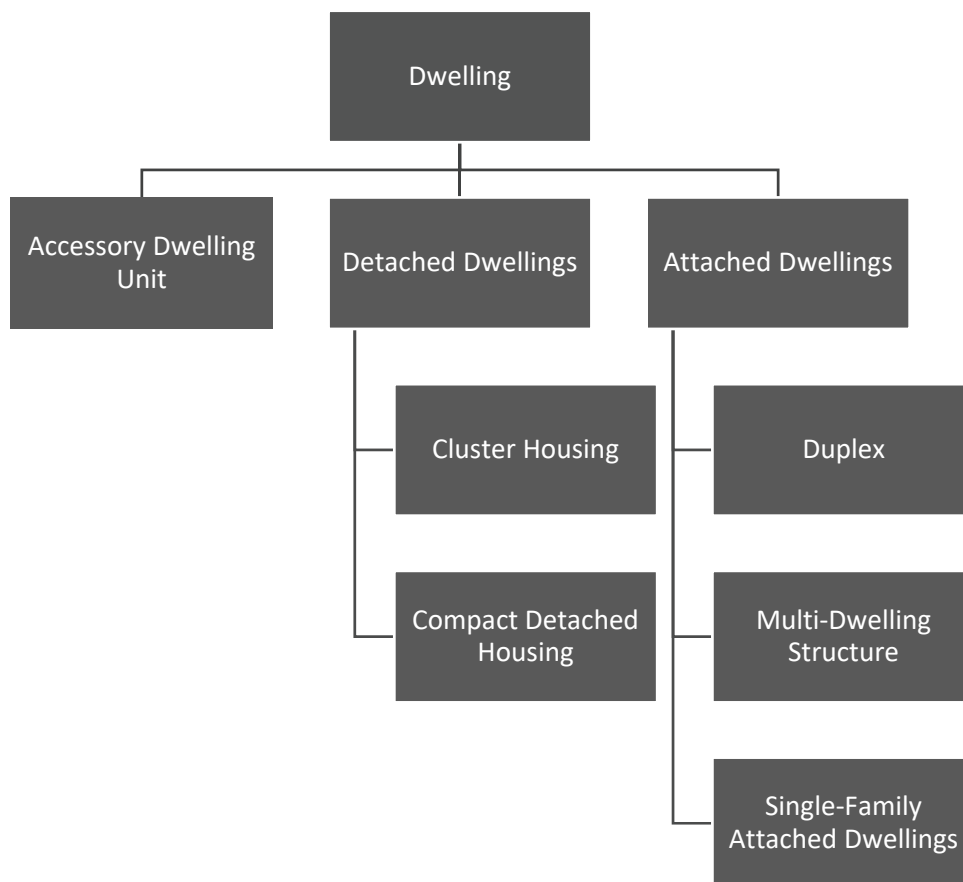
⁸ Compact Detached Dwellings on lots fronting common greens, shared courts, or public streets may be permitted on sites that are two acres or greater in size through the Conditional Use-Planned Unit Development process. (20.05.25.12).

proximity to each other and share common open space including recreation areas and parking.

Compact Detached Housing. [ORD 4652; February 2015] Dwelling units that front onto a shared court, common green, or public street and meet the minimum density requirements of the underlying Residential or Multiple Use zone.

- Small Scale Multifamily Dwellings.** Triplexes, fourplexes, courtyard apartments, and other multifamily developments that contain a relatively small number of units in the structure or development, would all be classified as *Multi-Dwelling Structures*, a type of *Attached Dwelling*. If code provisions are designed to apply to only certain types of multi-dwelling structures, such as those with under a certain number of units or meeting certain specifications, then new definitions would be needed.

Figure 5. Definitions of Housing Types



3. ENGINEERING DESIGN MANUAL

The City of Beaverton Engineering Design Manual (EDM), administered by the Public Works Department, establishes standards for the design of public facilities that serve development. The EDM was reviewed, with input from Public Works staff, to identify any standards that may present a barrier to development of ADUs and Missing Middle housing types. Generally, the EDM does not require a significantly higher level of standards for single-family vs. multifamily development; however, there are a few specific requirements that may be more costly for the low-density multifamily housing types in the Missing Middle. These requirements are identified in Table 10.

Table 10. EDM requirements – potential barriers

EDM Chapter and Section	Requirement	Assessment
Chapter 2 – Streets Section 210 Street Design 210.21 Driveways	Joint use and maintenance agreement required for driveway two or more multifamily lots or four or more single-family lots (210.21.J and K)	This is a common requirement and not a significant barrier.
Chapter 5 - Surface Water Management (SWM) and Sanitary Sewer Section 520 General Design Criteria	All SWM drainage conduits that serve more than one lot, or crosses onto another lot, shall be considered a public system and shall be constructed to public standards with appropriate easements to the city (520.L)	This standard may apply to multiple Missing Middle housing types. Engineering staff noted that this had affected these housing types. The degree of the impact and alternative approaches should be explored.
Chapter 5 - Surface Water Management (SWM) and Sanitary Sewer Section 530.1 Surface Water Management (SWM) Facilities	For multifamily projects, roof and foundation drains must drain to public storm drain system. For single-family, these drains can be piped to street gutter (530.1.A.8).	Engineering staff noted that this had affected these housing types. Connecting to the public storm drain system is more costly than draining to the gutter. An alternative might be to exempt duplexes and/or triplexes from this requirement and apply the same standard as single-family houses.
Chapter 6 - Water System Section 650 Fire Hydrants	Single-family and duplex must be within 500 feet, multifamily must be within 250 feet (650.1)	The prevalence and cost of this requirement needs further study. If triplexes and other attached dwellings are permitted more widely, this standard may become an issue in more cases.
Chapter 6 – Water System Section 660 Water Service Connections	Master water meter required for any structure serving more than two dwelling units on a single lot (660.1.1).	The cost of this requirement needs further study. There may be an opportunity to exempt triplexes from this standard.

More broadly, there are two issues related to public facilities that may affect development of ADUs and Missing Middle housing types:

- **Street improvement requirements.** In some cases, Missing Middle housing types would be required to construct street frontage improvements where the existing street frontage does not meet the Standard Drawings specified in the EDM. These improvements are necessary for creating safe, efficient, and multi-modal transportation system, so exempting this

requirement may not be a viable approach. Further, frontage improvement requirements also apply to single-family detached housing. Alternatively, the City may consider identifying a funding source to help supplement the costs of street improvements or develop other methods for reducing the cost burden borne by the development.

- **Capacity constraints.** In some cases, existing public facilities may not have the capacity to serve new development of ADUs or Missing Middle housing types. Capacity of local sewer, storm, and water facilities should be considered prior to allowances for additional housing types or higher density development.

4. SUBDIVISION COVENANTS, CONDITIONS, AND RESTRICTIONS

Many subdivisions and PUDs in the City of Beaverton, and other cities across the state, adopt private contractual agreements among the homeowners in the development that place certain restrictions on uses, activities, and improvements in the development. These are generally referred to as Covenants, Conditions and Restrictions (CC&Rs). These CC&Rs are typically administered by some type of Home Owners Association (HOA). As specified in Section 10.45 of the BDC, the City's Development Code is not intended to supersede any easements, covenants, or other agreements between private parties, except under these two conditions:

- The code imposes a greater restriction on use or height of a building than the private agreement.
- The code imposes a requirement for larger open spaces than the private agreement.

Therefore, any Covenants, Conditions & Restrictions (CC&Rs) that prohibit missing middle housing types or place more restrictive standards than the code will supersede the code standard. This is significant because it may limit the effectiveness of any Development Code changes that intend to allow for a wider variety of housing types or higher density development, as these changes will be superseded by any more restrictive CC&Rs.

The CC&Rs of 10 subdivision or PUD projects were reviewed to identify any restrictions that may affect proposed code changes under this project. The results of this review are summarized in Table 11. The key findings of this review are as follows:

- **Use Restrictions.** Five of the ten developments include restrictions that could be generally interpreted to prohibit more than one dwelling unit being located on a lot, including an ADU. Only one development expressly allows ADUs (SCM Heights). The remaining four developments do not expressly prohibit ADUs or the conversion of a house to a duplex.
- **Land Division Restrictions.** Two of the ten developments prohibit lot divisions. Another two developments allow lot divisions with approval by the City and the HOA's Architectural Review Board. The remaining six developments do not expressly prohibit land divisions.
- **Leasing Restrictions.** All developments prohibit short-term rental of units (less than 30 days). Two developments place limits on the number of homes in the development that could be rented to a long-term tenant. In these developments, homeowners may have less incentive to construct an ADU if there are limits on the ability to lease the unit and earn rental income.
- **Design Standards or Guidelines.** All developments require alterations and new structures to be reviewed by some type of architectural review board or committee. Design guidelines and requirements are typically not included in these CC&Rs, but often are required to be adopted by the board or committee as a separate document. Additionally, some developments list specific standards in the CC&Rs. Common standards are the minimum floor area of a dwelling unit and a requirement for at least a two-car garage.

Table 11. Review of CC&Rs

Project/CC&R Name	Use Restrictions	Land Division Restrictions	Leasing Restrictions	Design Standards/Guidelines
45 Central	Residential use only	Declarant may subdivide, individual owners with approval by Architectural Review Committee and City	None specified	Design guidelines in separate document.
Adalyn Place	Single-family residential use only	No lot divisions	No more than two lots in the HOA at a time, requires board approval, must be entire lot	Design guidelines in separate document. No trees over 6" DBH can be removed without prior approval.
Fox Woods	Residential use only	No lot divisions	None specified	Design guidelines in separate document. No trees over 6" DBH can be removed without prior approval.
Greenway Ridge	Residential use only	None specified	No more than 17 of 20 homes may be rented	Design guidelines in separate document.
Hiteon Meadows	Residential use only	None specified	None specified	Design guidelines in separate document. Minimum size of home is 1,900 square feet. Roof, siding, and window materials are specified in CC&Rs.
Murrayhill	Residential use only, with lots designated as either single-family or multifamily	None specified	None specified	Design guidelines in separate document. No trees over 6" DBH can be removed without prior approval.
Nora Road Highlands	Single-family residential use only, no outbuilding used as a residence.	None specified	None specified	Minimum size of home is 1,800 square feet. Must have two-car garage. Minimum roof pitch is 6/12.
SCM Heights	Single living unit with ADU only.	Declarant may subdivide, individual owners with approval by Architectural Review Committee and City	None specified	Design guidelines in separate document.
Stewart Heights	Residential use, no detached ADUs.	None specified	None specified	Design guidelines in separate document. Max height is two stories. Minimum size of home is 1,400 square feet. Must have two-car garage.
Stonegate at Waterhouse	One detached single-family dwelling, except for multifamily lots.	None specified	None specified	Design guidelines in separate document. Roofing must be cedar. Minimum size of home is 1,500 feet. Minimum 25-foot setback from open spaces.