

# Residential Infill Project

AN UPDATE TO PORTLAND'S  
SINGLE-DWELLING ZONING RULES

As-Amended by City Council  
JULY 2020

## VOLUME 3: APPENDICES A-G



Bureau of Planning and Sustainability  
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## Volume 3 – Appendices

**Appendix A:** *Economic Analysis of Proposed Changes to the Single-Dwelling Zone Development Standards*, Memorandum from Johnson Economics, November 2018

**Appendix B:** Displacement Risk Analysis, BPS Staff, February 2019

**Appendix C:** *Use of Floor Area Ratios (FARs) in Single Family Zoning*, Dyett & Bhatia Urban and Regional Planners, June 2016

**Appendix D:** *Visitability Best Practices*, Alan DeLaTorre, Ph.D., Alex Freeman, and Matthew Wadleigh (Portland State University), June 27, 2017

**Appendix E:** Catalog of 2015 New Single-Family House Permits in the R2.5 Zone, BPS Staff, 2017

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**Appendix G:** Portland's Historically Narrow Lots, BPS Staff, 2017



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## MEMO

**DATE:** December 5, 2018

**TO:** Planning and Sustainability Commission

**FROM:** Morgan Tracy, Residential Infill Project Manager  
Tyler Bump, Senior Economic Planner

**CC:** Joe Zehnder, Director  
Sandra Wood, Principal Planner

**SUBJECT:** Residential Infill Project Economic Analysis for the Revised Proposed Draft

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On December 11, 2018 the Planning and Sustainability Commission (PSC) will discuss the revised economic analysis for the Residential Infill Project. Attached is the analysis provided by Johnson Economics. This memo summarizes the analysis and provides key findings.

### Background

In April 2018, staff released the Residential Infill Project *Proposed Draft*. The *Draft* included Appendix B: *Economic Analysis of Proposed Changes to the Single Dwelling Zone Development Standards*, conducted by Johnson Economics.

The analysis was based on proposed changes to R7, R5 and R2.5 zone standards with new limitations on floor area and additional housing type allowances in the new 'a' overlay zone.

In September 2018, the PSC directed staff to revise the proposal by incrementally increasing floor area limits for additional units, allowing more housing types, in more locations in the affected zones.

In November 2018, Johnson Economics conducted an update to the *Economic Analysis of Proposed Changes to the Infill Development Standards* that reflects increases in floor area allowances and allowing more housing types in a broader geographic area consistent with direction from the PSC.



## Economic Analysis Summary

Both analyses were conducted over a 20-year development horizon. The following table summarizes the results:

	Summary of Analysis Results	
	Staff Proposal, April 2018	Revised Proposal, Sept 2018
<b>\$ investment</b>	-\$1.5 Billion (-30%)	+\$817 Million (15%)
<b>New units</b>	+1,713 (31%)	+24,450 (179%)
<b>Replaced units</b> (house is replaced by 1 or more units)	-1,498 (-22%)	+117 (8%)
<b>Total Additional Units</b>	+215 (2%)	+24,333 (198%)
<b>Average rent</b>	\$3,000 (-35%)	\$1,800 (-56%)

### Key findings:

- Increasing allowable units without increasing FARs provides a small market incentive to build an alternative to a single house (in the form of being able to offer individually lower priced, smaller units). This result is borne out in the staff's April 2018 proposal.
- Increasing FARs with the number of units provides a more significant incentive to build housing types other than a single house. This is seen in the September 2018 revised proposal.
- Staff's April 2018 proposal:
  - Significantly reduced the number of replaced units (22% reduction). This is primarily a function of lower FARs limits.
  - Provided a modest increase to the total number of units (215 total units) and reduced construction investment (by 30 percent) over the 20-year time horizon.
  - Resulting units were smaller (e.g. 1,000 sf triplex units and 1,250 sf duplex units) and consequently, less expensive in comparison to a single house (e.g. 2,500 sf).



- The resulting rents (e.g. average of \$3000 per unit) are not low enough to expect that new construction would be built as a rental product.
- The September 2018 revised proposal:
  - Significantly increases the unit production (by nearly 200 percent) and increases construction investment by 15 percent.
  - Marginally increases the number of replaced units.
  - With the housing type allowances for three and four units, the resulting unit sizes were further reduced (e.g. 1,100 sf triplex units and 875 sf fourplex units).
  - These reductions in unit size bring the average rent near to the market rate for new apartment construction (e.g. average of \$1800 per unit).

**About the Economic Model:**

The economic analysis is based on a **predictive model** that looks at the real market value of parcels against a series of housing prototype proformas to determine the relative likelihood that a parcel will develop.

For example, when the real market value (RMV) of a parcel is less than the residual land value (RLV) of a development type, then that parcel is assumed to develop. These results are then aggregated up into a total. These results are compared against a baseline (the no change scenario). The model is especially sensitive to achievable sales/rental pricing which is a function of market conditions and specific geographies, and allowable floor area.

The following table lists the relevant inputs that were used in the model to conduct both analyses:

	<b>Comparison of Relevant Economic Model Inputs</b>	
	<b>Staff Proposal, April 2018</b>	<b>Revised Proposal, September 2018</b>
<b>Floor Area Ratios*</b>	R7 = 0.4; R5 = 0.5; R2.5 = 0.7 Corner triplex = +.15	R7 = 0.4; R5 = 0.5; R2.5 = 0.7 2 <sup>nd</sup> unit = +.10 More than 2 units = +.20
<b>Housing types**</b>	Duplex Triplex	Duplex Triplex Fourplex
<b>Geography</b>	~66% of affected zones	~92% of affected zones

\* The modeling did not account for bonus FARs (affordability or house retention incentives)

\*\* Accessory dwelling units were not specifically factored in the model



The analysis did not look specifically at **accessory dwelling unit (ADU)** potential. There are two reasons for this: First, for the purposes of evaluating the revised proposal, the model considered development costs per square foot, number of units, and total allowable square footage. Because the allowable FAR in the proposal is tied to the number and not type of units, the model made no distinction between different development configurations. In other words, it doesn't distinguish between three units in a triplex and three units in a house with two ADUs. Second, ADUs created by homeowners are largely built using home equity sources of financing and are sensitive to other factors that the model cannot readily predict.

Therefore, **the production of ADUs would be in addition to the units included in this analysis.** Current ADU projections, based on 2010-2016 trends, assume 5,000 more ADUs between 2017 and 2035, or about 280 per year. Both staff's April 2018 proposal and September 2018 revised proposal include allowances to double ADU entitlements.

We look forward to our conversation on December 11.





**MEMORANDUM**

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**DATE:** November 29, 2018

**To:** Tyler Bump  
BUREAU OF PLANNING AND SUSTAINABILITY

**FROM:** Jerry Johnson  
JOHNSON ECONOMICS LLC

**SUBJECT:** Economic Analysis of Proposed Changes to the Infill Development Standards

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The City of Portland Bureau of Planning and Sustainability continues to refine the Residential Infill Project, and this analysis provides an updated to previous work completed by Johnson Economics on the project from March 2018. A number of changes have been made since the previous draft standards, including changes in allowable FAR, the number of units allowed in the structure, and a change in zoning of some parcels.

The proposed change in allowed development being evaluated are as follows:

Units	Allowed Housing Type	R7	R5	R2.5
<b>Minimum Lot Size (1-2 Units)</b>		4,200 SF	3,000 SF	1,600 SF
1	Single Family Home	Base FAR: 0.4	Base FAR: 0.5	Base FAR: 0.7
2	Duplex or Single Family Home + ADU	Base FAR: 0.5 W/Bonus: 0.6	Base FAR: 0.6 W/Bonus: 0.7	Base FAR: 0.8 W/Bonus: 0.9
<b>Minimum Lot Size (3+ Units)</b>		5,000 SF	4,500 SF	3,200 SF
3	Triplex, Duplex +ADU, or House +2 ADUs	Base FAR: 0.6 W/Bonus: 0.7	Base FAR: 0.7 W/Bonus: 0.8	Base FAR: 0.9 W/Bonus: 1.0
4	Fourplex			
<b>Current Allowed FAR</b>		1.1 FAR	1.35 FAR	1.75 FAR

The changes allow for more units on individual parcels, and modest increases in allowed FAR as the number of units increases. The bonus FAR is available if at least one of the units is affordable at 80% MFI, or an existing home is converted to multiple units. Both of these conditions favor multi-unit development solutions for redevelopment.

The geographic coverage for the residential infill project has also changed.

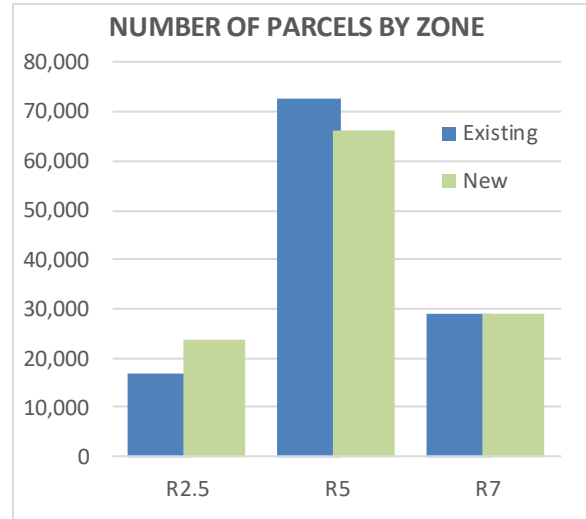
While the FAR reductions are significant, the current allowed size of structure for the three residential zones is likely well above what would be expected in the market, as homes in these size ranges represent a small percentage of housing stock. The revised allowable home sizes will likely restrict final home sizes below what the market may



support, particularly for single family homes, and we would expect new development to largely develop close to the new limits.

The new proposal includes a rezone of a number of parcels from R5 to R2.5, which has a significant impact on allowable density under the proposal, with fourplexes now allowed at up to 1.0 FAR on a 3,200 square foot lot.

In summary, the most recent proposed changes to the code increase allowable density in terms of units, and the FAR and bonus structure provides incentives for greater unit counts at redevelopment. The net impact is expected to be a greater proportion of redevelopment being multiple-unit properties, providing greater net unit yield and lower average price points as a result.



## I. PROTOTYPES

As with our previous analyses, Johnson Economics modeled the economic feasibility of a series of prototypical development types. A total of 11 development prototypes were evaluated, five representing current zoning standards with an additional 6 under the revised standards. Under the new proposed standards, the allowable square footage is reduced due to lower allowable FAR, while the number of allowed units is increased. By allowing for multiple residential structures on the site, a developer is able to produce housing at a lower overall price point which broadens the potential market for the housing. While the lower price point will reduce market risk, these units are likely to be largely rental product.

The following are summary pro formas for these development forms. The assumed pricing levels in these examples was included as an example, with actual pricing varied based on a series of eleven discrete pricing bands identified in the study area. The number of pricing bins was reduced as the geographic coverage of the new proposal is more limited although including a greater number of parcels, with less pricing variability between areas.





EXAMPLE OF DEVELOPMENT PROTOTYPES, RENTAL RESIDENTIAL ANALYSIS

		Current Zoning Assumptions					New Zoning Assumptions					
		Rental_Middle_SFR	Rental_Middle_Skinny	Rental_Middle_Duplex	Rental_Middle_4-Plex_2	Rental_Middle_Triplex	Rental_Middle_SFR_2	Rental_Middle_Skinny_2	Rental_Middle_Duplex_2	Rental_Middle_4-Plex_2	Rental_2.5-4-Plex_2	Rental_Middle_Triplex_2
<b>PROGRAM</b>	<b>Property Assumptions</b>											
	Site Size (SF)	5,000	2,500	4,500	4,500	4,500	4,200	4,200	4,200	4,500	3,800	4,500
	Density	8.71	17.42	19.36	38.72	29.04	10.37	10.37	20.74	38.72	45.85	29.04
	Unit Count	1	1	2	4	3	1	1	2	4	4	3
	Ave Unit Size	2,000	1,850	1,710	788	990	2,100	2,940	1,260	731	713	1,050
	Efficiency Ratio	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Building Square Feet	2,750	1,850	3,420	3,150	2,970	2,100	2,940	2,520	2,925	2,850	3,150
	Stories	2	3	2	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	Bldg Footprint	1,375	617	1,710	1,575	1,485	1,050	1,470	1,260	1,463	1,425	1,575
	FAR	0.55	0.74	0.76	0.70	0.66	0.50	0.70	0.60	0.65	0.75	0.70
	Parking Ratio/Unit	1.5	1.0	1.0	0.5	1.0	1.5	1.0	1.0	0.5	1.0	1.0
	Total Parking Spaces	1.5	1.0	2.0	2.0	2	1.5	1.0	2.0	2.0	2.0	2.0
	Parking SF/Space - Surface											
	Parking SF/Space - Structure											
	Parking Spaces - Surface	-	1.0	-	-	-	-	1.0	-	-	-	-
	Parking Spaces - Structure	2.0	-	2.0	2.0	2.0	1.5	-	2.0	2.0	2.0	2.0
	Structured Parking %	100%	0%	100%	100%	100%	100%	0%	100%	100%	100%	100%
	<b>Cost Assumptions</b>											
	Base Construction Cost/SF	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185
	Adjustment Factor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Construction Cost/SF	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185	\$185	
Base Parking Costs/Space	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
Adjustment Factor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Parking Cost/Space	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
<b>PROPERTY VALUATION</b>	<b>Income Assumptions</b>											
	Base Income/Sf/Mo.	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	
	Adjustment Factor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Achievable Pricing	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	\$1.95	
	Parking Charges/Space/Mo	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	\$122	
	<b>Expenses</b>											
	Vacancy/Collection Loss	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	
	Operating Expenses	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
	Adjustment Factor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Operating Expenses	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	
	Reserve & Replacement	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
	<b>Valuation</b>											
Capitalization Rate	5.50%	5.50%	6.00%	6.00%	6.00%	5.50%	5.50%	6.00%	5.50%	5.50%	6.00%	
Adjustment Factor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Capitalization Rate	5.50%	5.50%	6.00%	6.00%	6.00%	5.50%	5.50%	6.00%	5.50%	5.50%	6.00%	
<b>SUPPORTABLE PROPERTY VALUE</b>	<b>Cost</b>											
	Cost/Construct w/o prkg.	\$508,750	\$342,250	\$632,700	\$582,750	\$549,450	\$388,500	\$543,900	\$466,200	\$541,125	\$527,250	\$582,750
	Total Parking Costs	\$40,000	\$0	\$40,000	\$40,000	\$40,000	\$30,000	\$0	\$40,000	\$40,000	\$40,000	\$40,000
	Estimated Project Cost	\$548,750	\$342,250	\$672,700	\$622,750	\$589,450	\$418,500	\$543,900	\$506,200	\$581,125	\$567,250	\$622,750
	<b>Income</b>											
	Annual Base Income	\$64,350	\$43,290	\$80,028	\$73,710	\$69,498	\$49,140	\$68,796	\$58,968	\$68,445	\$66,690	\$73,710
	Annual Parking	\$2,928	\$0	\$2,928	\$2,928	\$2,928	\$2,196	\$0	\$2,928	\$2,928	\$2,928	\$2,928
	Gross Annual Income	\$67,278	\$43,290	\$82,956	\$76,638	\$72,426	\$51,336	\$68,796	\$61,896	\$71,373	\$69,618	\$76,638
	Less: Vacancy & CL	\$3,364	\$2,165	\$4,148	\$3,832	\$3,621	\$2,567	\$3,440	\$3,095	\$3,569	\$3,481	\$3,832
	Effective Gross Income	\$63,914	\$41,126	\$78,808	\$72,806	\$68,805	\$48,769	\$65,356	\$58,801	\$67,804	\$66,137	\$72,806
	Less Expenses:											
	Operating Expenses	\$20,453	\$13,160	\$25,219	\$23,298	\$22,018	\$15,606	\$20,914	\$18,816	\$21,697	\$21,164	\$23,298
	Reserve & Replacement	\$1,917	\$1,234	\$2,364	\$2,184	\$2,064	\$1,463	\$1,961	\$1,764	\$2,034	\$1,984	\$2,184
	Annual NOI	\$41,544	\$26,732	\$51,225	\$47,324	\$44,723	\$31,700	\$42,482	\$38,221	\$44,073	\$42,989	\$47,324
	<b>Property Valuation</b>											
	Return on Cost	7.57%	7.81%	7.61%	7.60%	7.59%	7.57%	7.81%	7.55%	7.58%	7.58%	7.60%
	Threshold Return on Cost	6.33%	6.33%	6.90%	6.90%	6.90%	6.33%	6.33%	6.90%	6.33%	6.33%	6.90%
Residual Property Value	\$108,075	\$80,384	\$69,696	\$63,105	\$58,710	\$82,685	\$127,745	\$47,724	\$115,679	\$112,420	\$63,105	
RPV/SF	\$21.61	\$32.15	\$15.49	\$14.02	\$13.05	\$19.69	\$30.42	\$11.36	\$25.71	\$29.58	\$14.02	



EXAMPLE OF DEVELOPMENT PROTOTYPES, OWNERSHIP RESIDENTIAL ANALYSIS

		Current Zoning Assumptions					New Zoning Assumptions					
		Condo_Middle_SFR	Condo_Middle_Skinny	Condo_Middle_Duplex	Condo_Middle_4-Plex_2	Condo_Middle_Triplex	Condo_Middle_SFR_2	Condo_Middle_Skinny_2	Condo_Middle_Duplex_2	Condo_Middle_4-Plex_2	Condo_2.5-4-Plex_2	Condo_Middle_Triplex_2
<b>PROGRAM</b>	<b>Property Assumptions</b>											
	Site Size (SF)	5,000	2,500	4,500	4,500	4,500	4,200	4,200	4,200	4,500	3,800	4,500
	Density	9	17	19	39	29	10	10	21	39	46	29
	Unit Count	1	1	2	4	3	1	1	2	4	4	3
	Ave Unit Size	2,000	1,850	1,710	788	990	2,100	2,940	1,260	731	713	1,050
	Building Square Feet	2,750	1,850	3,420	3,150	2,970	2,100	2,940	2,520	2,925	2,850	3,150
	Stories	2	3	2	2	2	2	2	2	2	2	2
	Bldg Footprint	1,375	617	1,710	1,575	1,485	1,050	1,470	1,260	1,463	1,463	1,575
	FAR	0.55	0.74	0.76	0.70	0.66	0.50	0.70	0.60	0.65	0.75	0.70
	Parking Ratio/Unit	1.50	1.00	1.00	0.50	1.00	1.50	1.00	1.00	0.50	1.00	1.00
	Total Parking Spaces	2	1	2	2	2	2	1	2	2	2	2
	Parking SF/Space - Surface	350	350	350	350	350	350	350	350	350	350	350
	Parking SF/Space - Structure	350	350	375	350	375	350	350	-	-	-	-
	Parking Spaces - Surface	-	1	-	-	-	-	1	-	-	-	-
	Parking Spaces - Structure	2	-	2	2	2	2	-	2	2	2	2
	Structured Parking %	100%	0%	100%	100%	100%	100%	0%	100%	100%	100%	100%
	<b>Cost Assumptions</b>											
	Base Construction Cost/SF	\$204	\$204	\$204	\$204	\$204	\$204	\$204	\$204	\$204	\$204	\$204
	Adjustment Factor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Construction Cost/SF	\$204	\$204	\$204	\$204	\$204	\$204	\$204	\$204	\$204	\$204	\$204
Base Parking Costs/Space	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
Adjustment Factor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Parking Cost/Space	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
<b>Income Assumptions</b>												
Sales Price/SF	\$278	\$278	\$278	\$278	\$278	\$278	\$278	\$278	\$278	\$278	\$278	
Adjustment Factor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Achievable Pricing	\$278	\$278	\$278	\$278	\$278	\$278	\$278	\$278	\$278	\$278	\$278	
Parking Charges/Space	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875	
<b>Expenses</b>												
Sales Commission	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
<b>SUPPORTABLE PROPERTY VALUE</b>												
<b>Cost</b>												
Cost/Construct w/o prkg.	\$559,625	\$376,475	\$695,970	\$641,025	\$604,395	\$427,350	\$598,290	\$512,820	\$595,238	\$579,975	\$641,025	
Total Parking Costs	\$40,000	\$0	\$40,000	\$40,000	\$40,000	\$30,000	\$0	\$40,000	\$40,000	\$40,000	\$40,000	
Estimated Project Cost	\$599,625	\$376,475	\$735,970	\$681,025	\$644,395	\$457,350	\$598,290	\$552,820	\$635,238	\$619,975	\$681,025	
<b>Income</b>												
Gross Income - Units	\$763,620	\$513,708	\$949,666	\$874,692	\$824,710	\$583,128	\$816,379	\$699,754	\$812,214	\$791,388	\$874,692	
Gross Income - Parking	\$43,750	\$0	\$43,750	\$43,750	\$43,750	\$32,813	\$0	\$43,750	\$43,750	\$43,750	\$43,750	
Gross Sales Income	\$807,370	\$513,708	\$993,416	\$918,442	\$868,460	\$615,941	\$816,379	\$743,504	\$855,964	\$835,138	\$918,442	
Less: Commission	(\$32,295)	(\$20,548)	(\$39,737)	(\$36,738)	(\$34,738)	(\$24,638)	(\$32,655)	(\$29,740)	(\$34,239)	(\$33,406)	(\$36,738)	
Effective Gross Income	\$775,075	\$493,160	\$953,679	\$881,704	\$833,721	\$591,303	\$783,724	\$713,763	\$821,725	\$801,732	\$881,704	
<b>Property Valuation</b>												
Return on Sales	29.26%	30.99%	29.58%	29.47%	29.38%	29.29%	30.99%	29.11%	29.36%	29.32%	29.47%	
Threshold Return on Cost	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	
Residual Property Value	\$74,353	\$52,360	\$93,316	\$85,674	\$80,580	\$56,826	\$83,209	\$67,844	\$79,306	\$77,184	\$85,674	
<b>RPV/SF</b>	<b>\$14.87</b>	<b>\$20.94</b>	<b>\$20.74</b>	<b>\$19.04</b>	<b>\$17.91</b>	<b>\$13.53</b>	<b>\$19.81</b>	<b>\$16.15</b>	<b>\$17.62</b>	<b>\$20.31</b>	<b>\$19.04</b>	



## II. PREDICTIVE DEVELOPMENT MODELING

### Description of Model

Johnson Economics used a predictive development model, which is designed to estimate the marginal impact of changes in the development environment on the expected magnitude and character of development. The model is designed to predict the magnitude and form of likely development or redevelopment activity over an assumed time frame. The primary approach used to predict likely development patterns is the relationship between the supportable residual land value for prospective uses and the current value of the property (including land as well as improvements, if any). The underlying assumption is that when the value of a property for new development is high relative to the current value of the property, it will be more likely to see development or redevelopment over a defined time-period.

The model evaluates the likelihood of development at the parcel level, although the results are expressed in aggregated geographies. What the model solves for is probabilities to redevelop as well as anticipated development forms, and the results reflect the expected value of development/redevelopment activity. The model will not indicate that a specific parcel will or won't redevelop, rather, it will indicate the probability of that occurrence as well as predict the likely form of development.

### Pricing Gradients

The analysis used the achievable pricing gradients developed in our March 2018 work. While these have not been changed, we recognize that pricing has continued to trend upwards for ownership housing product, while rental housing product has seen less escalation.

The model was broken down into eleven separate pricing bins, which have similar achievable price points. The table to the right shows the pricing bins, the number of parcels in that bin, as well as the average residential rent per square foot and the average sales price per square foot in that bin. A total of 118,528 parcels were evaluated, which represented all parcels zoned either R7, R5, or R2.5 in the study area. The average achievable rent assumption was \$1.91 per square foot, while the average achievable sales price was \$273 per square foot.

Pricing Bin	# of Parcels	Residential Rent/SF	Sales Price/SF
1	7,525	\$1.47	\$209
2	19,516	\$1.54	\$219
3	8,776	\$1.64	\$234
4	6,889	\$1.75	\$249
5	11,326	\$1.85	\$263
6	17,059	\$1.95	\$278
7	15,700	\$2.05	\$292
8	13,824	\$2.17	\$309
9	13,043	\$2.32	\$330
10	4,570	\$2.61	\$372
11	300	\$2.72	\$387
Total/Avg.	118,528	\$1.91	\$273



### Model Output

Our predictive development model was run for two scenarios, reflecting current and proposed development standards. The results showed an expected aggregate increase in the level of construction investment but yielding a sharply higher number of predicted new residential units in the study area. The output reflects a modest increase in the level of redevelopment, but a greater unit density, expected net unit yield, and lower price point per unit on properties that do redevelop.

The predicted net development yield from residential development/redevelopment in the study area was 12,281 units over the next twenty years under the current zoning, increasing to 36,614 units under the proposed new zoning. The construction of these units will entail the loss of existing residential capacity (demolition of existing structures where present), which is reflected in the net unit estimates. The impact on rental residential pricing was highly significant, with average rents dropping by 56% as compared to the default scenario (current zoning), which reflects a change in unit size as opposed to reduced rents per square foot.

## SUMMARY OF PREDICTED DEVELOPMENT ACTIVITY WITH PROPOSED MODIFICATIONS IN ZONING CODES 20 Year Study Period , No Pricing Changes

	Predicted Development Yield				
	Construction Investment	New Units	Replaced Units	Net Units	Average Rent
<b>BASELINE</b>					
New Construction	\$5,233,460,967	13,665	(1,384)	12,281	\$4,159
<b>NEW ZONING</b>					
New Construction	\$6,105,186,215	38,115	(1,501)	36,614	\$1,823
<b>NET IMPACT</b>					
Total	<b>\$871,725,248</b>	<b>24,450</b>	<b>-117</b>	<b>24,333</b>	<b>-\$2,336</b>
% Change	17%	179%	8%	198%	-56%

The number of new units predicted is quite high, and market support for that many units in these configurations may limit the study area's ability to support this level and type of development over a planning period.

When output is broken down by pricing bin, the impact on pricing is spread broadly, with redevelopment favoring higher density solutions providing smaller units at lower price points. As with our previous analysis, the lowest priced neighborhoods have no predicted redevelopment under either the baseline or new zoning scenario.



### SUMMARY OF RENTAL ANALYSIS RESULTS AT THE PRICING BIN LEVEL

Pricing Bin	# of Parcels	Residential Rent/SF	Sales Price/SF	Baseline		New Zoning		Net Change		
				Units	Avg. Rent	Units	Avg. Rent	Units	Avg. Rent	% Price
1	7,525	\$1.47	\$209	0	\$0	0	\$0	0	\$0	0%
2	19,516	\$1.54	\$219	0	\$0	0	\$0	0	\$0	0%
3	8,776	\$1.64	\$234	235	\$3,178	641	\$1,683	406	(\$1,496)	-47%
4	6,889	\$1.75	\$249	192	\$3,396	537	\$1,799	345	(\$1,597)	-47%
5	11,326	\$1.85	\$263	331	\$3,618	1,001	\$1,902	670	(\$1,715)	-47%
6	17,059	\$1.95	\$278	567	\$3,854	2,396	\$1,758	1,829	(\$2,096)	-54%
7	15,700	\$2.05	\$292	1,639	\$4,008	6,280	\$1,873	4,641	(\$2,135)	-53%
8	13,824	\$2.17	\$309	1,179	\$4,224	5,381	\$1,667	4,202	(\$2,557)	-61%
9	13,043	\$2.32	\$330	5,755	\$4,046	13,467	\$1,777	7,712	(\$2,269)	-56%
10	4,570	\$2.61	\$372	3,685	\$4,568	8,213	\$1,977	4,528	(\$2,590)	-57%
11	300	\$2.72	\$387	82	\$4,679	199	\$2,082	117	(\$2,598)	-56%
Total/Avg.	118,528	\$1.91	\$273	13,665	\$4,159	38,115	\$1,823	24,450	(\$2,336)	-56%

Under the assumptions used, rental residential largely outbid ownership residential solutions in the current pricing environment. Over the study period, the relationship between rental and ownership residential units will likely change, with ownership units shifting to the highest and best use solution.

### III. SUMMARY

Our analysis indicates that the proposed changes in entitlements would likely result in a modest increase in redevelopment activity in terms of construction investment but yield a significantly higher number of units through the development of multi-unit development forms.

The predicted marginal increase in unit capacity associated with the changes is significant, but the level of development may be limited by market factors and demand. The large number of units in a multi-unit configuration are likely to be disproportionately rental, and the market for this type of rental unit as well as investors interested in holding these types of income properties is limited. Nonetheless, our analysis indicates that the proposed changes will support an increase in residential yield as well as a reduction in average pricing for new units under the proposed changes.

#### Ownership Residential

Ownership residential solutions under the proposed new codes would be expected to be limited, particularly for multiple-unit development projects. This is due to challenges in developing condominium units in the current environment. While smaller condominium units would likely be well received by the market due to their lower price point, few developers are interested in producing and selling condominiums. This is largely attributable to construction defect litigation risk, in which purchasers can sue the developer and members of his team (architects, contractors, product manufacturers).

Construction defects can range from complex foundation and framing issues which threaten the structural integrity of buildings, to aesthetic issues such as improperly painted surfaces and deteriorating wood trim around windows and doors. In the State of Oregon, there is a ten-year statute of limitations on construction defect claims. As condominium developments have homeowner's associations (HOA), the suits typically use the HOA as a class to



pursue to the claim. Pursuit of these claims was widespread during the last cycle, during which a large number of new condominium units were constructed.

Insurance rates have climbed significantly for condominium construction, which is typically carried by the developer as well as members of the team. Due to the vagaries of this type of litigation, developers and contractors now must buy 10-year trailing insurance before they commence construction, as that is the period during which can be sued. This additional insurance adds significantly to the cost of construction.

These factors have largely deterred developers from initiating new condominium projects due to concern regarding the cost, risk, and time burden entailed by construction defect litigation. If one was to be built, the costs associated with the cost of insurance and increased risk would need to be reflected in higher pricing. One way to reduce this risk is to sell units with fee-simple ownership of the property, where the unit includes the underlying land. This type of ownership is typically found in townhomes. While generating a lower density yield than three- and four-plex solutions, this type of development would likely be favored by a developer looking to construct and sell ownership residential units. While our model may indicate a multi-unit plex solution as representing the highest and best use from a return perspective, townhome development entails less risk and may be a more favored program solution for ownership residential.

Residential Infill Project  
**Displacement Risk and Mitigation**

February 2019

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## EXECUTIVE SUMMARY

The Residential Infill Project, an update to Portland’s single-dwelling zoning code, does not occur in a vacuum. It occurs within a historical context of zoning patterns and other land use regulations that have had exclusionary intents and/or impacts on communities of color. Portland, like most other cities across the United States, has a history of racially exclusionary zoning as well as land use and real estate practices that reinforced segregated neighborhoods. **Zoning, redlining, racial covenants, and community planning have played a role in shaping the city’s urban form—and in exacerbating inequities along race and class lines. Exclusive neighborhoods that do not allow for more housing options to absorb a growing and changing population can increase gentrification pressures in other neighborhoods as housing demand spills over and increases housing costs.**

As the City of Portland continues to understand the history of racially exclusionary zoning and land use practices and understand their impacts, the challenge comes in not repeating past mistakes and beginning to redress past actions. The City established equity as a guiding principle in the adopted 2035 Comprehensive Plan, with a recognition that equitable access to opportunity is essential to Portland’s long-term success.

The Comprehensive Plan calls upon new plans to evaluate the potential to cause displacement or increase housing costs in vulnerable communities. Part I examines who is vulnerable to indirect displacement and where redevelopment is most likely to happen under the proposal. **Overall, the proposal is likely to reduce displacement of low-income renters in single-family homes across Portland.** This reduction results from allowing more units to be built on one lot, which means fewer lots will be redeveloped across the city. However, **Brentwood-Darlington, Lents, and parts of the Montavilla neighborhood east of 82nd Avenue are likely to see significant increases in redevelopment that could lead to the increased displacement of vulnerable households.**

The proposal **will likely significantly reduce the cost of housing** for the additional housing types allowed in single-dwelling zones. This is a function of the smaller unit sizes as well as the ability to defray land costs across two, three, or four housing units as opposed to one unit. These findings suggest the proposals will **reduce displacement citywide, increase housing supply, create less-expensive housing options, and provide choices for types of housing** that were historically allowed but have since been disallowed in Portland’s single-dwelling zones. This, in turn, gives more people across wider range of the income and racial spectrum the opportunities and benefits afforded by our great neighborhoods.

The Comprehensive Plan also calls for identification and implementation of strategies to mitigate for anticipated impacts. Part II presents an **array of potential strategies to mitigate displacement among vulnerable residents in Portland’s single-dwelling neighborhoods.** Where program funding is available for anti-displacement and community stabilization in single-dwelling zones, the neighborhoods most at risk of displacement should be the focus for these actions. Strategies for vulnerable renters include education, financial assistance, incentives to property owners to keep rent affordable, and expanded homeownership opportunities. Strategies for vulnerable homeowners include education to combat predatory practices, financial assistance to stabilize homeowners, and technical assistance and financing to enable low- and moderate-income homeowners to take advantage of the expanded housing choices allowed by the proposal.

## Part I: DISPLACEMENT RISK ANALYSIS

This analysis aims to estimate the number of households that may be at risk of displacement due to the proposals of the Residential Infill Project, when compared to the baseline zoning scenario adopted by the 2035 Comprehensive Plan, and to describe the characteristics of households that could be at risk as the result of these proposals.

### SUMMARY OF FINDINGS

Key findings from this analysis of the Residential Infill Project proposals in comparison to the baseline zoning scenario include:

- There is a **net reduction in the frequency of demolition and redevelopment** across the city while at the same time a **net increase in the amount of housing units**.
- Housing units that are produced are likely to be **smaller** and **less expensive** than under the current single-family zoning allowances.
- **Citywide**, there is a **28 percent reduction of indirect displacement for low-income renters who live in single-family homes**. Through 2035, around **680** low-income renters in single-family homes are at risk of displacement, compared to **950** such renters under the current zoning regulations.
- In Portland neighborhoods that are identified as **Displacement Risk Areas**, there is a **21 percent reduction of indirect displacement risk for low-income renters who live in single-family homes**. In these neighborhoods, through 2035, around **480** low-income renters in single-family homes are at risk of displacement, compared to **610** such renters under the current zoning regulations.
- **The potential for displacement** is greatest where increases in redevelopment are more likely, and where there is a higher proportion of low-income renters.
- **Three areas have higher potential for displacement: Brentwood-Darlington, Lents, and parts of the Montavilla neighborhood that are east of 82<sup>nd</sup> Avenue.**

### Potential Benefits of the Residential Infill Project

The Residential Infill Project is likely to **reduce displacement of low-income renters in single-family homes across Portland**. This is the result of allowing for more units with each instance of redevelopment. In other words, **allowing more units to be built on one lot means there will be fewer lots redeveloped** overall across Portland through 2035.

Previous analysis by Johnson Economics showed that development of a duplex, triplex, or fourplex rather than a single house would yield more new housing units at sizes that are affordable to households at 80% to 120% median family income.<sup>1</sup> Current zoning standards are most likely to produce larger detached single-family houses that are only affordable to households at 150% to 220% median family income. Together, these findings suggest **the proposals will reduce displacement, increase**

<sup>1</sup> Jerry Johnson, "Economic Analysis of Proposed Changes to the Infill Development Standards" (Johnson Economics, November 29, 2018), <https://www.portlandoregon.gov/bps/article/705704>.

**housing supply, create less-expensive housing options, and provide choices for types of housing that do not exist in Portland’s single-dwelling zones today.**

## INTRODUCTION

### Direction from the 2035 Comprehensive Plan

The 2035 Comprehensive Plan defines gentrification and displacement in the following ways:

- **Gentrification** occurs when an under-valued neighborhood becomes desirable, resulting in rising property values and changes to demographic and economic conditions of the neighborhood. These changes include a shift from lower-income to higher-income households, and often there is a change in racial and ethnic make-up of the neighborhood’s residents and businesses.
- **Displacement** is defined as when households or businesses are involuntarily forced to move from a neighborhood because of increasing market values, rents, or changes in the neighborhood’s ability to meet basic needs in the case of households, or erosion of traditional client base in the case of businesses.

The Comprehensive Plan includes a number of related policies in Chapter 5: Housing. This analysis comes in response to two key policies found in that chapter:

**Policy 5.15**, Gentrification/displacement risk, directs City agencies to evaluate new plans and investments for the potential to cause displacement or increase housing costs in vulnerable communities as well as to identify strategies to mitigate anticipated displacement.

**Policy 5.16**, Involuntary displacement, calls for programming and coordination with nonprofit housing organizations to create permanently affordable housing and mitigate the impacts of market pressures that cause involuntary displacement when plans and investments are expected to create neighborhood change.

This analysis presents the methodology and findings to evaluate the potential for increased risk of displacement due to the proposed changes to residential zoning through the Residential Infill Project. Part II identifies potential methods to mitigate displacement in the single-dwelling zones.

### Where Are We Now?

The Residential Infill Project proposes to revise the height, mass, and range of housing types allowed in single-dwelling residential base zones. This can also expand the diversity of housing in terms of homeownership and rental opportunities in smaller-scale buildings throughout Portland’s neighborhoods.

The proposals presented to the Planning and Sustainability Commission (PSC) in April 2018 included a displacement risk analysis and proposed mitigation strategies. Areas that included a higher proportion of vulnerable populations (defined as areas with a higher percentage of people of color, people with lower educational attainment, renters, and/or low-income residents) were identified as areas at higher

risk of displacement. Areas with higher proportions of vulnerable populations that also had lower housing opportunity scores (based on proximity to amenities such as employment access, transportation access, educational opportunities, parks, grocery stores, and similar factors) were identified. The additional housing types could not be built in these areas until and unless a suite of anti-displacement programs, shaped by community input, would be in place to protect vulnerable renters and homeowners.

In September 2018, the Planning and Sustainability Commission (PSC) considered the Proposed Draft and gave staff direction to revise the proposal to allow additional housing types (duplexes, triplexes, fourplexes, and additional accessory dwelling units) in most areas of the city, and including areas identified as having a high risk of displacement. This was based on an economic analysis done by Johnson Economics in March 2018 that showed that the *size of the building*, which would be regulated similarly across the city, *not the number of units* allowed, was the primary driver of whether a lot would be redeveloped.<sup>2</sup> This meant that allowing additional units would not significantly increase displacement pressure but would offer those parts of the city the same opportunities to create more housing.

In addition, the Commission was persuaded by input from nonprofit affordable housing providers, housing and anti-displacement advocates, the Portland Housing Bureau, some neighborhood associations, and other groups and individuals who supported allowing the additional housing types to be built “everywhere” in the city.

The new displacement risk analysis described in this appendix is based on changes the PSC has requested, which are detailed in the *Revised Proposed Draft*.

## DEFINING DISPLACEMENT RISK

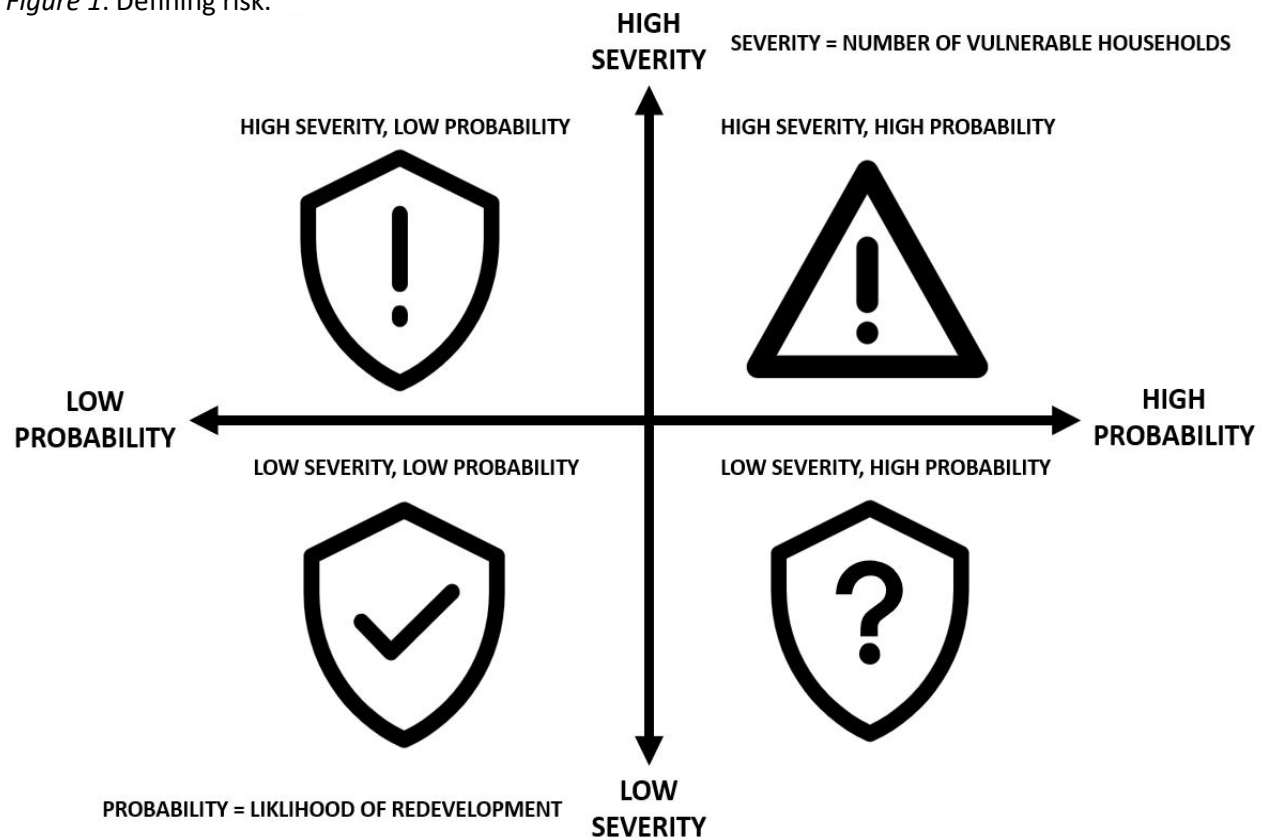
This analysis seeks to understand the potential for the Residential Infill Project proposals to encourage the redevelopment of existing single-family houses in a way that would result in outcomes that further burden historically under-represented communities.

Risk is defined as **the combination of the probability of harm occurring and the severity of that harm**. What is the likelihood (probability) of redevelopment of an existing house as a result of new development standards, and what is the magnitude (severity) of that displacement in terms of the number of vulnerable households that could be displaced by that redevelopment?

Probability and severity are charted on the matrix below, with the highest-risk situation (areas with highest severity and highest probability) shown in the top right quadrant.

<sup>2</sup> Jerry Johnson, “Economic Analysis of Proposed Changes to the Infill Development Standards” (Johnson Economics, March 27, 2018), <https://www.portlandoregon.gov/bps/article/678769>.

Figure 1. Defining risk.



## DISPLACEMENT IN THE CONTEXT OF THE RESIDENTIAL INFILL PROJECT

Displacement related to plans and public investments can be classified into three categories:

1. **Direct displacement** occurs when government acquires property through eminent domain and a property owner is forced to sell their home—for example, when right of way for a transit line requires condemnation of property.
2. **Indirect displacement** occurs when policy changes create measurable impacts on market dynamics, such as an increase in rates of redevelopment—for example, regulatory changes in zoning around a transit station.
3. **Induced displacement** occurs when market conditions respond to new development and changes in neighborhood character and impact existing housing units in terms of increasing rents or prices—for example, expected increases in property values from the introduction of transit or other new amenities.

Direct displacement is easily measured but not evaluated in this analysis because the proposals will not be acquiring property or using eminent domain.

Indirect displacement is more difficult to measure, but it is possible to use models to estimate the likelihood of redevelopment with some degree of certainty. Indirect displacement is defined for this analysis as a home being torn down and replaced with one or more new units as a result of new development standards. In other words, for the purposes of this analysis, **we define indirect displacement as the displacement of existing houses/households resulting from the redevelopment of units in the R2.5, R5, and R7 zones**, which would see new allowances because of these proposals.

Induced displacement is much more challenging to measure, and it relies on assumptions that are not widely acknowledged or agreed upon.

Therefore, only the second category of displacement—indirect displacement — is evaluated in this displacement risk analysis. This analysis considers the following three steps:

1. **Severity: How many households are vulnerable to displacement?** This step characterizes the households that are the most vulnerable to displacement as a result of the proposal, as well as the magnitude of the impact to vulnerable households.
2. **Probability: Where is redevelopment most likely?** Not all parts of the city will see the same level of redevelopment. This step identifies areas that are most likely to see redevelopment of single-family houses in single-family neighborhoods.
3. **Risk Assessment: What parts of Portland have high severity and probability?** This step examines the overlap of severity and probability to assess which areas with higher levels of vulnerability are most at risk of displacement.

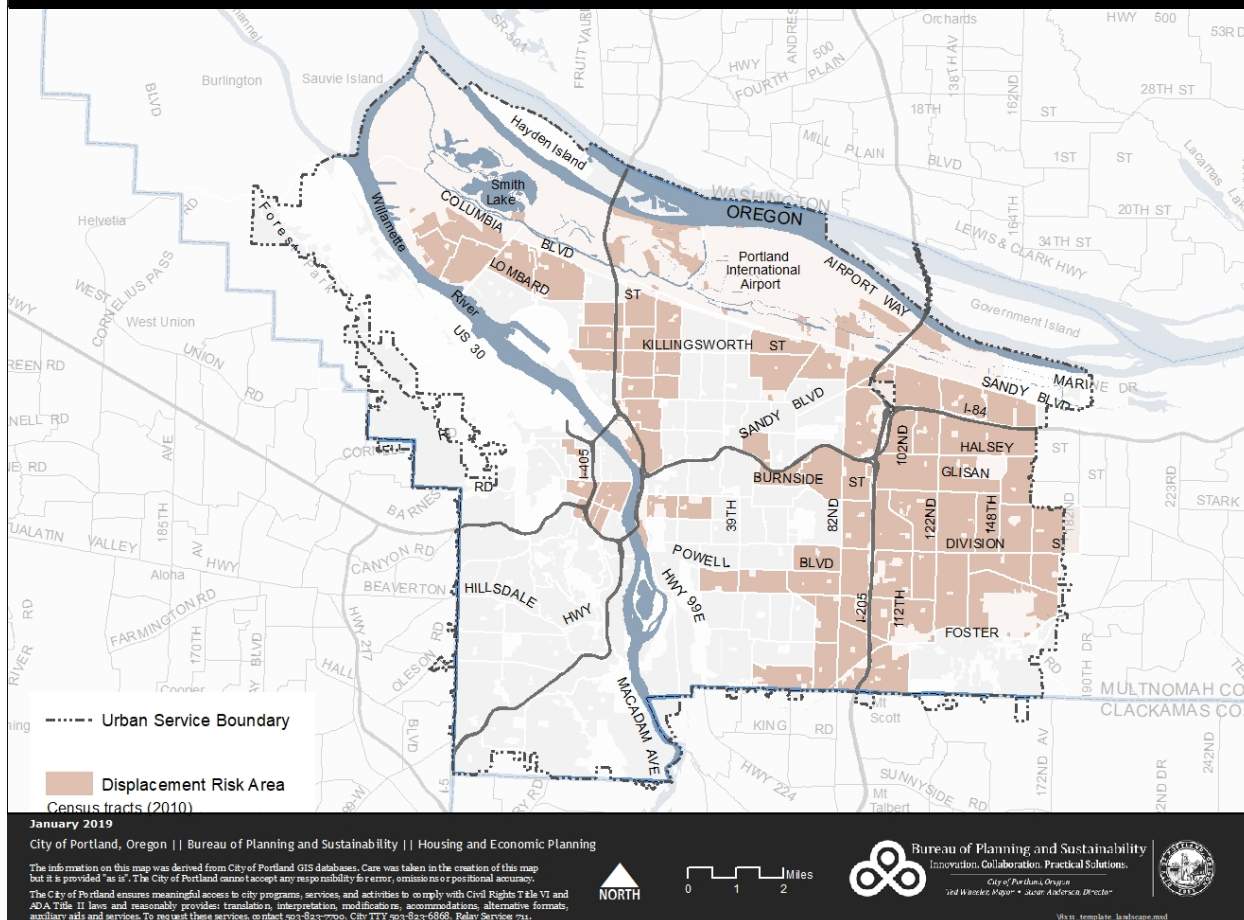
This displacement risk analysis evaluates households most at risk of indirect displacement as the result of the proposals across Portland, with a focus on parts of Portland that have been identified as being at risk of gentrification and displacement by the 2018 Gentrification and Displacement Risk Assessment.<sup>3</sup> The gentrification typologies used in this analysis were developed by Dr. Lisa Bates in the 2013 Gentrification and Displacement Neighborhood Typology Assessment.<sup>4</sup> This method considers whether a neighborhood has a vulnerable population, has experienced demographic change, and has housing market conditions that are undergoing price increases. More information on different neighborhood typologies and how they have changed over time is available in the 2012 and 2018 reports. The Displacement Risk Areas used throughout the remainder of this analysis are identified in Map 1 below.

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<sup>3</sup> 2018 *Gentrification and Displacement Neighborhood Typology Assessment*, Bureau of Planning and Sustainability (2018), <https://www.portlandoregon.gov/bps/article/700970>.

<sup>4</sup> Lisa Bates, "Gentrification and Displacement Study: implementing an equitable inclusive development strategy in the context of gentrification," Bureau of Planning and Sustainability (May 18, 2013), <https://www.portlandoregon.gov/bps/article/454027>.

Map 1. Displacement Risk Areas from the 2018 Gentrification and Displacement Assessment.



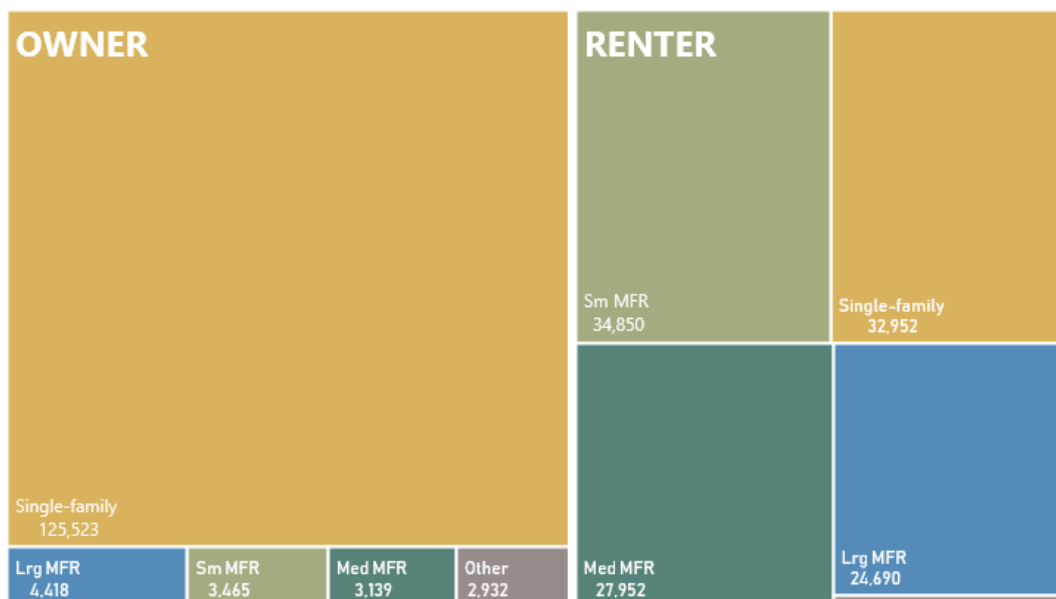
## Severity: How Many Households Are Vulnerable to Displacement?

**Economic vulnerability is measured across four socioeconomic variables** that indicate a reduced ability to withstand housing price increases caused by gentrification. As outlined in the 2018 Gentrification and Displacement Neighborhood Typology Assessment, areas of economic vulnerability are defined as those that have, when compared to the citywide average, the following characteristics:

- A larger share of households that are **renters**
- A larger share of the population that are **communities of color**
- A larger share of adults (25 or older) **without a four-year degree**
- A larger share of households that are **low-income** (below 80% median family income)

Single-family houses comprise 61 percent of Portland's housing stock—about 158,000 homes (Figure 2). About 85 percent of these houses are located in a zone affected by the Residential Infill Project (R2.5, R5, and R7—henceforth referred to as "RIP zones").

Figure 2. Portland's housing stock, 2017.

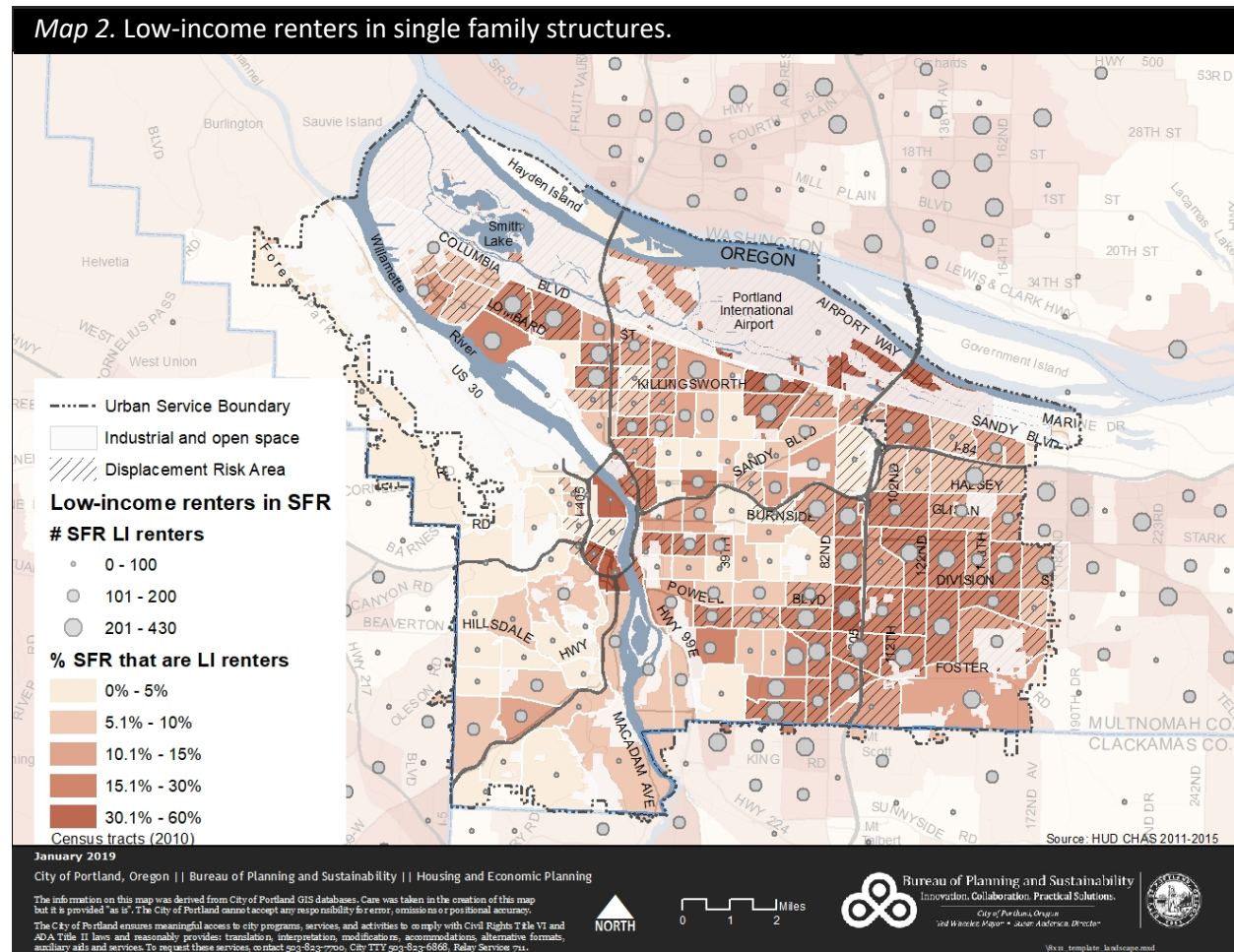


Large MFR = 50+ units. Medium MFR = 10 to 49 units. Small MFR = 2 to 9 units.  
Other = mobile homes, RVs, boats, tents, etc.

The baseline scenario, or what is allowed under current conditions, assumes redevelopment of smaller houses into larger single houses with higher achievable floor area than what is proposed in the Residential Infill Project. The project proposal scenario assumes redevelopment into buildings with a higher number of units allowed, coupled with lower achievable floor area allowed by the proposed code changes. In both scenarios, the analysis estimates how often property owners may find it more advantageous to redevelop their property than continue to rent to their tenant.



Therefore, this analysis focuses on the comparison of risk between the baseline scenario and the proposal scenario to the 14,000 low-income households who rent single-family homes in RIP zones (Map 2). These households are most vulnerable when considering the impacts of the proposal because they have the least control over their housing (they are subject to eviction) and the degree of choice in housing (based on affordability).



While the most vulnerable households that are at risk in this analysis are low-income renters in single-family structures, homeownership is not a guarantee to withstand displacement pressures. Given the history of predatory lending practices, exclusionary zoning, and racial disparities in accessing bank financing to support homeownership, it is important to consider the potential impacts these proposals may have on vulnerable homeowners as well. Low-income homeowners may be targeted by predatory buyers who do not offer a fair price for purchasing their home. Such homeowners may also be more apt to sell if they are in stressed financial situations. Map 3 shows the distribution of low-income homeowners across the City, while Table 1 summarizes the distribution of low-income households by tenure for homes in RIP zones.

Map 3. Low-income owners in single family structures.

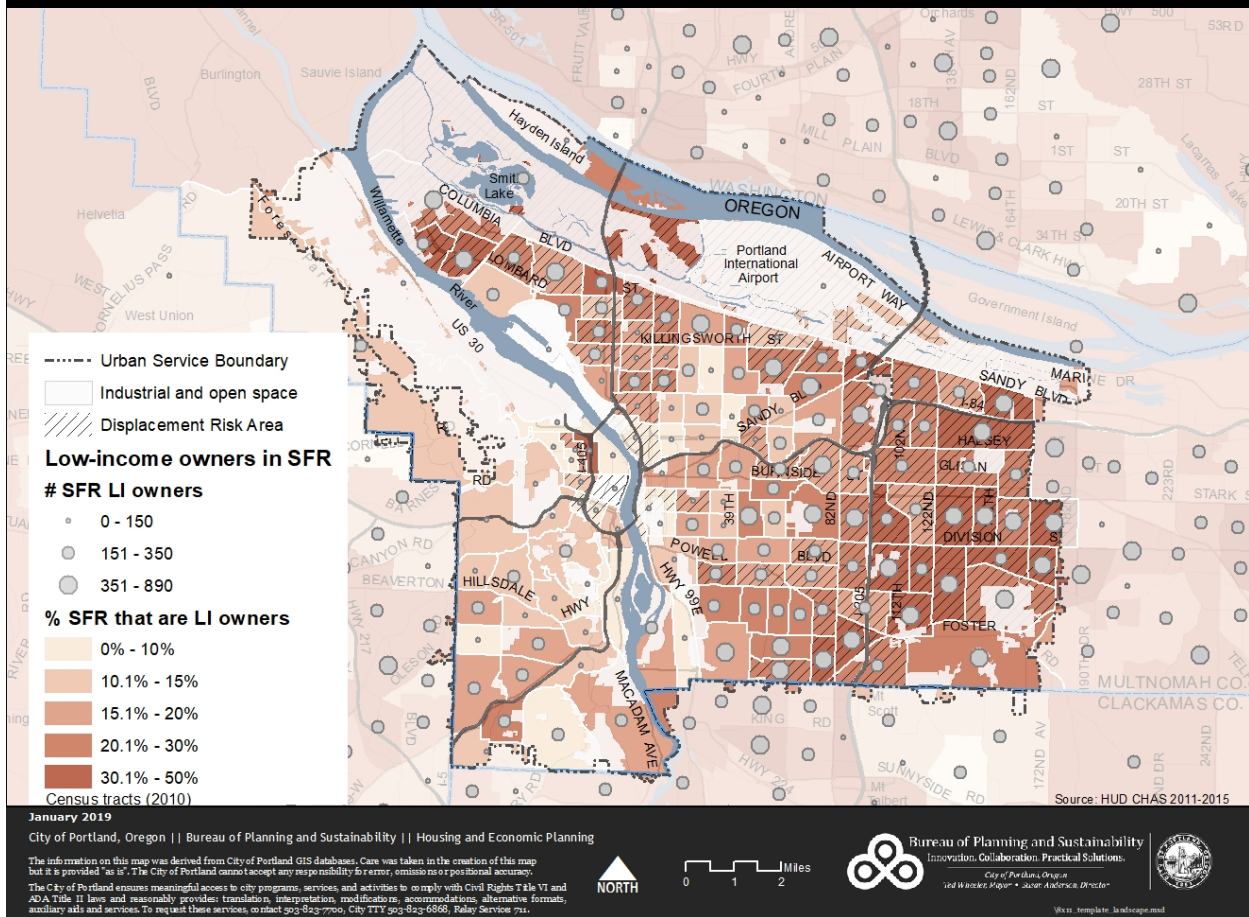


Table 1. Low-income households in single-unit structures in RIP zones by tenure, 2015.

	Displacement Risk Areas RIP Zones	Citywide RIP Zones
Households <80% MFI	24,708	40,078
Renters	8,773	13,582
Owners	15,935	26,496
With mortgage	10,447	16,150
Free and clear	5,488	10,346

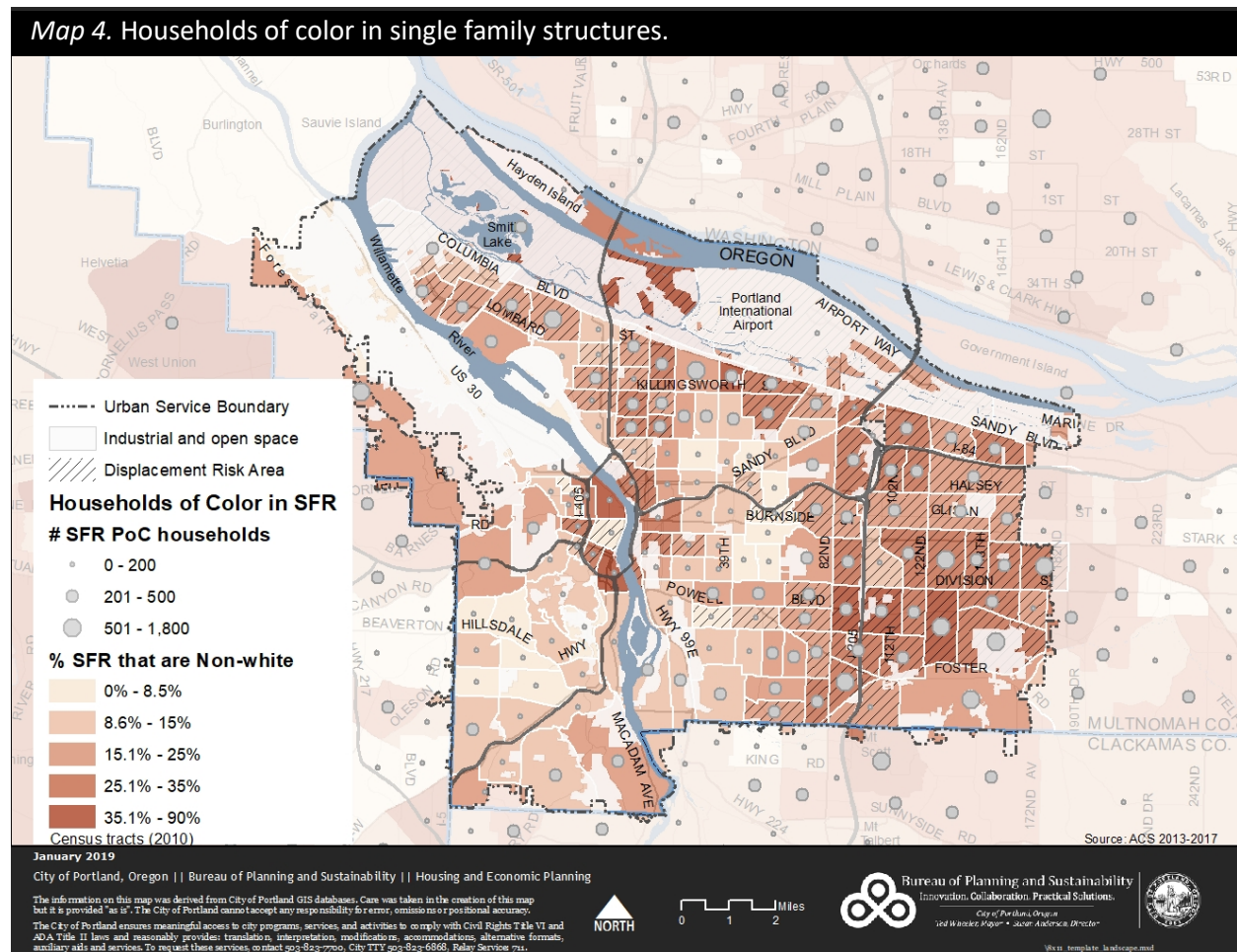
Because of historical disparities in access to homeownership, it is important to assess the potential impact on homeowners of color. Homeownership is a critical aspect of intergenerational wealth generation within a family. When a homeowner sells their home for less than market value, they forgo the opportunity to maximize their wealth-generation potential.

Although approximately 30 percent of Portland residents are a person of color, only 18 percent of single-family homeowners are a person of color. Beyond the racial gap in homeownership rates, national

research suggests homeowners of color are more vulnerable to predatory buyers, foreclosures, loan denials, and higher interest rates even compared to similar creditworthy white peers.<sup>5</sup>

Citywide, there are about 18,000 single-family homeowners of color in RIP zones. About 37 percent are low-income households, compared to 29 percent of low-income white households in single-family units.

With regard to where households of color (renters and owners) reside, the highest numbers and concentrations are in East Portland, Cully, and North Portland (Map 4).



<sup>5</sup> <https://files.stlouisfed.org/files/htdocs/publications/review/2017-02-15/the-homeownership-experience-of-minorities-during-the-great-recession.pdf>

### Probability: Where is Redevelopment Most Likely?

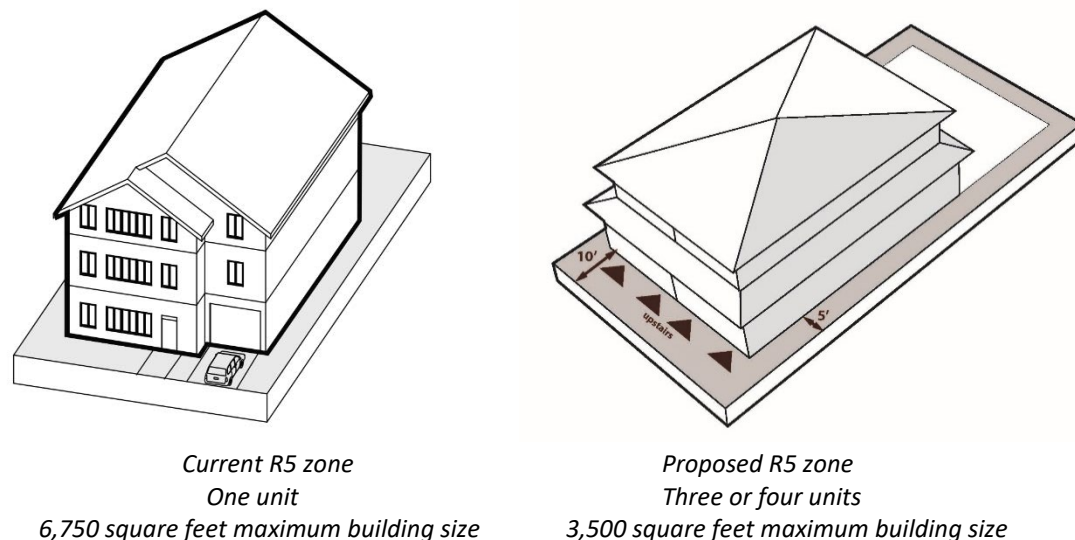
This section describes the citywide outcomes of redevelopment (defined as a home that is demolished and replaced with one or more new units) as a result of the proposal's development standards.

Redevelopment occurs because a new-construction building with one or more units allowed under the proposal might be of higher value than an existing single-unit house. In this situation, redevelopment could occur when a landowner or developer chooses to demolish the existing house to build a new structure with multiple units.

There are two significant factors in the proposed development standards that impact development capacity, redevelopment activity, and the allocation of new housing units in this analysis.

First, the change in Floor Area Ratio (FAR) allowances in RIP zones is the most significant factor that impacts development capacity between the baseline and proposal scenarios. For example, on a 5,000-square-foot-lot, maximum current development allowances in the R5 zone would allow up to a 6,750-square-foot structure, while the R5 zone under the proposal would only allow between 2,500 and 3,500 square feet, depending on the number of units (Figure 3). This reduction in square footage allowance shifts redevelopment activity away from higher-value neighborhoods and towards areas of Portland with more moderate land values that can support the achievable sale prices and rents of market-rate new construction.

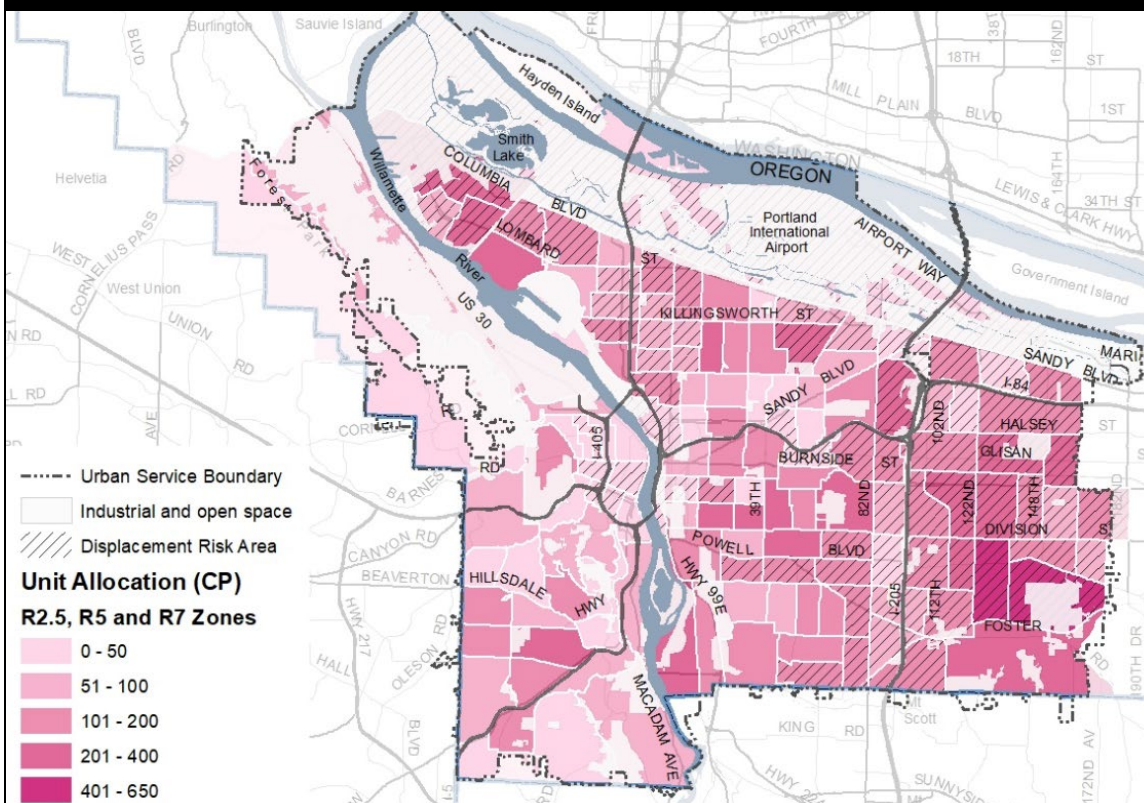
Figure 3. Maximum building size under current and proposed R5 development standards.



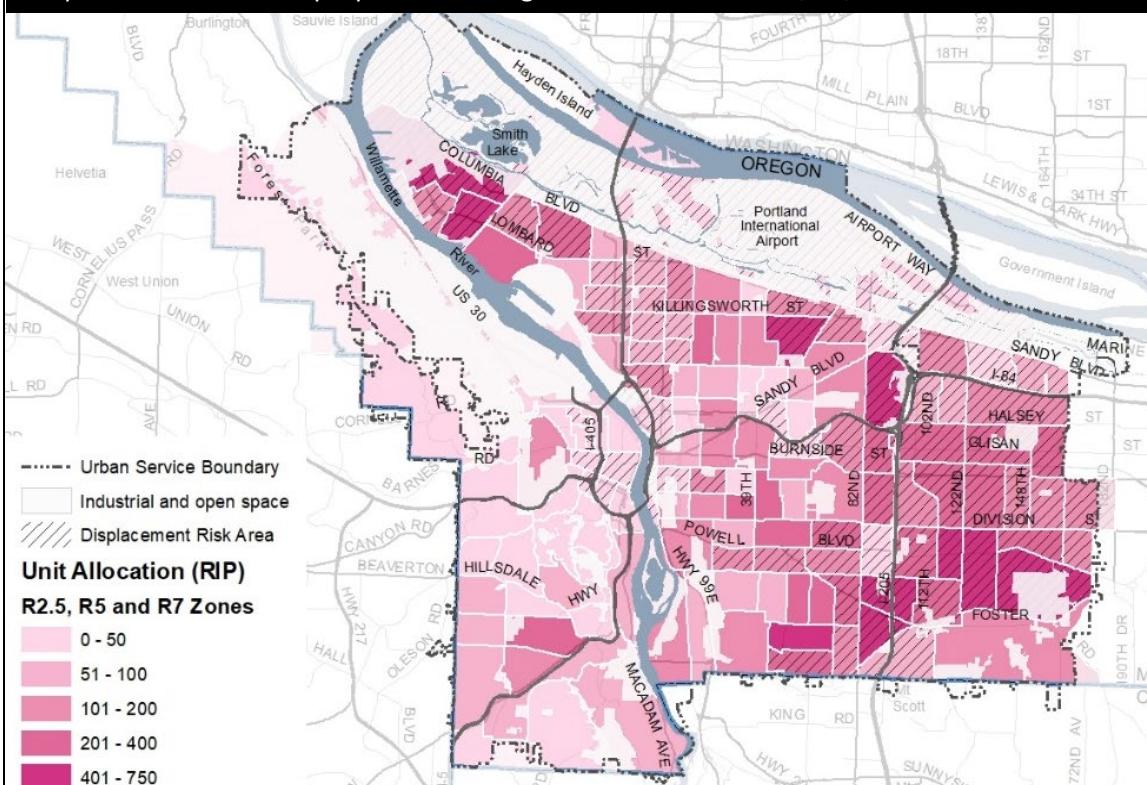
Second, the allowance for duplexes, triplexes, and fourplexes also impacts the distribution of redevelopment activity, though to a lesser extent than building size. These housing types are likely to develop in areas of Portland with land values high enough to support sales prices and rent levels of these housing types.

This analysis considers the probability of redevelopment given current market conditions. According to regional forecasts, Portland is projected to gain approximately 123,000 new households between 2010 and 2035. The Buildable Lands Inventory (BLI) model helps us begin to understand where this new growth might occur in Portland. The BLI estimates development capacity, which is defined as the number of new dwelling units that could be accommodated in the city under existing regulations and recent development trends. Staff used the BLI model to evaluate two development scenarios: one for current housing allowances and development standards from the baseline Comprehensive Plan scenario (Map 5) and one for the proposed housing allowances and development standards (Map 6). The output of the BLI model is a map that allocates new housing development—in this case new housing in R2.5, R5, and R7 zones—to show the expected distribution of housing in Portland in 2035.

Map 5. 2035 Comprehensive Plan - housing unit allocation in R2.5, R5, and R7 zones.

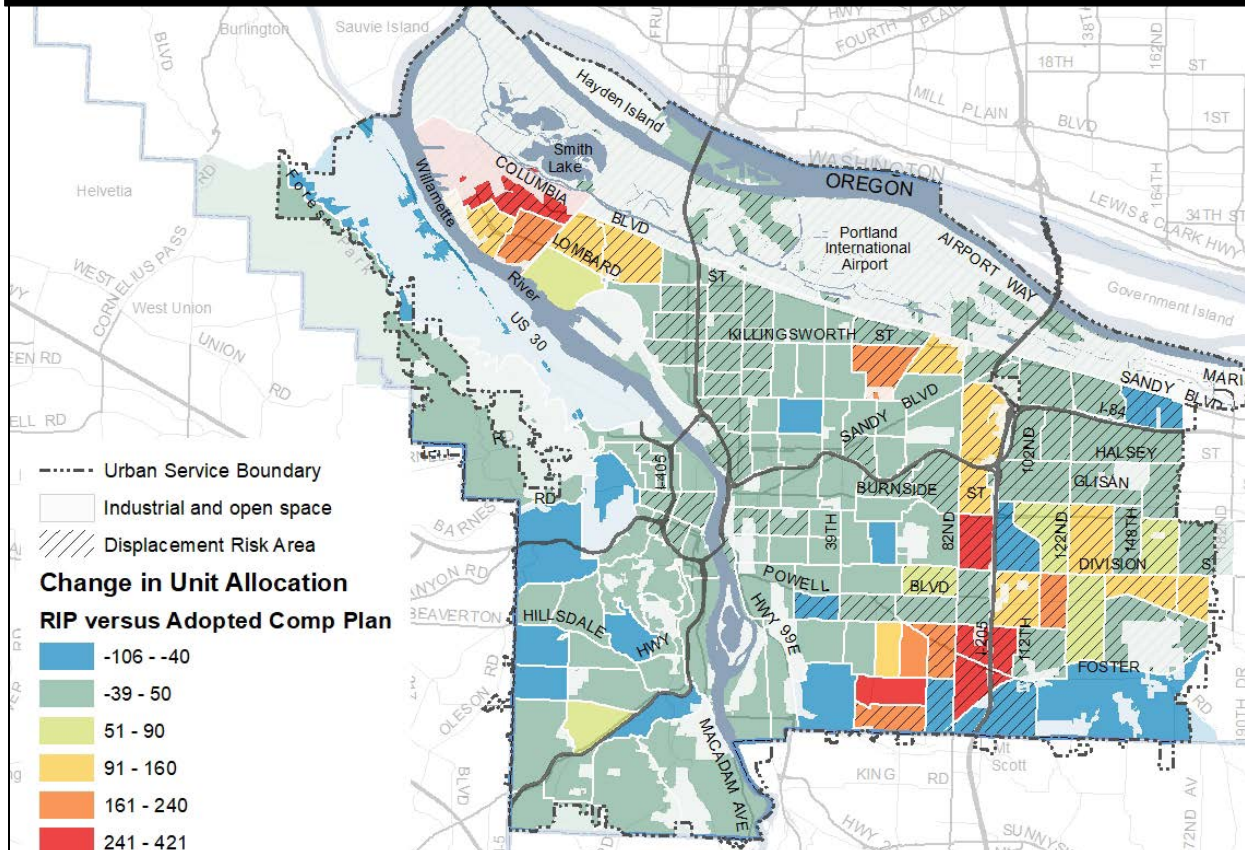


Map 6. Residential Infill proposal - housing unit allocation in R2.5, R5, and R7 zones.



Overall, compared to the baseline Comprehensive Plan zoning scenario, the proposal is expected to **create more housing units but decrease overall redevelopment (demolitions)**. Map 7 shows the net change in allocation of dwelling units in 2035.

**Map 7. Comparison between 2035 Comprehensive Plan and Residential Infill proposal**  
– areas with increased or decreased household allocation under the proposal scenario.



Map 7 shows that through 2035, with the proposed amendments, some areas of Portland see net increases in redevelopment and new housing units, and some areas see net reductions in redevelopment. The reduction in redevelopment alongside increases in new unit production is the result of allowing multiple units within one structure, which absorbs unit demand that otherwise would have occurred in one-for-one redevelopment situations in the baseline Comprehensive Plan scenario. In other words, current regulations result in more houses being demolished and replaced with a single house, while the proposed regulations result in fewer houses being demolished because more units can be produced on the same site.

With the proposed changes, **inner Portland neighborhoods** like Buckman, Richmond, Eliot, Humboldt, and Northwest see **minimal change in redevelopment rates** and **moderate increases in new housing units**. New housing units will likely be distributed broadly across inner neighborhoods.

**Middle ring neighborhoods**, including St. Johns, Portsmouth, Concordia, Cully, Montavilla, Brentwood-Darlington, and Lents, see **more significant increases in new unit production**. However, these areas also see a **smaller rate of overall redevelopment**. Under the baseline scenario, these middle ring neighborhoods are expected to see a higher-than-average amount of one-for-one demolition/redevelopment. The proposal scenario indicates **more units will be built on fewer parcels**.

Neighborhoods in East Portland see a broader range of redevelopment and new housing unit impacts. **Most East Portland neighborhoods see moderate increases in new housing units** including Centennial, Powellhurst-Gilbert, Mill Park, and eastern portions of Lents. **Other East Portland neighborhoods** such as Parkrose, Argay, Hazelwood, and Glenfair will likely see **minimal change in the number of new units**.

**West Portland neighborhoods** see **minimal change in new housing units** compared to the baseline existing zoning regulations. There are small increases in new housing units in some areas along Barbur Boulevard and a moderate increase in new units in Multnomah.

Conversely, this analysis finds that **some areas of Portland see decreases in redevelopment and new units**. These areas include neighborhoods such as Pleasant Valley, Eastmoreland, Southwest Hills, Sylvan-Highlands, Hayhurst, Maplewood, and Wilkes. These decreases in redevelopment are mostly due to a combination of market factors and proposed development standards that make development less likely to occur in these neighborhoods. In most cases, redevelopment is less likely to occur in these neighborhoods than in other parts of Portland because of high home values.

This analysis indicates that there is an unequal distribution of redevelopment. Higher-income and higher-value neighborhoods will likely see less redevelopment compared to other areas across Portland. Many of these neighborhoods have historically had restrictive and exclusionary land use classifications, covenants, and lending practices.

The lower rates of redevelopment for higher-value neighborhoods is driven by existing home values that cannot support new development with proposed FAR limitations and density allowances. In other words, **in many cases the cost to purchase existing houses in higher-value neighborhoods exceeds the land price threshold needed to support new development**. Under the proposal, new development in higher-value neighborhoods is expected to be limited to sites with lower-value houses compared to the

**Inner Neighborhoods** – These neighborhoods fall roughly within a 3-mile distance from the Central City and are bounded Killingsworth Street, NE 7<sup>th</sup> Avenue, Cesar Chavez Boulevard, and Powell Boulevard and include South Portland and Northwest District.

**Middle Ring Neighborhoods** – These neighborhoods extend to St. Johns, Sellwood, and I-205 and also include neighborhoods in Southwest Portland along Barbur Boulevard such as Hillsdale, Multnomah, South Burlingame, and Markham.

**East Portland Neighborhoods** – These neighborhoods are located east of I-205 and extend along NE Sandy Boulevard and SE Powell Boulevard to the Portland city limits.

**West Portland Neighborhoods** – These neighborhoods extend to City of Portland in Southwest and are generally further than 3 miles from the Central City.



surrounding neighborhood. **The claim that these proposals will increase the rate of redevelopment in some higher-value and higher-income neighborhoods in Portland is not supported by this analysis.**

#### Risk Assessment: Which Parts of Portland Have High Severity and Probability?

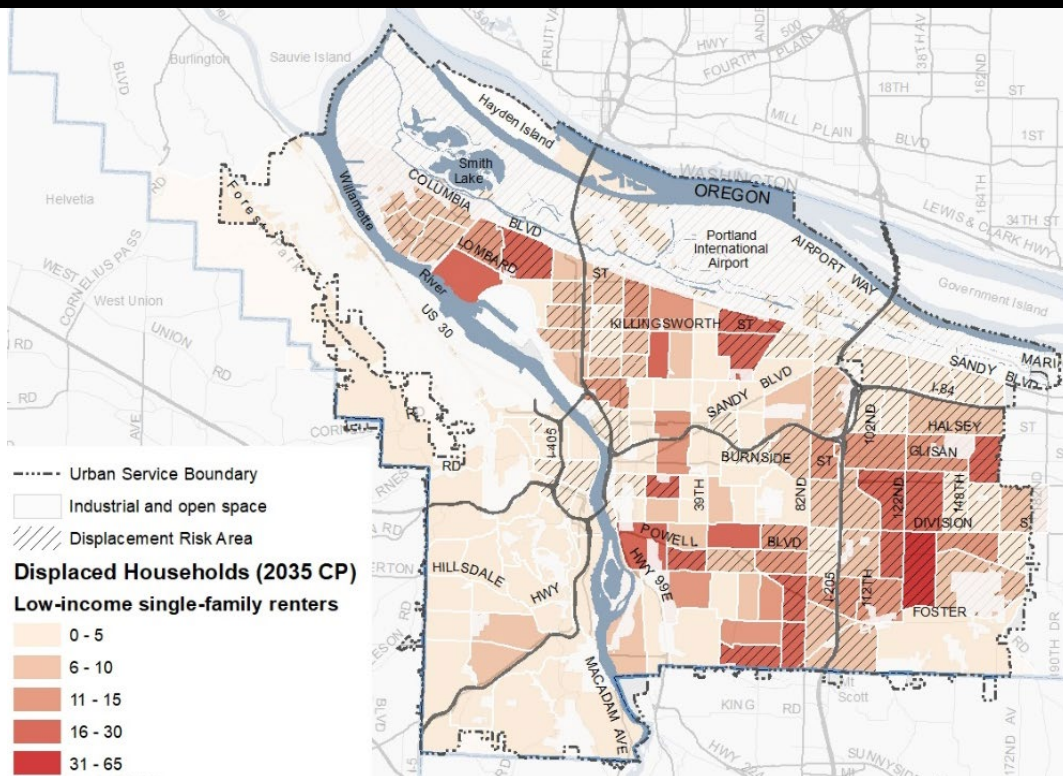
In RIP zones, **low-income renters in single-family structures** are the households most vulnerable to displacement.

This analysis of the Residential Infill Project is conducted at three levels: citywide, in Displacement Risk Areas, and in a select group of Displacement Risk Areas that show the most redevelopment activity.

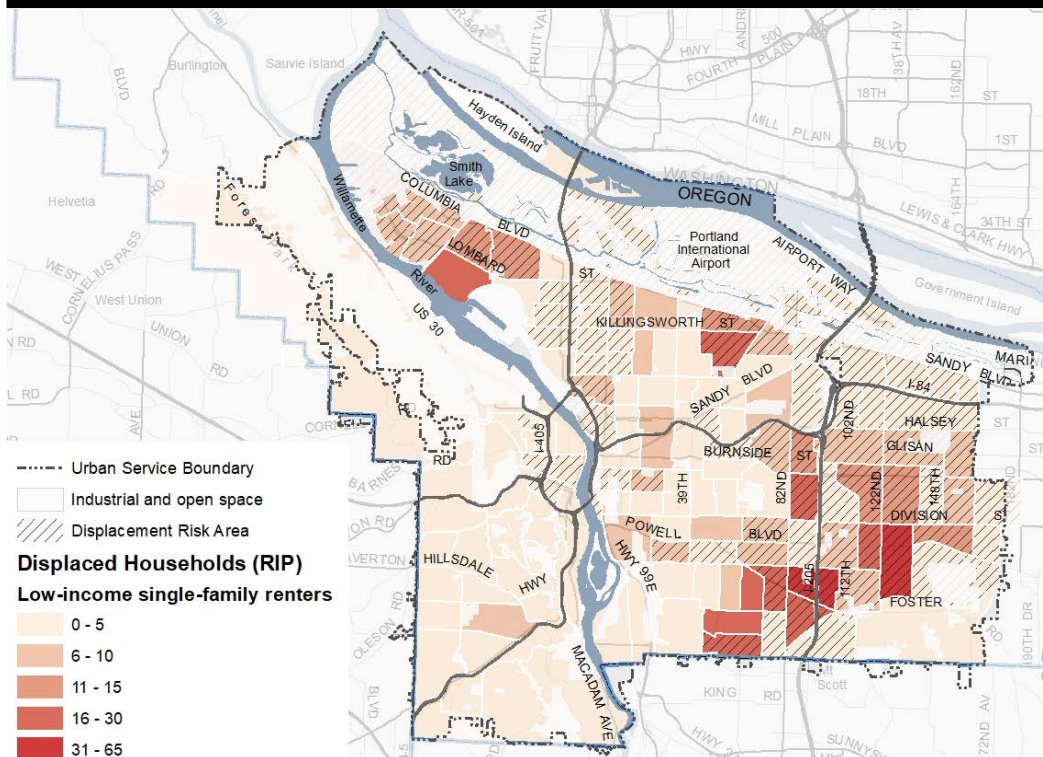
In summary, this analysis finds that **there is a net reduction in displacement pressures across Portland as the result of the proposals.** Under the proposal scenario, this analysis identified around **680 low-income renter households in single-family structures** that are at risk of indirect displacement through 2035 as the result of redevelopment. Under the 2035 Comprehensive Plan single-dwelling development standards, this analysis identified around **940 low-income renter households in single-family structures** that are at risk of indirect displacement as the result of redevelopment through 2035.

Maps 8 and 9 compare areas of increased displacement burden under the baseline scenario and proposal scenarios, respectively. More areas see higher rates of displacement risk under the baseline.

Map 8. Comprehensive Plan - areas with displacement burden

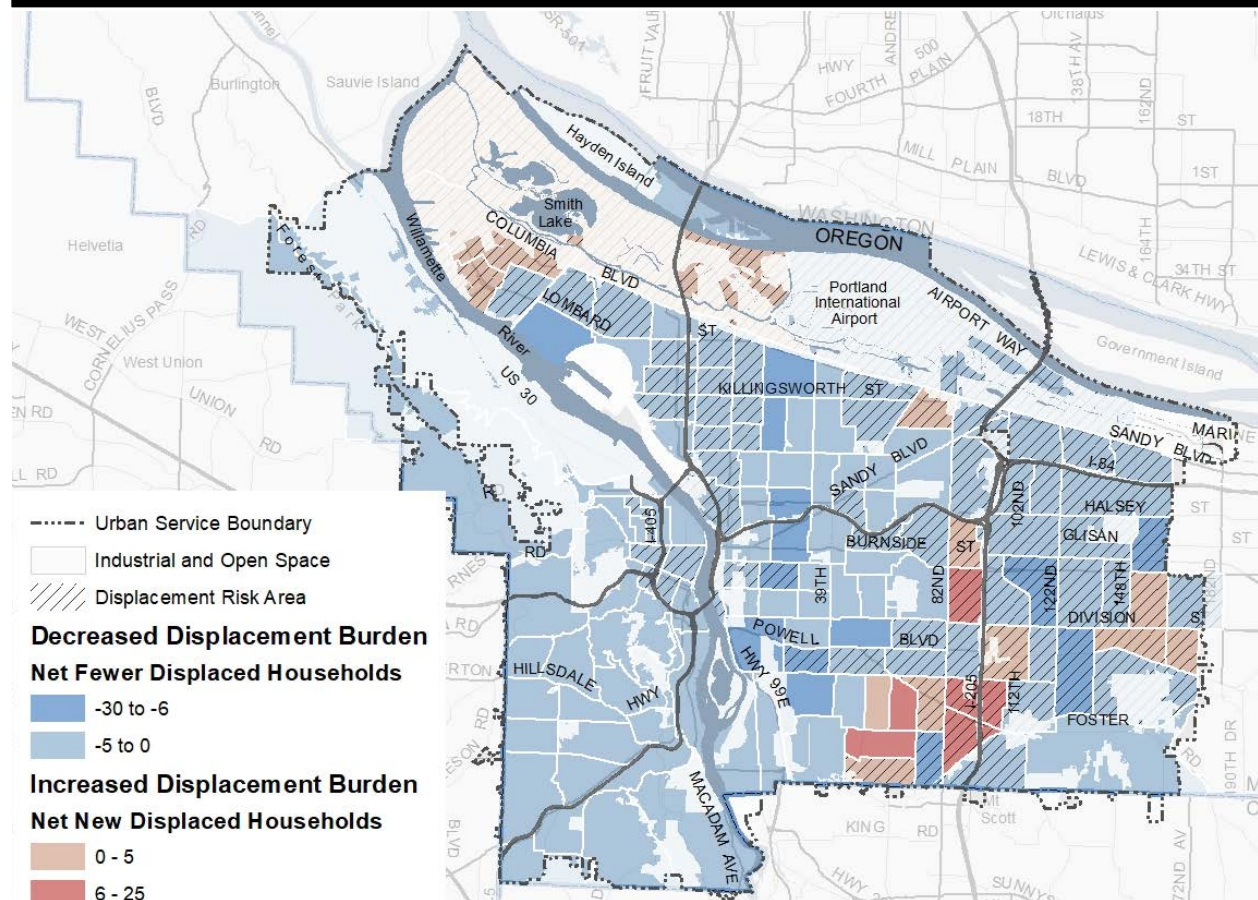


Map 9. Residential Infill proposal - areas with displacement burden



Map 10 shows that the **proposal scenario reduces the displacement risk in most neighborhoods across Portland**. The largest reductions in displacement risk occur in University Park, Concordia, Vernon, Kerns, Creston-Kenilworth, Mill Park, and portions of Powellhurst-Gilbert.

*Map 10. Comparison between 2035 Comprehensive Plan and Residential Infill proposal – areas with increased or decreased displacement burden under the proposal scenario.*



### Applying the Risk Assessment to the Displacement Risk Areas

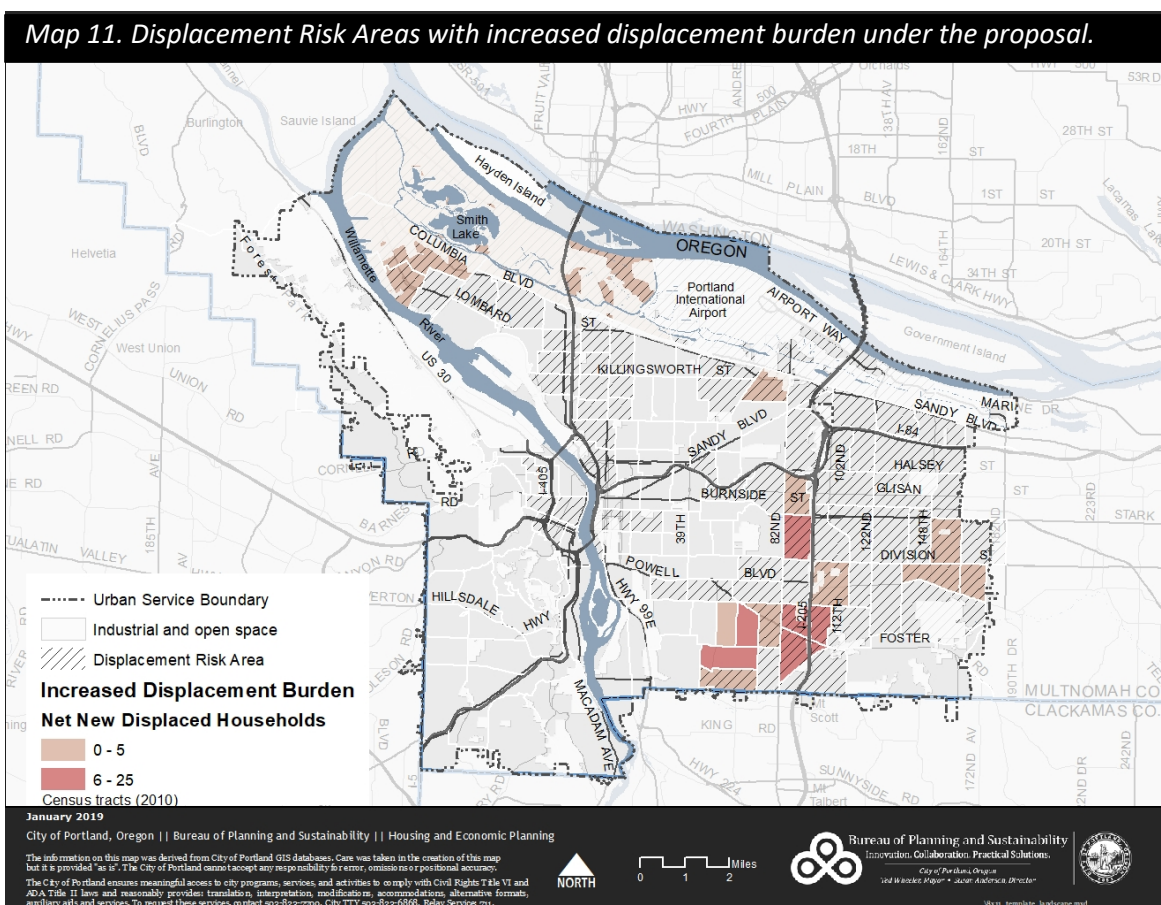
Neighborhood-specific changes vary depending on development feasibility of the proposed development types (detached single-family, duplexes, triplexes, and fourplexes).

Under the proposal scenario, this analysis identified around **480 low-income renter households in single-family structures** that are **at risk of indirect displacement through 2035** as the result of redevelopment in these higher risk areas (shown in Map 10). Under the 2035 Comprehensive Plan single-dwelling development standards, this analysis identified around **610** low-income renter

households in single-family structures that are at risk of indirect displacement as the result of redevelopment in these high-risk areas. Similar to the citywide analysis, **there is a net reduction in displacement pressures in Displacement Risk Areas as the result of the proposed changes.**

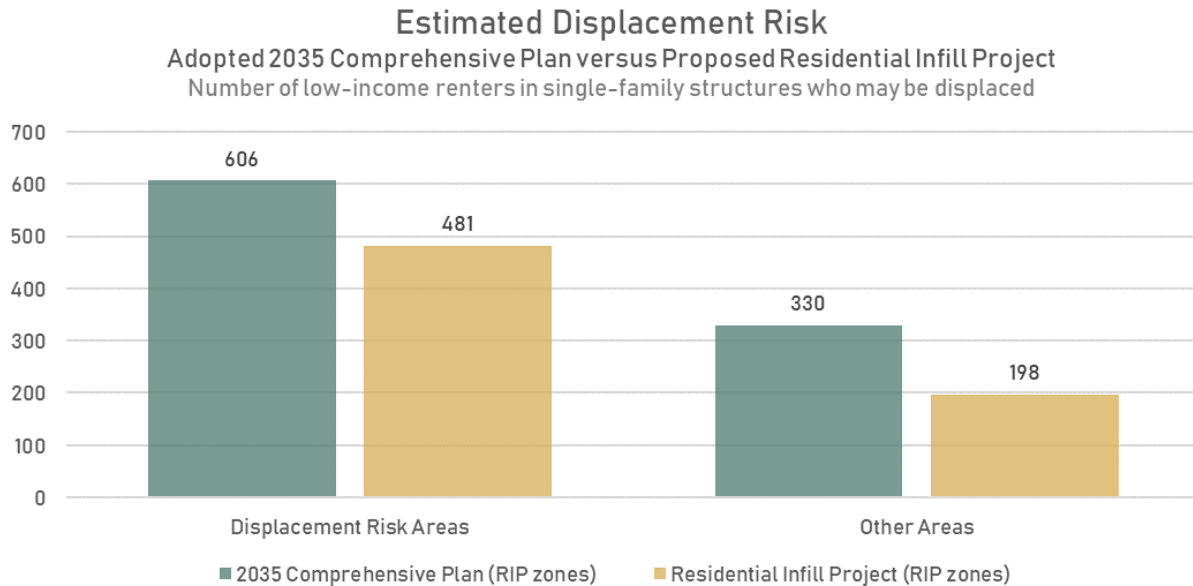
Some areas are expected to see significant increases in redevelopment in the proposal scenario due to market conditions combined with the proposal's increased density allowances and reduction in scale. The Displacement Risk Areas with more displacement burden under the proposal are identified in Map 11. These areas fall into two categories: 1) less than five households at risk of displacement through 2035, and 2) between six and 25 households at risk of displacement through 2035.

The areas with less severe displacement risk include portions of St. Johns, East Columbia, Cully, and Centennial neighborhoods. Areas with more significant displacement risk include portions of Montavilla, Brentwood-Darlington, and Lents. In addition, there is more significant displacement risk for low-income renters in single-family structures in parts of Brentwood-Darlington that are not identified as a Displacement Risk Area.



Further examination of the Displacement Risk Areas in Figure 4 indicates **aggregate net reductions across all Displacement Risk Area typologies**. Additionally, **areas of Portland not identified as Displacement Risk Areas saw large decreases in potential displacement of low-income renters** in the proposal scenario.

Figure 4. Estimated displacement risk by gentrification typology area.



## TECHNICAL METHODOLOGY

This analysis of displacement for the Residential Infill Project relies on the following sources of data and methods:

1. **Severity:** This section relied on demographic data from the American Community Survey (ACS) from the Census Bureau and the Comprehensive Housing Affordability Strategy (CHAS) data from HUD. Some data are published in standard tables from these two sources, while other data required custom analysis using the Public Use Microdata Samples (PUMS), which are person- and household-level ACS data.
2. **Probability:** Finding the likelihood of redevelopment required modifying and running the Buildable Lands Inventory (BLI) capacity and allocation models. The capacity model identifies parcels that are more likely to redevelop given their current value and the proposed development allowances under the project. The allocation model estimates which parts of the city will see new development based on the capacity and recent development trends. This analysis compared the BLI models of the proposal to that of the Adopted 2035 Comprehensive Plan. More details are described below.
3. **Risk Assessment:** The bulk of this analysis focuses on the assessment of severity and probability to estimate displacement risk.

## Moving from Unit Allocation to Parcel Redevelopment Count

The BLI allocation model estimates the number of new units an area will see between 2010 and 2035. Within the model, 123,000 units must be placed somewhere in the city, and the model uses a combination of capacity (zoning allowances and development constraints) and market trends to make a best guess as to which parts of the city will see more or less development.

The number of new units is reported in two scenarios: the zoning rules and assumptions under the adopted 2035 Comprehensive Plan and those under the proposed RIP. However, the model does not report the number of parcels that will develop or redevelop—only the number of units. Since displacement risk measures the number of low-income renters in single-family homes (i.e., one-unit parcels) who may be displaced due to redevelopment, this analysis created a way to turn the BLI unit allocation into an estimate of parcels redeveloped.

Under the proposal, new-construction detached single-family homes are less likely to be built than duplexes, triplexes, and fourplexes. The 2035 Comprehensive Plan baseline analysis assumed 1.5 units per parcel that is redeveloped based on recent development trends. That is, one lot yields on average one and a half single-family homes, with accessory dwelling units accounted for separately. Under the proposal scenario, the assumption is that three units will be produced for every parcel that is redeveloped—one lot yields a triplex or three townhomes in R2.5, R5, and R7 zones. Although duplexes and fourplexes are allowed, this analysis uses a most likely average new development scenario of three units per parcel to account for a variation of densities between one and four units per parcel.

For example, if an area zoned R2.5, R5, or R7 was expected to see 47 new units (allocation), then the number of corresponding parcels would be  $47 / 3 = 15.66 = 16$  parcels redeveloped. The unit-to-parcel adjustment factor is applied after the unit allocation is aggregated to census tracts.

## Accounting for Vacant Parcels

Known vacant capacity must also be accounted for. Recent development trends show that vacant lot development varies by geography but comprises a smaller share of total redevelopment. Staff applied an adjustment factor to account for vacant development versus redevelopment involving demolition. This adjustment factor considered development trends between 2013 and 2018 to estimate the share of anticipated development that would involve demolition of existing structures. This figure was applied at the census tract level and averaged about 80 percent across Portland, meaning 20 percent of development scenarios were estimated to occur on vacant parcels.

## Accounting for Accessory Dwelling Units

The analysis did not examine potential accessory dwelling unit (ADU) development for two reasons. First, for the purposes of evaluating displacement impacts, the addition of an ADU to an existing property is unlikely to result in indirect displacement for a renter of the existing primary structure. Second, ADUs created by homeowners are largely built using home equity and are sensitive to other factors that the model cannot readily predict. Therefore, the production of ADUs would occur in addition to the units included in this analysis. Current ADU projections, based on 2010 to 2016 trends, assume 5,000 more ADUs between 2017 and 2035, or about 280 per year.

## Part II: POTENTIAL MITIGATION STRATEGIES

This Part includes a variety of potential displacement mitigation strategies, including programs and funding mechanisms, for both renters and homeowners. Because the Residential Infill Project affects single-dwelling neighborhoods, these strategies specifically address the needs of low-income renters and homeowners that live in single-family houses. They build on previous work, especially the SW Corridor Equitable Housing Strategy and Dr. Lisa Bates' 2013 Gentrification and Displacement Study.<sup>6</sup> New ideas for reducing the risk of displacement also came from nonprofit housing providers, anti-displacement organizations, and housing advocates.

These strategies face three main challenges—funding resources, organizational capacity, and scattered sites. First, the demand for housing assistance programs already exceeds available resources. Successful implementation of these programs will require additional resources. In addition to resources, there is a need to build organizational capacity, especially in Montavilla, Brentwood-Darlington, and Lents. These neighborhoods are expected to see increased displacement burden under the Residential Infill Project proposals, even as the rest of the city sees a reduction in displacement risk. Fortunately, community organizations like Impact Northwest and Rose Community Development Corporation can provide an organizational structure for these types of programs. Finally, single-family dwellings and other middle housing types are located on scattered sites that are time- and resource-intensive to administer and maintain. Some groups, like Portland Community Reinvestment Initiatives, Proud Ground, and Habitat for Humanity, have been successful with these types of programs. It will be important to learn from their experience to create an effective program.

### Next Steps

Although the changes proposed in the Residential Infill Project reduce the risk of displacement citywide, there are still households at risk of displacement, particularly in the three neighborhoods mentioned above. These potential strategies provide a starting point for a community conversation between BPS, other city bureaus, community organizations, and community members to determine which strategies will be most effective in mitigating potential displacement impacts.

The next steps are to engage service providers, community organizations, and low-income renters and homeowners to understand the scope of the challenge, the most effective strategies, and the funding and organizational capacity needed to support these programs. As part of this engagement, BPS will work with the Portland Housing Bureau to analyze the effectiveness and cost of different strategies and how they fit into the City's overall housing affordability efforts.

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<sup>6</sup> *SW Corridor Equitable Housing Strategy*, City of Portland and City of Tigard (2018), [www.portlandoregon.gov/bps/article/675321](http://www.portlandoregon.gov/bps/article/675321).

## OVERVIEW

In general, these strategies apply to two types of clients (renters and homeowners) and include four types of programs (education, technical assistance, financial assistance, and regulatory incentives).

Renters	Education – tenant rights, financial literacy Financial assistance – stabilization Incentives to property owners Expanding supply – land trusts, co-housing, cooperative housing
Homeowners	Education – combating predation of vulnerable homeowners Technical assistance – understanding development opportunities Financial assistance – increasing access to capital for development

The anti-displacement strategies below are detailed in the following pages.

Strategies	Renters	Homeowners
<b>Education</b>		
Tenant rights and legal services	X	
Financial literacy	X	X
Anti-predation/fraud	X	X
Foreclosure prevention		X
<b>Financial Assistance</b>		
Short-term rent assistance (STRA)	X	
Stabilization incentives		X
Home repair loans and grants	X	X
SDC waivers and tax abatements		X
ADU construction	X	X
Community land trusts and co-housing	X	X
<b>Technical Assistance</b>		
ADU construction		X
Pre-approved plans		X
Access to home equity loans		X



## STRATEGIES FOR VULNERABLE RENTERS

### Renter Education

Providing anti-displacement and prevention services is the most immediate step that can be taken to retain community members in neighborhoods undergoing change. These relatively quick-to-implement services are critical. Other measures to prevent displacement can take years to fund and implement, during which time large turnover of community residents can occur. Anti-displacement services can span a broad range, from legal support to education and outreach. Outreach and education efforts could build on Portland's network of existing community-based organizations that provide education, tenant services, and homeowner assistance. Education programs for low-income renters regarding tenants' rights, understanding lease agreements, financial literacy, and relocation assistance could help them stabilize their housing situation. Funding to support and extend those efforts could focus on people and/or neighborhoods at the highest risk of displacement.

As an example, while doing engagement with renters in the St. Johns neighborhood, the Community Alliance of Tenants (CAT) met a group of renters facing harassment, eviction, and steep rent increases. BPS funded CAT and the St. Johns Center for Opportunity to support these renters so they could learn more about their rights to get repairs completed and advocate to remain in their homes. CAT provides renter's rights education and information and direct tenant support through trained volunteer tenant rights specialists. CAT also provides a renter's rights hotline that focuses on tenant education. CAT does not provide legal advice; rather, they provide support for tenant rights up to the point at which a participant needs legal aid. At this time, CAT can make a referral to Portland Defender, a private law firm, and Legal Aid Services of Oregon. In 2017 the Portland Housing Bureau, through its tenant protection program, provided CAT with an additional \$270,000 for outreach and engagement, renter services, and renter legal advocacy.

### Financial Assistance

Financial assistance programs provide an array of monetary support, either with assistance in emergency situations or to access housing. Home Forward's Short-Term Rent Assistance (STRA) program pools funding from the their organization along with the City and County Joint Office of Homeless Services, Multnomah County Department of County Human Services, United Way, and the City of Gresham. Home Forward contracts with providers to deliver the STRA program to households who are experiencing homelessness or are at risk of homelessness in Multnomah County. Eligible expenses for STRA include financial assistance with rent, rent arrears, mortgages, motel vouchers, application fees, deposits and move-in expenses, housing debt, and limited "non-leasing" expenses needed to reduce or eliminate barriers to housing.

### Incentives for Property Owners to Stabilize Renters

Providing incentives to property owners to rent to existing or new low-income tenants could help stabilize vulnerable groups.

The City could build on existing assistance efforts to homeowners for weatherization and home repairs by subsidizing weatherization or home repairs for property owners renting to low-income tenants.

Further, the City could incentivize property owners to rent new dwelling units to low-income tenants. Multnomah County's A Place for You pilot program built accessory dwelling units (ADUs) as transitional housing for homeless families and could be extended for other housing types allowed by the Residential Infill Project.<sup>7</sup> In Austin, Texas, the Alley Flat Initiative supports the creation of affordable rental units if the homeowners offer the units at a rent affordable to people making 80% of the median family income or below (with rent not exceeding 28% of the tenant's income) for five years. Assistance includes reduced fees; expedited services; a design catalogue with a step-by-step guide to development and City-approved building plans for ADUs; and advocacy in resolving issues with City departments.<sup>8</sup>

The City of Portland offers System Development Charge (SDC) waivers for ADUs that will not be used for short-term rentals for 10 years. The City could extend SDC waivers to other types of housing units allowed through the Residential Infill Project if the property owner signs a covenant agreeing to rent to a household at a specified income level (60% to 80% median family income) for 10 years.

#### Expanding Homeownership Opportunities

Programs can help low- and moderate-income tenants purchase their homes. Limited equity cooperative homeownership models or other forms of cooperative or co-housing models of ownership can make homeownership more affordable. Cooperatives allow members to share the risk and responsibility involved in owning and maintaining a home. Peninsula Park Commons in North Portland, established in 2004, provides an example of co-housing with nine units. When available, units can be rented or purchased. Another project underway in the Interstate Urban Renewal and North/Northeast Housing Strategy Plan area will be developed by Proud Ground with 41 of the 50 condominium units to be permanently affordable, family-sized units serving households at a range of 35% to 100% of median family income.

Community land trusts are organizations that own land and provide long-term ground leases to low-income households to purchase homes on the land with agreement on purchase prices, resale prices, equity capture, and other terms. This model allows low-income residents to become homeowners and capture some limited equity as the home appreciates but ensures the home remains affordable for future homebuyers. Community land trusts may also lease land to affordable housing developers for the development or management of rental housing.

<sup>7</sup> "A Place for You August 2018 Briefing," Multnomah County Idea Lab (August 2018), <https://multco.us/file/77423/download>.

<sup>8</sup> *The Alley Flat Initiative* (2019), [http://thealleyflatinitiative.org/?page\\_id=41](http://thealleyflatinitiative.org/?page_id=41).

## STRATEGIES FOR VULNERABLE HOMEOWNERS

### Combating Predation of Vulnerable Homeowners

The complexity of information about regulations, financing, and the development process has allowed for predation of vulnerable homeowners in the past. Much can be learned from the causes of and responses to the 2008 foreclosure crisis, which uncovered racially discriminatory real estate practices that resulted in a disproportionate number of homeowners of color losing their homes. The City could consult with nonprofits currently offering services to at-risk homeowners in order to learn more about the dynamics of vulnerability and predation (for example, targeting a vulnerable homeowner by reporting nuisance violations to coerce a quicker sale or reduced sales price) and collaborate on a variety of anti-predation education efforts.

One form of predation comes in predatory speculation, leading to “voluntary” displacement of homeowners (i.e., homeowners who sell their home after being given misleading information). The City could support educational and public awareness campaigns aimed to help low-income homeowners resist predatory real estate practices.

### Homeowner Stabilization

The Portland Housing Bureau currently provides assistance to at-risk homeowners through home repair loans as well as foreclosure prevention assistance.<sup>9</sup> These programs could be marketed in areas anticipated to see increased displacement risk.

### Development Assistance and Financing

The complexity of information about regulations, financing tools, and the development process also creates a knowledge gap between well-resourced homeowners and low-income homeowners. Programs offer technical assistance to help low-income homeowners add ADUs and other housing types on their property. For example, Verde leads a community-based affordable ADU collaborative, with programs focused on creating benefits for both modest-income host families and lower-income rental housing occupants in displacement-impacted neighborhoods throughout Portland.

Pre-approved plans for ADUs or other housing types could help low- and/or moderate-income homeowners overcome barriers in the permitting process. The City could host a design competition to solicit plans and partner those with a lineup of potential funding partners for interested homeowners. City precedents for such a program include the Courtyard Housing Design Competition, which called for infill housing designs that promote more affordable family housing, and the Living Smart competition, which sought aesthetically pleasing designs for narrow houses and resulted in two permit-ready plan

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<sup>9</sup> “Homeowners,” Portland Housing Bureau (2019), [www.portlandoregon.gov/phb/72624](http://www.portlandoregon.gov/phb/72624).

sets.<sup>10,11</sup> The Living Smart program and its resultant permit-ready plan sets were cancelled due to lack of interest by developers, perhaps because of the plans' costly design, so any design competition or pre-approved plans created now should include strict cost constraints to remain relevant to both affordable housing developers and homeowners with moderate budgets.

Low-income homeowners also face barriers accessing capital to further develop their property, whereas access to capital is less of a barrier for developers and high-income homeowners. The City could help lower these barriers by partnering with local banks to offer home equity lines of credit and/or low-cost loans. The Federal Deposit Insurance Corporation (FDIC) promotes partnerships between banks and Community Development Financial Institutions (CDFIs). CDFIs fill a niche by specializing in providing credit to borrowers and communities that may be difficult for traditional banks to serve. Many borrowers may be creditworthy but often lack credit history, have a poor past experience with alternative or predatory credit providers, or have a minimal amount of personal savings. CDFIs offer products with more flexible underwriting standards, combine a range of below-market financing with their own resources, and provide technical assistance with their lending activities to help ensure that borrowers use credit and capital effectively.<sup>12</sup>

Efforts to combat disparities in both information and financing could include collaboration with existing efforts, such as the Portland State University's Small Backyard Homes Initiative, which is working with CDFIs and other financial institutions on loan products to make ADU development more affordable.<sup>13</sup>

As an example of a program supporting ADU development from another city, the West Denver Single Family Plus initiative will address involuntary displacement of homeowners through resources addressing general refinancing options, home equity, basics of ADU development, and high-risk mortgages, as well as an ADU handbook.<sup>14</sup>

A pilot "developer hub" in East Portland or other areas of the city with low-income homeowners and/or residents vulnerable to displacement could convene financing opportunities and education for low-income homeowners looking to develop additional units. Private developers could provide technical assistance to community development corporations looking to develop affordable housing or low-income homeowners looking to develop additional units.

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<sup>10</sup> "About the Project," *Portland Courtyard Housing Design Competition* (Bureau of Planning and Sustainability), [www.courtyardhousing.org/about.html](http://www.courtyardhousing.org/about.html).

<sup>11</sup> *Living Smart: Designs of Excellence*, City of Portland (2004), [www.portlandonline.com/bds/Living\\_Smart\\_Design\\_Excellence\\_Monograph.pdf](http://www.portlandonline.com/bds/Living_Smart_Design_Excellence_Monograph.pdf).

<sup>12</sup> "Community Affairs Program – Strategies for Community Banks to Develop Partnerships with Community Development Financial Institutions," Federal Deposit Insurance Corporation (2014), [www.fdic.gov/consumers/community/cdfi/index.html](http://www.fdic.gov/consumers/community/cdfi/index.html).

<sup>13</sup> "Small Backyard Homes Initiative" (Portland State University, 2019), <https://www.pdx.edu/sustainability/small-backyard-homes-accessory-dwelling-units-adus>.

<sup>14</sup> "Housing (the WDSF+ Initiative)," West Denver Renaissance Collaborative (2019), <http://www.mywdrc.org/wdsf.html>.

The Fair Housing Council of Oregon’s guide to examining local land use with a fair housing lens notes that certain groups of people have historically been excluded from amenity-rich housing areas. A 2015 rule from the U.S. Department of Housing and Urban Development requires jurisdictions receiving federal money to affirmatively further fair housing and identifies increasing integration and overcoming historic segregation patterns; and narrowing disparities in access to transit, education, and employment as key actions. In addition to increasing access to affordable development in high-displacement-risk areas, the City could use its housing opportunity lens to identify more exclusive neighborhoods and partner with community-based organizations to increase affordable housing options in those neighborhoods, consistent with Policy 5.22 of the 2035 Comprehensive Plan.

## FUNDING MECHANISMS

Delivery of these programs will require additional resource commitment from the City of Portland, which could result in new programs for other bureaus and agencies (e.g., the Portland Housing Bureau) and partnerships with nonprofit organizations that serve low-income communities. Potential funding mechanisms are outlined below.

### Housing Investment Fund

Funding for these strategies could come from the Housing Investment Fund, created to develop or preserve affordable housing in Portland or help low- and moderate-income individuals access affordable housing. Revenue sources for this fund include the short-term rental lodging tax, loan interest income, fee payments, cash transfers, and local shared revenues.

### Affordable Housing Construction Excise Tax

The City’s Affordable Housing Construction Excise Tax (CET), effective August 1, 2016, provides another potential funding source. It levies a tax of 1 percent on all permits valued at \$100,000 or more to help fund affordable housing programs. All single-dwelling development over this value threshold is subject to this tax. Revenue from single-dwelling development after the proposed zoning changes go into effect could be earmarked for affordable housing development in single-dwelling zones or anti-displacement programming. The Residential Infill Project’s November 2018 economic analysis predicts \$6.1 billion in construction investment in the single-dwelling zones over 20 years, which would work out to \$61 million in Affordable Housing CET revenue. Assuming a construction cost of \$300,000 per affordable unit in the single-dwelling zones, for example, this revenue could fund 10 affordable units per year for 20 years, help bridge the gap between existing subsidies and financial need, or fund a variety of anti-displacement programs.

### Charge an Anti-Displacement Fee

Similar to an SDC, requiring a fee for anti-displacement programming or affordable housing development would result in some public benefit in exchange for the increase in property value, sales price, and/or rental revenue that property owners could receive due to increased zoning allowances.

The fee could be structured as an additional construction excise tax that could be dedicated to development assistance for low-income homeowners and/or the creation of affordable units. This could be applied to development in single-dwelling zones. This fee would need authorization from the Oregon Legislature.

### Leverage City and Regional Funds

Sources of City funding can be leveraged with grant funds and philanthropic program-related investments. Measure 102, passed by voters in November 2018, changed the Oregon constitution to remove the requirement that local governments retain ownership of housing projects funded with bond money, potentially opening new opportunities to fund and collaborate with nonprofit organizations and private-sector developers for affordable housing.

Voters have recently passed bonds for affordable housing in the City of Portland and Metro, part of which could be spent on affordable housing development in single-dwelling zones.

## OTHER STRATEGIES

A number of policy toolkits can help inform the creation of a mitigation strategy:

- Partnership for Working Families: Policy and Tools [www.forworkingfamilies.org/resources/tools](http://www.forworkingfamilies.org/resources/tools)
- HousingPolicy.org: Toolbox [www.community-wealth.org/resourcetype/Toolbox](http://www.community-wealth.org/resourcetype/Toolbox)
- PolicyLink: Equitable Development Toolkit [www.policylink.org/resources-tools/affordable-housing](http://www.policylink.org/resources-tools/affordable-housing)
- All-In Cities: Policy Toolkit [www.allincities.org/toolkit](http://www.allincities.org/toolkit)
- Association for Neighborhood and Housing Development: Policy Tools [www.antidisplacementtoolkit.org/](http://www.antidisplacementtoolkit.org/)
- Grounded Solutions Network: Policy Toolkit [www.groundedsolutions.org/sites/default/files/2018-11/17%20What%20About%20Housing%20-%20A%20Policy%20Toolkit%20for%20Inclusive%20Growth.pdf](http://www.groundedsolutions.org/sites/default/files/2018-11/17%20What%20About%20Housing%20-%20A%20Policy%20Toolkit%20for%20Inclusive%20Growth.pdf)



Bureau of Planning and Sustainability

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## MEMO

**DATE:** February 22, 2019

**TO:** Planning and Sustainability Commission

**FROM:** Morgan Tracy, Residential Infill Project Manager  
Tyler Bump, Senior Economic Planner

**CC:** Joe Zehnder, Director  
Sandra Wood, Principal Planner

**SUBJECT:** Residential Infill Project Additional Displacement Risk Analysis

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At the February 12, 2019 Planning and Sustainability Commission (PSC) worksession, staff presented Appendix H, Displacement Risk and Mitigation. The Commission requested additional information to address questions raised about the demographic composition of certain neighborhoods where the risk analysis showed a net increase in displaced households. The Commission also wanted to determine whether the reallocation of displacement, while an overall net reduction, had a potential disparate effect on any particular community of color. The following summarizes the additional analysis and provides key findings.

### Limitations on Data

The data used in the analysis is drawn from the American Community Survey (ACS), Comprehensive Housing Affordability Strategy (CHAS) and Public Use Microdata Samples (PUMS). With each further grain of detail, the margin of error is increased. When the margin of error approaches the sample size, the data can no longer be assumed to be statistically valid.

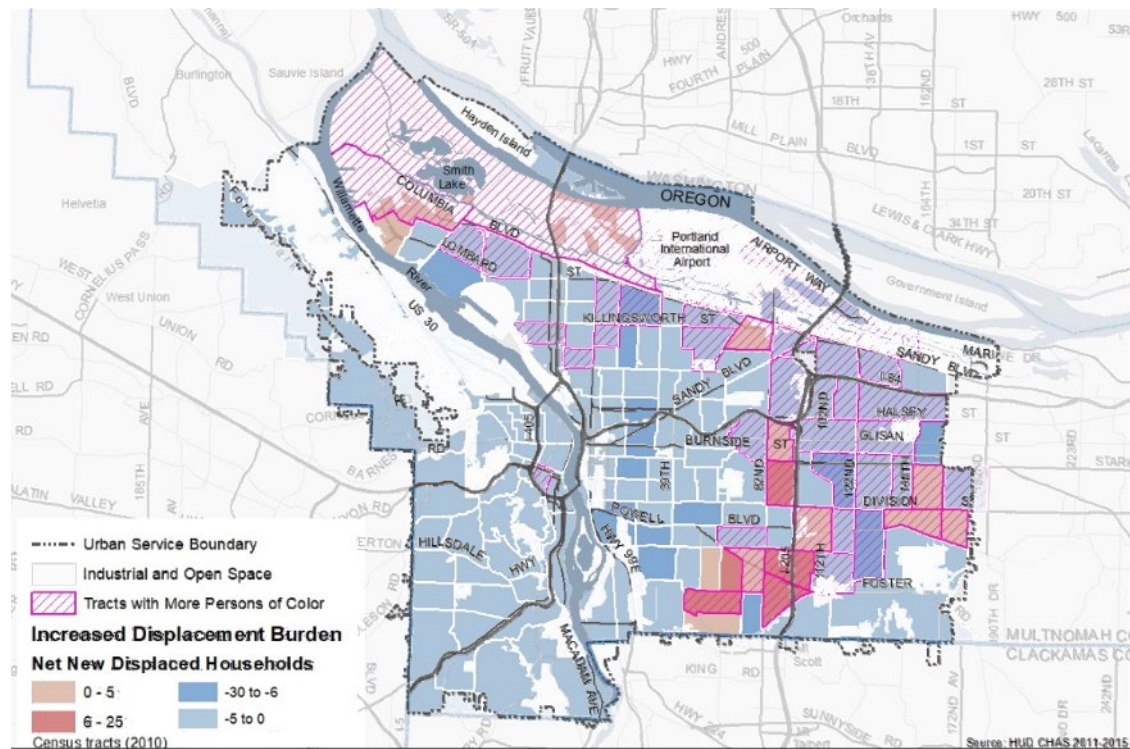
The determinants of vulnerability are based on a composite score of four factors: tenure, race, income, and education attainment. We used “low income renters residing in single dwelling structures” as the indication of vulnerable households in the original Displacement Risk Analysis. Data is not available or is not statistically reliable to determine “low income renters of color residing in single dwelling structures.” Therefore, to build on the prior analysis, staff identified areas at the census tract level that had higher shares of populations of color (when compared against the citywide average), as an indication of the likelihood of



when displacement is more likely to impact a low-income renter of color. Staff also examined average rent profiles in areas with net increased displacement risk.

**Focus on Communities of Color**

The map below shows the census tracts with higher shares of people of color (indicated by the pink cross-hatching). It also shows all census tracts where there is a net decrease from the baseline in displaced households (shown in light and dark blue), as well as all census tracts where there is a net increase in displaced households (shown in light and dark red). The table below the map tallies the net displaced households from only those census tracts with higher shares of communities of color.



	Number of tracts with higher shares of persons of color	Number of households affected	Citywide households affected
Medium displacement decrease (-30 to -6)	26	-157	
Low displacement decrease (-5 to 0)	3		
Low displacement increase (0-5)	11	73	
Medium displacement increase (6-25)	4		
<b>TOTAL</b>	<b>42</b>	<b>-84</b>	<b>-257</b>

This table indicates that the proposals decrease displacement for approximately 157 households in areas with more people of color but increases potential risk displacement risk





for approximately 73 households in other areas with more people of color. In total there are approximately 84 fewer low-income renters in single family structures at risk under the proposal compared to the 2035 Comprehensive Plan, or about a 16 percent reduction.

Staff also evaluated the racial and ethnic composition for the specific areas identified as having increased displacement risk under the RIP Proposals. In general, these neighborhoods have a higher share of Latinx and Asian households compared to both the city as a whole and compared to identified displacement risk areas.

Population	Neighborhoods with net increase in displacement risk				
	Citywide	Displacement Risk Areas	Brentwood-Darlington	Lents/ Mt. Scott-Arleta	Montavilla
White	630,331	335,863	13,192	37,589	15,870
Black	447,488	206,780	8,931	21,880	10,518
Latino	35,091	27,720	383	1,405	677
Asian	61,214	46,077	2,065	5,888	1,336
Native American	48,815	32,699	870	6,002	2,056
Hawaiian/Pacific	3,513	2,520	123	366	266
Another race	3,787	3,470	193	217	138
Multi-racial	1,941	1,129	33	113	33

Population share	Neighborhoods with net increase in displacement risk				
	Citywide	Displacement Risk Areas	Brentwood-Darlington	Lents/ Mt. Scott-Arleta	Montavilla
White	71%	62%	68%	58%	66%
Black	6%	8%	3%	4%	4%
Latino	10%	14%	16%	16%	8%
Asian	8%	10%	7%	16%	13%
Native American	1%	1%	1%	1%	2%
Hawaiian/Pacific	1%	1%	1%	1%	1%
Another race	0%	0%	0%	0%	0%
Multi-racial	5%	5%	5%	5%	5%

## Rent Analysis

Current average rents for single family homes in areas identified as having more potential risk for displacement under the RIP proposals are currently around 80% MFI rent levels for two and three bedroom units. Using 2018 HUD rent limits published by the Portland Housing Bureau, 80% to 120% MFI for a two bedroom unit in Portland is between \$1,466 and \$2,197 per month. The economic analysis conducted by Jerry Johnson indicates that new units in triplex and fourplex development types would



likely be priced at 80%-120% MFI, at or close to current rents for detached single dwelling units in these neighborhoods today.

Zillow Rent Index (ZRI) for Single-family Residential by Neighborhood (Q3 2018).

Neighborhood	SFR ZRI
Brentwood-Darlington	\$1,630
Lents	\$1,560
Montavilla	\$1,680
Mount Scott-Arleta	\$1,630

#### Key findings:

- Communities of color overall are as likely or less likely to be displaced compared to the baseline scenario as a result of the proposals.
- In general, the three neighborhoods with a net increase in potential displacement risk have a higher share of people of color, especially Latinx and Asian households, compared to both the city as a whole and compared to identified displacement risk areas.
- Average rents in the three neighborhoods are around 90% MFI, which is at or near the average rents predicted for triplex and fourplex units under the economic feasibility analysis.

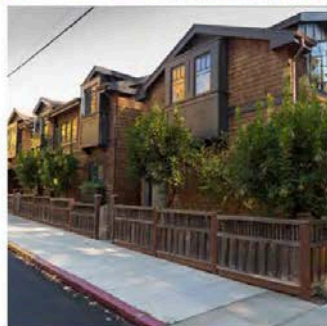


# Floor Area Ratio (FAR) in Single Family Zoning

The following is a report on the use of floor area ratios (FARs) in single family zones, prepared by Dyett & Bhatia, Urban and Regional Planners, June 2016.



## City of Portland Residential Infill Project



## Use of Floor Area Ratios (FARs) in Single Family Zoning



Prepared by  
**DYETT & BHATIA**  
Urban and Regional Planners

June 2016

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# I Introduction

As part of Dyett & Bhatia's work on Portland's Residential Infill Project, City staff requested a written report of research analyzing different cities' codification of square footage limits through floor area ratios (FARs) in single-family zoning districts. FARs have been used in Portland's downtown and in commercial and mixed-use zones in the City, and they may be an appropriate tool to control bulk and mass in the single-family neighborhoods. However, in SAC meetings, some questions have been raised about how they would be implemented and whether they might not be too complicated. City staff noted that FARs are well understood when they apply to box-shaped buildings on flat sites, but shifting to an FAR approach in the single dwelling zones raises some implementation concerns because of the wide variety of house forms and lot topography.

Of particular interest to the Bureau of Planning & Sustainability are the specific zoning code provisions and implementation approaches as they relate to describing the measurement of FAR in single dwelling house proposals. Topics that were called out as warranted specific attention included:

- Area within roof forms when or if they are counted (attics, under gables, dormers);
- Basements (especially daylight basements or basements on sloping lots);
- Garages (when or if they are counted, tuck-under garages vs. at grade vs. detached);
- Porches, balconies, and decks (how are they defined or distinguished from other floor area);
- Double height rooms (foyers, cathedral ceilings);
- Bay windows; and
- Stairwells.

Nine cities were selected for the FAR analysis, with a pre-condition being that they had set an FAR for single-family homes. We sought a range of planning climates, geographies and perspectives on regulations. We also wanted to include some cities that have recently fine-tuned their FAR regulations or are in the process of doing so. Key characteristics of the case study cities and their 2015 population follow:

- **Atlanta (pop. 464,000):** This southern city has a strong planning tradition in a community committed to preserving the City neighborhoods' identity by preserving the unique character of established neighborhoods and supporting revitalization efforts that will increase housing opportunities and neighborhood stability. The City also is committed to preserving single-family residential neighborhoods and ensuring infill development that preserves neighborhood character. Atlanta has a diverse population,

which is aging in place, supportive state planning, and strong environmental protection policies. Its approach to single family FAR controls is fairly traditional, cleanly drafted, and effective. Its controls are straight-forward and easily administered, with no discretionary review and a well-conceived set of exemptions – items excluded from FAR calculations.

- **Beverly Hills (pop. 35,000):** The City has dealt with mansionization at a different scale, in that the “target” house size is now 10,000 square feet for a family to feel they have “arrived” and can be recognized in Beverly Hills society. The City Council, being fairly conservative, has not wanted to reduce its FARs to control house size, but instead adopted standards for architectural modulation, setbacks, and upper-story setbacks to reduce visible mass. Basement space and light wells also have been big planning issues and are addressed in the zoning controls. Their regulations are instructive in showing how a community deals with bulk and mass at the high end of the price scale.
- **Boston (pop. 667,000):** Under the aegis of the Boston Redevelopment Authority, planning in Boston is very neighborhood oriented; the City deals with gentrification in its older single family neighborhoods with a “light touch”, and been fairly conservative in its zoning. Their FAR controls are another example of a clean, straightforward approach to controlling single family home size without discretionary review or design standards.
- **Burbank (pop. 105,000):** Home to the entertainment and high tech industries, Burbank was a fairly sleepy community until it began to face pushback from neighborhoods dealing with teardowns and large homes in established neighborhoods as “new money” moved in. An Interim Development Control Ordinance was adopted to reduce FARs and set some other limits on new houses while permanent zoning is being put in place. How this interim zoning was structured and what some of the changes in FAR controls are may provide some lessons for Portland.
- **Chicago (pop. 2.7 million):** Mayor Dailey initiated a comprehensive zoning reform program about 15 years ago, which included a complete overhaul of the residential regulations and resulted in adoption of FAR controls for single family homes. This ordinance represents “best practices” in doing zoning for a large and diverse city with a strong tradition of residential architecture and limited support for design review and discretionary development controls on new homes. It also represents a “light touch” that has been quite effective.
- **Los Angeles (pop. 3.9 million):** The City Council adopted a Base Mansionization Ordinance in 2008, which was followed by a Base Hillside Ordinance shortly thereafter. Technical guidance materials also were prepared that may be instructive for Portland’s coding efforts. These ordinances were effective in dealing with bulk and mass through FAR controls and other standards, but loopholes and some generous exceptions prompted the City Council to initiate a set of amendments to the FAR controls that are now under public review.
- **Mill Valley (pop. 14,400):** A smaller Bay Area community with limited land, beautiful hillsides, and a tradition of craftsmen architecture. Their zoning has long regulated single family houses with FARs and recent Code amendments initiated because of community concerns about big houses in the hills may offer some insights, particularly in dealing

with defining “covered” floor area, basements and garages, cathedral ceilings, and grading.

- **Minneapolis (pop. 411,000):** A city with a history of strong neighborhood planning and innovative zoning; older single family housing stock, and a well-developed process for design review. Minneapolis also has a long tradition of small area planning, stemming from the work in the 1960s on interconnected urban villages. The planning initiatives in recent years have focused on infill and transit-oriented development, urban gardens, live work/shared space, urban design, and zoning. The FAR controls for single-family homes are clean and straight-forward, involving minimal discretion. They are effective in doing the job they were designed to do.
- **New York City (pop. 8.6 million):** The Mayor’s recently adopted affordable housing program included an extensive set of far-reaching Code amendments (1,000+ pages), including minor adjustment to FAR controls for single-family homes. New York City is known for its fine-grained zoning that deals with social issues as well as economic and environmental considerations. How the new zoning has responded to the pressures in the diverse neighborhoods facing gentrification seemed worthy of study.

Our findings are presented in three sections:

- Defining floor are and measuring FAR
- Base FARs and FAR Bonuses
- Special situations (hillsides and large lots)

The appendix to this report includes relevant code language from the zoning regulations adopted for each on these cities. In a couple of instances, we also found summary materials and guidelines, but in most of the cities surveyed, such guidance was not readily available. We also interviewed planning staff in some of the cities to explore how the regulations have worked and refinements under consideration. Their observations helped us draft our findings and suggestions for Portland to consider as it moves forward with this project.

## 2 Defining Floor Area & Measuring FAR

### DEFINING FLOOR AREA

Based on our review of zoning codes in the selected jurisdictions, the “best practice” is to have an inclusive definition of floor area based on total visible building mass. Do not use the definition to make policy about what to include or exclude in calculating the floor area ratio (FAR), as these clarifications then are buried in the ordinance. Having a separate set of rules for measurement, as Portland does, is preferable. The simplest definition is just to say:

**Floor Area.** The total horizontal enclosed area of all the floors below the roof and within the outer surface of the walls of a building or other enclosed structure.

Chicago among others is more inclusive in defining floor area and specifically lists what is included, as follows:

- Floor area of any floor located below *grade* or partially below *grade* when more than one-half the floor-to-ceiling height of the below-*grade* (or partially-below-*grade*) floor is above *grade* level, provided that below-*grade* or partially below-*grade* floors with a clear height of less than 6 feet 9 inches are not counted as floor area;
- Elevator shafts and stairwells on each floor;
- Floor area used for mechanical equipment, except equipment located on the roof and mechanical equipment within the building that occupies a commonly owned contiguous area of 5,000 square feet or more;
- Those portions of an *attic* having clear height (head-room) of 6 feet 9 inches or more;
- Mezzanines;
- Enclosed porches;
- Floor area devoted to *non-accessory parking*;
- Parking provided in excess of the maximum *accessory parking* limits, provided that each such parking space will be counted as 350 square feet of floor area; and
- Floor area within a *principal building* that is occupied by *accessory uses*.

Delving more deeply into the codes in each of the jurisdictions reveals some specific differences in approach, such as how to deal with attic space, basements, covered porches, and high ceilings. Some of these are highlighted below with our recommendations; details are in the appendix.



### Area within roof forms when or if they are counted

Most jurisdictions include floor area in attics, under peak roofs, whether or not it is habitable, meaning does the attic have the minimum floor to ceiling clearance set by the Uniform Building Code (UBC) for a habitable room. The Senior Planner in Los Angeles pointed out that dormers are easily added, and they do not want to track whether this would put a house over an FAR limit. So they ignore ceiling height.

- Chicago sets a minimum height of 6 feet 9 inches to be counted, but no minimum area. This is less than the current UBC standard of 7 feet, down from a previous 7.5 foot standard.
- Mill Valley is more specific: if attic space has 7 foot headroom with minimum horizontal dimensions of 6 feet by 8 feet, then it is counted toward FAR.
- Minneapolis refers to headroom clearance as set by the building code in determining whether to count attic space, but does not include a specific number in the zoning regulations.
- New York City is more nuanced, counting some attics with only 5 feet of headroom (in R2A and R2X zoning districts, among others) and others with 8 feet of headroom (R1 and R2 zoning districts).

Mill Valley's approach might be worth a closer look, as it recognizes the value of attic space and sets out specific parameters on when to count it; they have gone a bit further than Chicago.

### Basements

Most jurisdictions exclude basements from FAR calculations based on a Building Code definition or something similar. Usually this translates to a rule that the basement has to be below a finished first floor that is no more than 2.5 or 3 feet above grade for at least 50 percent of its perimeter (or for the whole perimeter, as in Beverly Hills, Burbank and Mill Valley, among others).

- Burbank and New York City includes basement space within the definition of floor area because it is used. However, in hillsides, you get the "walk-in" basement problem, and are really giving away space that contributes to overall building mass.
- New York City has a separate definition for cellar space and allows that space to be excluded unless it's used for dwelling purposes.
- The Burbank Assistant Director cautioned against using the term "habitable space" for basements as it invites arguments about whether a below grade interior space, such as an unfinished room below a garage slab, should be excluded or included.
- The Mill Valley Senior Planner said that when they had the basement exclusion and only required a portion of the perimeter to be completely underground, "it was a real nightmare". Since changing the rule, Mill Valley is much happier with the results as building bulk in the hillsides has been reduced.
- Mill Valley also allows "raw space" as found under a garage or carport in a hillside home to be converted to habitable space with the following rule: "*During the improvement of an*

*existing single-family dwelling, any enclosed but undeveloped volumes may be converted to habitable space and shall not be restricted to the maximum adjusted floor area as determined by Section 20.16.040(A)(2); provided that the conversion of the existing space does not change the existing height, bulk, mass or footprint of the structure and only if minimal excavation or modification of the existing grade is required.”*

- Los Angeles specifically addresses the issue of daylight access to basements and allows the basement exclusion from floor area even with 2 light wells, provided they are not visible from a public right-of-way, they do not project more than 3 feet from the exterior walls of the basement, and they are not wider than 6 feet. This is similar to rules adopted in upper-income communities on the San Francisco Peninsula where tight FAR controls may the option of a family room that is below grade a viable alternative.
- Los Angeles also excludes basement space only if the upper surface of the floor or roof above does not exceed 2 feet in height above natural or finished grade, whichever is lower.

Burbank’s approach – count everything, but deal with garage space separately – may make sense as a starting point because such space does contribute to overall mass, even is partially below-grade.

### **Garages**

Most jurisdictions exclude garage space for required parking; some do this with a general rule, while others state a specific amount of floor area that is excluded (300 square feet in New York City, 400 square feet in Beverly Hills, Burbank and Los Angeles, and 500 square feet in Mill Valley and in New York City if two spaces are provided).

- Boston exempts all garage space, whether at grade or underground.
- Chicago counts garage space if it’s for parking more than the minimum number of required spaces. This was intended in part to be a disincentive for the three-and four-car garages being built.
- Minneapolis counts garage space if attached to single family and two-family homes.
- Beverly Hills has the most developed concepts for garage entrance locations (see Section 10-3-114) and, notably, does not allow sloped garage entries to tuck-under or partially below-grade or subterranean garages in the front yard setback area. The idea being to move the entry to a below-grade garage back into the lot. Limits on garage width also are set (40 percent of the lot width or 24 feet, whichever is less).

On balance, we think some for of exemption for garage space may make sense, with additional attention to underground and tuck-under garages. Burbank is currently considering not only a garage proscenium width, but also restrictions on apron width and curbcuts for drives, along with a rule that a garage door for a third space be offset at least two feet from the front of a two-garage garage entrance.

## Porches, balconies, and decks

If porches, balconies, and decks are generally open, they are typically excluded, but if they are enclosed on two or three sides, then the floor area is counted in a FAR calculation.

- Burbank counts all covered porches as floor area.
- Chicago counts enclosed porches.
- Los Angeles exempts porches and breezeways with an open lattice roof, and gives a partial exemption (250 square feet) for porches, patios and breezeways with a solid roof if they are open on two sides.
- New York City excludes floor space in open or roofed porches and breezeways provided not more than 50 percent of the space is enclosed.

Of the cities surveyed, Los Angeles may be the best model, with its partial exemption.

## Double height rooms

The issue of cathedral ceilings for family rooms and foyers has been approached in several ways:

- **Allow an Unlimited Exemption.** Beverly Hills does not limit interior space with high floor to ceiling heights.
- **Allow a Limited Exemption.** Los Angeles has allowed an exemption for only a certain amount of space (100 square feet) to have floor-to-ceiling heights over 14 feet.
- **Requiring Double-Counting.** Burbank requires interior space greater than 12 feet to count as a second story, meaning the floor area is double-counted. Los Angeles is considering a similar rule in its amendments to the Base Mansionization Ordinance, but they would set an allowable ceiling height of 14 feet.
- **Assign a 50% Premium to Foyer or Cathedral Ceiling Space.** Mill Valley uses this option, meaning the floor area in rooms where the interior space exceeds 14 feet is multiplied by 1.5. Mill Valley also has some specific rules for top floor space related to roof pitch.

Mill Valley offers a good model, with its 50 percent premium, but if there is SAC support, you could require double-counting as this is more-effective in controlling overall building bulk.

## Bay windows

In generally, floor area created by a bay window only is counted if it is a floor-to-ceiling bay, but not if it is a traditional bay window with a shelf or bench for seating. The best way to do this is to set a minimum vertical distance for the bay window to be above the floor, such as 30 inches. However, many of the zoning ordinances reviewed did not address this topic explicitly.

## Stairwells

Stairwells usually are counted once, not twice, but some jurisdictions do count this space at each level.

## **ESTABLISHING AN “ADJUSTED” FLOOR AREA FOR FAR CALCULATIONS**

Several jurisdictions establish specific rules for determining floor area as the basis for determining compliance with FAR standards. This is done by stating, first, that the floor area of a building is the sum of the gross horizontal areas of all floors of a home and other enclosed structures, measured from the outside perimeter of the exterior walls and/or the centerline of interior walls, and then listing what is included and excluded in these calculations.

Interestingly, Mill Valley allows exclusion for enclosed but undeveloped volumes, which could be utilized in the future as floor area if they have minimum horizontal dimensions of 8 feet by 10 feet and 7 foot headroom. The Burbank Assistant Planning Director cautions against this approach, preferring to count all interior floor area, whether or not it is habitable and be a bit more generous with the FAR (Mill Valley sets a 0.35 base FAR, while Burbank’s is 0.40, which can go up to 0.45 if certain features are included in the home design (e.g. wider side yards, upper-story setbacks, so the second floor is smaller than the ground floor).

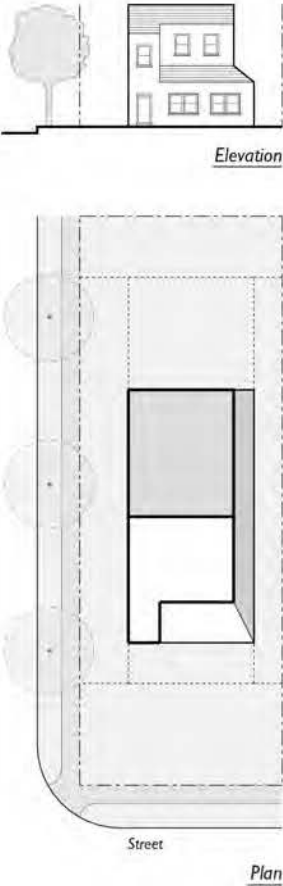
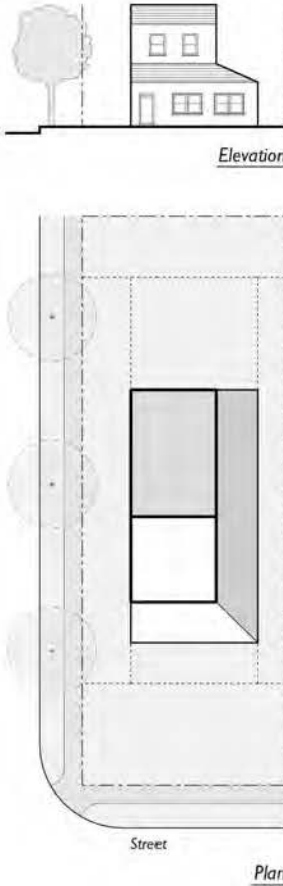
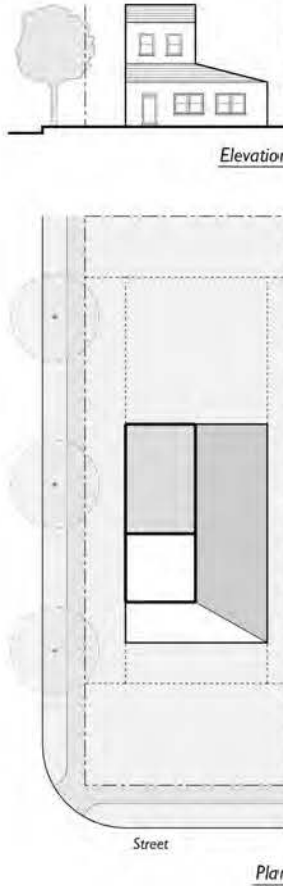
## **DETERMINING THE FLOOR AREA RATIO**

The floor area ratio (FAR) is the ratio of the floor area, excluding areas specifically noted, of all principal and accessory buildings on a site to the site area. To calculate the FAR, floor area is divided by site area, and typically expressed as a decimal. For example, if the floor area of all buildings on a site totals 20,000 square feet, and the site area is 10,000 square feet, the FAR is expressed as 2.0.

The diagram on the following page shows how Burbank illustrates different FARs in combination with standards intended to reduce visible bulk.

## **VERIFICATION OF EXISTING CONDITIONS**

Los Angeles has a counter handout on procedures they follow for verification of existing residential floor area, including when “as-built” plans are required (any project involving more than 1,000 square feet of construction or demolition of more than 50 percent of perimeter walls).

Comparison of FAR on a Typical Burbank Lot (50' x 150')		
 <p style="text-align: center;"><i>Elevation</i></p> <p style="text-align: center;"><i>Plan</i></p>	 <p style="text-align: center;"><i>Elevation</i></p> <p style="text-align: center;"><i>Plan</i></p>	 <p style="text-align: center;"><i>Elevation</i></p> <p style="text-align: center;"><i>Plan</i></p>
FAR = 0.45	FAR = 0.40	FAR = 0.35
Total Floor Area = 3,375 sf	Total Floor Area = 3,000 sf	Total Floor Area = 2,625 sf
2 <sup>nd</sup> Story Floor Area = 75% of 1 <sup>st</sup> Story Floor Area	2 <sup>nd</sup> Story Floor Area = 56% of 1 <sup>st</sup> Story Floor Area	2 <sup>nd</sup> Story Floor Area = 56% of 1 <sup>st</sup> Story Floor Area
Conforms to section 10-1-803 of the current Zoning Code with the eight feature listed to achieve a 0.45 FAR.	Reduces 2 <sup>nd</sup> story floor plate by 375 square feet.	Further reduces the 1 <sup>st</sup> and 2 <sup>nd</sup> story floor plate to yield an FAR of 0.35.

### 3 Base FARs and FAR Bonuses

#### BASE FARs IN SURVEYED CITIES

The table below summarizes the base FAR in the cities studied, with notes on the right-hand column about typical lots size and some other notable provisions. These FARs are substantially less than the typical FARs calculated for the SAC discussions by DECA.

<i>City</i>	<i>Base FAR in Single Family Zones</i>	<i>Comments</i>
Atlanta	R-4A: 0.50 R-4B: 0.75	R-4A zone has 7,500 sq. ft. lots R-4B zone has 2,800 sq. ft. lots
Beverly Hills	Central Area: 1,500 sq. ft. plus 0.40	Additional floor area allowed with a Central Area Permit
Boston	R-5: 0.50 S-3: 0.30	R-5 zone has 5,000 sq. ft. lots S-3 zone has 9,000 sq. ft. lots
Burbank	R-1: 0.40	Typical lot: 7,500 sq. ft. Bonus of 0.05 for lots over 10,000 sq. ft. for certain features
Los Angeles	R-1: 0.50 R-S: 0.45	R-1 zone has 5,000 sq. ft. lots R-S zones has 7,500 sq. ft. lots
Mill Valley	RS: 0.35 if under 8,000 sq.ft.	If lot is 8-12,000 sq.ft.: house size is 2,000 sq. ft. plus 0.10; over 12,000 sq.ft. 3,000 sq.ft. plus 0.5 up to maximum of 7,000 sq.ft. gross floor area. One-time allowance of 100 sq. ft. for existing homes.
Minneapolis	R-1: 0.5	May be increased to match FARs of 50% of the homes within 100 feet of the lot; one time allowance of 500 sq. ft. for existing homes
New York City	R1: 0.50	Minimum lot area: 5,700 to 9,500 sq. ft.

Interestingly, in Atlanta, the R-4B zoning district is intended specifically as an alternative single-family zone for affordable housing that is centrally located and accessible to public transit, jobs and social services. Areas with this zoning were formally zoned for multi-family residential uses and the City's objective is to transit these areas to single-family development pattern meeting the affordability goals specified.

## FAR BONUSES

Nonresidential FAR bonuses are often granted for affordable housing, community benefits, dedication of right-of-way or other off-site improvements, urban gardens and green roofs, but for single family home, there are fewer bonuses that make sense. Bonuses that have been offered in the cities studied include:

- **Single story homes.** Los Angeles gives a 20 percent floor area bonus for home that stay within an 18-foot height “envelope”. As an alternative, in Studio City, Los Angeles gives an FAR bonus if the maximum height is reduced by 20 percent under a “menu” approach to FAR options.
- **Reduced second story size and setbacks.** Burbank allows up 0.05 additional FAR with a second story setback 10 feet at the front elevation for 75 percent of the width and 5 feet on at least one side elevation. The second story floor area cannot exceed 75 percent of the floor area of the first floor.
- **Front façade setbacks.** Los Angeles allows a 20 percent floor area bonus for an upper-story front setback that is at least 20 percent of the building depth.
- **Increased side yards.** Los Angeles allows a 20 percent floor area bonus when the combined width of the side yards is 25 percent of the lot width, provided no single yard is less than 10 percent of the lot width.
- **Minimal grading.** Los Angeles offer a 20 percent floor area bonus if the grading does not exceed 10 percent of the lot area, expressed in cubic yards, or 1,0000 cubic yards, whichever is less. By contrast, Mill Valley just sets a 300 cubic yard standard.
- **Green building.** Los Angeles offers a 20 percent floor area bonus (30 percent if the lot is less than 5,000 square feet), for a home that substantially complies with the “certified” level or higher, as set by the U.S. Green Building Council LEED program. The City Council has proposed eliminating this bonus, as they would prefer to see green building requirements established for all homes.
- **General Articulation Option.** For Studio City, Los Angeles offers a floor area bonus if all sides of a building façade are relieved by one or more variations that, in total, are no less than 20 percent of the façade and have a minimum average depth of 9 inches. These may include façade details, such as recessed windows, insets, pop-outs, or window trim. For existing homes and additions, only new exterior walls and existing walls that are altered are required to have the articulation. The precise FAR bonus is determined by a “menu” approach, with different FAR bonus increments for specific zoning districts.

The Burbank FAR bonus for larger lots is being reconsidered by the City Council because of concerns about house size.

## 4 Special Situations

### HILLSIDES

Hillsides present a special situation for FAR controls because of bulk and mass is more visible. Larger homes on upslope lots also can loom over downslope lots and intrude into a neighbor's privacy. Increasing side setbacks and decreasing front setbacks also can help, as can height limits that distinguish an upslope from a downslope condition. The easiest way to regulate bulk though may be to establish a rule for reduced FAR as a function of slope.

- In Los Angeles, for example, the maximum FAR in the RS zoning district (0.45) drop to 0.4 in the 15-30 percent slope band, 0.35 in the 30-45 percent slope band, 0.30 in the 45-60 percent slope band, and 0.25 percent for lots with a slope band of 60+ percent.
- Burbank is considering a similar rule in its Neighborhood Compatibility Project.

### LARGE LOTS

Two jurisdictions have “bent line” rules to address FAR on larger lots. The concept is straightforward: the amount of floor area that can be added on larger lots is proportionally less than on a standard-size lot. This rule also does not reward lot mergers, the purchase of an adjacent lot with a “teardown”, for example, with twice the floor area of the standard lot.

In Burbank, the bent line rule is presented in a table format:

<b>Maximum Residential Floor Area Based on Lot Size and Allowable Floor Area Ratio (FAR)</b>		
<i>Lot Size (Sq. Ft.)</i>	<i>Maximum FAR</i>	<i>Maximum Residential Floor Area (Sq. Ft.)</i>
7,500 or less	0.4	3,000
7,501 – 15,000	0.4 for lot area up to 7,500; 0.3 for lot area over 7,500	3,000 to 4,350
Over 15,000	0.4 for lot area up to 7,500; 0.3 for lot area over 7,500 but less than 15,000; and 0.2 for lot area over 15,000	Over 4,350, as determined by the applicable maximum FARs

In Mill Valley, the maximum floor area is determined as follows:

- Lots with less than 8,000 square feet of effective lot area: 35% of the effective lot area.
- Lots with 8,000 to 20,000 square feet of effective lot area: 10% of the effective lot area plus 2,000 square feet.
- Lots with more than 20,000 square feet of effective lot area: five percent of the effective lot area plus 3,000 square feet, to a maximum of 7,000 square feet.



# “Visitability” Best Practices

To inform how best to develop new code that advances universal design principles and provide better housing opportunity for people of all ages and abilities, City staff consulted with Residential Infill Project Stakeholder Advisory Committee member Alan DeLaTorre, Ph.D, Research Associate with the Institute of Aging at Portland State University (PSU). City staff sought a broader base of knowledge beyond Alan’s contributions and information gained from prior Phase I outreach to the Portland Commission on Disability and at the 2016 Age-Friendly Housing workshop.

Alan recommended collaborating on a strategy for advancing “visitability,” an increasingly-used term used to describe a base level of housing accessibility. There are three main principles of visitability – at least one zero-step entrance, wide doorways and hallways for clear passage, and at least one bathroom on the main floor of a house that can be used, without accommodation from others, by a person in a wheelchair or using another type of mobility device. The collaborative effort aimed to identify how best to create incentives or requirements for some or all of these features.

The team assembled a two-part focus group to inform its analysis. One focus group represented consumers and users, the other group consisted of designers and builders. Notes taken during these discussions are included in this Appendix. Focus group participants are shown below.

**Visibility Focus Group Facilitator:** Alan DeLaTorre, Ph.D. – Portland State University, Institute on Aging

## Visitability Focus Group #1

Robert Freeman – Robert Freeman Architecture  
 Brenda Jose – Portland Commission on Disability, Unlimited Choices  
 Thalia Martinez-Parker – REACH Community Development, Inc.  
 Julia Metz – Portland Community Reinvestment Initiative, Inc.  
 Michael Mitchoff – Portland Houseworks  
 Garlynn Woodsong – Woodsong Property Renovation Partners, LLC

## Visitability Focus Group #2

Nikole Cheron – City of Portland, Office of Equity and Human Rights  
 Larry Cross – Portland Commission on Disability  
 Marie Cushman – Portland resident  
 Susan Cushman – United Cerebral Palsy of Oregon and SW Washington  
 Myra Sicilia – Portland Commission on Disability, Sakura Counseling  
 Joe Wykowski – Community Vision

Alan also collaborated with a team of undergraduate students from his age-friendly design class, who assisted in the focus groups and developed a nationwide inventory of visitability best practices.

## Visitability Research

Alan DeLaTorre, Ph.D. – Portland State University, Institute on Aging  
 Alex Freeman – Portland State University  
 Matthew Wadleigh – Portland State University

## Visitability Best Practices<sup>i</sup>

September, 2017

By Alan DeLaTorre, PhD. – Portland State University, Institute on Aging  
Alex Freeman and Matthew Wadleigh, Portland State University



***Visitability...refers to single-family or owner-occupied housing designed in such a way that it can be lived in or visited by people who have trouble with steps or who use wheelchairs or walkers.*** – Visitability.org

### Introduction

The City of Portland's growth is projected to include nearly 123,000 new households by 2035 and approximately 240,000 of those households are expected to be housed in the City's single-dwelling zones.<sup>ii</sup> According to Metro's population projections, from 2010-2035, the greater Portland region is expected to grow by 27.5%; however, the population aged 65+ is expected to grow by 98.1%, which is markedly higher than all other age cohorts.<sup>iii</sup>

To accommodate increases to both the overall number and proportion of older adults, it is critically important that the City of Portland increases the supply of housing that allows older adults – as well as people with disability, parents with strollers, cyclists, etc. – housing that meets their day-to-day needs, as well as the long-term opportunity to age in their home and community.

### Visitability

"Visitability" is a growing national trend in home design. Some variations exist in the ways in which visitability is described such as VisitAble Housing Canada which details "enhanced Visitability" that goes beyond basic features and addresses accessible bathrooms and kitchens, parking, adaptability, etc.<sup>iv</sup> Visitability.org provides the most commonly used definition:<sup>v</sup>

Single-family or owner-occupied housing designed in such a way that it can be lived in or visited by people who have trouble with steps or who use wheelchairs or walkers. A house is visitable when it meets these three basic requirements:

1. One zero-step entrance.
2. Doors with 32 inches of clear passage space.
3. One bathroom on the main floor you can get into in a wheelchair.

Note: in addition to "visitability" terms such as "accessibility," "usability," "age-friendly housing," "universal design," and other terms are used to describe housing that meets the needs of a person with a disability, mobility impairment, or other functional need. For the purpose of this report, we focus on visitability and closely related items.

## Method

As part of this Capstone project, two students working under the direction of the course instructor reviewed existing literature pertaining to visitability and efforts in the United States and Canada that incorporated visitable features and approaches into local policies and programs. To begin, a document from the IDeA Center at the University of Buffalo and AARP's Public Policy Institute that detailed 59 U.S. local visitability initiatives and policies was reviewed.<sup>vi</sup> To supplement those initiatives and policies an Internet search was conducted to identify additional efforts that were underway before determining 10 initiatives that were considered best practices – considerations were made for a range of regulatory, incentive-based, and voluntary programs, as well as policies that were incorporated into local zoning and/or building code and those that were implementable.

## Best practices

The review of the literature and existing efforts in the U.S. led to identifying six municipalities that addressed visitability through regulatory approaches, including (note: [Details, including links to policy documents can be found in a developed spreadsheet<sup>vii</sup>](#)):

- Austin, TX
- Bolingbrook, IL
- Dublin City, CA
- Pima County, AZ
- Pine Lake, GA
- San Antonio, TX

In addition to those municipalities, four local governments were identified with incentive-based and voluntary approaches, including (note: [details of those programs can be found here](#)):

- Escabana, MI
- Irvine, CA
- Monroeville, PA
- Montgomery County, MA

<sup>i</sup> This document was prepared for the Bureau of Planning and Sustainability, by Portland State University faculty (Dr. Alan DeLaTorre, Institute on Aging, College of Urban and Public Affairs) and students (Alex Freeman & Matthew Wadleigh) from the University Studies Capstone course titled *Creating Age-friendly Communities*.

<sup>ii</sup> City of Portland (2017). *Residential Infill Project*. Retrieved from: <https://www.portlandoregon.gov/bps/67728>. The Residential Infill Project in Portland has sought to address myriad concerns related to Portland's changing demographics and housing stock, including size of housing, demolitions, affordability, housing choice, and meeting the needs of the future populations.

<sup>iii</sup> Lycan, R. (2016). Population Forecasts for the Portland Metro Region: Disparities between Metro's Metroscope Model and the Demographers' Forecasts. Retrieved from:

[https://www.pdx.edu/ioa/sites/www.pdx.edu.ioa/files/MetroScope\\_Demographers\\_2.pptx](https://www.pdx.edu/ioa/sites/www.pdx.edu.ioa/files/MetroScope_Demographers_2.pptx)

<sup>iv</sup> VisitAble Housing Canada (n.d.). VisitAble Housing Canada – Winnipeg Task Force. Retrieved from:

<http://visitablehousingcanada.com/wp-content/uploads/2016/03/Winnipeg-TF-Accessibility-Continuum-Chart.pdf>.

<sup>v</sup> Visitability.org (2017). Visitability – what is it? Retrieved from: <http://www.visitability.org/>.

<sup>vi</sup> IDeA Center & AARP Public Policy Institute (2014). Local Visitability Initiative & Policies. Retrieved from:

<http://idea.ap.buffalo.edu/visitability/reports/existingcitylaws.htm>.

<sup>vii</sup> Visitability spreadsheet developed by PSU students/faculty as part of the course *Creating Age-friendly Communities*:

<https://docs.google.com/spreadsheets/d/1HnPLvD6vVxuRA256nit7KsytvAN9Y2P4JPgLQQ9tHI/edit#gid=858828875>

## Residential Infill Project — Visitability Focus Groups

Thursday, May 25, 2017 - Portland State University, Room 410

Facilitated by Alan DeLaTorre, Ph.D. - Portland State University, Institute on Aging

“Visitability” refers to housing designed in such a way that it can be lived in or visited by people who have trouble with steps or who use wheelchairs or walkers. A house is visitable when it meets these three basic requirements: (1) has at least one zero-step entrance; (2) has doors with at least 32 inches of clear passage space; and (3) has at least one bathroom on the main floor that can be used, without accommodation from others, by a person in a wheelchair or other mobility device.

### Focus Group #1 (11:00 am to Noon) - Questions for Designers/Builders:

1. **How common is it for new construction to have visitable features, as defined above? What about remodels and renovations?** Is there a market trend towards more visitability and/or accessibility for all users and abilities ('universal design')?
2. **In addition to the three visitability features mentioned above, what other visitability features do you feel lead to more accessible, age-friendly housing?** For example, features such as door and cabinet hardware, electrical switches and plugs, kitchen and bath design, paths and routes, raised/accessible garden areas, etc.
3. **What are the barriers to including more visitability and accessible features in new and remodeled houses?** For example: cost, consumer preference, floorplan constraints, difficulties in providing zero-step entrances etc.
4. **What construction approaches or floorplan designs facilitate easier adaptability in response to a change in one's ability or function?** For example: having ground floor bedroom/bathroom, placement of plumbing for laundry facilities, minimum size of bathroom to adapt for later accessibility, blocking/backing for future grab bars, etc.
5. **What visitability and adaptability features would be most effective if mandated or incentivized in the zoning and/or building code?** Which features are best mandated vs. incentivized?
6. **With respect to visitability, how important is a reserved space for parking or passenger loading (on-street, off-street, covered, etc.)?** What standards should be required or incentivized to create usable, off-street parking for people with mobility challenges?
7. **How important are outdoor spaces for improving visitability?** What features should be considered? (hard surface, covered or protected from weather, vegetation, etc.)
8. **Would visitability standards need to be modified for steeply sloping sites?** If sloped lots limit the ability to reasonably provide zero-step entrances, what advice do you have for zoning agencies seeking to maximize visitability on steeply sloping sites? Are there other site constraints that impede providing a visitable unit?

**Focus Group #2 (12:30 pm to 1:30 pm) - Questions for Consumers/Users:**

1. **Please discuss the relevance of these three visitability features with respect to your own day-to-day experiences.** Can these three features be prioritized?
2. **In addition to the three visitability features mentioned above, what other visitability features do you feel should be included in the zoning and/or building code?** For example, features such as door and cabinet hardware, electrical switches and plugs, kitchen and bath design, paths and routes, raised/accessible garden areas, etc.
3. **What construction approaches or floorplan designs facilitate easier adaptability in response to a change in one's ability or function?** For example: having ground floor bedroom/bathroom, placement of plumbing for laundry facilities, minimum size of bathroom to adapt for later accessibility, blocking/backing for future grab bars, etc.
4. **With respect to visitability, how important is a reserved space for parking or passenger loading (on-street, off-street, covered, etc.)?** What standards should be required or incentivized to create usable, off-street parking for people with mobility challenges?
5. **How important are outdoor spaces for improving visitability?** What features should be considered? (hard surface, covered or protected from weather, vegetation, etc.)
6. **What visitability and adaptability features would be most effective if mandated or incentivized in the zoning and/or building code?** Which features are best mandated vs. incentivized?
7. **Would visitability standards need to be modified for steeply sloping sites?** If sloped lots limit the ability to reasonably provide zero-step entrances, what advice do you have for zoning agencies seeking to maximize visitability on steeply sloping sites? Have you experienced other site constraints that impede providing a visitable unit?

## **Residential Infill Project—Visitability Focus Groups**

**Focus Group #1: Consumer/User Group** (11:00 – noon)

**Focus Group #2: Designer/Builder Group** (12:30-1:30 pm)

Thursday, May 25, 2017 - Portland State University, Room 410

Facilitated by Alan DeLaTorre, PSU Institute on Aging

City of Portland, Bureau of Planning & Sustainability: Julia Gisler and Todd Borkowitz

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### **Why these focus groups?**

- City Council directed staff to explore requirements and bonus for age-friendly housing as we develop zoning standards for new development in single-dwelling zones as part of the Residential Infill Project. We are focusing on what we have control over – the Zoning Code but we can also facilitate discussions with other bureau – like BDS who have jurisdiction over Building Code implements and the Housing Bureau who administers housing programs.
- We can approach zoning regulations two ways 1) mandatory requirements. Example: in triplex require at least one unit to have a zero-step entrance and 2) Incentives- not a requirement but builder gets a bonus in units, extra height, etc.
- We need to keep in mind that zoning regulations can add cost and complexity to housing.
- We will be looking at trade-offs in design: 1) Tuck under garages reduce impact of the garage on front of house and many think they look better but elevates the finished floor and makes access more challenging. 2) Desire to separate living space from public realm for privacy and safety often results in finished floor above grade level. 3) paving increases ease of access but reduces pervious surface for vegetation and stormwater infiltration. 4) on-site parking disrupts the sidewalk, takes away an on-street parking space and creates more vehicle/pedestrian conflict points.

**Working Definition of Visitability:** Refers to housing designed in such a way that it can be lived in or visited by people who have trouble with steps or who use wheelchairs or walkers. A house is visitable when it meets the following three basic requirements ([visitability.org](http://visitability.org)).

- At least one zero-step entrance
- Doors with 32 inches of clear passage space
- One bathroom on the main floor you can get into in a wheelchair.

### **Focus Group #1: Consumers/Users**

Myra Sicilia (Counselor & Portland Commission on Disability), Marie Cushman (resident), Susan Cushman (United Cerebral Palsy), Larry Cross (Portland Commission on Disability), Nikole Cheron (City of Portland, OEHR), Joe Wykowski (Community Vision)

### **How important are visitability features with respect to your day-to-day experiences?**

#### ***Entrances:***

- These three features are very important and used every day if I want to get around. Of course, the zero step (with appropriate clearance) is the first criteria to getting into the home.
- It is stigmatizing to not be able to get into other's houses for visiting.

- I carry a portable ramp in my car but it has limited use. Portable ramps can be unsafe. They should never be used for access of more than 5 steps – 2 steps maximum is the most comfortable.

***Doors/Hallways:***

- 36" is really more comfortable and becoming more necessary as wider wheelchairs are being built to accommodate our increasing obese population.
- Pocket doors offer great opportunities. They are easy to open/close and take up less space.

***Bathrooms:***

- Provide reasonable space in bathrooms to accommodate personal assistants.
- Should have at least a 5-foot turning radius of a t-shaped floor design.
- Wheel chair baths with no threshold are preferred ("open" bathroom floor plan with "roll-in" showers and no-slip surfaces); minimal/no additional cost of roll-in showers; hold up much better than conventional shower/tubs.
- Two grab bars at either side of toilet are preferred.
- Cabinets beneath sink limit usability of both sink and cabinets; cabinets in bathrooms are still important.
- Single water mixers on shower are easier to control than one each for hot and cold water.
- Opinions on grab bars varied; some see blocking as a waste and that grab bars should always just be designed in to a bathroom; others saw horizontal (i.e. at 30 inches high) and vertical blocking at key locations to allow future adaptability as important. Grab bars come in a variety of designs and aid more than just people with disabilities. Don't mandate grab bars but at least allow for their ready installation later.
- Low toilets are bad; no preferences indicated for toilet bowl length.
- Towel racks could double as grab bars and should also have a strong backing.
- ADA guidelines for baths should be considered minimum for any visitable residential bathroom; NKBA offers a guidebook with great kitchen/bath guidelines.
- At least an accessible ½ bath (sink/toilet) on the ground floor.

***Other considerations:***

- Lower door handles might be useful [some disagreed].
- Integrate visitability features into design; they should not look like add-ons.
- All wheelchairs (like electric assist) are not meant to be lifted by others; design accordingly; also, others may not understand a person in a wheelchair's personal needs, so it's best to plan spaces for the independent wheelchair user without the assumption that they will be assisted by others.
- Open floor plans are popular and offer the most adaptability/flexibility over time; rooms separated by doors may be a matter of preference but door functionality will determine whether rooms will work; there is no benefit to a bedroom that is too small to be functional for a person with a disability.

- Public areas (kitchens, living rooms, etc.) should be located at the main ‘public’ entry to a house; private areas (bedrooms, etc.) should be away from it.
- Cabinet doors are often a hassle; best to have door-free cabinets.

#### **Comments on visitability features in other areas:**

##### ***Kitchens:***

- Probably the main space for socialization with visitors.
- Range tops that pull out are good.
- “Reachable” cabinets are functional cabinets.
- 30-inch high countertops are ideal and most practical; “bar seating” is way too high.
- Open kitchen design is critical; avoid long aisle, dead-end kitchens.
- Side access to appliances is extremely difficult for many people with disabilities to use; head-on access is highly preferred.
- Back burners are difficult to reach. A row of burners is preferred to front/back burners.
- Appliances, drawers and cabinets should be easy to open.
- Microwaves are important for many people with disabilities and should be at a usable height. Never placed above the stove top.

##### ***Laundry rooms:***

- Should be on the main floor.
- Washer/dryer should be side-by-side.

##### ***Yards:***

- Because Portland has only 3-4 months of sunny weather each year; focus should be on visitable areas inside a house.
- Focus on creating a quality and usable route to/from the housing unit.
- Consider making the back entrance as the primary entrance if visitability to it is more practical.
- Use combinations of ramps and railings; even in flat areas, railings offer balance for people who have various challenges with walking; always include a railing for even one or two steps.
- Avoid wood ramps as they’re always slippery. Consider hard surfaces.
- Drainage of all surfaces is often overlooked. Use porous surfaces (like permeable concrete) to avoid water buildup.
- Accessible garden space can provide many benefits for people with disabilities.
- Gravel is terrible, even in parking strips; grass is generally easier for people with disabilities to maneuver.
- Small steps are often used for design purposes where a sloping path could be used and would be accessible.
- Designs should allow ramps to be built later when needed in the future.
- Steep slopes are difficult and terrifying; ramps are not too stigmatizing and can be well designed into the landscape; ensure that slopes have flat landing surfaces.



***Parking areas:***

- Dedicated parking is not a big concern. The bigger concern is how to people in wheelchairs get in and out of cars picking them up and dropping them off.
- Avoid gravel in passenger loading areas; grass is okay, pavers are preferred. Allow surface to drain!

**What visitability features are best mandated versus made as incentives?*****Mandates:***

- Would expand products/materials markets, making them more affordable.
- Zero step entrances are priority- mandate some percentage of units.
- One- or zero-step entries, or at least the ability to easily install a safe ramp.
- “Basic” visitability, even for skinny houses.
- Minimum: 36-inch doors and corridors, and ½ bath on first floor.

***Incentives:***

- Additional FAR for housing units that are fully accessible on at least one level.
- Incentivize plexes (bottom level units visitable with other units above that allow opportunity for non-mobility impaired personal assistants to have their own personal space).

***Resources:***

- Model examples: Ed Roberts Center (Berkeley, CA) and Axis Living (Chicago, IL)
- The City of Atlanta codified visitability into its zoning code.
- LEED-like rating system for visitability would be helpful.

**Key Takeaways from Focus Group #1 (BPS Staff):**

1. Location of a house (near services, transit, etc.) is often a higher need than accessibility as people with disabilities eventually find solutions to best access a house.
2. There are very few accessible apartments. Accessible houses are continually being lost to new development
3. Mandating zero-step entries on first floors would have significant benefits for advancing visitability. (priority of the group)
4. A 36-inch wide entry standard is a “non-noticeable” requirement (appearance and cost) that offer significant benefit. (priority of group)
5. Open floor plan is the best.

**(Continued)**

6. Dedicated parking is not a significant priority. Barrier-free access on well-drained, stable surfaces is a bigger priority.
7. Integrating visitability design features will help make them more acceptable and common.
8. Design for all ages and abilities; not just people with disabilities. Messaging should identify that everyone will likely be limited by a disability at some point on their lives.
9. Design for independent living and visiting, but also keep in mind that many people with disabilities often rely on personal assistants whose work needs should also be considered.

**Focus Group #2: Designer/Builder**

Thalia Martinez-Parker (Reach Community Development), Brenda Jose (Unlimited Choices, Portland Commission on Disabilities), Garlynn Woodsong (Woodsong Partners), Michael Mitchoff (Portland Houseworks), Robert Freeman (architect), Julia Metz (Portland Community Reinvestment Initiative)

**How common in remodels/renovations are visitability features?**

- Visitability features are not “on the radar” of most contractors.
- When visitability features are included, they are usually “a product of need” (i.e. ramps, add-on grab bars, etc.) and done cheaply and expeditiously.
- Steps have positive meaning in our culture- slab on grade is less preferred and is considered cheap construction. Threshold keeps the rain out.
- There is not much difference in costs of construction materials.

**What is the market demand for visitability features?**

- There is demand for visitability/accessibility features in affordable housing projects.
- One estimate: In 50 percent of jobs, the clients themselves introduce issues of accessibility.
- There is interest in visitability features in single-family homes; a legal requirement in multifamily units.

**Comments on visitability features:*****Entrances:***

- Steps are dominant in nearly all new construction.
- Stepped entrances provide a means to keep water out of a house.
- Development without steps often requires significant site grading, which can add cost.
- Slab-on-grade construction offers accessibility and lower cost, but is usually not preferred by buyers.

***Doorways/Hallways:***

- Open floor plans are preferred in nearly all housing units.

- Pocket doors are sometimes hard for users to operate and are not desirable in high-use areas; carpentry skills are often needed to install correctly, increasing their costs; most are poorly designed (they often come in two grades – the lower grades often lack important “smart” handles); many are too narrow (often 24 inches wide) for many people with disabilities to use.

***Bathrooms:***

- Roll-in showers are common; trench drains have become increasingly more affordable and are easy to maintain.

***Other considerations:***

- Cabinet hardware and maneuverability features are “low-hanging fruit” that can often be done for little/no additional cost.
- Carpets are problematic for visitability; glued-on carpet is a solution; low pile, no-pad carpet is important for visitability, especially on stairs.
- Cover all outdoor spaces to protect users from weather.
- Design for people with Alzheimer’s and Dementia by:
  - Illuminating surfaces;
  - Using large address numbers;
  - Covering deck areas;
  - Including seating at front doors;
  - Assuring in-unit communication through open floor plans and/or communication devices;
  - Installing remote access on doors;
  - Maximizing safety through street orientation;
  - Influencing decision making (reducing decision making and providing “wayfinding clues” is a common best practice when designing for people with Alzheimer’s); and
  - Install windows or eyeholes in doors to maximize security.

**Comments on visitability features in other areas:**

***Yards:***

- Low- or flat-sloped walks are preferable.
- While impermeable paving materials are often preferred for people with disabilities, this preference should be balanced with the ecological benefits (i.e. stormwater permeability) of porous surfaces. Pervious concrete may offer an effective balance.
- Access to attractive outdoor areas, especially for gardening, is often very important for people with disabilities.
- May be needed to accommodate ramps, especially if switchbacks are required; porch lifts could minimize these spatial needs (they can now plug into a 110 outlet and be leased).

***Parking areas:***

- On-site spaces are needed.
- Transit investments should be prioritized over parking requirements.

- Modify parking requirements to allow for zero-step entries.

### **What are primary barriers to designing for visitability?**

- Code requirements for accessible units (1 for every 4 units) limits overall housing that might otherwise be built; solution: residential elevators.
  - Cost around \$40,000 installed in a 3- to 4-story building (additional \$2,000 per floor) – including \$30,000 to purchase and \$10,000 to install (by comparison, commercial elevators are about \$135,000 to purchase/install and about \$200/month to maintain).
  - Create an incentive that provides a net benefit by covering the cost of elevator purchase/installation.
- Availability of land is a barrier to visitability in new construction. Most remaining lots are narrow/skinny, which are difficult to make visitable.
  - Visitability incentives (i.e. extra units, etc.) could rectify this.
  - While lots in East Portland are often larger, they often have poor transportation access.
- On-site stormwater mitigation requirements (drywell) limit available space for visitability features.
  - Create incentive to have stormwater requirement waived if house is lowered to allow for visitability, if mitigating through a rain garden, or if using stormwater in a graywater system.
  - Allow water to discharge into sewer if at least 1 unit has 1 or less steps to access.

### **How can housing be adaptable to provide visitability later?**

- Promote open floor plans.
- Block out for elevators.
  - Requires a 6-foot by 8-foot shaft, 12-inch vertical space at bottom and 18-inch clear at the top (for mechanical equipment).
  - Create building code exceptions for 5 or fewer units (buildings with over 2 units now must meet commercial elevator code).

### **What visitability features are best mandated versus made as incentives?**

#### ***Mandates:***

- Zero- or no-step entrance (not all agreed, one person indicating that steps are actually healthy for anyone who does not have a mobility impairment; another indicated the prevalence of steeply sloping lots in Portland); could be either front or back door.
- Any mandate could “kill a project” and reduce the amount of housing units that would otherwise get built.
- Steep slopes make mandates problematic.

#### ***Incentives:***

- Consider incentivizing different levels of visitability.
- Bonuses should be offered as a package (FAR, height, AND setback).

- Creative solutions to meeting on-site stormwater requirements, while presumably a challenge to codify, could provide key space available on-site to meet visitability needs.

**Key Takeaways from Focus Group #2 (BPS Staff):**

1. The increasing affordability and practicality of residential elevators present an interesting opportunity to achieve some visitability goals.
2. Modifying on-site parking requirements could minimize barriers to visitability.
3. Mandates for “low hanging fruit” like “visitability-friendly” door handles, cabinet hardware and rails could provide some not-overly prescriptive mandates for little/no additional cost.
4. Zero- or 1-step entries, while possibly the most impactful feature, could also be the most challenging to achieve given costs and market preferences. Changing this paradigm may require strong and meaningful incentives and viable development options for steep sloping lots.

## Identification of U.S. States with Standards for Visitability

The following U.S. states have standards that aim to achieve some levels of visitability: California, Maryland, Oregon, Pennsylvania and Texas.

### Inventory of Local Regulatory Mandates for Visitability

#### **Austin, TX** *Date of Adoption: 2014*

**Weblink to Policy Description:** [www.austintexas.gov/edims/document.cfm?id=205386](http://www.austintexas.gov/edims/document.cfm?id=205386) / [www.austintexas.gov/sites/default/files/files/Planning/Residential/Visitability\\_Presentation.pdf](http://www.austintexas.gov/sites/default/files/files/Planning/Residential/Visitability_Presentation.pdf) / [www.austintexas.gov/edims/document.cfm?id=202500](http://www.austintexas.gov/edims/document.cfm?id=202500)

**Key Features to Implementation:** "A dwelling must be accessible by at least one no-step entrance with a beveled threshold of 1/2 inch or less and a door with a clear width of at least 32 inches. The entrance may be located at the front, rear, or side, or in the garage or carport, of the dwelling". Ramps leading to entrance must not exceed 1:50 grade slope.

**External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):** Only direct mention of parking/garages in the policy document is R320.7, which requires an approved entrance to have a no more than 1:50 sloped ramp from a garage, driveway, public street, or sidewalk to reach the no-step entrance.

**Internal Design Highlights (site, yard, paths, patios, parking, etc.):** Bathrooms: Minimum 30 inches clear opening, lateral 2x6 blocking installed flush with studs in bathroom walls 34 inches from and parallel to the floor except behind the lavatory. Route to bathroom must remain 32 inches wide from entrance to bathroom entrance. Electrical Switches/controls no higher than 48 inches from floor, outlets no higher than 15 inches except outlets designed into the floor.

**Exemptions or exceptions:** Does not apply to remodels or additions; waiver of exterior visitable route provision for: 1) lots with 10 percent or greater slope prior to development; or 2) properties for which compliance cannot be achieved without the use of switchbacks.

#### **Bolingbrook, IL** *Date of Adoption: 2003*

**Weblink to Policy Description:** [www.bolingbrook.com/vertical/sites/%7B55EB27CA-CA9F-40A5-A0EF-1E4EEF52F39E%7D/uploads/MunicipalCodeChpt25.pdf](http://www.bolingbrook.com/vertical/sites/%7B55EB27CA-CA9F-40A5-A0EF-1E4EEF52F39E%7D/uploads/MunicipalCodeChpt25.pdf)

**Key Features to Implementation:** Zero step entrance, ramps to not exceed 1:12. "All exterior and interior doors shall not be less than 3 feet in width and 6 feet, 8 inches in height, and shall provide a minimum clear opening of 32 inches. All required exit doors shall be side hinged. The minimum width of a hallway or exit access shall not be less than 42 inches."

**External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):** "This step free entrance shall be approached by a slope no greater than 1 in 12 (less steep is desirable). This entrance can be approached by a sidewalk, a driveway, a garage floor, or other useable route. The step free entrance may be located at any entrance to the home. If the step free entrance is located in the garage, a door bell button shall be located outside the overhead garage door. In a case where a lot is so steep that it cannot be graded to a maximum slope of 1:12, the driveway may have to exceed a 1:12 slope. In this case, upon approval by the Building Commissioner, the builder may construct a 1:12 (or less) route leading from the driveway to the

no-step entrance. If the grade of a lot is so steep that providing a step free entrance would be unfeasible or dangerous, the Building Commissioner may waive this requirement."

**Internal Design Highlights (site, yard, paths, patios, parking, etc.):** One zero-step entrance into the home. One bathroom on the same level as the zero-step entrance. Bathroom wall reinforced for grab bars. Minimum 42-inch wide hallways and 36-inch passageways. Electrical wall outlets/ receptacles shall be 15 inches above the finished floor. Wall switches controlling light fixtures and fans shall be a maximum 48 inches above the finished floor. All exterior and interior doors shall be 32 inches in width.

**Exemptions or exceptions:** Multiple exceptions per item in code. No direct mention to specific garage code.

### **Dublin City, CA** *Date of Adoption:* 2007

**Weblink to Policy Description:** [www.codepublishing.com/CA/Dublin/Dublin07/Dublin0790.html](http://www.codepublishing.com/CA/Dublin/Dublin07/Dublin0790.html)

**Key Features to Implementation:** The accessible primary entrance that is consistent with the requirements of CBC Chapter 11A. The floor or landing at and on the exterior and interior side of the accessible entrance door that is either of the following: consistent with the requirements of CBC Chapter 11A; or the width of the level area on the side to which the accessible entrance door swings shall extend 24 inches past the strike edge of the door.

**External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):** At least one doorbell is provided for accessible entry door. An exterior accessible route must not be less than 40 inches wide and not have a slope greater than 1:20. Exterior accessible door that has a 34-inch net clear opening. If on the primary entry level, miscellaneous areas or facilities (such as a patio or yard, laundry room, or storage area) for the dwelling must have an accessible route to and from the accessible entrance, either through the dwelling unit or around the dwelling unit.

**Internal Design Highlights (site, yard, paths, patios, parking, etc.):** At least one accessible route through the hallway consistent with the requirements of CBC chapter 11A from the entrance of the dwelling unit to the primary entry level restroom/bathroom, a common use room, and the kitchen if located on the primary level. No sunken or raised area in the bathroom. Handrails may be installed along the accessible route. This route must have a minimum width of 42 inches. Restroom/ bathroom must have grab bar reinforcement for the shower or tub. Clear space in the restroom/ bathroom outside the swing of the door or a 48-inch circle. Sink controls not requiring tight grasping, pinching or twisting of the wrist are required in the bathroom and kitchen.

**Exemptions or exceptions:** A 34-inch clear doorway width may be requested from a hallway with a 39-inch width, and a 36-inch clear doorway width may be requested from a hallway with a 36-inch width.

### **Pima County, AZ** *Date of Adoption:* 2003

**Weblink to Policy Description:** [www.accessiblesociety.org/topics/housing/pimacoruling.html](http://www.accessiblesociety.org/topics/housing/pimacoruling.html) / <http://idea.ap.buffalo.edu//visitability/reports/existingcitylaws.htm>

**Key Features to Implementation:** Zero step entrance; lever door handles.

**External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):** No explicit mention of external features.

**Internal Design Highlights (site, yard, paths, patios, parking, etc.):** Reinforced walls in bathrooms for grab bars, switches no higher than 48 inches. Hallways must be at least 36 inches wide throughout main floor. Electrical outlets and light switches that are reachable by someone in a wheelchair.

**Pine Lake, GA Date of Adoption: 2007**

**Weblink to Policy Description:**

[www.municode.com/library/ga/pine\\_lake/codes/code\\_of\\_ordinances?nodeId=PTIICOR\\_CH54PLDE\\_ARTIIR E\\_S54-33VICO](http://www.municode.com/library/ga/pine_lake/codes/code_of_ordinances?nodeId=PTIICOR_CH54PLDE_ARTIIR E_S54-33VICO) / [www.pinelakega.com/wp-content/uploads/2012/08/City-of-Pine-Lake-Zoning-Ordinance.pdf](http://www.pinelakega.com/wp-content/uploads/2012/08/City-of-Pine-Lake-Zoning-Ordinance.pdf)

**Key Features to Implementation:** Zero step entry. This zero-step entrance can be at any entrance to the home with the slope approaching this entrance no greater than 1:12. Threshold on the entrance no more than a 1/2 in height. 32-inch minimum clearing for interior doors and 30-inch minimum width of hallways. All required exit doors shall be side hinged. Hallways shall not be less than 42 inches in width and all passageways, other than doorways to be no less than 36 inches in width.

**External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):** Step-free entrance shall be approached by a slope no greater than 1:12 (less steep is desirable). In a case where a lot is so steep that it cannot be graded to a maximum slope of 1:12, the driveway may have to exceed a 1:12 slope. In this case, upon approval by the Building Commissioner, the builder may construct a 1:12 (or less) route leading from the driveway to the no-step entrance.

**Internal Design Highlights (site, yard, paths, patios, parking, etc.):** Grab bars required in restrooms/ bathrooms made of wood blocking within wall framing. This reinforced wall must be located between 33 inches and 36 inches above the finished floor and must be in all walls adjacent to a toilet, shower stall or bathtub. At least one bathroom/restroom containing at least one toilet and one sink on the dwelling floor.

**Exemptions or exceptions:** Multiple exceptions laid out per item in code.

**San Antonio, TX Date of Adoption: 2002**

**Weblink to Policy Description:** [www.sanantonio.gov/Portals/0/Files/DAO/UD-Ordinance95641.pdf](http://www.sanantonio.gov/Portals/0/Files/DAO/UD-Ordinance95641.pdf)

**Key Features to Implementation:** Flat entrance with a beveled threshold of 1/2 inch or less, all interior doors no less than 32 inches wide except doors leading to closet of less than 15 square feet. Each hallway at least 36 inches wide and level, with ramped or beveled changes at each door threshold.

**External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):** At least one entrance shall have a 36-inch no step door and be on an accessible route. An accessible route is a continuous, unobstructed path at least 36 inches wide connecting all interior and exterior elements and spaces of a house and site, including corridors, parking, curb ramps, crosswalks and sidewalks. No explicit mention of parking or garages in code.

**Internal Design Highlights (site, yard, paths, patios, parking, etc.):** Bathrooms to have studs in wall around toilet to facilitate future grab bar installation. Bathtub/Shower to either have studs for grab bars or room for pre-approved ADA compliant alteration. All doorknobs to be lever handles. Light switches, electrical panels, and thermostat to be no less than 48 inches from the floor. All electrical plug or receptacles at least 15 inches from floor.



## Inventory of Local Incentives for Visitability

### **Escanaba, MI** *Date of Adoption:* 2002

***Weblink to Policy Description:*** [www.escanaba.org/images/11/file/visabord.pdf](http://www.escanaba.org/images/11/file/visabord.pdf)

***Key Features to Implementation:*** Must comply with State of Michigan code standard for accessible route, doorway must be 36 inches wide minimum.

***External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):*** Sidewalks and ramps that are part of the visitable route shall have a maximum slope and length as follows: Sidewalks: 1/20 N/L, Type 1 Ramp. 1/8 5-foot (max 7.5-inch rise), Type 2 Ramp. 1/10 12-foot (max. 14.5-inch rise), Type 3 Ramp. 1/12 30-foot (Between Landings), Width: The route shall have a minimum clear width of 36 inches. Landings: Landings in a visitable route shall be not less than 36 inches by 36 inches clear or shall meet the Michigan Accessibility Code whichever is greater. Surfaces: Surfaces shall be non-slip. Drainage: Cross-slope shall be no greater than 1/50. Only direct mention comes from section 6.39(2), "The entrance may be at the front, side, or back of a dwelling if it is served by an accessible route such as a garage or sidewalk."

***Internal Design Highlights (site, yard, paths, patios, parking, etc.):*** Wide doorways and a half bath on the first floor, the code addresses hallways, bathroom design and the height of wall switches and receptacles.

### **Irvine, CA** *Date of Adoption:* 1999

***Weblink to Policy Description:*** [www.cityofirvine.org/community-development/accessibility-universal-design#Design Features](http://www.cityofirvine.org/community-development/accessibility-universal-design#Design Features)

***Key Features to Implementation:*** N/A

***External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):*** Accessible path of travel to dwelling, Maximum ½-inch vertical change in level at thresholds, 32-inch wide interior doors, Lever door hardware, doorbell no higher than 48 inches. "No specific mention to parking or Garage requirements."

***Internal Design Highlights (site, yard, paths, patios, parking, etc.):*** Visual fire alarms and visual doorbells Switches, outlets and thermostats at 15 inches to 48 inches above the floor Rocker light switches Closet rods and shelves adjustable from 3 feet to 5 feet-6 inches high Residential elevator or lift; Bathrooms: Grab bar backing in walls, Grab bars, 5-foot diameter turning circle, 36 inches by 36 inches or 30 inches by 48 inches of clear space, Lavatory with lever faucet controls, Open-front lavatory with knee space and protection panel, Contrasting color edge border at countertops, Anti-scald devices on all plumbing fixtures, 17 inches to 19 inches high water closet seat, Roll-in shower in lieu of standard tub or shower, Shower stall with 4-inch lip in lieu of standard tub, Hand-held adjustable shower head. Kitchen: 30 inches by 48 inches clear space at appliances or 60-inch diameter clear space for U-shaped kitchen, Removable base cabinets at sink, Countertop height repositioning to 28 inches high, Lever controls at kitchen sink faucet, Base cabinets with pull-out shelves, Base cabinets with Lazy Susans, Contrasting color edge border at countertops, Microwave oven at countertop height Under cabinet task lighting.

**Monroeville, PA** *Date of Adoption: 2006*

***Weblink to Policy Description:*** [www.monroeville.pa.us/ordinances/ORD2419.pdf](http://www.monroeville.pa.us/ordinances/ORD2419.pdf)

***Key Features to Implementation:*** No step entry, and having a threshold no greater than three fourths inch. In addition, a place where pedestrians may enter from a public right of way. This includes sidewalks, driveway, streets, alleys and paths. No-step entrances must have a clear open width of at least 32 inches.

***External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):*** The no step entry could be through an entrance through the visitable level of the dwelling through an integral garage.

***Internal Design Highlights (site, yard, paths, patios, parking, etc.):*** Interior paths on visitable level must have a clear open width of at least 32 inches and be equipped with lever opening hardware. Interior hallways must be 36 inches in width throughout the length. One powder room or one full bathroom is required on the visitable level. Bathroom must be a minimum of 30 inches by 48 inches of clear floor space. Plumbing fixtures and entry doors must be equipped with lever style hardware. All powder rooms and full bathrooms throughout the house shall have a reinforcement of at least two inches by eight inches of blocking in the wall to allow for installation of grab bars. The reinforcement must be capable to resist pulling and benign forces of at least 250 pounds.

***Exemptions or exceptions:*** Lights switches can't be higher than 48 inches above the floor.

**Montgomery County, MA** *Date of Adoption: 2009*

***Weblink to Policy Description:*** [www.montgomerycountymd.gov/HHS-Program/Resources/Files/A%26D%20Docs/DFLM/DFLMGuidelinesVoluntaryCertificationProgram09.pdf](http://www.montgomerycountymd.gov/HHS-Program/Resources/Files/A%26D%20Docs/DFLM/DFLMGuidelinesVoluntaryCertificationProgram09.pdf)

***Key Features to Implementation:*** No step entry at front door, back door or side door. Walking surfaces must have a slope no steeper than 1:20. Floor or ground surfaces shall be stable and slip resistant. Building entrance must have width of 32 inches when the door is open 90 degrees.

***External Design Highlights (entry, halls/doors, bathrooms, kitchen, electrical, etc.):*** Accessible routes shall consist of one or more of the following components: Walking surfaces with a slope not steeper than 1:20. Doorways, ramps, curb ramps, elevators, and wheelchair (platform) lifts. Floor or ground surfaces shall be stable, firm, and slip resistant.

***Internal Design Highlights (site, yard, paths, patios, parking, etc.):*** Hallways must be 36 inches in width. The powder room/bathroom shall be large enough to accommodate a clear space of 2 foot-6 inches by 4 feet-zero inches.

***Exemptions or exceptions:*** New homes and renovated homes can apply for the permit, can either be level 1 which focuses on visitability or level 2 which includes livability.

# Catalog of 2015 New Single-Family House Permits in the R2.5 Zone

City staff analyzed City of Portland data for all new one and two family residential construction permitted in the R2.5 zone in 2015. Omitted from this analysis was data for construction on lots that had been proposed in the 2035 Comprehensive Plan for new zoning designation from R5 to R2.5 (four permits) and all permits that applied only to the construction of an accessory dwelling unit (ADU) in the R2.5 zone (sixty-one permits).

Data was obtained from Plan Review Sheets developed for each permit by the Bureau of Development Services (BDS) and the Portland Zoning Code. Floor area information was obtained using Multnomah County Assessor data available at portlandmaps.com. As calculating or documenting floor area ratio (FAR) is not currently required by Zoning Code in Portland's residential zones (single- or multi-dwelling), FAR was estimated by dividing the combined segment type square footage for all floors including basements, attics and attached garages (defined in the analysis as "livable floor area") by the lot size. "Gross building floor area," which includes the livable floor area and square footage for all other segment types, such as detached garages, concrete, covered porches and covered patios. City staff compared segment type information with architectural plans submitted by permit applicants to identify any significant inconsistencies.

All photos were taken by City staff.

## R2.5 Zone New Construction Permits in 2015

**51 Permits Analyzed: New Dwellings with/without Attached ADUs**  
**Not Analyzed:**


- 4 Permits for New Dwellings in R5 Zones being changed to R2.5 per Comp Plan
- 61 Permits for New ADUs in R2.5


**LOT SIZE: 1,850 sf to 7,500 sf; Average = 3,234 sf**  
**LOT WIDTH: 25 ft to 125 ft; Average = 40.1 ft**  
**GROSS BUILDING FLOOR AREA: Average = 2,728 sf**  
**LIVABLE FLOOR AREA: Average = 2,240 sf**  
**FAR (GROSS): Average = 0.83:1**  
**FAR (NET): Average = 0.91:1**


**BUILDING HEIGHT: Average = 25.9 ft**  
**ALLOWED BUILDING HEIGHT: Average = 34.3 ft**

**FRONT SETBACK: Average = 13.4 ft; Min Req: 10 ft**

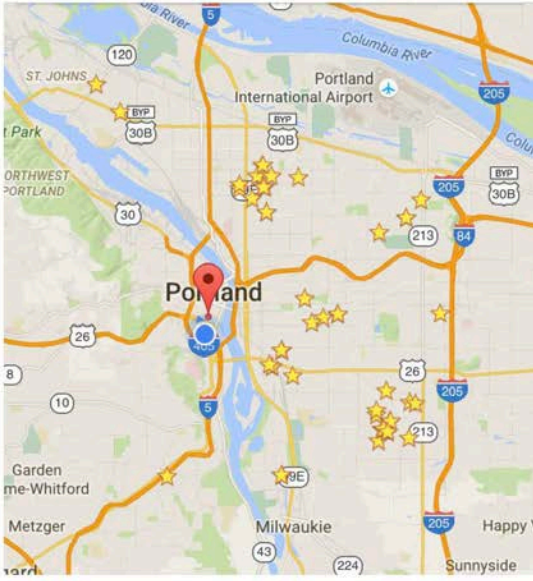
**ALLOWED BUILDING COVERAGE: Average = 1,649 sf**  
**BUILDING COVERAGE: Average = 1,362 sf (82.6%)**

 **45 of 51 Included Garages (40 Attached)**

 **8 of 51 Included ADUs (All Attached)**

 **9 Attached Primary Dwelling Units**

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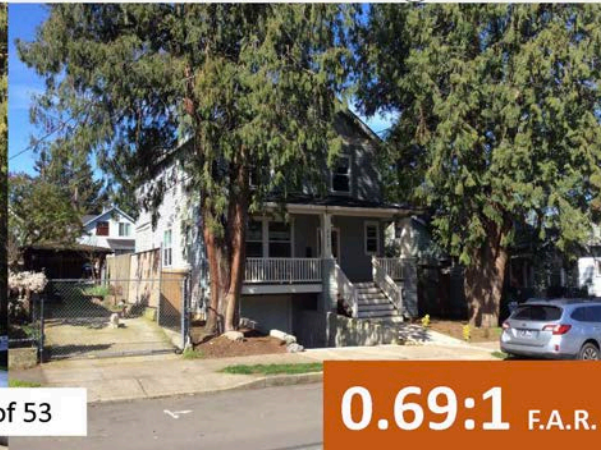
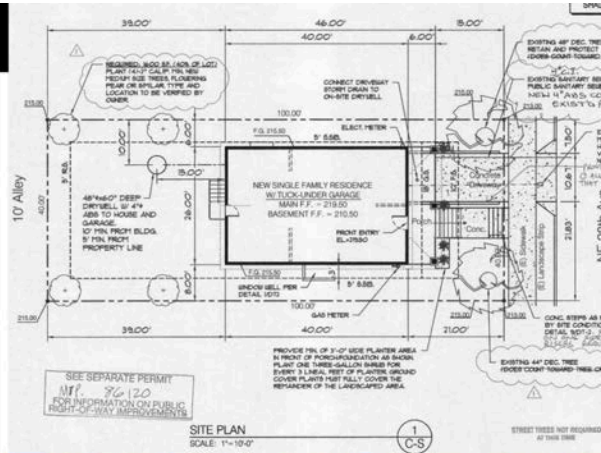


DATA SUMMARY

**5217 NE 28<sup>th</sup> Ave. Concordia**

**R2.5ah (Standard Lot)**

Lot Size/Width	4,000 sf / 40 ft
Gross Floor Area	2,761 sf
Height	28 ft
Front/Rear Setback	11.5 ft / 35 ft
Side Setbacks	8 ft / 6 ft
Lot Coverage (Max)	1,204 sf (1,875 sf)
Front Facade	667 sf



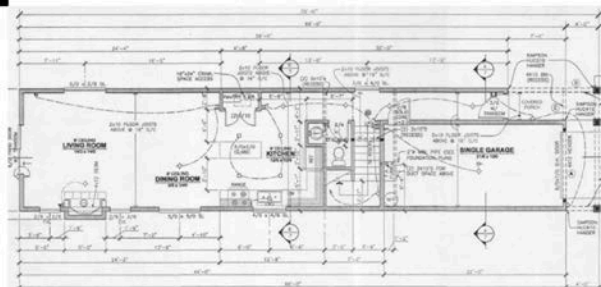
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**0.69:1 F.A.R.**

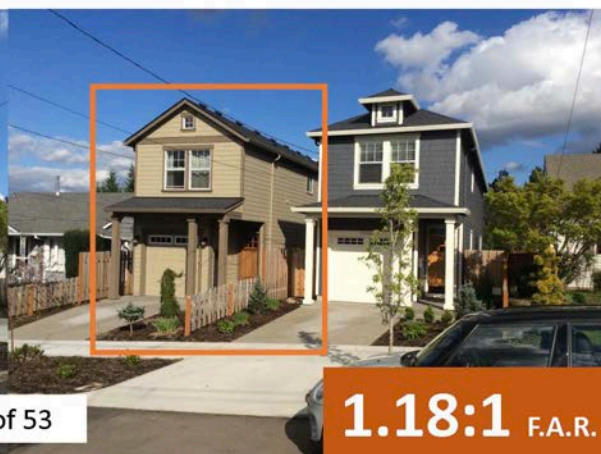
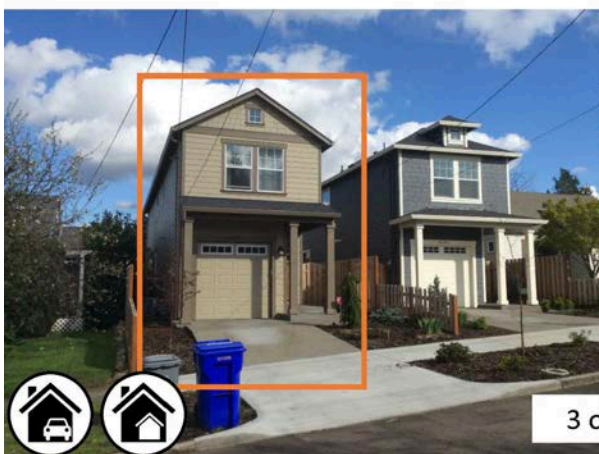
**4214 NE 81<sup>st</sup> Ave. Beaumont-Wilshire**

**R2.5h**

Lot Size/Width	2,500 sf / 25 ft
Gross Floor Area	2,942 sf
Height	22 ft
Front/Rear Setback	15 ft / 15 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,095 sf (1,250 sf)
Front Facade	333 sf



**1<sup>st</sup> Floor Plan**



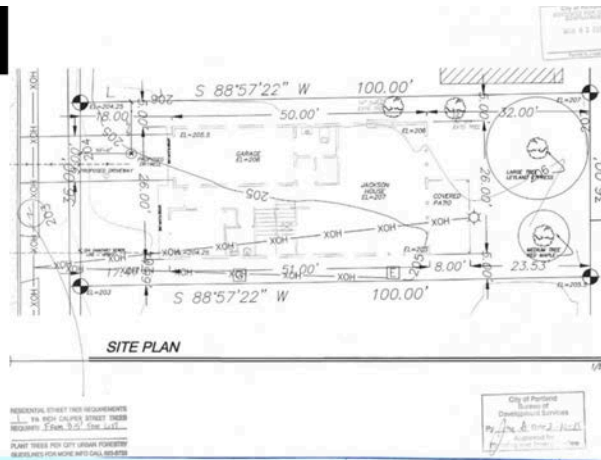
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**1.18:1 F.A.R.**

**4626 N Rodney Ave. King**

**R2.5a**

Lot Size/Width	3,600 sf / 36 ft
Gross Floor Area	4,632 sf
Height	21 ft
Front/Rear Setback	15.5 ft / 23.5 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,696 sf (1,725 sf)
Front Facade	507 sf



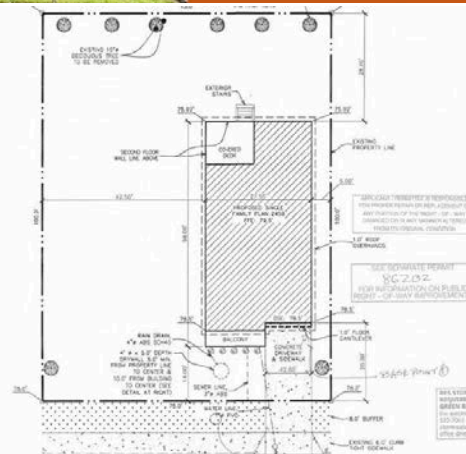
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**1.29:1** F.A.R.

**8226 SE 19th Ave. Sellwood-Moreland**

**R2.5ad**

Lot Size/Width	3,250 sf / 37.5
Gross Floor Area	2,727 sf
Height (Max)	29 ft (30 ft)
Front/Rear Setback	14 ft / 28 ft
Side Setbacks	42.5 ft / 5 ft
Lot Coverage (Max)	1,535 sf (2,625 sf)
Front Facade	627 sf

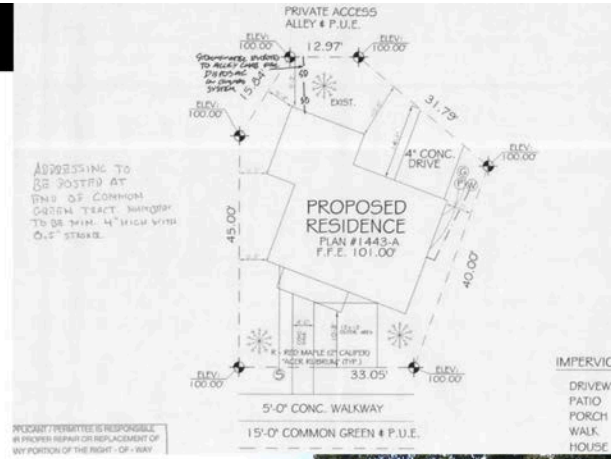


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**0.84:1** F.A.R.

**9114 N Macrum Ave. St. John's**

<b>R2.5</b>	
Lot Size/Width	2,141 sf / 33 ft
Gross Floor Area	2,013 sf
Height	21 ft
Front/Rear Setback	10 ft / 10.5 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	811 sf (1,070.5 sf)
Front Facade	706 sf

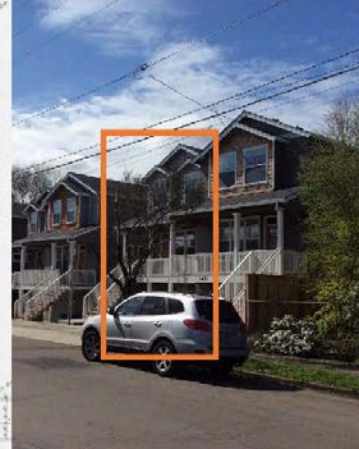
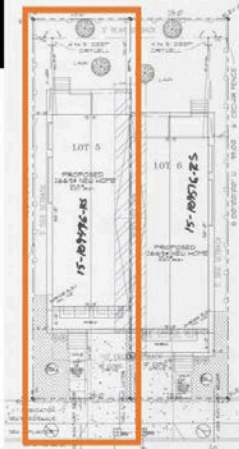


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**0.94:1** F.A.R.

**3625 NE 14<sup>th</sup> Ave. Sabin**

<b>R2.5</b>	
Lot Size/Width	2,475 sf / 25 ft
Gross Floor Area	3,113 sf
Height	26 ft
Front/Rear Setback	18 ft / 18 ft
Side Setbacks	5 ft / 0 ft
Lot Coverage (Max)	1,006 sf (1,238 sf)
Front Facade	400 sf



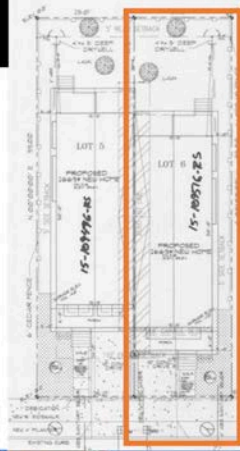
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**1.26:1** F.A.R.

**3631 NE 14<sup>th</sup> Ave. Sabin**

**R2.5**

Lot Size/Width	2,475 sf / 25 ft
Gross Floor Area	3,097 sf
Height	26 ft
Front/Rear Setback	12 ft / 24.5 ft
Side Setbacks	0 ft / 5 ft
Lot Coverage (Max)	1,006 sf (1,238 sf)
Front Facade	400 sf



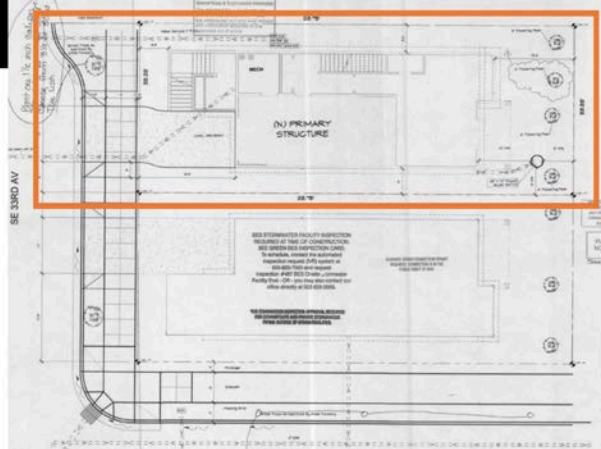
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**1.25:1** F.A.R.

**1356 SE 33<sup>rd</sup> Ave. Sunnyside**

**R2.5**

Lot Size/Width	2,791 sf / 33.33 ft
Gross Floor Area	3,257 sf
Height	34.5 ft
Front/Rear Setback	10 ft / 15 ft
Side Setbacks	5.3 ft / 5 ft
Lot Coverage (Max)	1,320 sf (1,395 sf)
Front Facade	780 sf

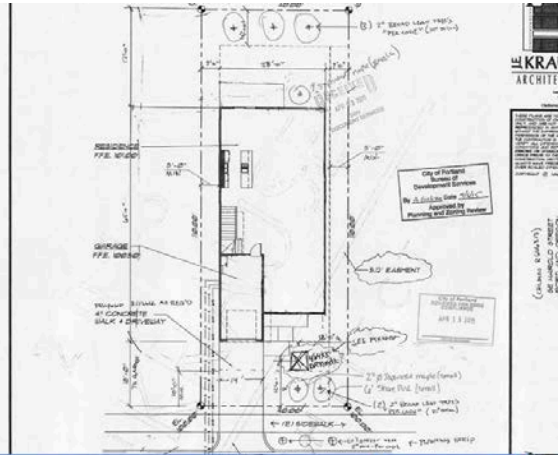


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**1.17:1** F.A.R.

**6115 SE Harold St. Mt. Scott-Arla**

<b>R2.5a</b>	
Lot Size/Width	4,400 sf / 40 ft
Gross Floor Area	3,172 sf
Height	27.5 ft
Front/Rear Setback	18 ft / 27 ft
Side Setbacks	5 ft / 6 ft
Lot Coverage (Max)	1,708 sf (2,025 sf)
Front Facade	682

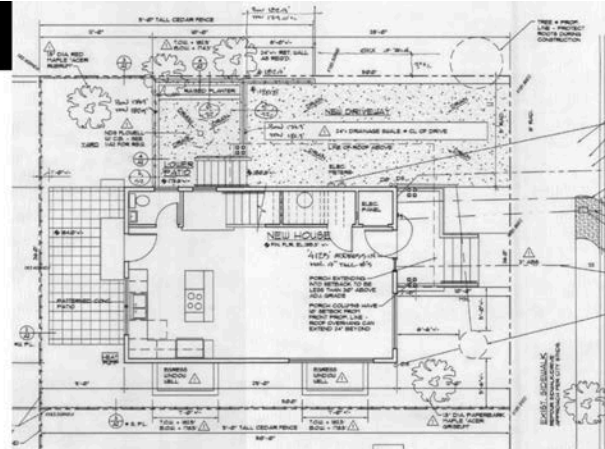


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**0.72:1** F.A.R.

**4125 NE 7<sup>th</sup> Ave. A/B King**

<b>R2.5a</b>	
Lot Size/Width	1,850 sf / 36 ft
Gross Floor Area	1,762 sf
Height	27 ft
Front/Rear Setback	10 ft / 6 ft
Side Setbacks	5 ft / 8 ft
Lot Coverage (Max)	558 sf (900 sf)
Front Facade	530 sf



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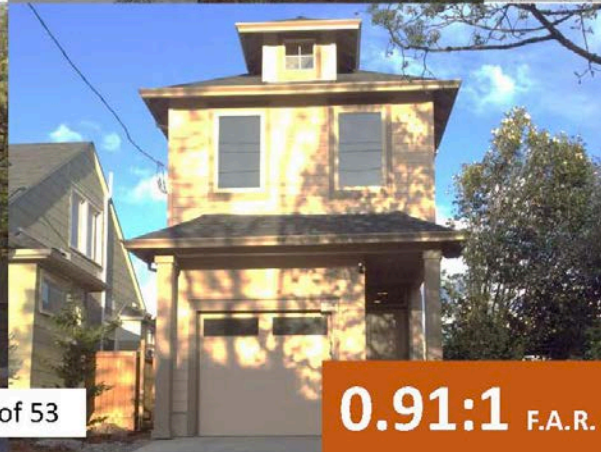
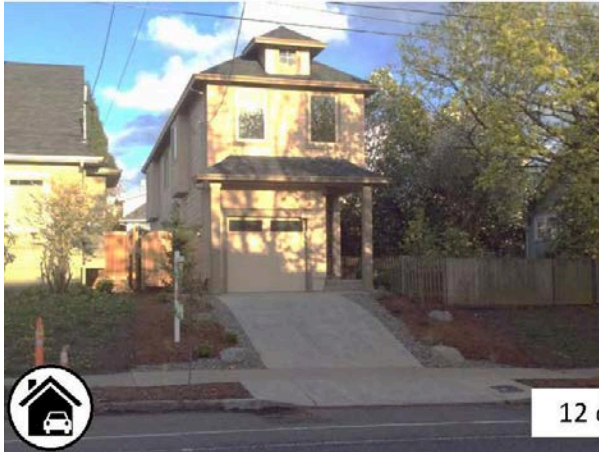
**0.95:1** F.A.R.



**3722 SE 26<sup>th</sup> Ave. Creston-Kenilworth**

**R2.5**

Lot Size/Width	2,500 sf / 25 ft
Gross Floor Area	2,283 sf
Height	22 ft
Front/Rear Setback	16 ft / 15 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,206 sf (1,250 sf)
Front Facade	255 sf



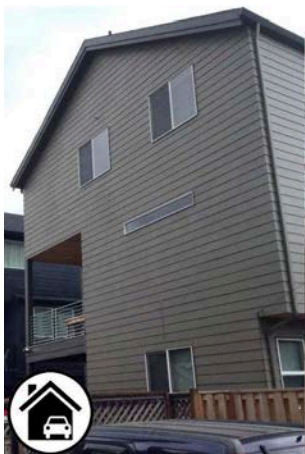
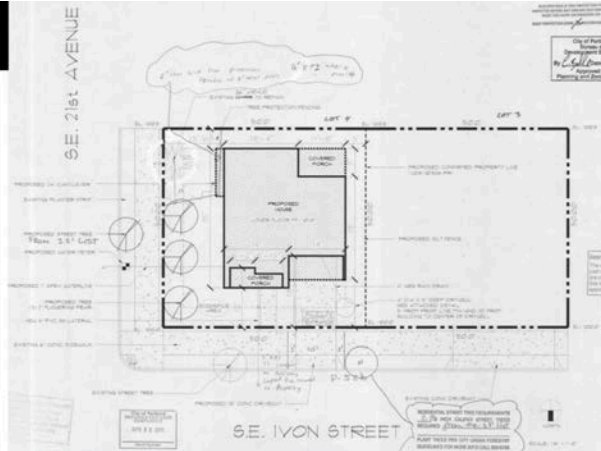
12 of 53

**0.91:1 F.A.R.**

**2080 SE Ivon St. Hosford-Abernethy**

**R2.5**

Lot Size/Width	2,500 sf / 50 ft
Gross Floor Area	2,916 sf
Height	32.5 ft
Front/Rear Setback	10 ft / 5 ft
Side Setbacks	15 ft / 65 ft
Lot Coverage (Max)	1,046 sf (2,250 sf)
Front Facade	960 sf/920 sf (side)



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**1.17:1 F.A.R.**

**6565 SE 76<sup>th</sup> Ave. Brentwood-Darlington**

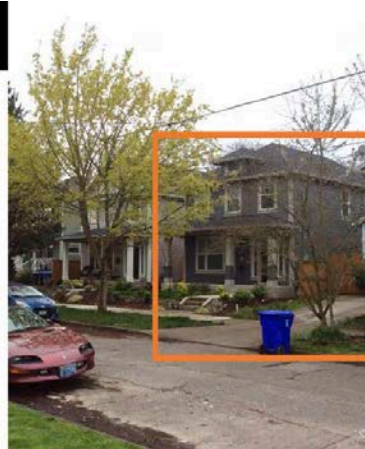
<b>R2.5a</b>	
Lot Size/Width	2,534 sf / 25 ft
Gross Floor Area	1,875 sf
Height	23.3 ft
Front/Rear Setback	14 ft / 19 ft
Side Setbacks	5 ft / 6 ft
Lot Coverage (Max)	1,035 sf (1,267 sf)
Front Facade	280 sf



**0.74:1** F.A.R.

**5032 N Vanderbilt St. Portsmouth**

<b>R2.5</b>	
Lot Size/Width	3,666 sf / 33.34 ft
Gross Floor Area	2,477 sf
Height	23.5 ft
Front/Rear Setback	15 ft / 7 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,477 sf (1,750 sf)
Front Facade	403 sf

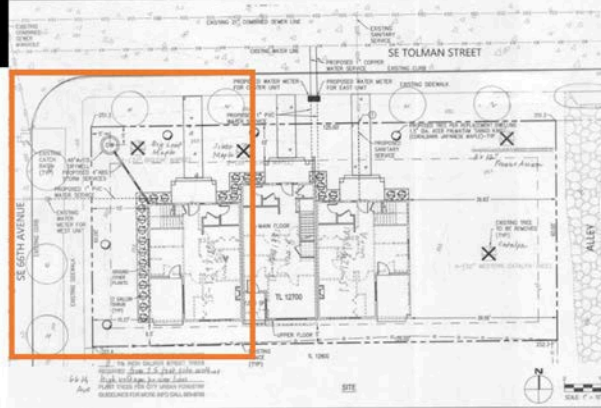


**0.68:1** F.A.R.

**6624 SE Tolman St. Mt. Scott-Arleta**

**R2.5a**

Gross Lot Size/Width	7,500 sf / 125 ft
Gross Floor Area	1,635 sf
Height	27 ft
Front/Rear Setback	14 ft / 6.5 ft
Side Setbacks	39 ft / 0 ft
Lot Coverage (Max)	2,622 sf (2,625 sf)
Front Facade	1,480 sf



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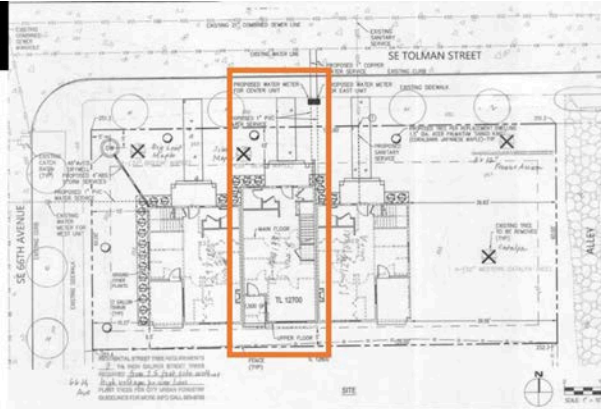
Note: Lot size, coverage, facade and FAR calculations apply to entire site.

**0.64:1 F.A.R.**

**6616 SE Tolman St. Mt. Scott-Arleta**

**R2.5a**

Gross Lot Size/Width	7,500 sf / 125 ft
Gross Floor Area	1,547 sf
Height	27 ft
Front/Rear Setback	10 ft / 5 ft
Side Setbacks	0 ft / 0 ft
Lot Coverage (Max)	2,622 sf (2,625 sf)
Front Facade	1,480 sf



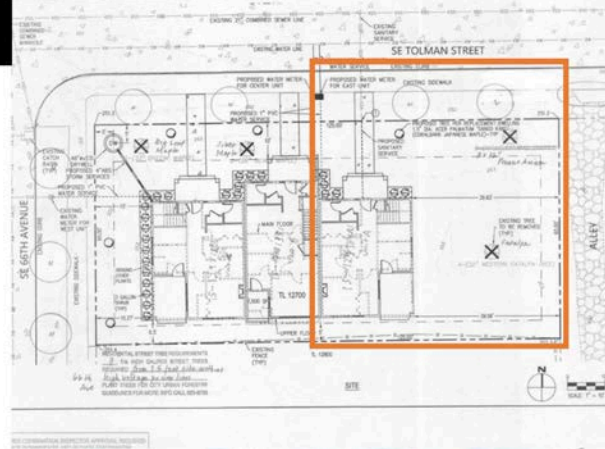
17 of 53

Note: Lot size, coverage, facade and FAR calculations apply to entire site.

**0.64:1 F.A.R.**

**6606 SE Tolman St. Mt. Scott-Arleta**

<b>R2.5a</b>	
Gross Lot Size/Width	7,500 sf / 125 ft
Gross Floor Area	1,635 sf
Height	27 ft
Front/Rear Setback	14 ft / 6.5 ft
Side Setbacks	0 ft / 15 ft
Lot Coverage (Max)	2,622 sf (2,625 sf)
Front Facade	1,480 sf/ 933 sf (side)



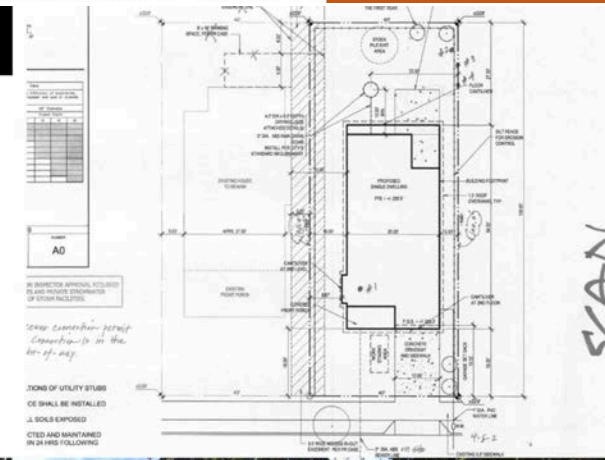
18 of 53

Note: Lot size, coverage, facade and FAR calculations apply to entire site.

**0.64:1** F.A.R.

**4924 SE 76<sup>th</sup> Ave. Foster-Powell**

<b>R2.5a</b>	
Lot Size/Width	4,000 sf / 40 ft
Gross Floor Area	2,581 sf
Height	26.3 ft
Front/Rear Setback	18 ft / 27 ft
Side Setbacks	8.7 ft / 5 ft
Lot Coverage (Max)	1,363 sf (1,875 sf)
Front Facade	493 sf



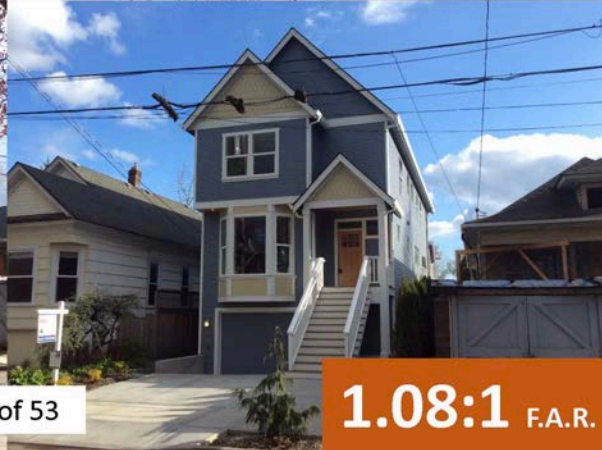
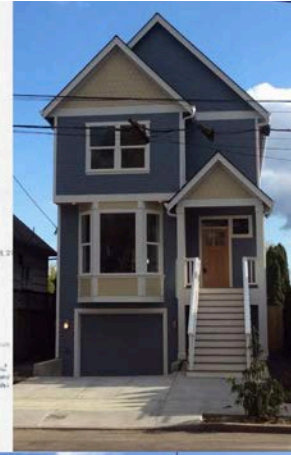
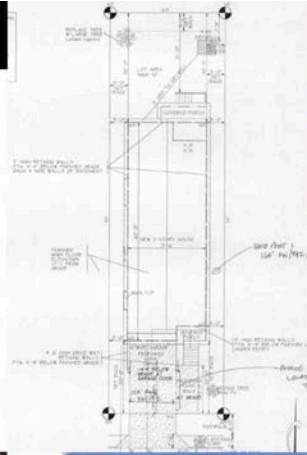
19 of 53

**0.66:1** F.A.R.

**3722 SE Taylor St. Sunnyside**

**R2.5**

Lot Size/Width	3,465 sf / 31.5 ft
Gross Floor Area	3,752 sf
Height	31.5 ft
Front/Rear Setback	20 ft / 21 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,360 sf (1,674 sf)
Front Facade	660 sf



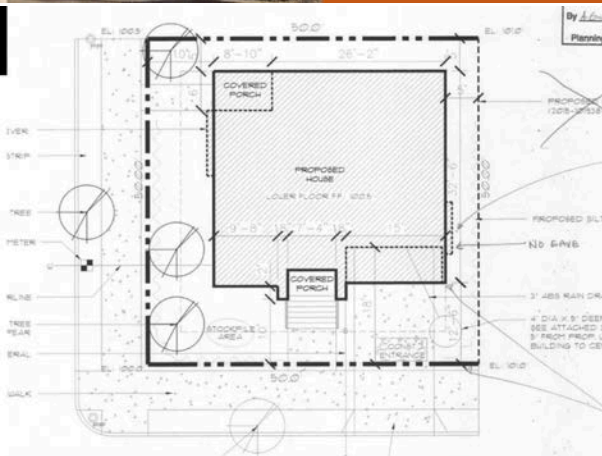
20 of 53

**1.08:1** F.A.R.

**5232 NE 9th Ave. A/B King**

**R2.5ah**

Lot Size/Width	2,500 sf / 50 ft
Gross Floor Area	3,443 sf
Height	32 ft
Front/Rear Setback	10 ft / 6 ft
Side Setbacks	9 ft / 5 ft
Lot Coverage (Max)	1,194 sf (1,250 sf)
Front Facade	966 sf / 813 sf (side)

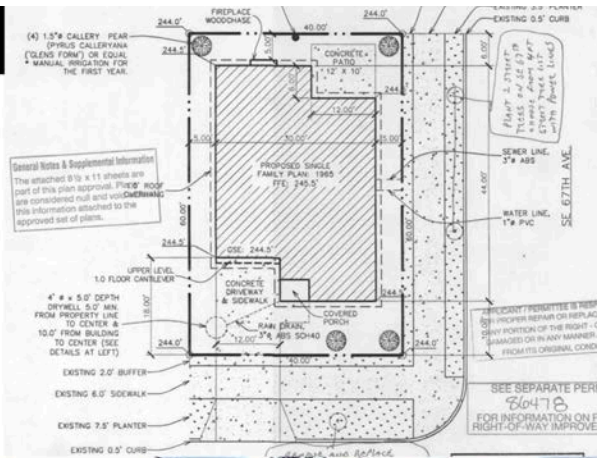


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**1.38:1** F.A.R.

**6706 SE Ramona St. Mt. Scott-Arleta**

<b>R2.5a</b>	
<b>Lot Size/Width</b>	<b>2,400 sf / 40 ft</b>
<b>Gross Floor Area</b>	<b>2,239 sf</b>
<b>Height</b>	<b>27.5 ft</b>
<b>Front/Rear Setback</b>	<b>10 ft / 5 ft</b>
<b>Side Setbacks</b>	<b>5 ft / 5 ft</b>
<b>Lot Coverage (Max)</b>	<b>1,169 sf (1,200 sf)</b>
<b>Front Facade</b>	<b>633 sf/847 sf (side)</b>

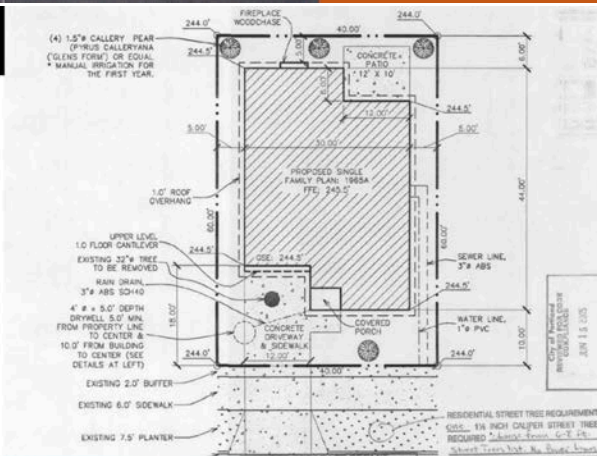


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**0.93:1 F.A.R.**

**6712 SE Ramona St. Mt. Scott-Arleta**

<b>R2.5a</b>	
<b>Lot Size/Width</b>	<b>2,400 sf / 40 ft</b>
<b>Gross Floor Area</b>	<b>2,310 sf</b>
<b>Height</b>	<b>27.5 ft</b>
<b>Front/Rear Setback</b>	<b>10 ft / 5 ft</b>
<b>Side Setbacks</b>	<b>5 ft / 5 ft</b>
<b>Lot Coverage (Max)</b>	<b>1,169 sf (1,200 sf)</b>
<b>Front Facade</b>	<b>633 sf</b>

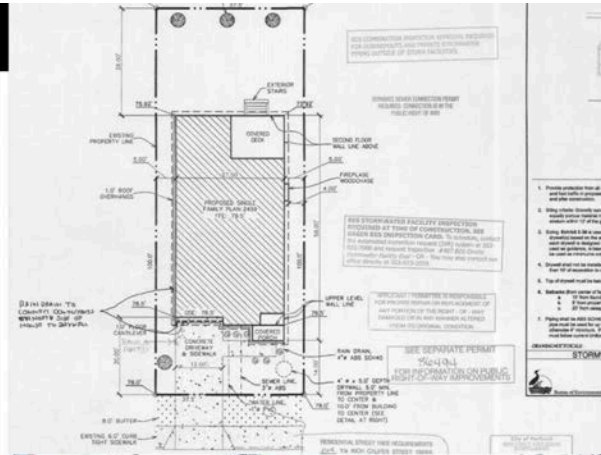


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**0.96:1 F.A.R.**

**8218 SE 19<sup>th</sup> Ave. Sellwood-Moreland**

<b>R2.5ad</b>	
Lot Size/Width	3,750 sf / 37.5 ft
Gross Floor Area	2,980 sf
Height	29 ft
Front/Rear Setback	14 ft / 28 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,505 sf (1,781 sf)
Front Facade	633 sf

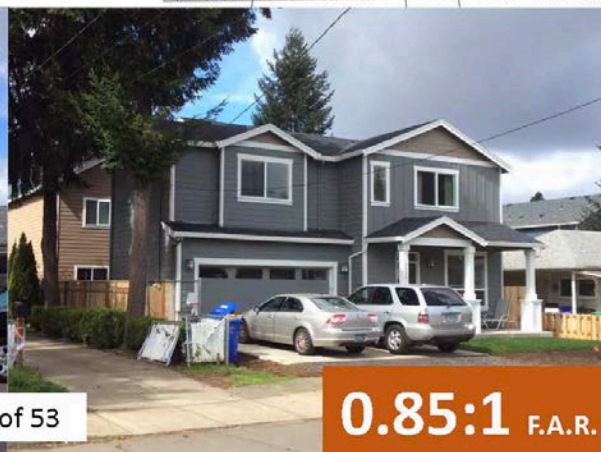
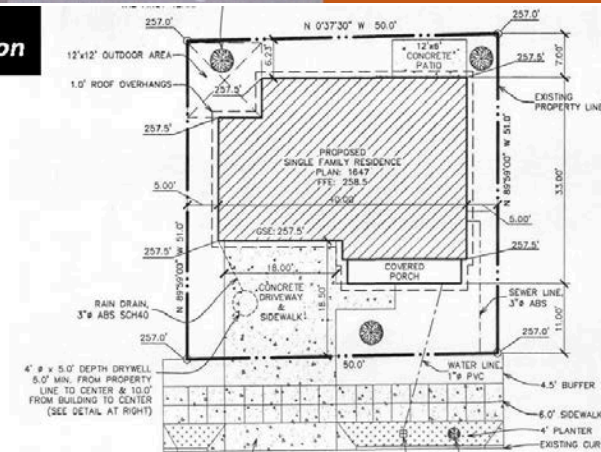


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**0.79:1 F.A.R.**

**6525 SE 62<sup>nd</sup> Ave. Brentwood-Darlington**

<b>R2.5a</b>	
Lot Size/Width	2,500 sf / 50 ft
Gross Floor Area	2,116 sf
Height	21.5 ft
Front/Rear Setback	11 ft / 6.3 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,056 sf (1,275 sf)
Front Facade	746 sf



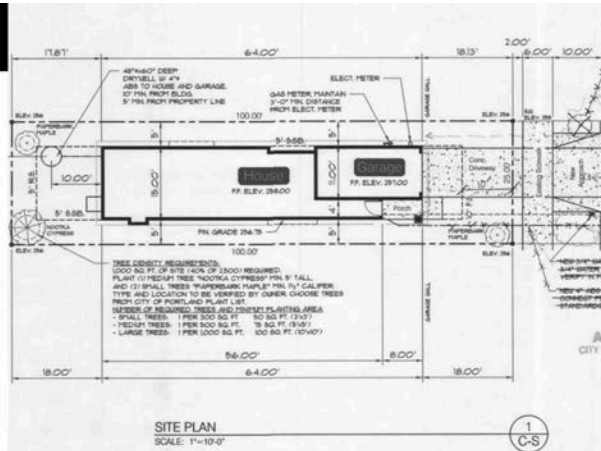
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**0.85:1 F.A.R.**

**3403 NE 74<sup>th</sup> Ave. Roseway**

**R2.5h**

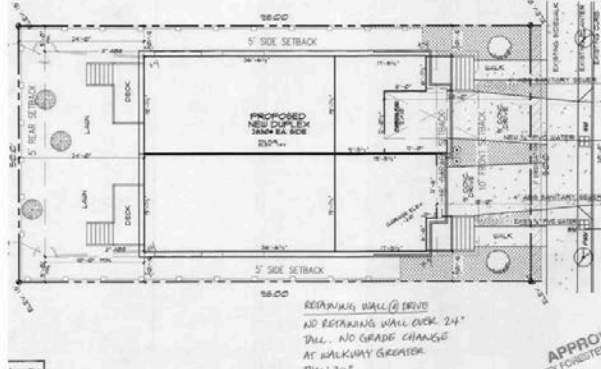
Lot Size/Width	2,500 sf / 25 ft
Gross Floor Area	1,922 sf
Height	21.8 ft
Front/Rear Setback	10 ft / 17.9 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	972 sf (1,250 sf)
Front Facade	366 sf



**5241/5247 NE 15<sup>th</sup> Ave. Vernon**

**R2.5ah**

Lot Size/Width	5,000 sf / 50 ft
Gross Floor Area	6,440 sf
Height	31 ft
Front/Rear Setback	15 ft / 24 ft
Side Setbacks	10.9 ft / 10.9 ft
Lot Coverage (Max)	2,249 sf (2,250 sf)
Front Facade	1,026 sf

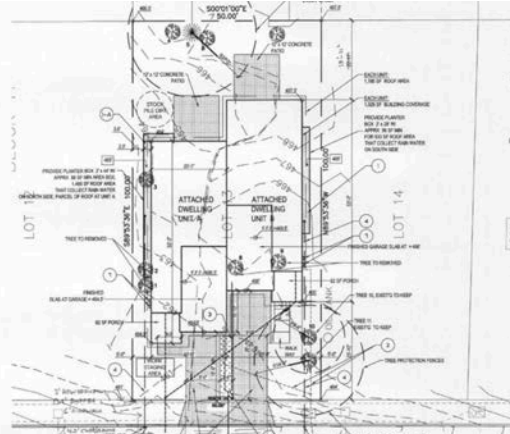




**8558/8566 SW 20<sup>th</sup> Ave. Markham**

**R2.5**

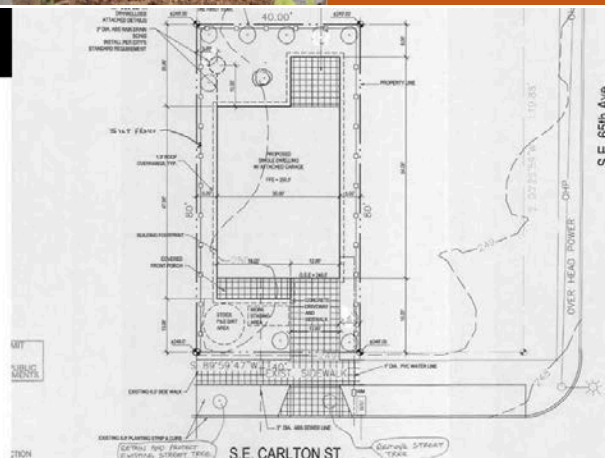
Lot Size/Width	5,000 sf / 50 ft
Gross Floor Area	3,988 sf
Height	25.5 ft
Front/Rear Setback	15 ft / 21 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	2,054 sf (2,250 sf)
Front Facade	860 sf



**6423 SE Carlton St. Mt. Scott-Arleta**

**R2.5a**

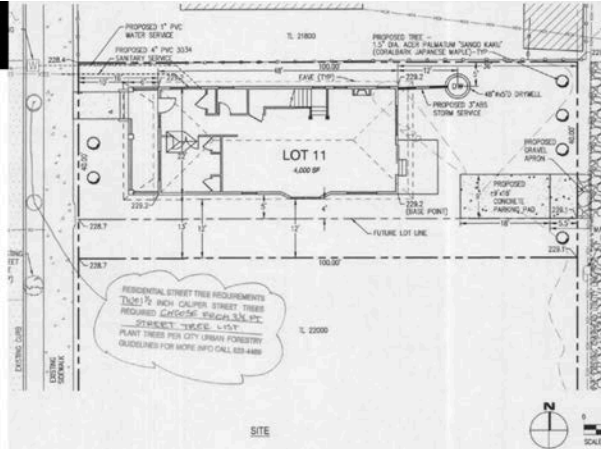
Lot Size/Width	3,200 sf / 40 ft
Gross Floor Area	2,623 sf
Height	22.1 ft
Front/Rear Setback	13 ft / 7 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,494 sf (1,575 sf)
Front Facade	526 sf



**4400 SE 65<sup>th</sup> Ave. Foster-Powell**

**R2.5a**

Lot Size/Width	4,000 sf / 40 ft
Gross Floor Area	2,625 sf
Height (Max)	25.3 ft (26 ft)
Front/Rear Setback	16 ft / 36 ft
Side Setbacks	5 ft / 13 ft
Lot Coverage (Max)	1,110 sf (1,575 sf)
Front Facade	533 sf



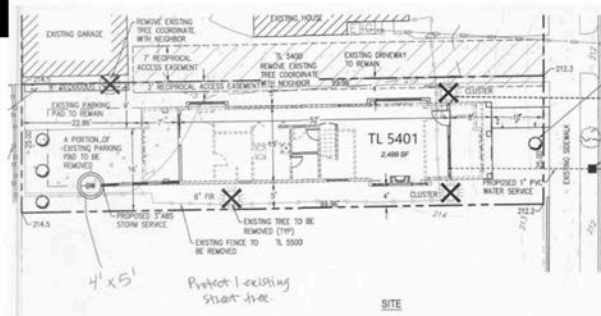
30 of 53

**0.66:1** F.A.R.

**4835 NE Rodney Ave. Humboldt**

**R2.5a**

Lot Size/Width	2,500 sf / 25 ft
Gross Floor Area	1,959 sf
Height	22.5
Front/Rear Setback	18 ft / 30 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	990 sf (1,250 sf)
Front Facade	340 sf

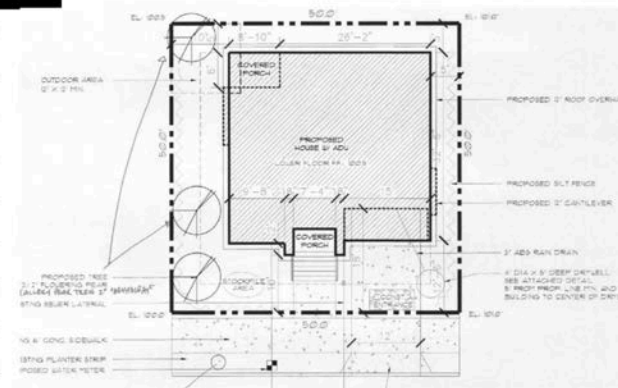


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**0.78:1** F.A.R.

**2068 SE Ivon St. A/B Hosford-Abernethy**

<b>R2.5</b>	
Lot Size/Width	2,500 sf / 50 ft
Gross Floor Area	3,443 sf
Height	31.9 ft
Front/Rear Setback	10 ft / 5 ft
Side Setbacks	9 ft / 5 ft
Lot Coverage (Max)	1,187 sf (2,250 sf)
Front Facade	933 sf



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**1.38:1** F.A.R.

**6336 SE Carlton St. Mt. Scott-Arleta**

<b>R2.5a</b>	
Lot Size/Width	4,800 sf / 40 ft
Gross Floor Area	2,779 sf
Height	31 ft
Front/Rear Setback	15 ft / 20 ft
Side Setbacks	7.5 ft / 7.5 ft
Lot Coverage (Max)	1,614 sf (2,175 sf)
Front Facade	764 sf



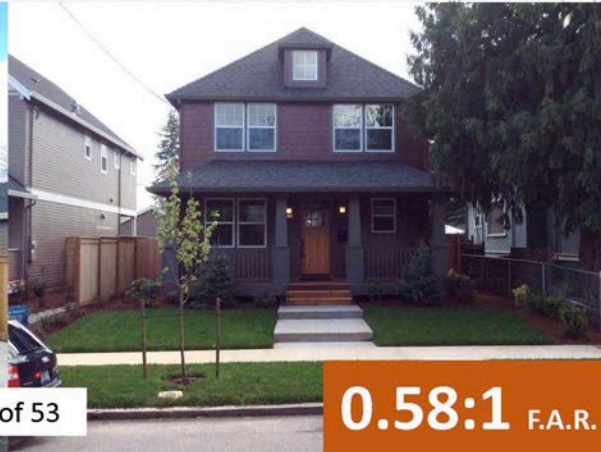
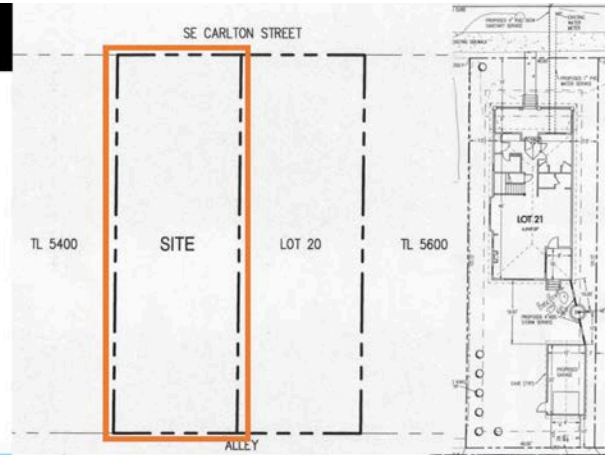
33 of 53

**0.58:1** F.A.R.

**6316 SE Carlton St. Mt. Scott-Arleta**

**R2.5a**

Lot Size/Width	4,800 sf / 40 ft
Gross Floor Area	2,779 sf
Height	31 ft
Front/Rear Setback	15 ft / 10 ft
Side Setbacks	7.5 ft / 7.5 ft
Lot Coverage (Max)	1,614 sf (2,175 sf)
Front Facade	500 sf



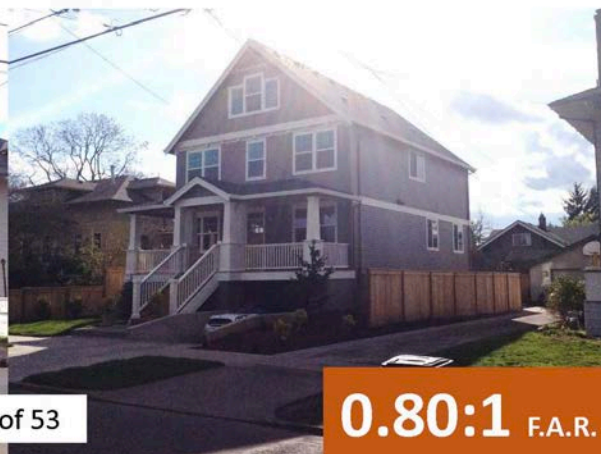
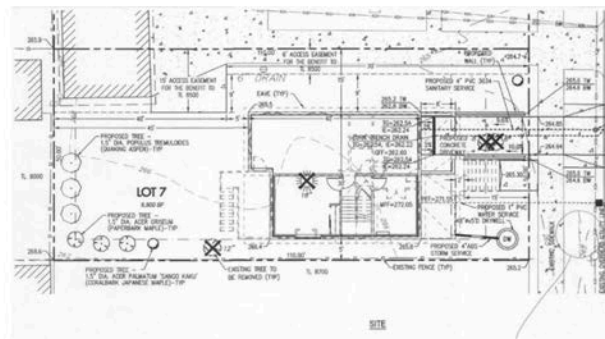
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**0.58:1** F.A.R.

**2725 NE 62<sup>nd</sup> Ave. Rose City Park**

**R2.5h**

Lot Size/Width	5,500 sf / 50 ft
Gross Floor Area	4,401 sf
Height	32 ft
Front/Rear Setback	15 ft / 45 ft
Side Setbacks	5 ft / 15 ft
Lot Coverage (Max)	1,459 sf (2,325 sf)
Front Facade	893 sf



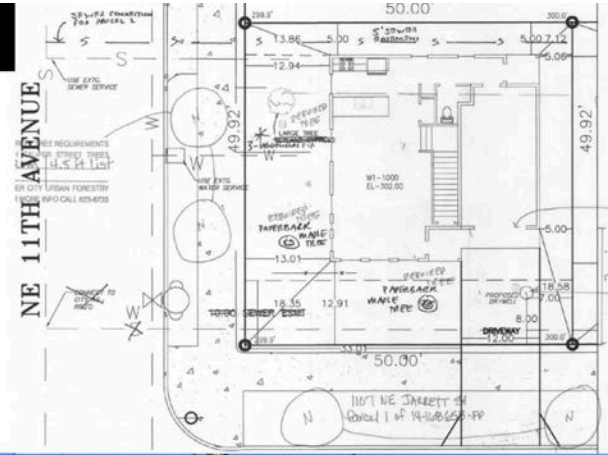
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**0.80:1** F.A.R.



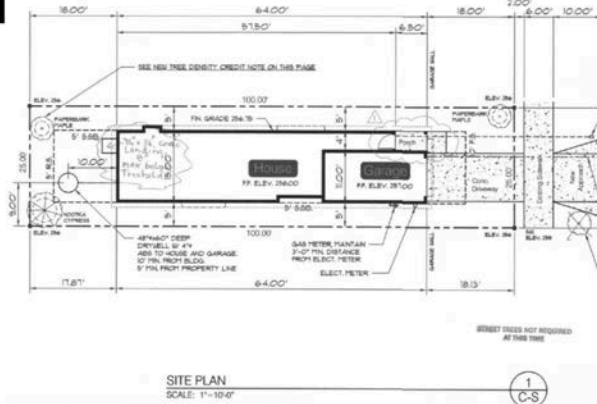
**1107 NE Jarrett St. Vernon**

<b>R2.5ah</b>	
Lot Size/Width	2,496 sf / 50 ft
Gross Floor Area	1,898 sf
Height	22 ft
Front/Rear Setback	13 ft / 5 ft
Side Setbacks	5 ft / 12.9 ft
Lot Coverage (Max)	1,150 sf (1,248 sf)
Front Facade	606 sf/606 sf (side)



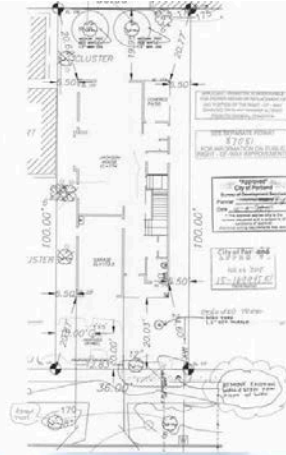
**3393 NE 74th Ave. Roseway**

<b>R2.5h</b>	
Lot Size/Width	2,500 sf / 25 ft
Gross Floor Area	1,926 sf
Height	21.7 ft
Front/Rear Setback	18 ft / 18 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	974 sf (1,250 sf)
Front Facade	300 sf



**4231 SE Yamhill St. Sunnyside**

<b>R2.5</b>	
<b>Lot Size/Width</b>	<b>3,600 sf / 36 ft</b>
<b>Gross Floor Area</b>	<b>2,882 sf</b>
<b>Height</b>	<b>21.5 ft</b>
<b>Front/Rear Setback</b>	<b>20 ft / 20 ft</b>
<b>Side Setbacks</b>	<b>5.5 ft / 5.5 ft</b>
<b>Lot Coverage (Max)</b>	<b>1,500 sf (1,725 sf)</b>
<b>Front Facade</b>	<b>486 sf</b>

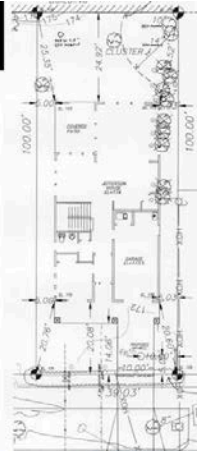


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**0.80:1** F.A.R.

**4235 SE Yamhill St. Sunnyside**

<b>R2.5</b>	
<b>Lot Size/Width</b>	<b>3,300 sf / 39 ft</b>
<b>Gross Floor Area</b>	<b>3,903 sf</b>
<b>Height</b>	<b>22 ft</b>
<b>Front/Rear Setback</b>	<b>14.1 ft / 24.9 ft</b>
<b>Side Setbacks</b>	<b>5 ft / 5 ft</b>
<b>Lot Coverage (Max)</b>	<b>1,769 sf (1,838 sf)</b>
<b>Front Facade</b>	<b>466 sf</b>



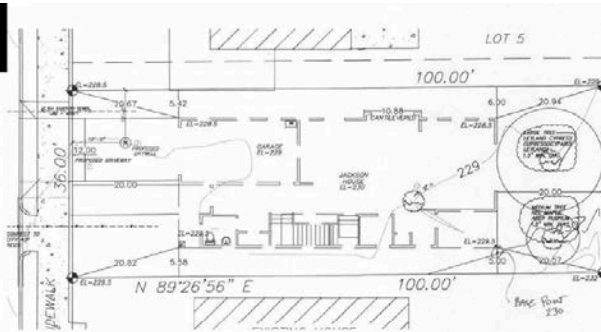
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**0.85:1** F.A.R.

**4816 NE 12<sup>th</sup> Ave. King**

**R2.5ah**

<b>Lot Size/Width</b>	<b>3,600 sf / 36 ft</b>
<b>Gross Floor Area</b>	<b>2,882 sf</b>
<b>Height</b>	<b>21.8 ft</b>
<b>Front/Rear Setback</b>	<b>20 ft / 20 ft</b>
<b>Side Setbacks</b>	<b>5.4 ft / 5.6 ft</b>
<b>Lot Coverage (Max)</b>	<b>1,500 sf (1,725 sf)</b>
<b>Front Facade</b>	<b>446 sf</b>



SITE PLAN



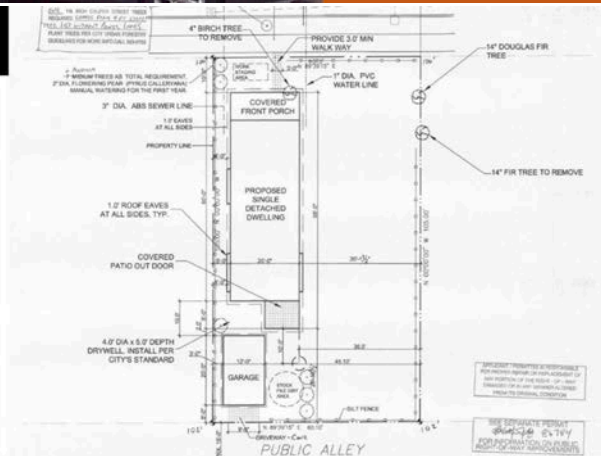
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**0.80:1** F.A.R.

**6108 SE Steele St. Mt. Scott-Arleta**

**R2.5a**

<b>Lot Size/Width</b>	<b>3,155 sf / 30 ft</b>
<b>Gross Floor Area</b>	<b>2,593 sf</b>
<b>Height</b>	<b>22.5 ft</b>
<b>Front/Rear Setback</b>	<b>10 ft / 27 ft</b>
<b>Side Setbacks</b>	<b>35.1 ft / 5 ft</b>
<b>Lot Coverage (Max)</b>	<b>1,534 sf (2,445 sf)</b>
<b>Front Facade</b>	<b>386 sf</b>

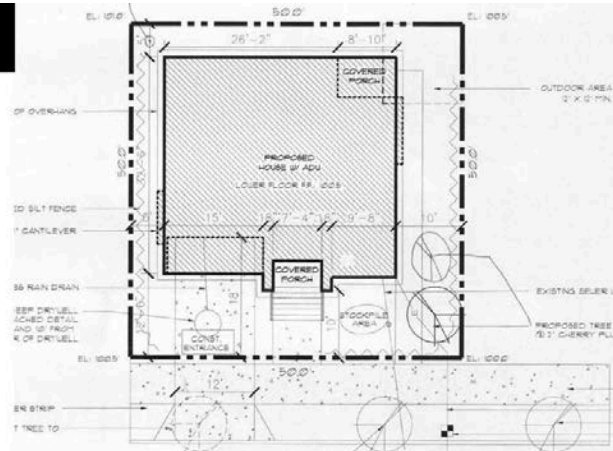


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**0.82:1** F.A.R.

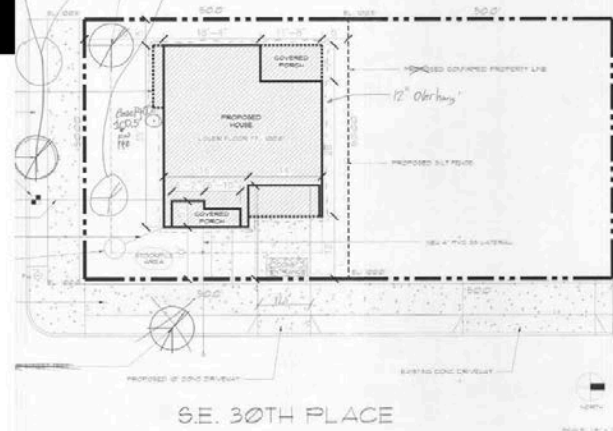
**1414 SE Franklin St. A/B Brooklyn**

<b>R2.5</b>	
<b>Lot Size/Width</b>	<b>2,500 sf / 50 ft</b>
<b>Gross Floor Area</b>	<b>3,264 sf</b>
<b>Height</b>	<b>32 ft</b>
<b>Front/Rear Setback</b>	<b>10 ft / 5 ft</b>
<b>Side Setbacks</b>	<b>5 ft / 5 ft</b>
<b>Lot Coverage (Max)</b>	<b>1,187 sf (1,250 sf)</b>
<b>Front Facade</b>	<b>960 sf</b>



**235 SE 30<sup>th</sup> Pl. Kerns**

<b>R2.5</b>	
<b>Lot Size/Width</b>	<b>2,500 sf / 50 ft</b>
<b>Gross Floor Area</b>	<b>2,868 sf</b>
<b>Height</b>	<b>33 ft</b>
<b>Front/Rear Setback</b>	<b>10 ft / 5 ft</b>
<b>Side Setbacks</b>	<b>15 ft / 5 ft</b>
<b>Lot Coverage (Max)</b>	<b>1,046 sf (1,250 sf)</b>
<b>Front Facade</b>	<b>907 sf</b>

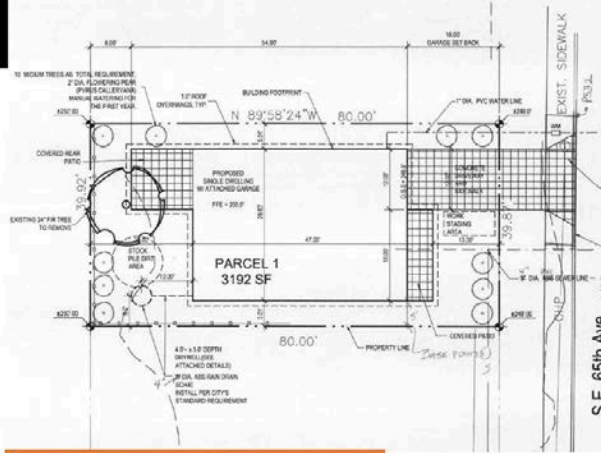




**6161 SE 65<sup>th</sup> Ave. Mt. Scott-Arleta**

**R2.5a**

Lot Size/Width	3,192 sf / 40 ft
Gross Floor Area	2,603 sf
Height	22.1 ft
Front/Rear Setback	13 ft / 20 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,194 sf (1,572 sf)
Front Facade	506 sf



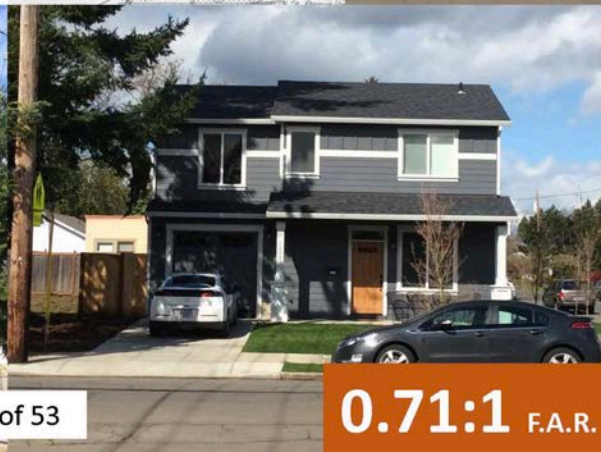
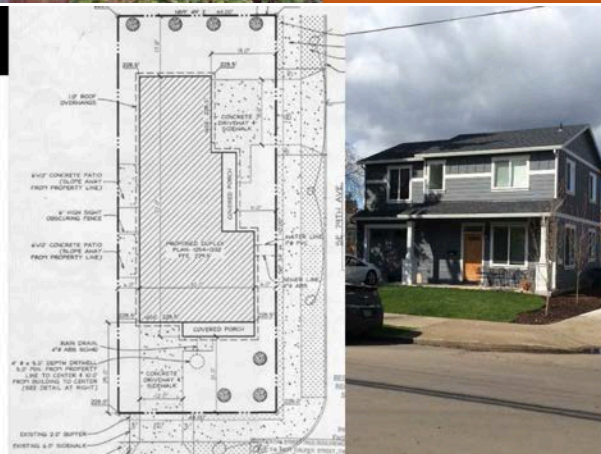
44 of 53

**0.82:1** F.A.R.

**7879 SE Raymond St. Foster-Powell**

**R2.5a**

Lot Size/Width	4,840 sf / 44 ft
Gross Floor Area	3,455 sf
Height	21.7 ft
Front/Rear Setback	21 ft / 17 ft
Side Setbacks	6 ft / 6 ft
Lot Coverage (Max)	1,894 sf (2,190 sf)
Front Facade	520 sf/1,346 sf (side)



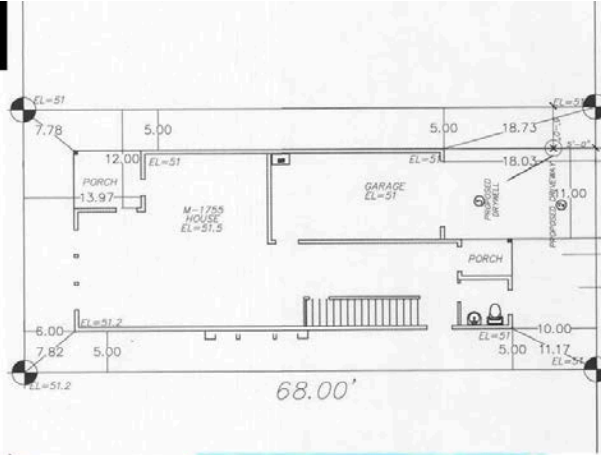
45 of 53

**0.71:1** F.A.R.

**3361 SE 16<sup>th</sup> Ave. Brooklyn**

**R2.5**

Lot Size/Width	2,176 sf / 32 ft
Gross Floor Area	2,174 sf
Height (Max)	21.6 ft (33 ft)
Front/Rear Setback	10 ft / 6 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,068 sf (1,088 sf)
Front Facade	426 sf



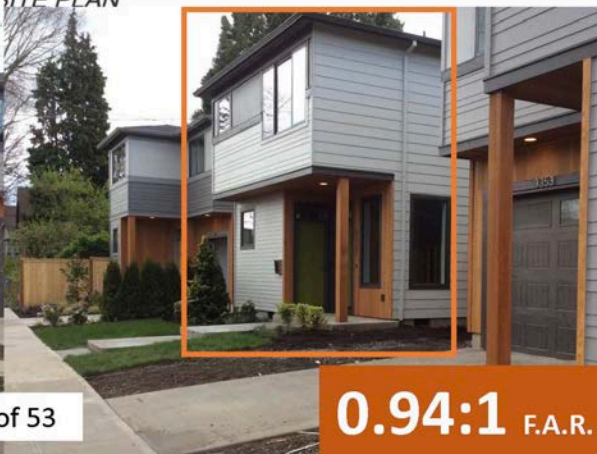
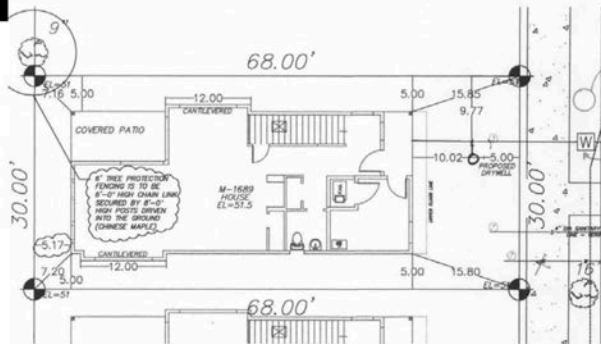
46 of 53

**1.00:1** F.A.R.

**3357 SE 16<sup>th</sup> Ave. Brooklyn**

**R2.5**

Lot Size/Width	2,040 sf / 30 ft
Gross Floor Area	1,923 sf
Height (Max)	21 ft (30 ft)
Front/Rear Setback	10 ft / 5 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,024 sf (1,024 sf)
Front Facade	373 sf



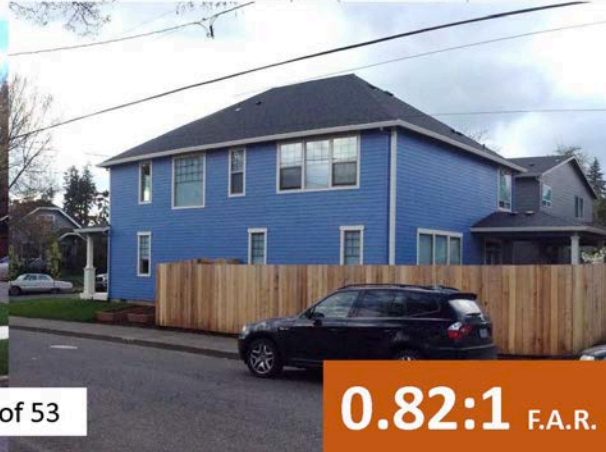
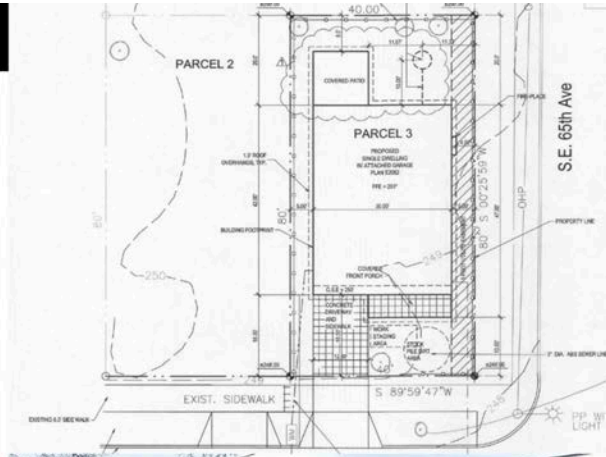
47 of 53

**0.94:1** F.A.R.

**6445 SE Carlton St. Mt. Scott-Arleta**

**R2.5a**

Lot Size/Width	3,200 sf / 40 ft
Gross Floor Area	2,623 sf
Height	25 ft
Front/Rear Setback	13 ft / 8 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	1,494 sf (1,575 sf)
Front Facade	580 sf/793 sf (side)



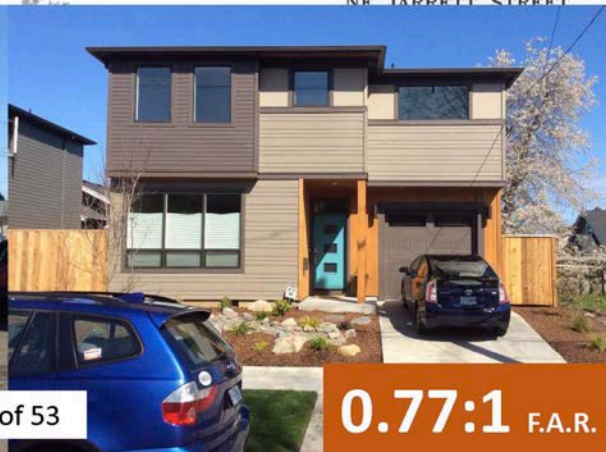
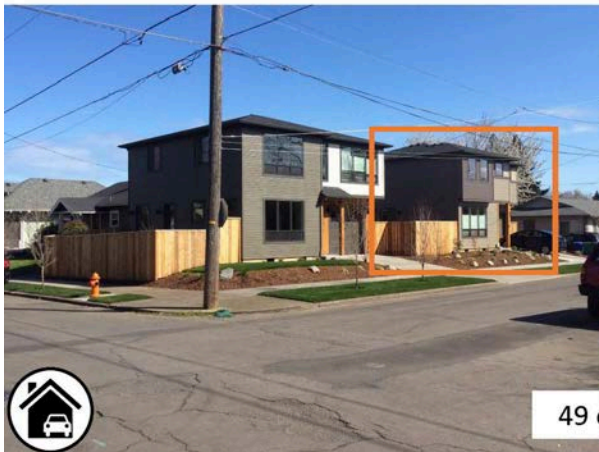
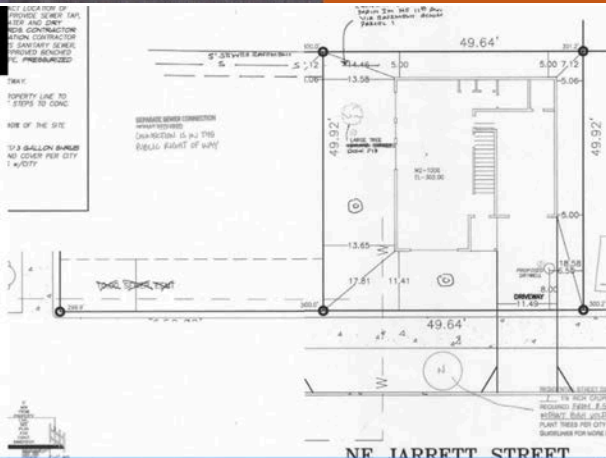
48 of 53

**0.82:1** F.A.R.

**1115 NE Jarrett St. Vernon**

**R2.5ah**

Lot Size/Width	2,500 sf / 50 ft
Gross Floor Area	1,934 sf
Height	22.5 ft
Front/Rear Setback	11.5 ft / 5 ft
Side Setbacks	13.5 ft / 5 ft
Lot Coverage (Max)	931 sf (1,250 sf)
Front Facade	586 sf



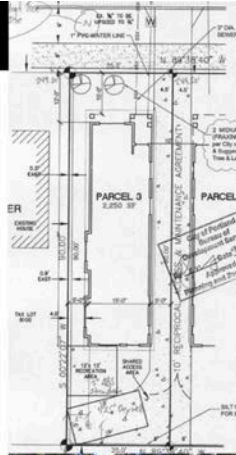
49 of 53

**0.77:1** F.A.R.

**9020 SE Yamhill St. Montavilla**

**R2.5a**

Lot Size/Width	2,250 sf / 25 ft
Gross Floor Area	1,687 sf
Height (Max)	20.8 ft (22.5 ft)
Front/Rear Setback	10 ft / 24 ft
Side Setbacks	5 ft / 5 ft
Lot Coverage (Max)	860 sf (1,125 sf)
Front Facade	293 sf



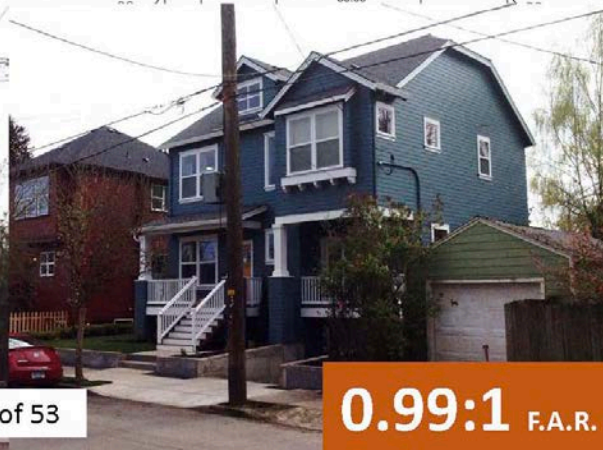
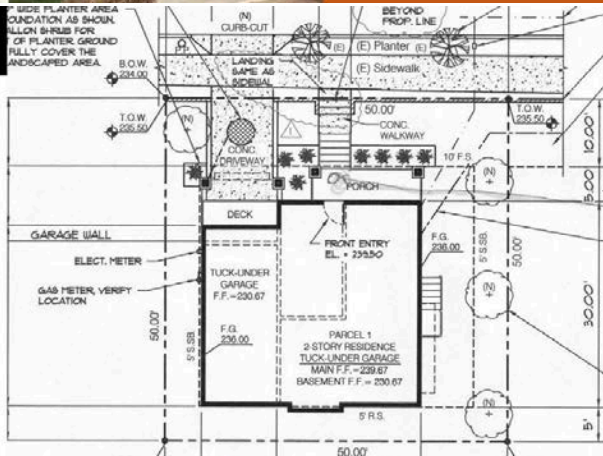
50 of 53

**0.75:1 F.A.R.**

**1260 NE Wygant St. King**

**R2.5ah**

Lot Size/Width	2,500 sf / 50 ft
Gross Floor Area	2,487 sf
Height	29 ft
Front/Rear Setback	10 ft / 6 ft
Side Setbacks	10 ft / 5 ft
Lot Coverage (Max)	1,114 sf (1,250 sf)
Front Facade	813 sf



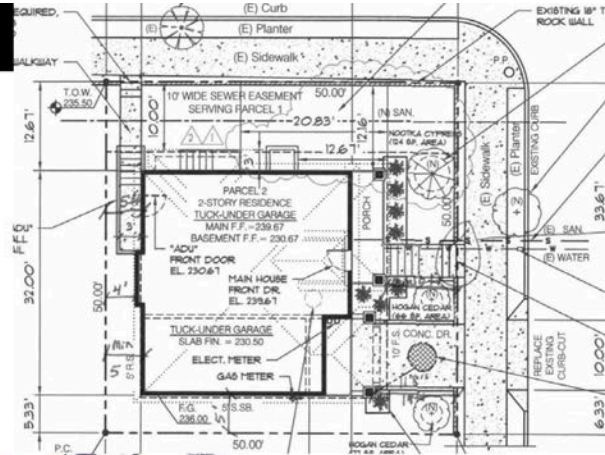
51 of 53

**0.99:1 F.A.R.**



4729 NE 13<sup>th</sup> Ave. A/B King

<b>R2.5ah</b>	
Lot Size/Width	2,504 sf / 50 ft
Gross Floor Area	2,406 sf
Height	28.6 ft
Front/Rear Setback	10 ft / 5 ft
Side Setbacks	5 ft / 12 ft
Lot Coverage (Max)	1,114 sf (1,252 sf)
Front Facade	793 sf



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**0.96:1** F.A.R.

R2.5 Zone New Construction Permits in 2015

Pg	Address	Type	FAR	Hgt	Lot SF	Lot W	Lot SF	Fr S b	Parking	Pg	Address	Type	FAR	Hgt	Lot SF	Lot W	Lot SF	Fr S b	Parking
2	5217 NE 28th Av	Detached	0.69	28.0	4000	40.0	4000	11.5	Tuck Under	27	5241/5247 NE 15th Av	Attached	1.29	31.0	5000	50.0	5000	15.0	Main Floor
3	4214 NE 81st Av	Detached	1.18	22.0	2500	25.0	2500	15.0	Main Floor	28	8558/8566 SW 20th Av	Attached	0.80	25.5	5000	50.0	5000	15.0	Main Floor
4	4626 NE Rodney Av	Detached	1.29	21.0	3600	36.0	3600	15.5	Main Floor	29	6423 SE Carlton Av	Detached	0.82	22.1	3200	40.0	3200	13.0	Main Floor
5	8226 SE 19th Av	Detached	0.84	29.0	3250	37.5	3250	14.0	Main Floor	30	4400 SE 65th Av	Detached	0.66	25.3	4000	40.0	4000	16.0	Detached
6	9414 N Macrum Av	Detached	0.94	21.0	2141	33.0	2141	10.0	Main Floor	31	4835 NE Rodney Av	Detached	0.78	22.5	2500	25.0	2500	18.0	Parking Pad
7	3625 NE 14th Av	Attached	1.26	26.0	2475	25.0	2475	18.0	Tuck Under	32	2068 SE Ivon St A/B	Detached	1.38	31.9	2500	50.0	2500	10.0	Main Floor
8	3631 NE 14th Av	Attached	1.25	26.0	2475	25.0	2475	12.0	Tuck Under	33	6336 SE Carlton St	Detached	0.58	31.0	4800	40.0	4800	15.0	Detached
9	1356 SE 33rd Av	Detached	1.17	34.5	2791	33.3	2791	10.0	Main Floor	34	6316 SE Carlton St	Detached	0.58	32.0	4800	40.0	4800	15.0	Tuck Under
10	6115 SE Harold St	Detached	0.72	27.5	4400	40.0	4400	18.0	Main Floor	35	2725 NE 62nd Av	Detached	0.80	32.0	5500	50.0	5500	15.0	Main Floor
11	4125 NE 7th Av A/B	Detached	0.95	27.0	1850	36.0	1850	10.0	Parking Pad	36	1107 NE Jarrett St	Detached	0.76	22.0	2496	50.0	2496	13.0	Detached
12	3722 SE 26th Av	Detached	0.91	22.0	2500	25.0	2500	16.0	Main Floor	37	3393 NE 74th Av	Detached	0.77	21.7	2500	25.0	2500	18.0	Main Floor
13	2080 SE Ivon St	Detached	1.17	32.5	2500	50.0	2500	10.0	Main Floor	38	4231 SE Yamhill St	Detached	0.80	21.5	3600	36.0	3600	20.0	Main Floor
14	6565 SE 76th Av	Detached	0.74	23.3	2534	25.0	2534	14.0	Main Floor	39	4235 SE Yamhill St	Detached	0.85	22.0	3903	39.0	3903	14.1	Main Floor
15	5032 N Vanderbilt St	Detached	0.68	23.5	3666	33.3	3666	15.0	Detached	40	4816 NE 12th Av	Detached	0.80	21.8	3600	36.0	3600	20.0	Main Floor
16	6624 SE Tolman St	Attached		27.0				14.0	Parking Pad	41	6108 SE Steele St	Detached	0.82	22.5	3155	30.0	3155	10.0	Detached
17	6616 SE Tolman St	Attached		27.0				10.0	Parking Pad	42	1414 SE Franklin St A/B	Detached	1.31	32.0	2500	50.0	2500	10.0	Main Floor
18	6606 SE Tolman St	Attached		27.0				14.0	Parking Pad	43	235 SE 30th Pl	Detached	1.15	33.0	2500	50.0	2500	10.0	Main Floor
	SE Tolman St		0.64		7500	125.0	7500			44	6161 SE 65th Av	Detached	0.82	22.1	3192	40.0	3192	13.0	Main Floor
19	4924 SE 76th Av	Detached	0.65	26.3	4000	40.0	4000	18.0	Main Floor	45	7879 SE Raymond St	Detached	0.71	21.7	4840	44.0	4840	21.0	Main Floor
20	3722 SE Taylor St	Detached	1.08	31.5	3465	31.5	3465	20.0	Main Floor	46	3361 SE 16th Av	Detached	1.00	21.6	2176	32.0	2176	10.0	Main Floor
21	5232 NE 9th Av A/B	Detached	1.38	32.0	2500	50.0	2500	10.0	Main Floor	47	3357 SE 16th Av	Detached	0.94	21.1	2040	30.0	2040	10.0	None
22	6706 SE Ramona St	Detached	0.93	27.5	2400	40.0	2400	10.0	Main Floor	48	6445 SE Carlton St	Detached	0.82	25.0	3200	40.0	3200	13.0	Main Floor
23	6712 SE Ramona St	Detached	0.96	27.5	2400	40.0	2400	10.0	Main Floor	49	1115 NE Jarrett St	Detached	0.77	22.5	2500	50.0	2500	11.5	Main Floor
24	8218 SE 19th Av	Detached	0.79	29.0	3750	37.5	3750	14.0	Main Floor	50	9020 SE Yamhill St	Detached	0.75	20.8	2250	25.0	2250	10.0	Parking Pad
25	6525 SE 62nd Av	Detached	0.85	21.5	2500	50.0	2500	11.0	Main Floor	51	1260 NE Wygant St	Detached	0.99	29.0	2500	50.0	2500	10.0	Tuck Under
26	3403 NE 74th Av	Detached	0.77	21.8	2500	25.0	2500	10.0	Tuck Under	52	4729 NE 13th Av A/B	Detached	0.96	28.6	2504	50.0	2504	10.0	Tuck Under

## R2.5 Zone Changes by District

***The R2.5 comprehensive plan map changes and zone changes can be seen in more detail in the Ordinance, Exhibit C and Exhibit E, respectively.***

This appendix provides information on the methodology used for the R5 to R2.5 proposed zone changes on historically narrow lots. Historically narrow lots have underlying platting that creates lots that are smaller than typical for the current zoning. Most of these lots are in R5 zones and typically are 25 feet wide by 100 feet deep (2,500 square feet). This appendix is organized by districts (North, Northeast, Southeast, East and West). Citywide there are 30 maps that include areas of R5 to R2.5 zone changes.

### Methodology

The following criteria was considered when developing the proposed for a zone change from R5 to R2.5. The zone changes are proposed on roughly half of the inventoried concentrations of historically narrow lots with the most convenient access to services where physical barriers and site constraints are not present. (See *Volume 1: Staff Report and Map Amendments*, Section 5, B. Rezoning Historically Narrow Lots for more information.)

In some cases, the Comprehensive Plan Map land use designations are also being changed to R2.5 to ensure that the designation corresponds to or allows the proposed R2.5 rezoning, in conformance with Policy 10.2 of the Comprehensive Plan. For example, parcels zoned R5 with a land use designation of R5 would become zoned R2.5 with a designation of R2.5. Where the current land use designation doesn't correspond but allows R2.5 zoning, no comprehensive map change is proposed. For example, parcels zoned R5 with a land use designation of "Mixed Use – Dispersed" would become zoned R2.5 but the comprehensive plan designation would remain MU – D. See the map on Page 2.

**Historically Narrow Lots.** Staff reviewed plats citywide to identify areas with historically narrow lots. There tends to be a higher concentration of these historically narrow lot plats in North and Northeast Portland, less in Southeast Portland and almost none in the east and west areas of the city. These concentrations of lots created the inventory of lots to further analyze. Single historically narrow lots or very small areas of historically narrow lots may not have been captured.

**Proximity to Centers, Corridors and Neighborhood Amenities.** The proposed re-zones build on the existing zoning pattern of R2.5 zones applied in areas to create a transition from higher intensity uses to surrounding single-dwelling zones. Because of this, the rezoning proposals are limited to a two- to three-block proximity to:

- Gateway Regional Center, Town Centers and Neighborhood Centers
- Frequent bus lines, MAX light rail stations and streetcar stops
- Neighborhood amenities such as parks, community centers and schools
- Smaller nodes of commercial zoning or neighborhood serving retail uses

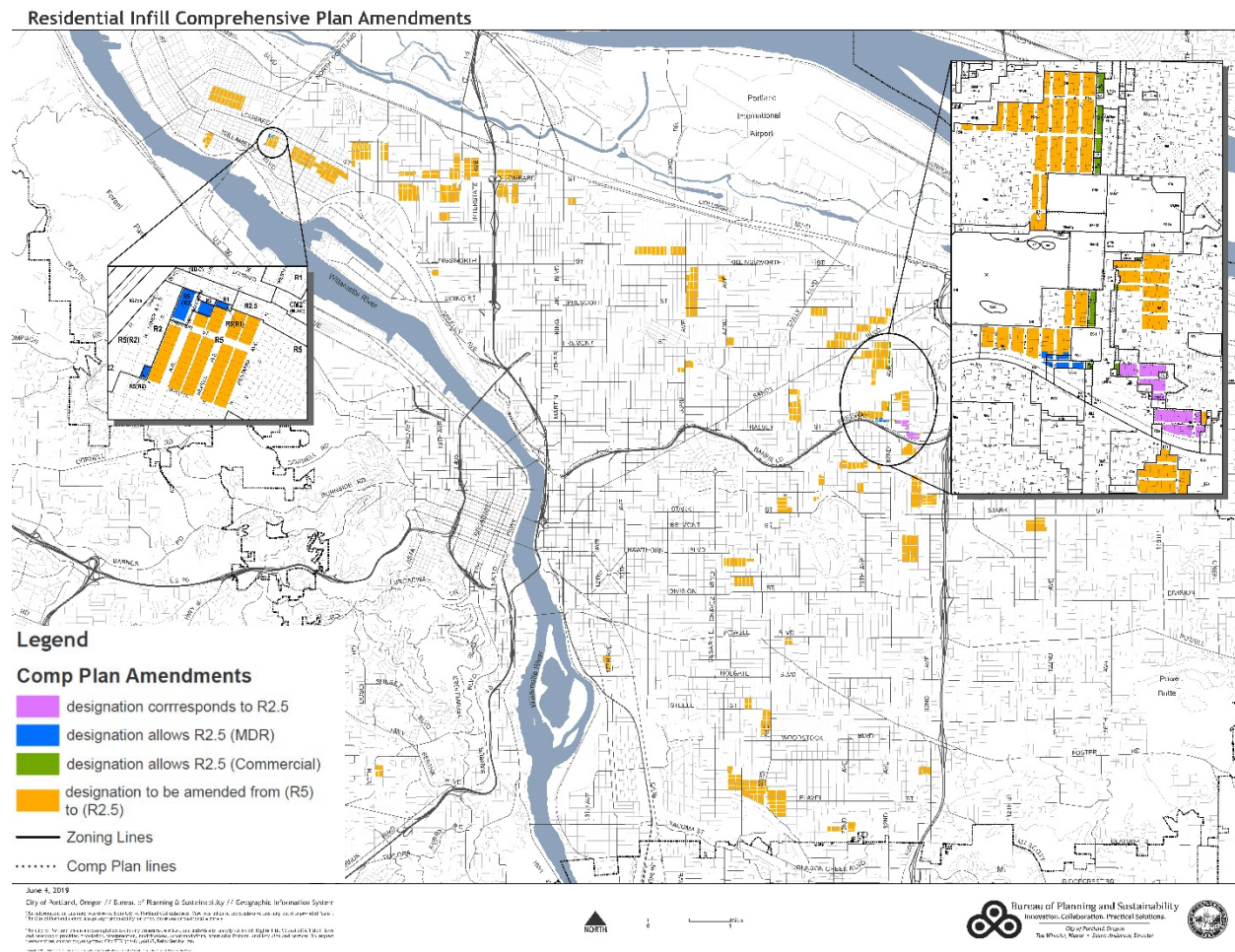
**Physical Factors.** In addition, the presence of the following factors weighed *favorably* towards rezoning:

- **Alley access.** Alley access provides greater flexibility and better design of houses on narrow lots.
- **Consistent zoning pattern.** Where adjacent areas were zoned R2.5 or a higher-intensity zoning designation, the R2.5 zone provides for a logical transition to lower-intensity zones.
- **Existing development patterns.** Areas where historically narrow lots have already been developed with narrow houses.

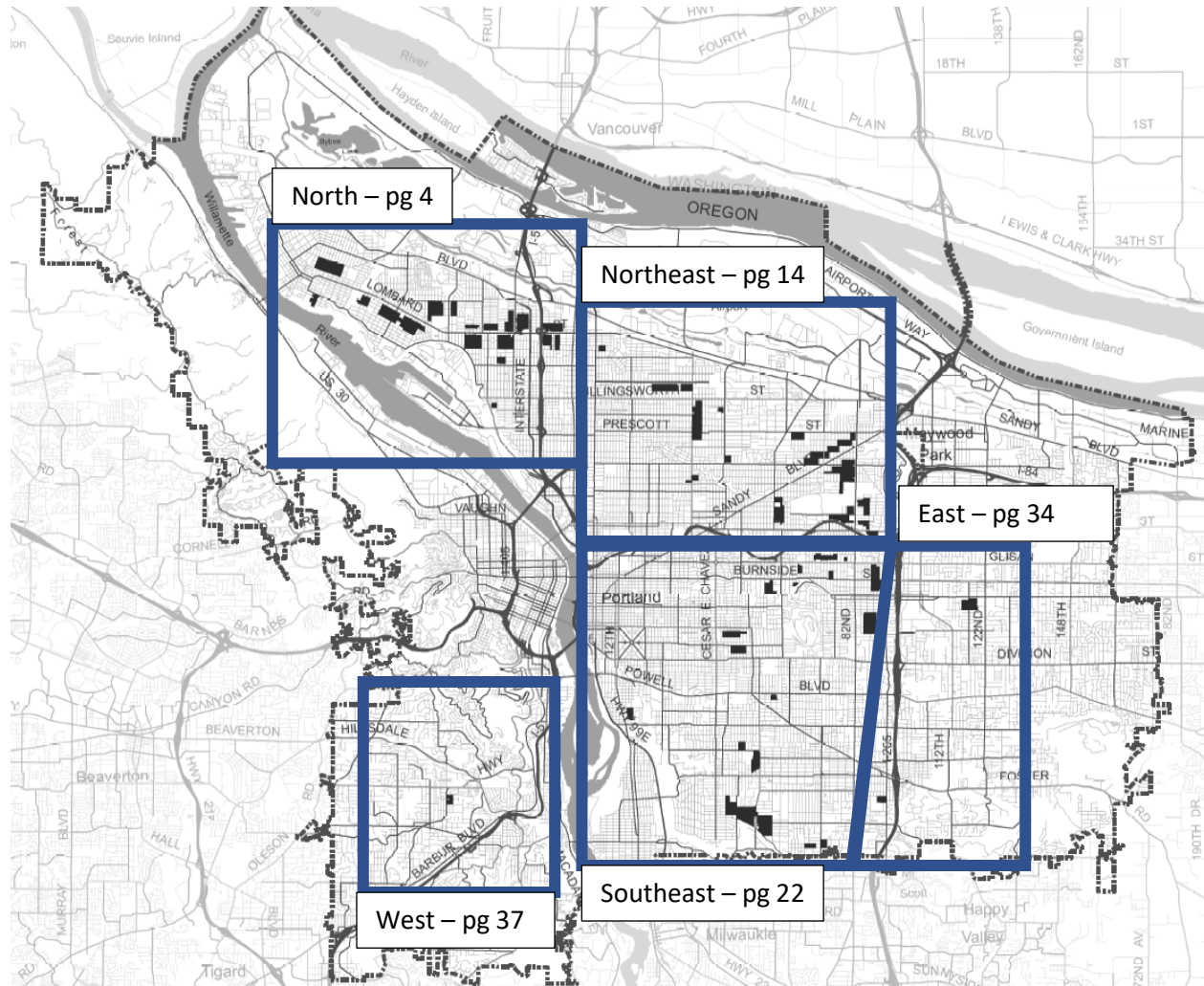
The following physical factors weighed *unfavorably* towards rezoning:

- **Discontinuous and unclear zoning patterns.** Creating inconsistent zoning patterns (for example, R2.5 leapfrogging across other zones or creating islands of isolated R2.5 zones) was avoided.
- **Public land.** Publicly-owned properties that are in public use.
- **Site constraints.** Areas with a high number of unimproved streets, poor connectivity or stormwater or topography issues.

**Equity Lens.** The equity analysis described in *Volume 1: Staff Report and Map Amendments*, Section 5, B. Rezoning Historically Narrow Lots was applied to the rezoning proposals but did not change the outcome.



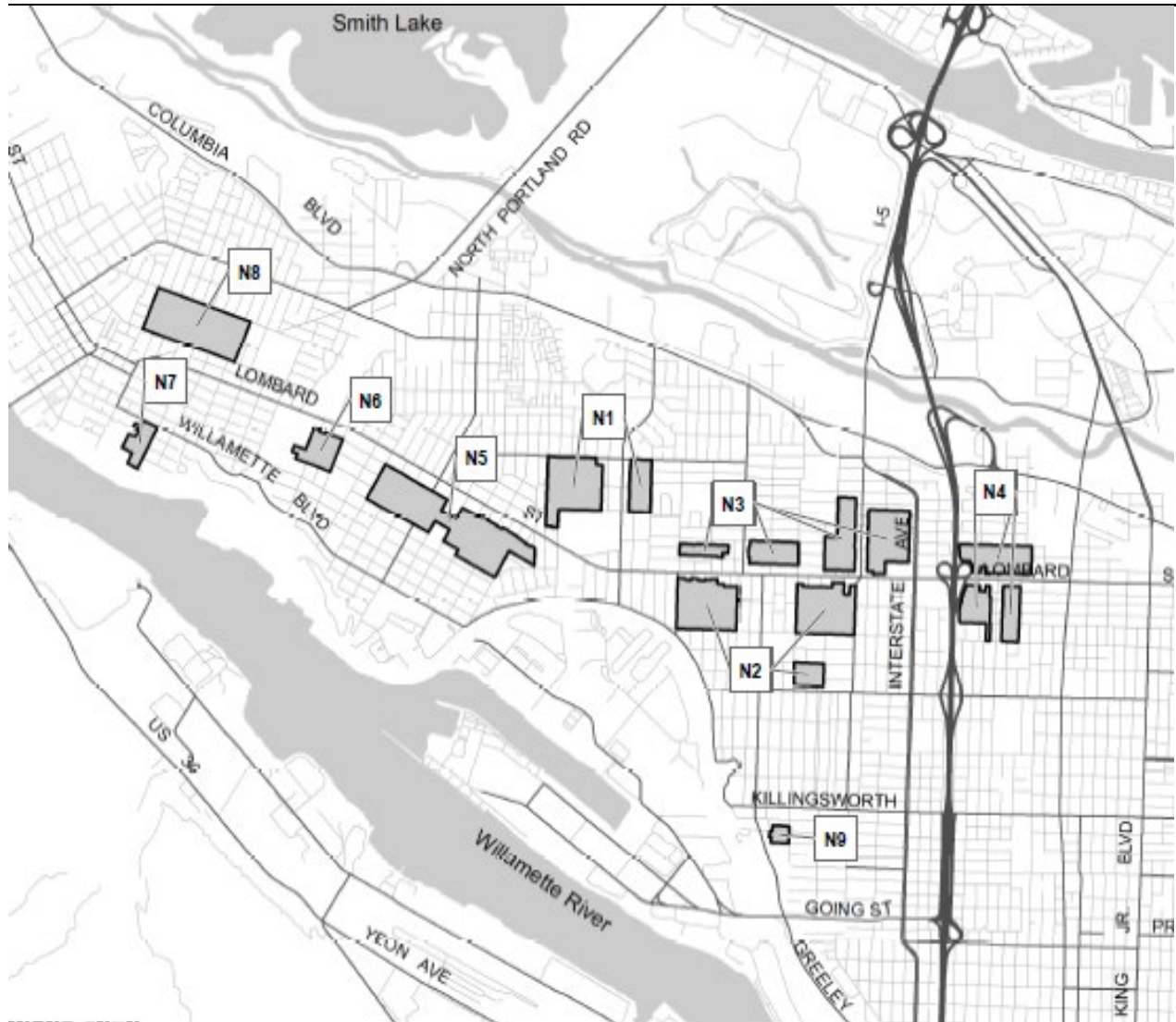
### Key to district area maps





## R2.5 Zone Change Proposals by District – North

There are nine maps that cover the areas of historically narrow lots proposed for zone changes from R5 to R2.5 in the North district.



North – 1

**Description:** R2.5 proposals are located in the area south of N Willis Boulevard and north of Columbia Park between N Dwight Avenue and N Washburne Avenue.

**Existing Zoning Pattern:** There is existing R2.5 zoning between the two sections of proposed R2.5 zoning and north of N Lombard Street.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties are within two blocks of Columbia Park and transit services on Willis and Chautauqua. Some of the properties are within three blocks of commercial and transit services on Lombard. The properties are in between New Seasons Market on Lombard and Village Market in New Columbia.

**Physical Factors:** All the proposed rezoned properties have mid-block alleys. A number of lots in these areas have already taken advantage of historically narrow lots to create R2.5-density development.



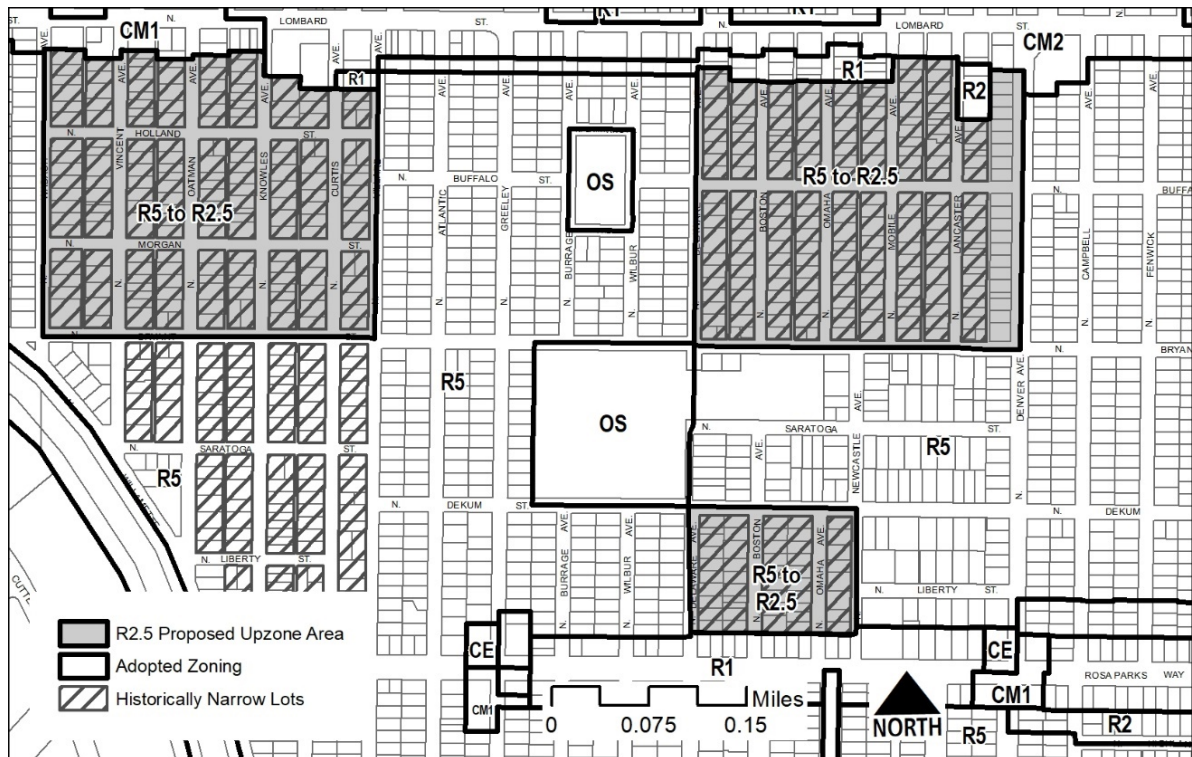
North – 2

**Description:** R2.5 proposals are located in the area south of N Lombard Street and north of N Rosa Parks Way between N Wabash Avenue and N Denver Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides a transition to the R1 and mixed-use zoning south of Lombard and the R1 north of Rosa Parks.

**Proximity to Centers, Corridors and Neighborhood Amenities:** Most of the proposed rezoned properties are within three blocks of commercial and transit services on Lombard. The properties have good access to Gammans City Park, Arbor Lodge Park and Chief Joseph Elementary School. This area is immediately to the west of the MAX Yellow Line on N Interstate Avenue and the station at Rosa Parks. There is bus service on Lombard and Rosa Parks. New Seasons Market is located at Rosa Parks and Interstate.

**Physical Factors:** All the northern properties proposed for rezoning have mid-block alleys. A number of lots in these areas have already taken advantage of historically narrow lots to create R2.5 density development.





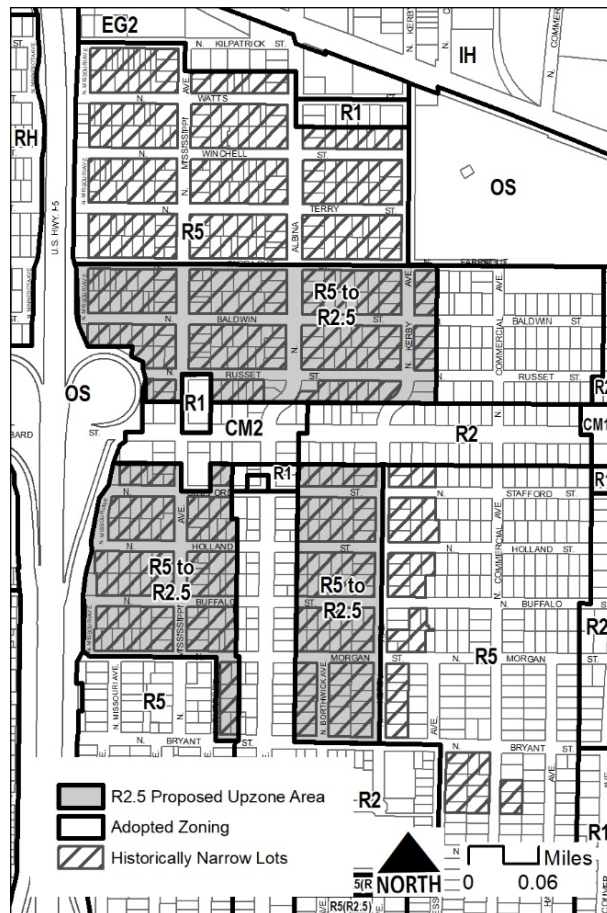
North – 4

**Description:** R2.5 proposals are located in the area north of N Bryant Street and south of N Farragut Street from I-5 east to N Congress Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides a transition to the R2, R1 and mixed-use zoning along N Lombard Street and the R2 zoning along N Albina Avenue.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties are within three blocks of commercial and transit services along Lombard. The MAX Yellow Line Lombard station is directly across I-5. The area is served by two parks – to the north is Farragut Park and to the south is Peninsula Park and Community Center. There are two nearby schools: Holy Redeemer Catholic High School and De La Salle North Catholic High School. For automobile users, the I-5 freeway is in close proximity.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development in this area.



North – 5

**Description:** R2.5 proposals are located in the area south of N Bowdoin Street and north of N Butler Street from N McKenna Avenue east to N Olin Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides a transition from the commercial zoning along N Lombard Street to the R5 zoning to the south by expanding the half-block R2.5 zoning south of Lombard to three blocks.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties are within three blocks of commercial and transit services along Lombard. Portsmouth Park is in the rezoned area, with McKenna Park nearby. Astor Elementary is one block south and Holy Cross Catholic School is adjacent to the proposed rezoned area. University of Portland is located five blocks south, with additional amenities available. New Seasons Market is within two to 11 blocks.

**Physical Factors:** Most of the proposed rezoned properties have mid-block alleys. A number of lots have already taken advantage of historically narrow lots to create R2.5-density development in this area.



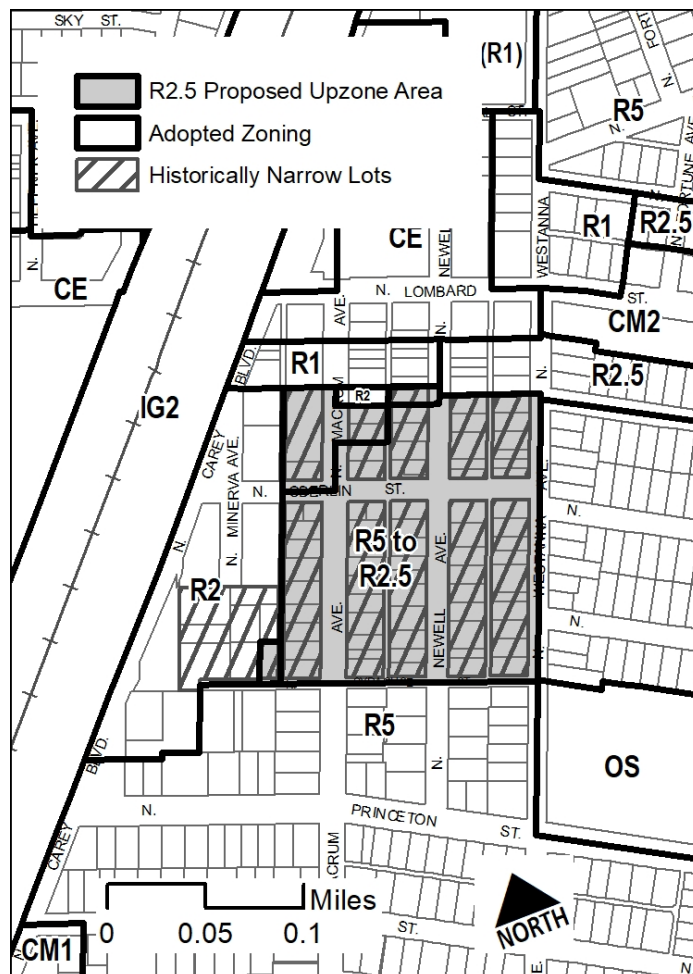
North – 6

**Description:** R2.5 proposals are located in the area south of N Lombard Street and north of N Syracuse Street from N Carey Boulevard east to N Westanna Ave.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides a transition to the R2 to the east and R1 and R2.5 south of Lombard.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties are within three blocks of commercial and transit services along Lombard. There area is served by two parks – McKenna Park directly southeast of the proposed rezone area and Farragut Park further east. Southeast of the proposed rezoned area are Astor Elementary and the University of Portland. New Seasons Market is within one to six blocks.

**Physical Factors:** Most of the proposed rezoned properties have mid-block alleys. A number of lots have already taken advantage of historically narrow lots to create R2.5-density development in this area.







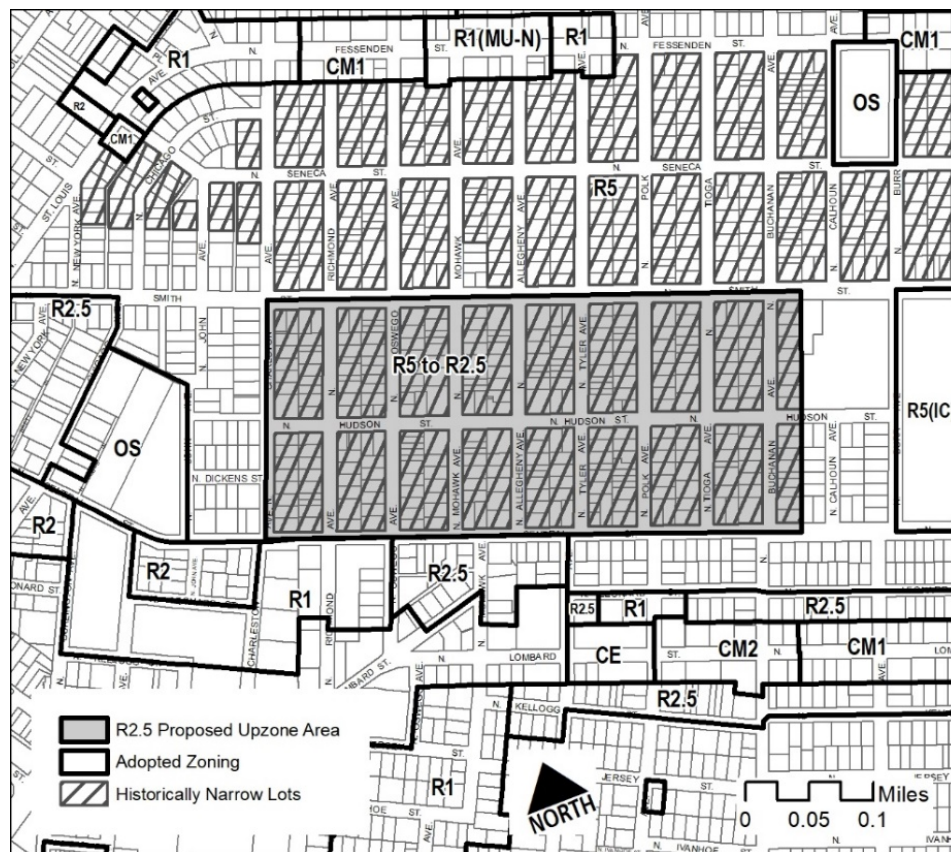
North – 8

**Description:** The R2.5 proposal is located between N Fessenden Street to the north and N Lombard Street to the south from N Charleston Avenue east to N Buchanan Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides a transition between multi-dwelling zoning to the south and R5 zoning to the north.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties are within two to three blocks of commercial and transit services along Fessenden and Lombard. The area is served by two parks – George Park to the east and St. Johns City Park and Community Center to the west. The Regional Pier Park is also to the northwest. James John Elementary School, George Middle School and Roosevelt High School are nearby. This area is close to both the Willamette and Columbia Rivers.

**Physical Factors:** A number of lots in this area have already taken advantage of historically narrow lots to create R2.5-density development.



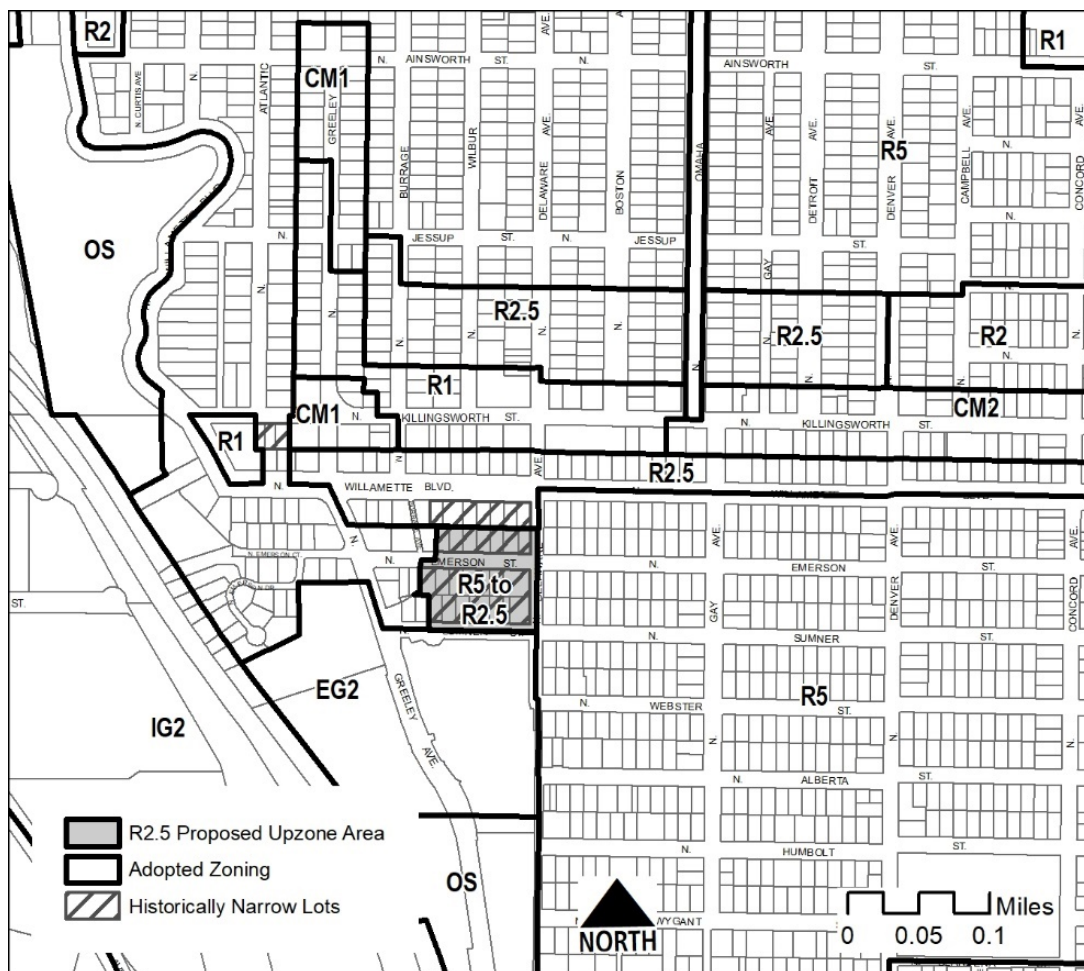
North – 9

**Description:** R2.5 proposals are located in the area south of N Willamette Boulevard and north of N Sumner Street from N Greeley Avenue to N Delaware Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the existing R2.5 zoning along Willamette and provides a transition to EG2 zoning to the south.

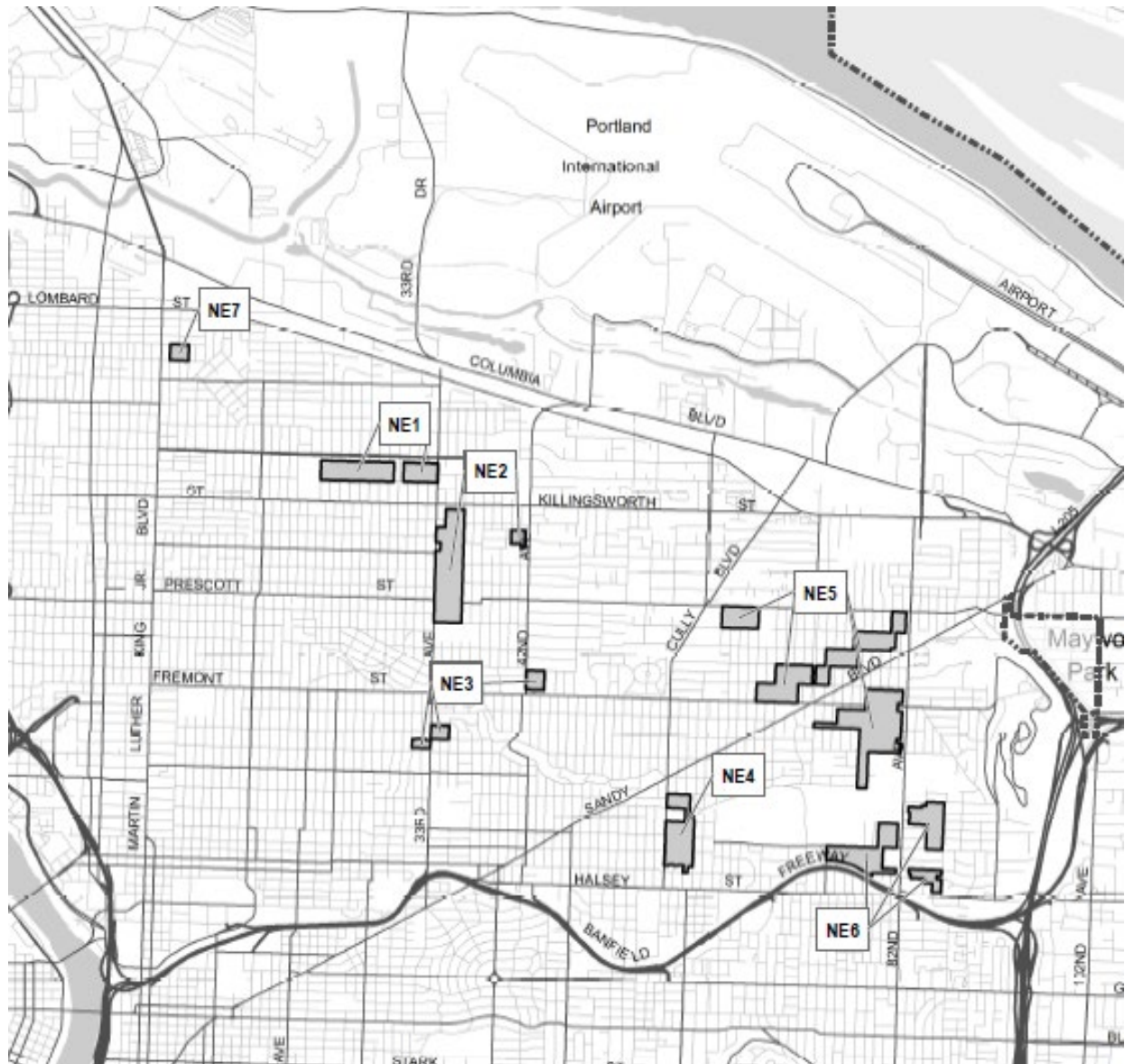
**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties have transit service along Greeley and Killingsworth. The MAX Yellow Line Killingsworth station is four blocks directly east of the area. Madonna Park is directly south and Beach Elementary School is five blocks southeast of the area.

**Physical Factors:** A number of lots in the area have already taken advantage of historically narrow lots to create R2.5-density development.



## R2.5 Zone Change Proposals by District – Northeast

There are seven maps that cover the areas of historically narrow lots proposed for zone changes from R5 to R2.5 in the Northeast district.



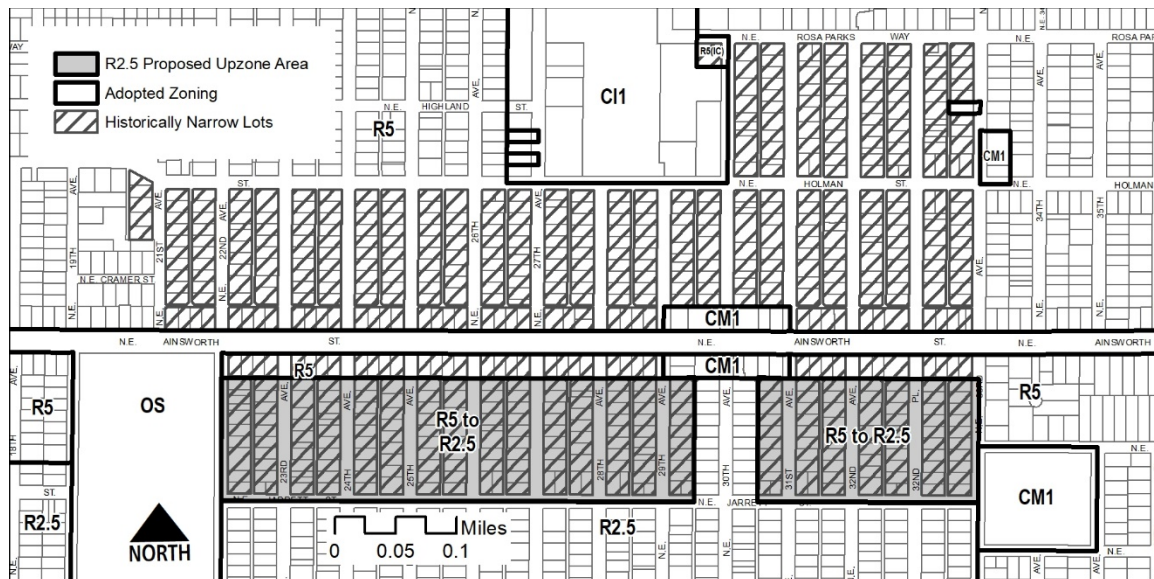
Northeast – 1

**Description:** R2.5 proposals are located in the area south of NE Ainsworth Street and north of NE Jarrett Street from NE 22<sup>nd</sup> Avenue to NE 33<sup>rd</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the area of existing R2.5 zoning south to NE Killingsworth Street. The proposed R2.5 zoning does not include the lots fronting Ainsworth to maintain consistent R5 zoning along the park blocks on this section of Ainsworth.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties have access to transit service along Killingsworth, NE 27<sup>th</sup> Avenue and 33rd. Scattered neighborhood commercial services on 33<sup>rd</sup> include New Seasons Market and Walgreens, and a small commercial node exists at NE 30<sup>th</sup> Avenue and Killingsworth. Alberta Park is directly east of the proposed rezoned area. Vestal Elementary is one block to the south, Faubion Elementary School is three blocks to the north and Concordia University is one block to the north.

**Physical Factors:** All the proposed rezoned properties have mid-block alleys. A number of lots in the area have already taken advantage of historically narrow lots to create R2.5-density development.



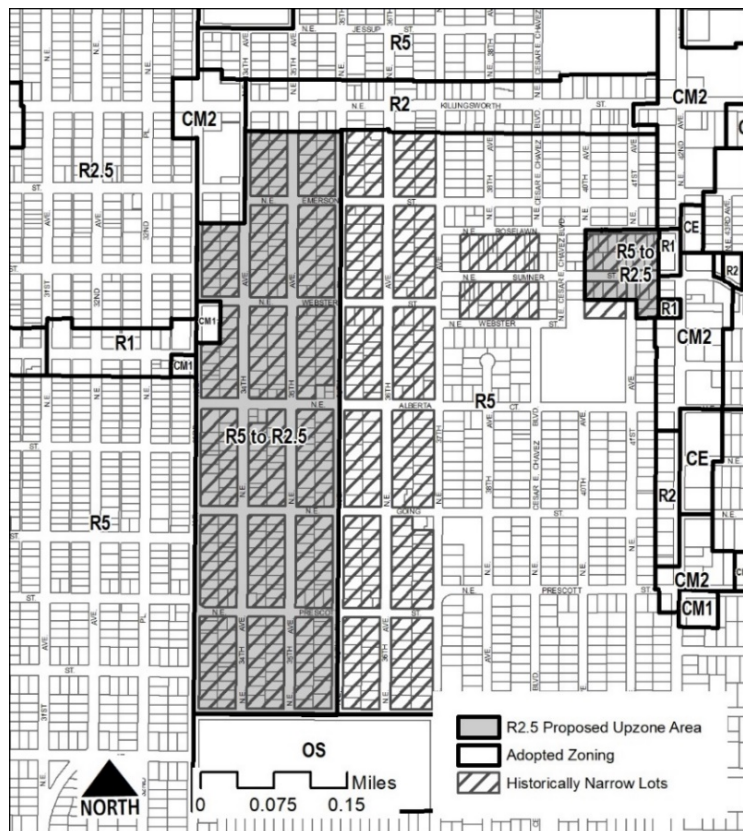
Northeast – 2

**Description:** Most of the proposed R2.5 properties are located south of NE Killingsworth Street and north of NE Skidmore Street from NE 33<sup>rd</sup> Avenue to NE 37<sup>th</sup> Avenue. To the east, a smaller area of R2.5 is proposed south of NE Roselawn Street and north of NE Webster Street just to the west of NE 42<sup>nd</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the pattern of existing R2.5 zoning south of Killingsworth to the west and extends R2.5 zoning down the east side of 33<sup>rd</sup>, a commercial street served by transit.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties are within three blocks of commercial and transit services along 33<sup>rd</sup>, Killingsworth, 42<sup>nd</sup> and NE Alberta Street. New Seasons Market is in the proposed rezone area at NE Emerson Street and 33<sup>rd</sup>. Wilshire Park is directly south of the area along 33<sup>rd</sup>, and Fernhill Park is to the north across Killingsworth. There are neighborhood commercial uses along NE 42<sup>nd</sup> Avenue, and the Portland Community College Workforce Training Center is on Killingsworth.

**Physical Factors:** Several lots in the area for proposed rezoning have already taken advantage of historically narrow lots to create R2.5-density development.



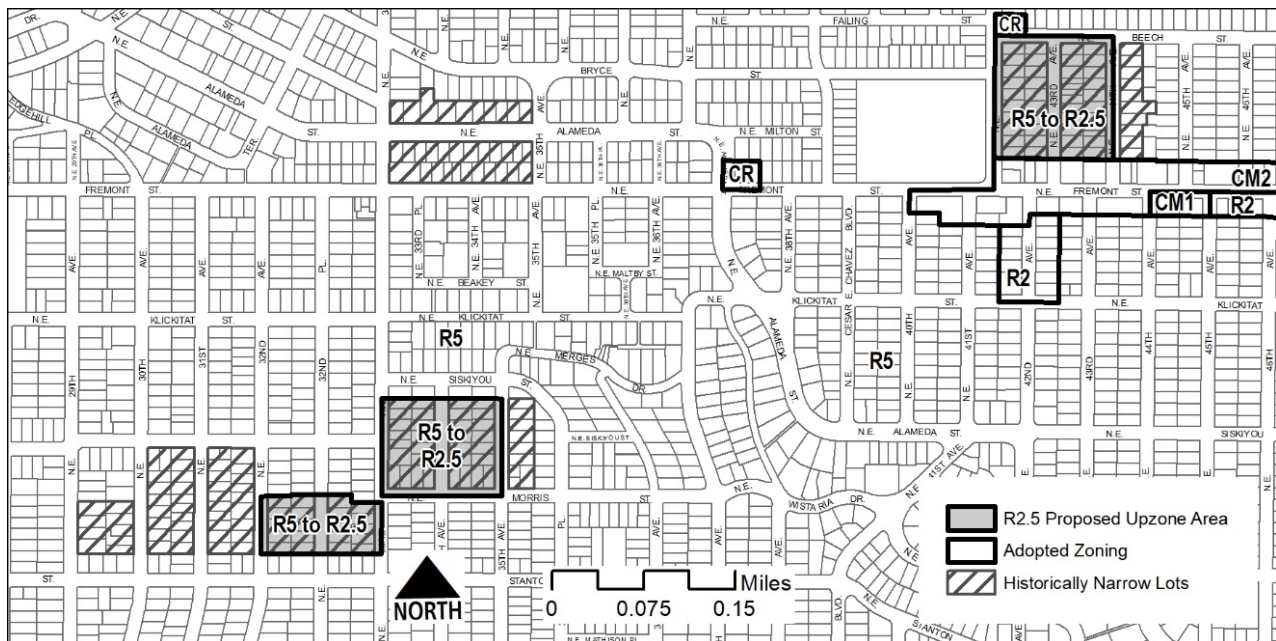
Northeast – 3

**Description:** This map shows three areas of proposed R2.5 rezoning near NE Fremont Street. The area north of Fremont is located between Fremont and NE Beech Street from NE 42<sup>nd</sup> Avenue to NE 44<sup>th</sup> Avenue. One area south of Fremont is bound by NE 33<sup>rd</sup> Avenue, NE 35<sup>th</sup> Avenue, NE Siskiyou Street and NE Morris Street, and another is bound by 33<sup>rd</sup>, NE 32<sup>nd</sup> Avenue and NE Stanton Street near NE Morris Street.

**Existing Zoning Pattern:** The northern area provides a transition to the CM2 zoning along the north side of Fremont and the surrounding R5-zoned areas to the north and west.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The northern area is within one block of commercial and transit services along Fremont as well as transit service along 42<sup>nd</sup>. Rose City Cemetery is three blocks to the east, Wilshire Park is six blocks to the northwest and Beaumont Middle School is across 42<sup>nd</sup> to the west. The southern areas have transit access along 33<sup>rd</sup> and are two blocks north of Grant Park and Grant High School.

**Physical Factors:** In all areas, a number of lots have already taken advantage of historically narrow lots to create R2.5-density development.



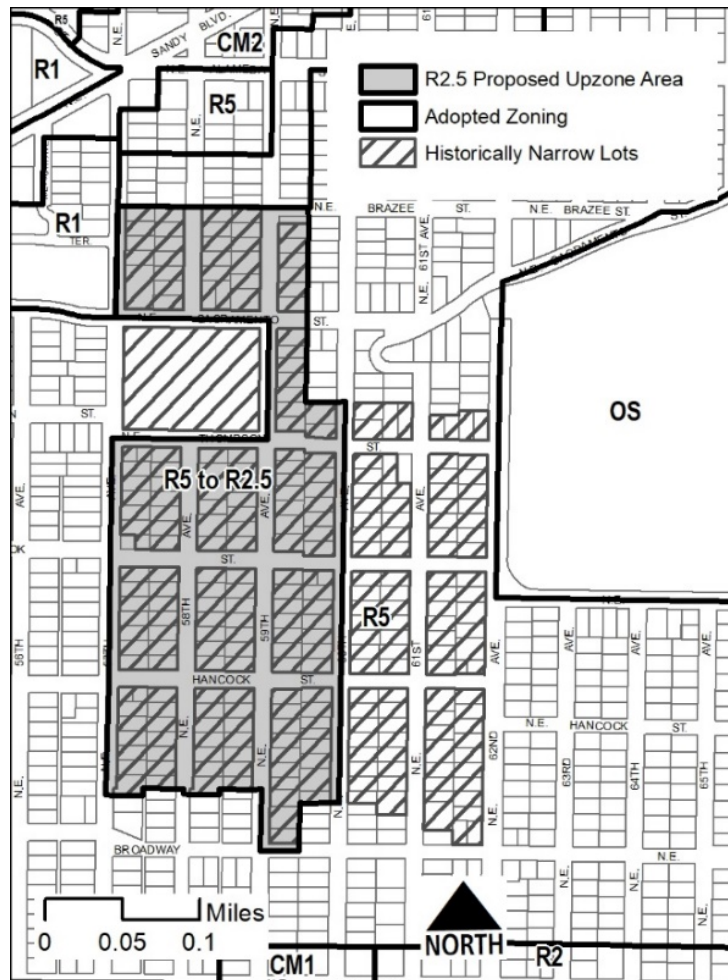
**Northeast – 4**

**Description:** R2.5 proposals are south of NE Braze Street and north of NE Broadway from NE 57<sup>th</sup> Avenue to NE 60<sup>th</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning adjacent to R1 zoning to the northwest, with R5 zoning surrounding the rest of the area.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties have access to transit service along NE Halsey Street and 57<sup>th</sup>. Neighborhood commercial services exist to the north on NE Sandy Boulevard and at the 57<sup>th</sup>/Halsey node. Rose City Park and Normandale Park, Rose City Park Elementary and Frazer School are nearby.

**Physical Features:** Several lots in the area have already taken advantage of historically narrow lots to create R2.5-density development.



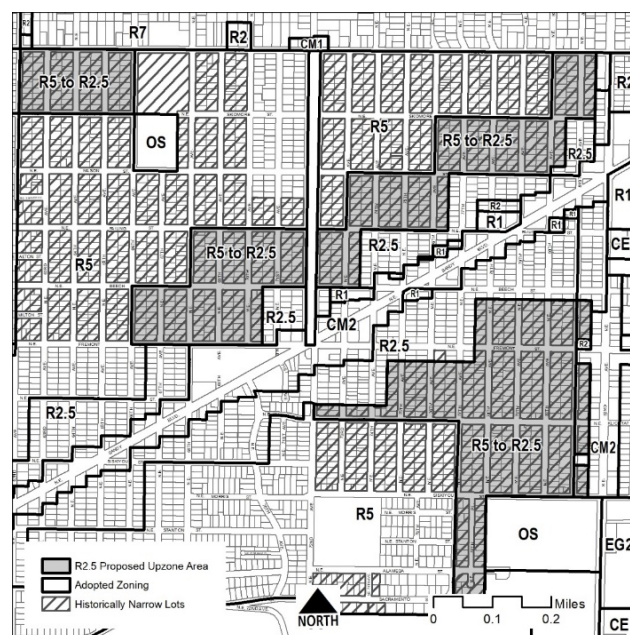
## Northeast – 5

**Description:** R2.5 proposals are located in three areas: north of NE Sandy Boulevard between NE 66<sup>th</sup> Avenue and NE 82<sup>nd</sup> Avenue, south of NE Prescott Street between NE 62<sup>nd</sup> Avenue and 66<sup>th</sup>, and an area that includes NE Beech Street to NE Siskiyou Street between NE 78<sup>th</sup> Avenue and NE 81<sup>st</sup> Avenue as well as properties along NE 77<sup>th</sup> Avenue between Siskiyou and NE Sacramento Street.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the area of existing R2.5 zoning. On the north side of Sandy, the proposed R2.5 area extends the R2.5 zone one block north of the current R2.5 zone that is adjacent to mixed use zoning along Sandy. South of Sandy, the proposed R2.5 area extends the R2.5 zone adjacent to mixed use zoning along Sandy by one to three blocks.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed areas for rezoning have access to frequent transit service along the major corridors of NE 82<sup>nd</sup> Avenue and Sandy. Neighborhood commercial services exist on both streets, with the Comprehensive Plan-designated Neighborhood Center extending from NE 72<sup>nd</sup> Avenue to 82<sup>nd</sup>. This area includes Madison High School, Glenhaven Park, Roseway Heights Elementary School and Rose City Golf Course all within three to six blocks. The five-block area between 62<sup>nd</sup> and 66<sup>th</sup> south of Prescott is in close proximity to Harvey Scott School, Wellington Park and the commercial area at NE Cully Boulevard and Prescott. Transit is available on Prescott connecting to Cully and 82<sup>nd</sup>.

**Physical Factors:** A number of lots in these areas for proposed rezoning have already taken advantage of historically narrow lots to create R2.5-density development.





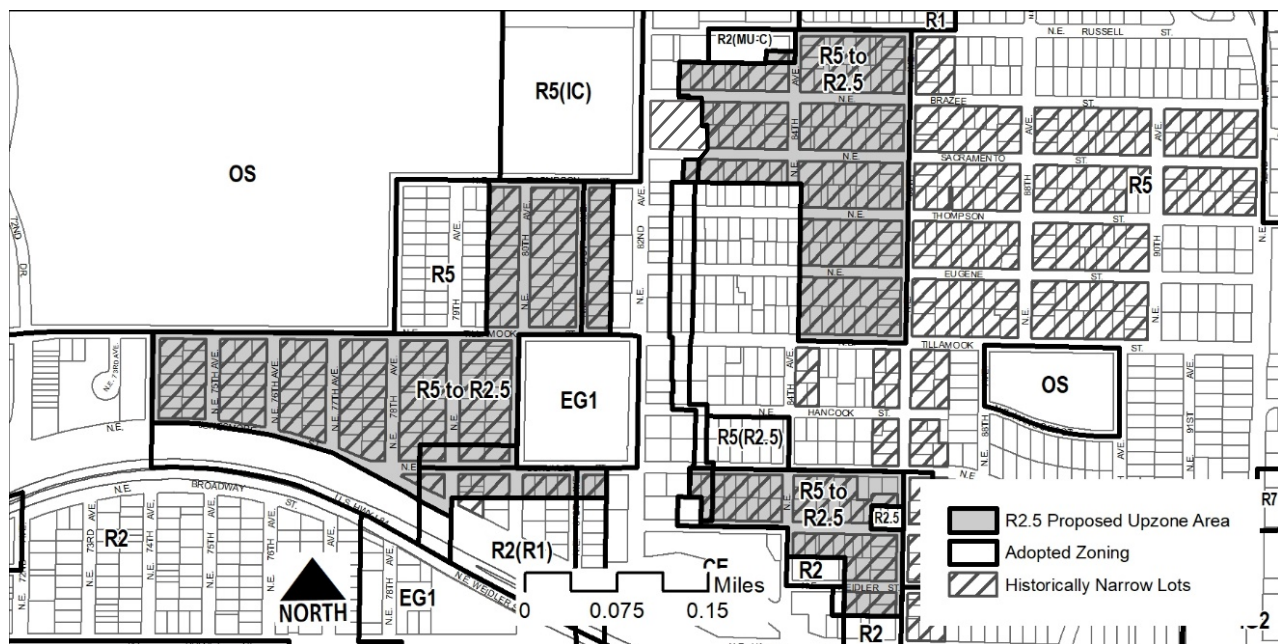
Northeast – 6

**Description:** R2.5 proposals are located in three areas: east of NE 82<sup>nd</sup> Avenue to NE 86<sup>th</sup> Avenue between NE Russell Street and NE Tillamook Street, NE Schuyler Street to I-84, and west of 82<sup>nd</sup> between Rose City Golf Course and I-84.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the existing R2.5 zone by one block east of 82<sup>nd</sup> and by two to six blocks west of 82<sup>nd</sup>, where it is adjacent to the golf course.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned areas have access to frequent transit service along 82<sup>nd</sup> and the MAX Light Rail 82<sup>nd</sup> Avenue station. Scattered neighborhood commercial services exist on 82<sup>nd</sup>. This area includes Madison High School, Glenhaven Park and the Rose City Golf Course. East of 82<sup>nd</sup>, Hancock Park is nearby at NE 87<sup>th</sup> Avenue and Tillamook.

**Physical Factors:** A number of lots in the area for proposed rezoning have already taken advantage of historically narrow lots to create R2.5-density development.



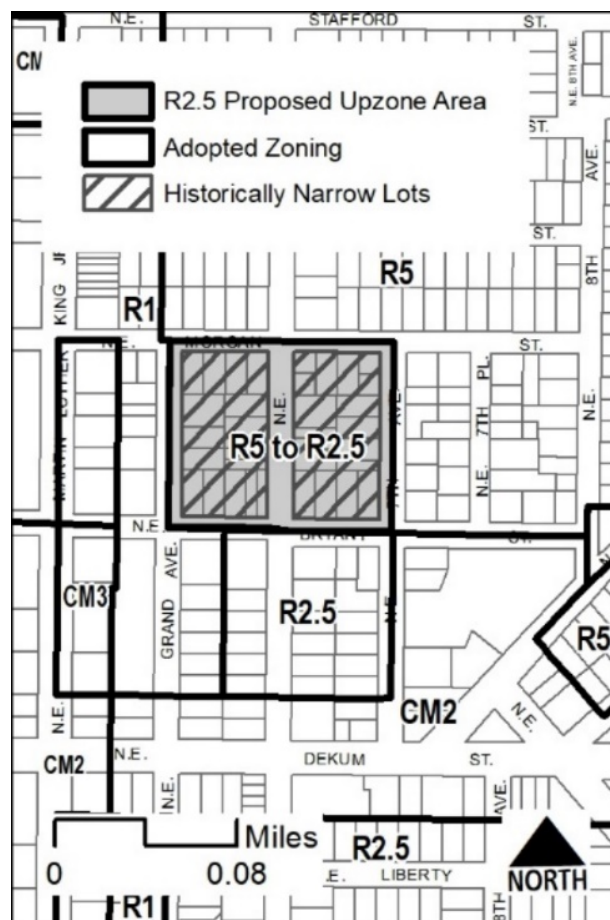
## Northeast – 7

**Description:** R2.5 proposals are located from NE Morgan Street south to NE Bryant Street from NE Grand Avenue east to NE 7<sup>th</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the area of existing R2.5 zoning north one block. This one-by-two-block proposal abuts medium-density residential (R1) zoning to the west.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties have access to transit service along Grand and NE Martin Luther King, Jr. Boulevard (MLK) and NE Dekum Street. Neighborhood commercial services exist on Dekum and MLK. Woodlawn Park is east of the proposed rezoned area, with Woodlawn Elementary School and various childcare facilities nearby.

**Physical Factors:** Several lots in the area have already taken advantage of historically narrow lots to create R2.5-density development.





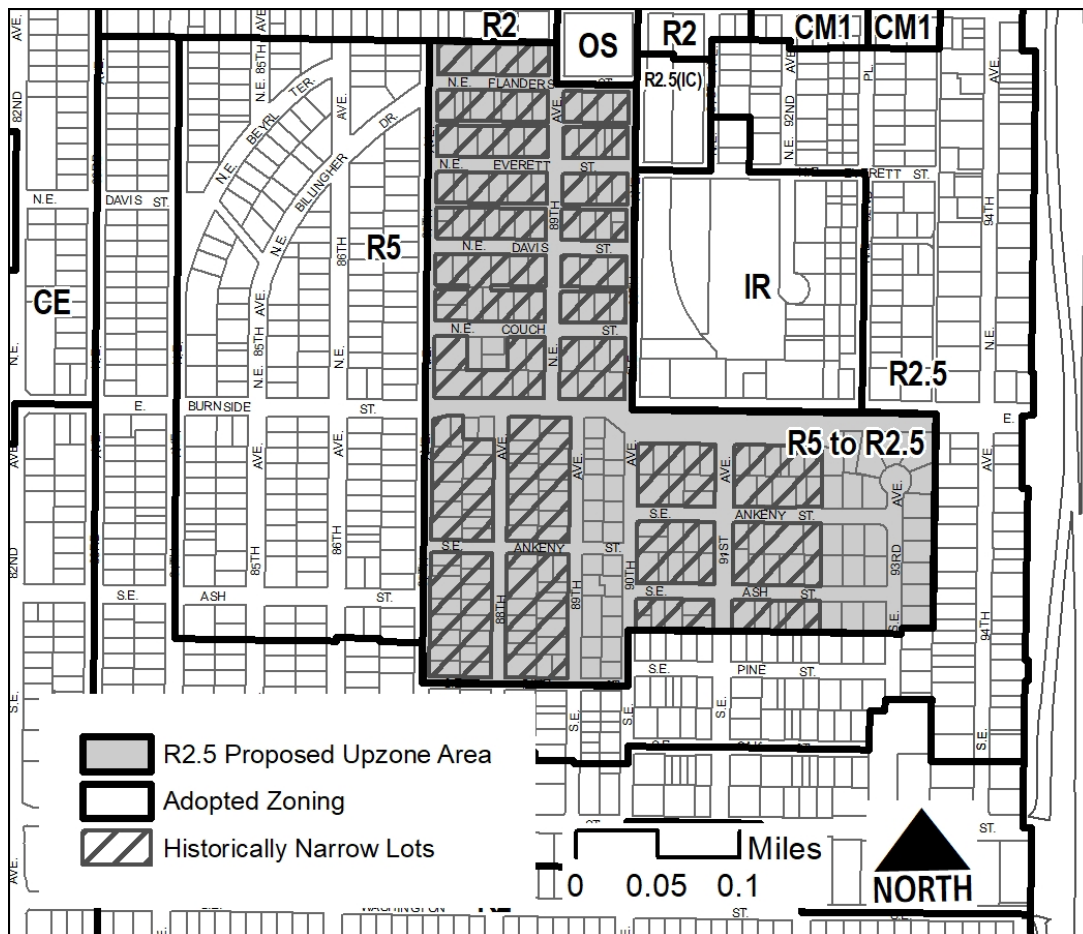
Southeast – 1

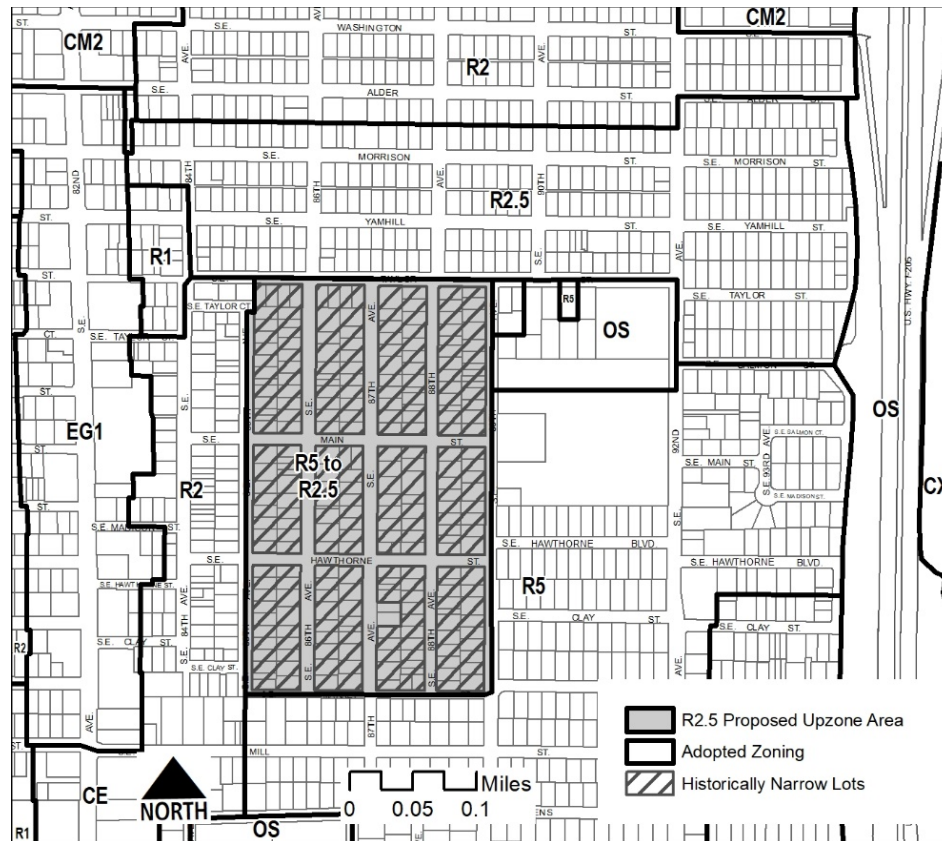
**Description:** R2.5 proposals are located in the area from SE Taylor Street south to SE Market Street from SE 85<sup>th</sup> Avenue to SE 89<sup>th</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides transition from the R2 zoning along SE 82<sup>nd</sup> Avenue and the R5 zoning to the east. R2.5 zoning currently exists north of Taylor.

**Proximity to Centers, Corridors and Neighborhood Amenities:** Most of the proposed rezoned properties are within three blocks of commercial and transit services along 82<sup>nd</sup>, as well as transit service to the north along SE Washington Street and SE Alder Street and to the south along SE Division Street. The area is directly west of Berrydale Park and the Creative Science School at Clark. Harrison Park and Harrison Park Elementary School are two blocks south of this area.

**Physical Factors:** A number of lots in the area have already taken advantage of historically narrow lots to create R2.5-density development.





## Southeast – 2

**Description:** R2.5 proposals are located in the area from NE Glisan Street south to SE Pine Street from 87<sup>th</sup> Avenue to SE 93<sup>rd</sup> Avenue.

**Existing Zoning Pattern:** This area is surrounded to the east and south with R2.5 zoning.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties are within five blocks of commercial and transit services along 82<sup>nd</sup> Avenue. Transit service to the north along Glisan connects to the Gateway Transit Center and to the south along SE Washington Street and SE Alder Street. The area is directly west and south of Columbia Christian School. Montavilla Park and Multnomah University are two blocks north of this area.

**Physical Factors:** A number of lots in the area have already taken advantage of historically narrow lots to create R2.5-density development. Properties north of NE Couch Street have mid-block alleys.

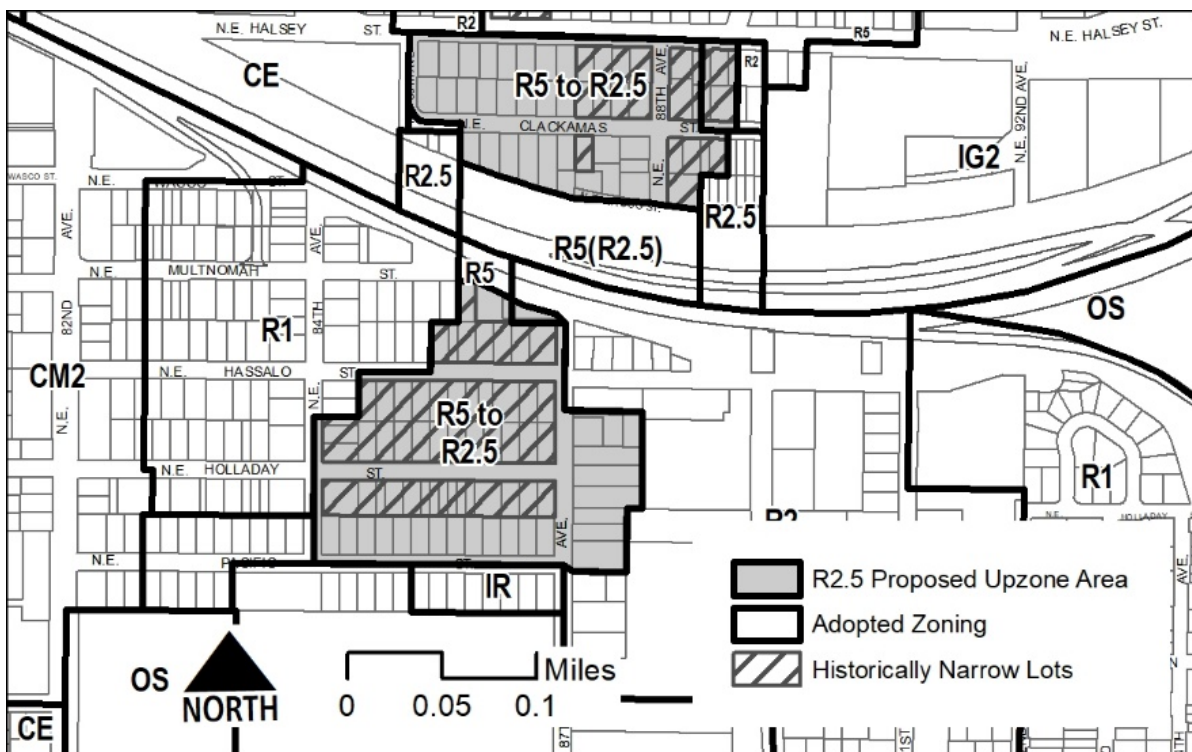
Southeast – 3

**Description:** R2.5 proposals straddle I-84 south of NE Halsey Street and north of NE Pacific Street from NE 84<sup>th</sup> Avenue to NE 90<sup>th</sup> Avenue.

**Existing Zoning Pattern:** North of I-84, this area is east of CE zoning and west of IG2 zoning. South of I-84, this area is east of R1 zoning and west of R2 zoning.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed rezoned properties are within one to two blocks of commercial and transit services along NE 82<sup>nd</sup> Avenue that connects to the MAX Light Rail 82nd Avenue station. The area is directly north of Montavilla Park and Multnomah University.

**Physical Factors:** A number of lots in the area along NE Clackamas Street and NE Holladay Street have already taken advantage of historically narrow lots to create R2.5-density development.



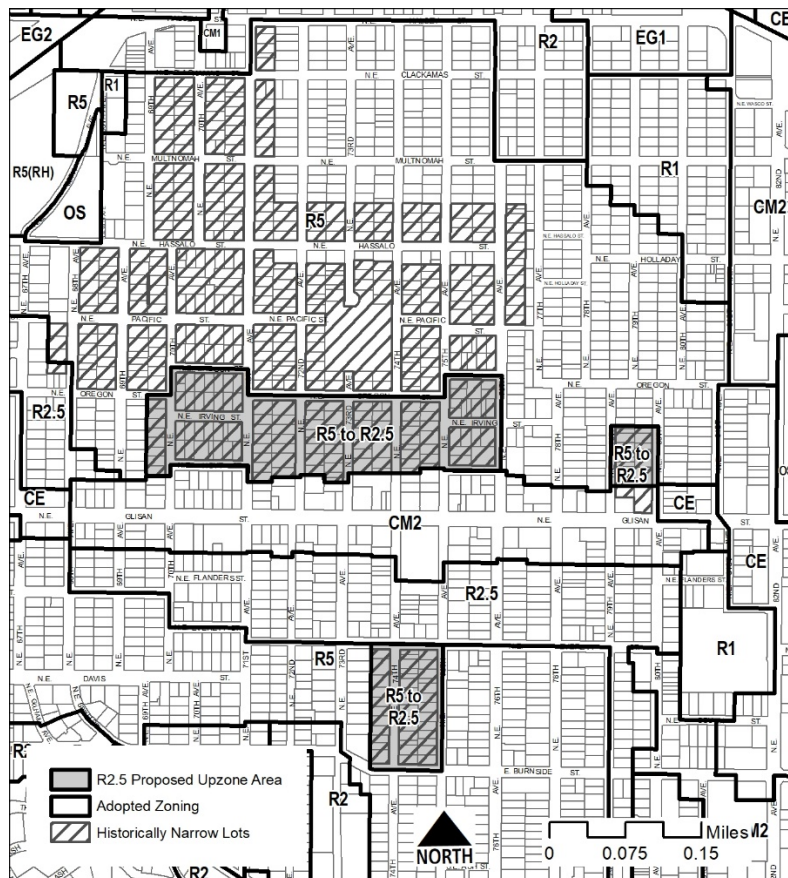
Southeast – 4

**Description:** Most of the properties proposed for R2.5 zoning are located in the area north of NE Glisan Street and south of NE Oregon Street from NE 68<sup>th</sup> Avenue to NE 80<sup>th</sup> Avenue. To the south, a smaller area of R2.5 is proposed between NE Burnside Street and NE Everett Street between NE 73<sup>rd</sup> Avenue and NE 75<sup>th</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides a transition to the CM2 north of Glisan. It also reflects the existing R2.5 zoning pattern on the south side of Glisan. To the south, the proposed R2.5 expands R2.5 zoning along the proposed Seventies Neighborhood Greenway alignment.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The northern properties are within three blocks of commercial services including a grocery store and transit service along Glisan, and they are five blocks west of Montavilla Park. The southern properties are directly north of transit service on Burnside. East of the proposed rezoned area is Vestal Elementary School. The Seventies Neighborhood Greenway alignment is proposed along 75<sup>th</sup> Avenue.

**Physical Factors:** A number of lots in the southern area have already taken advantage of historically narrow lots to create R2.5-density development.



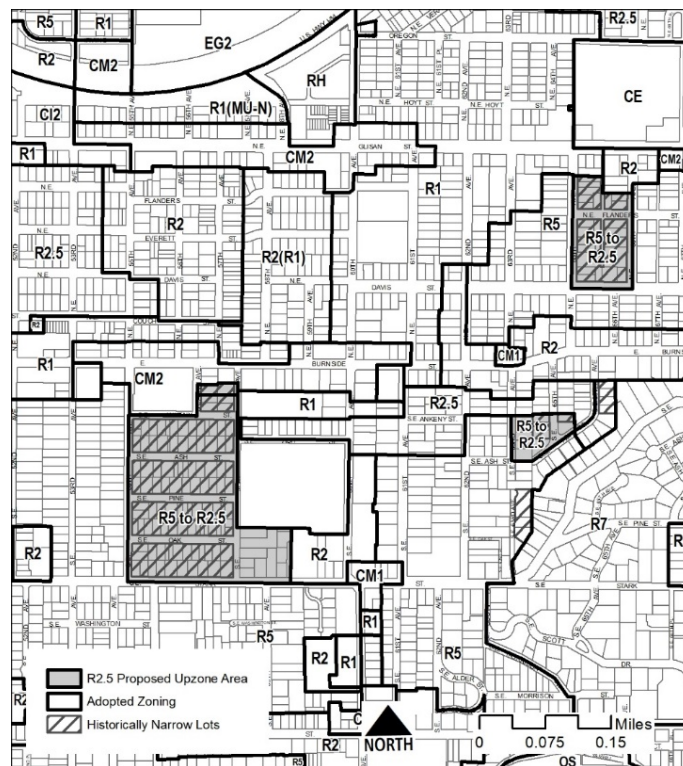
## Southeast – 5

**Description:** Most of the properties proposed for R2.5 zoning are located in the area from East Burnside Street south to SE Stark Street between SE 55<sup>th</sup> Avenue and SE 66<sup>th</sup> Avenue. To the north a smaller area of R2.5 is proposed between NE Glisan Street and NE Davis Street from NE 65<sup>th</sup> Avenue to 66<sup>th</sup>.

**Existing Zoning Pattern:** The proposed R2.5 zoning reflects existing application of the R2.5 zoning in the area. The two areas of proposed R2.5 to the south of Burnside are connected by existing R2.5 zoning.

**Proximity to Centers, Corridors and Neighborhood Amenities:** Most of the proposed properties south of Burnside are within three blocks of commercial services, including a QFC grocery store, and transit service along Burnside. All proposed rezoned areas have good access to MAX Light Rail service along Burnside. The northern properties are within three blocks of commercial and transit services along Glisan. Schools in the area include Mt. Tabor Middle School and Glencoe Elementary School.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development.





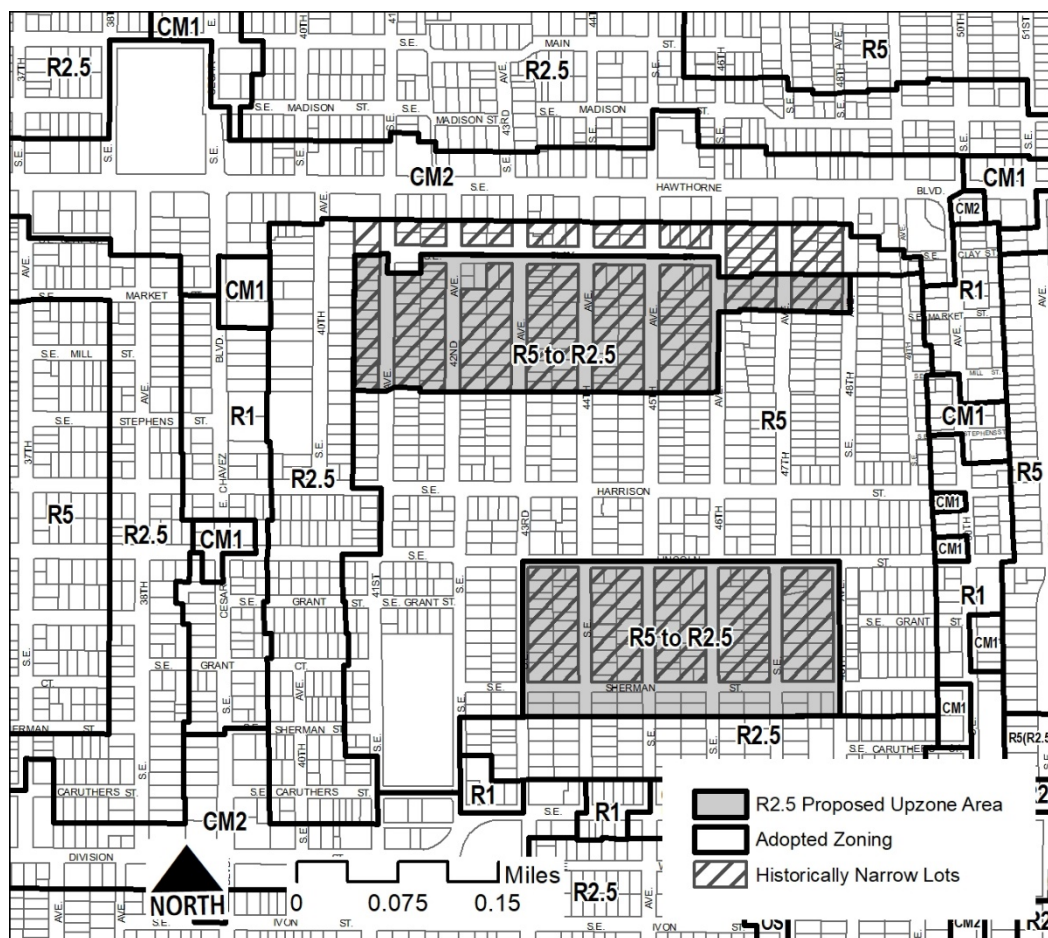
Southeast – 6

**Description:** The northern properties proposed for R2.5 zoning are located from SE Clay Street south one half-block from SE 40<sup>th</sup> Avenue to SE 48<sup>th</sup> Avenue. The southern properties are located from SE Division Street north to SE Lincoln Street from SE 43<sup>rd</sup> Avenue to 48<sup>th</sup>.

**Existing Zoning Pattern:** In both areas, the proposed R2.5 zoning extends the existing pattern of R2.5 zoning along SE Hawthorne Boulevard, Division and SE Cesar E. Chavez Boulevard.

**Proximity to Centers, Corridors and Neighborhood Amenities:** All the proposed properties are within three blocks of commercial and transit services along Hawthorne and Division. The area is bound by frequent bus service on Hawthorne, Division, Cesar E. Chavez and SE 50<sup>th</sup> Avenue. Richmond Elementary School is located within five blocks of the R2.5 proposals.

**Physical Factors:** A number of lots have taken advantage of historically narrow lots to create R2.5-density development.



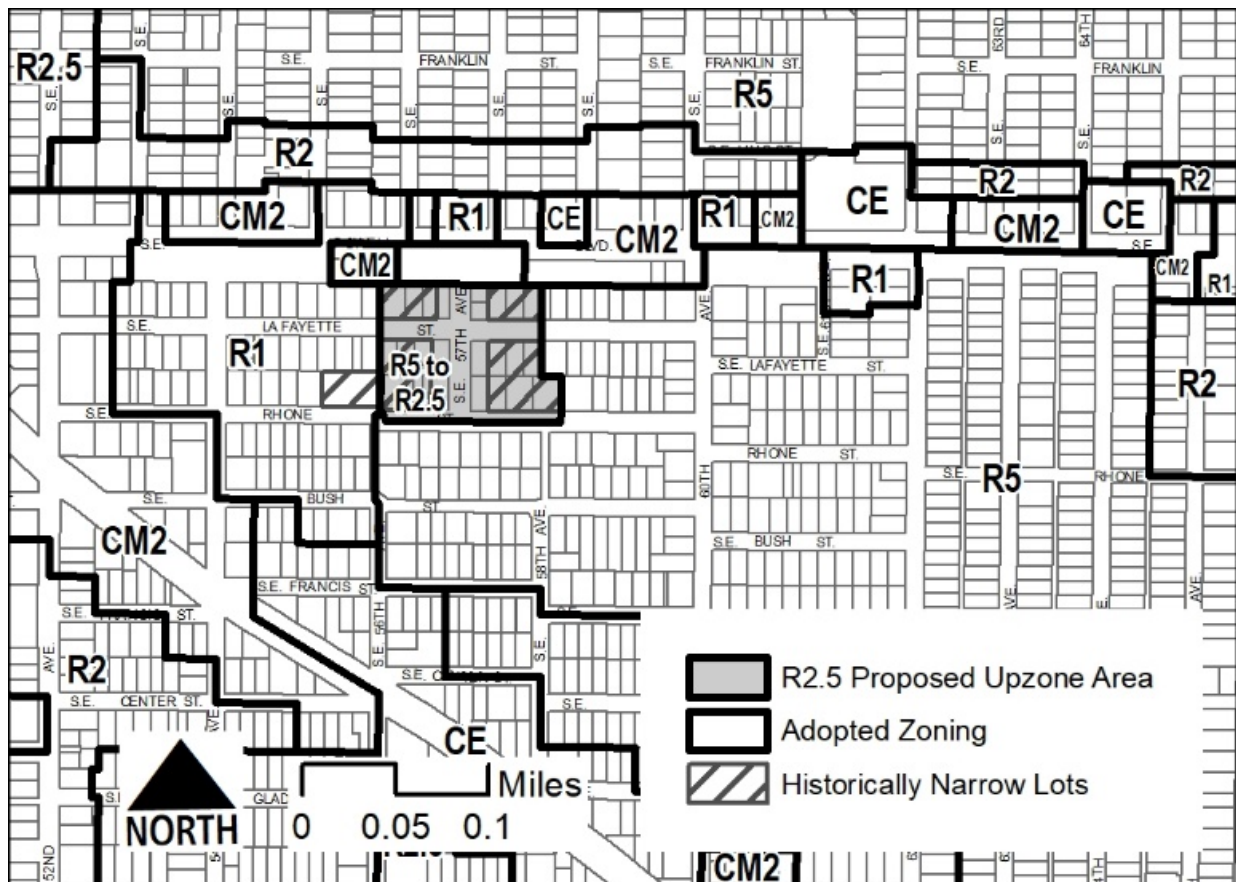
Southeast – 7

**Description:** The R2.5 proposals are several lots deep east and west of SE 57<sup>th</sup> Avenue south of SE Powell Boulevard and north of SE Rhone Street.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides a transition to the CM2 and row of off-street parking south of Powell, as well as between the R1 zoning east of SE 52<sup>nd</sup> Avenue and the surrounding R5 zoning. R2.5 zoning of similar depth exists along SE Foster Road.

**Proximity to Centers, Corridors and Neighborhood Amenities:** All the proposed rezoned properties are within three blocks of commercial and transit services along Powell. The area is four blocks north of commercial and transit services on Foster. Creston Park and Creston Elementary School are located four blocks to the west. Franklin High School is located four blocks to the north.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development.



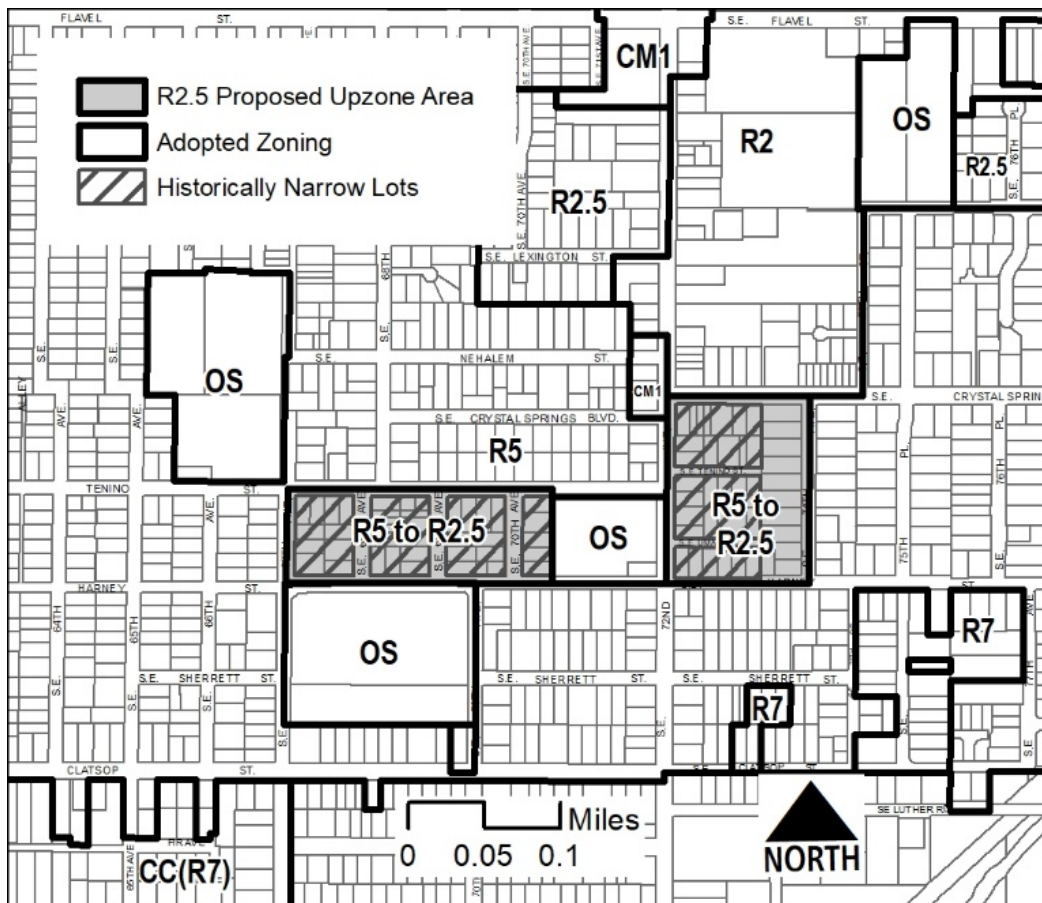
Southeast – 8

**Description:** The R2.5 proposals are in the area from SE Harney Street north to SE Crystal Springs Boulevard between SE 67<sup>th</sup> Avenue and SE 74<sup>th</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning provides a transition between the R2 zoning north of Crystal Springs and the OS zoning on the nearby parks and cemetery. R2.5 zoning currently exists north of the proposals.

**Proximity to Centers, Corridors and Neighborhood Amenities:** Most of the proposed rezoned properties are within three blocks of transit service along SE 72<sup>nd</sup> Avenue. The area is surrounded by open spaces including Harvey Park to the south, Mount Hood Little League and a cemetery. Whitman Elementary School is located to the north.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development.



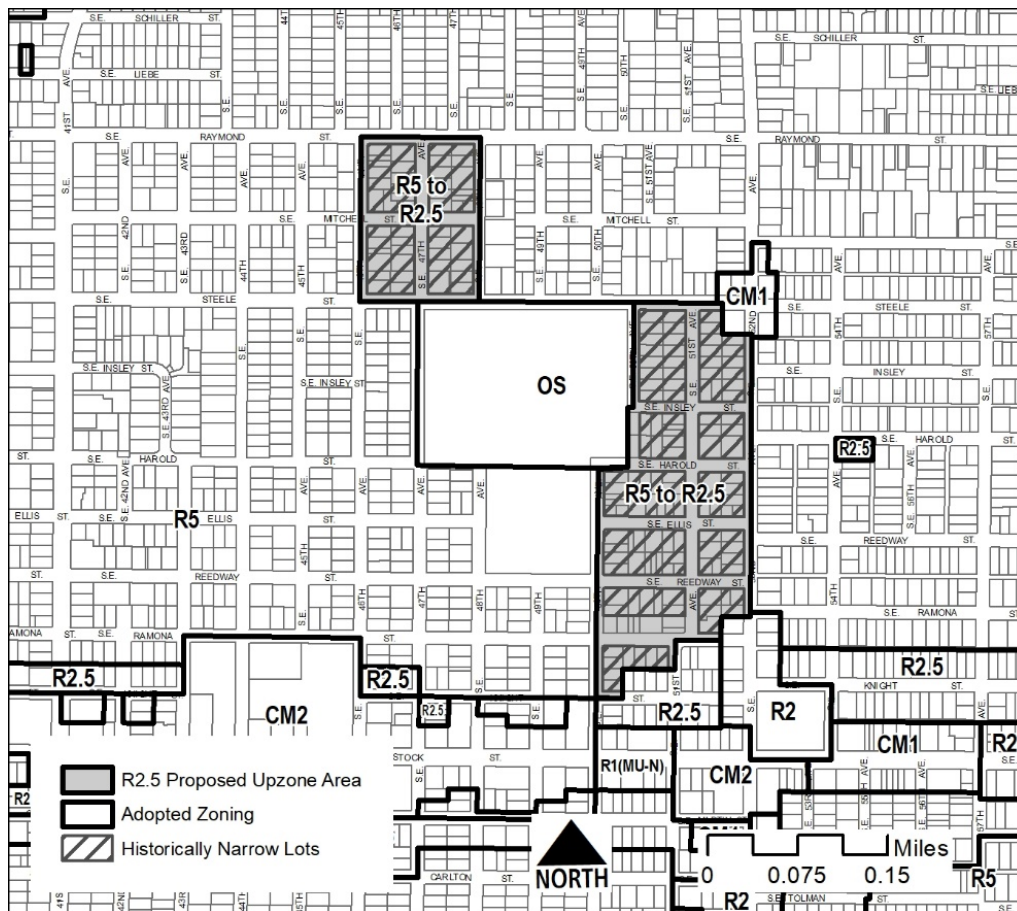
Southeast – 9

**Description:** The northern properties proposed for R2.5 zoning are located from SE Steele Street north to SE Raymond Street between SE 46<sup>th</sup> Avenue and SE 48<sup>th</sup> Avenue. The southern properties are located from SE Knight Street north to SE Steele Street between SE 50<sup>th</sup> Avenue and SE 52<sup>nd</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning in the southern properties extends the R2.5 zoning that currently existing along SE Woodstock Boulevard.

**Proximity to Centers, Corridors and Neighborhood Amenities:** Some of the southern properties are within three blocks of commercial and transit services along Woodstock. Both areas have access to transit along 52<sup>nd</sup> and Steele. Both areas are adjacent to Woodstock Park, and Woodstock Elementary School is located to the south of the park.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development.



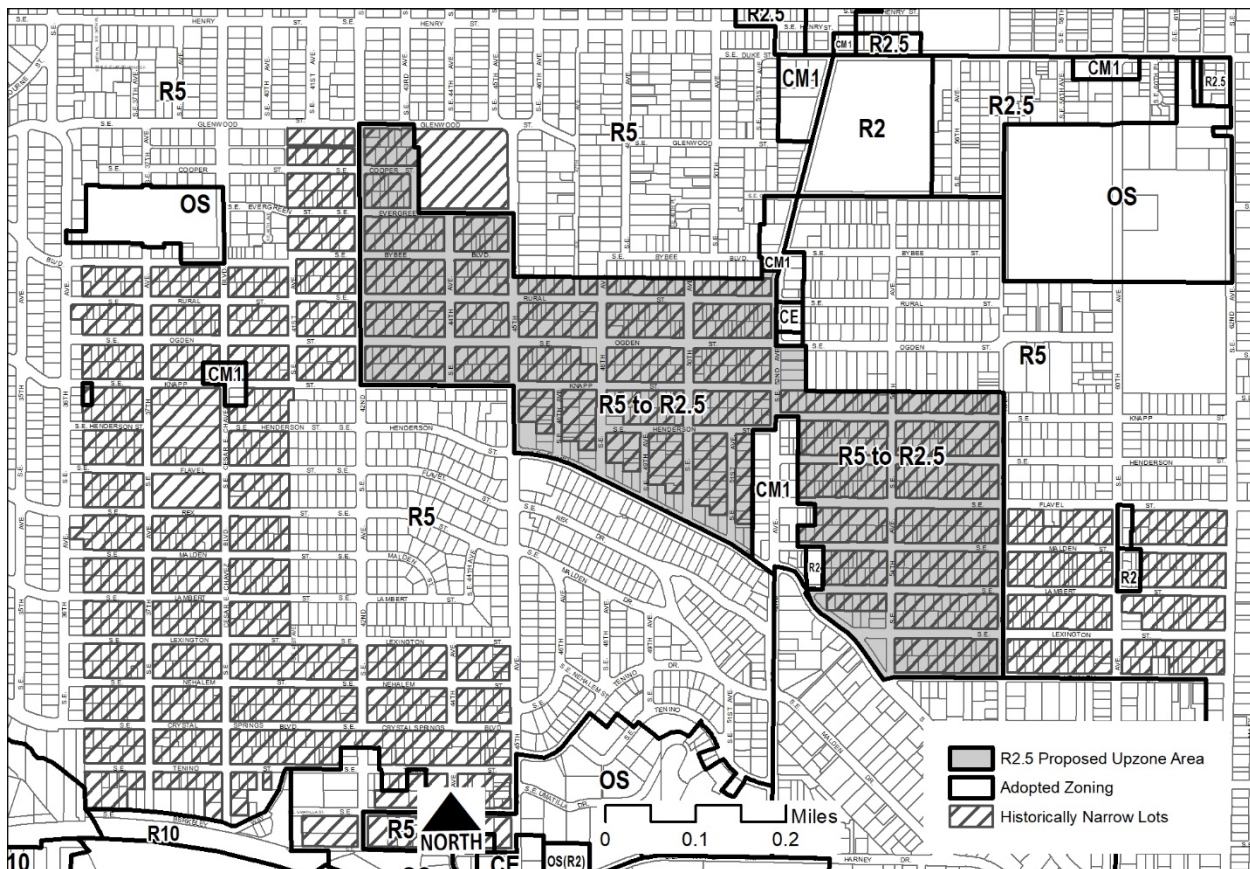
Southeast – 10

**Description:** The R2.5 proposals generally follow SE Flavel Drive and extend 6.5 to 3.5 blocks to the north between SE 42<sup>nd</sup> Avenue and SE 57<sup>th</sup> Avenue.

**Existing Zoning Pattern:** R2.5 zoning exists to the north along Duke and Woodstock.

**Proximity to Centers, Corridors and Neighborhood Amenities:** Most of the properties proposed for R2.5 zoning are within three blocks of commercial and transit services along SE 52<sup>nd</sup> Avenue. There is also transit service on SE 45<sup>th</sup> Avenue and Flavel. There are three nearby parks: Brentwood Park to the east, Errol Heights Park to the south and Berkeley Park to the west. The northwest portion of the area is adjacent to Lewis Elementary School, and Lane Middle School is one block to the east.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development.



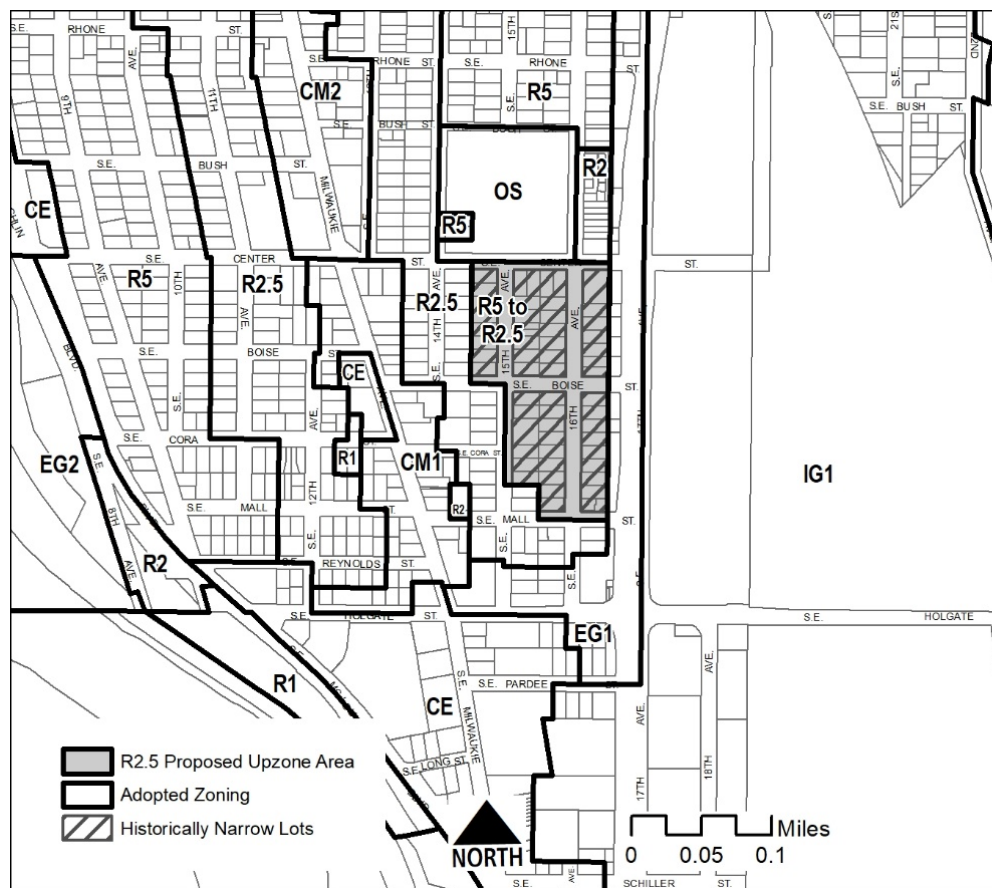
Southeast – 11

**Description:** The R2.5 proposals are located from SE Center Street south to SE Mall Street between SE 15<sup>th</sup> Avenue and SE 17<sup>th</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the existing R2.5 zoning located behind the CM and EG zoning along SE Milwaukie Avenue to the entire area south of Center and west of 17<sup>th</sup>.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed properties are within three blocks of commercial and transit services along Milwaukie. The area is adjacent to the MAX Orange Line station at 17<sup>th</sup> and SE Holgate Boulevard. Directly north are Brooklyn School Park and Winterhaven Elementary School.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development.



## R2.5 Zone Change Proposals by District – East

There are two maps that cover the areas of historically narrow lots proposed for zone changes from R5 to R2.5 in the East district.



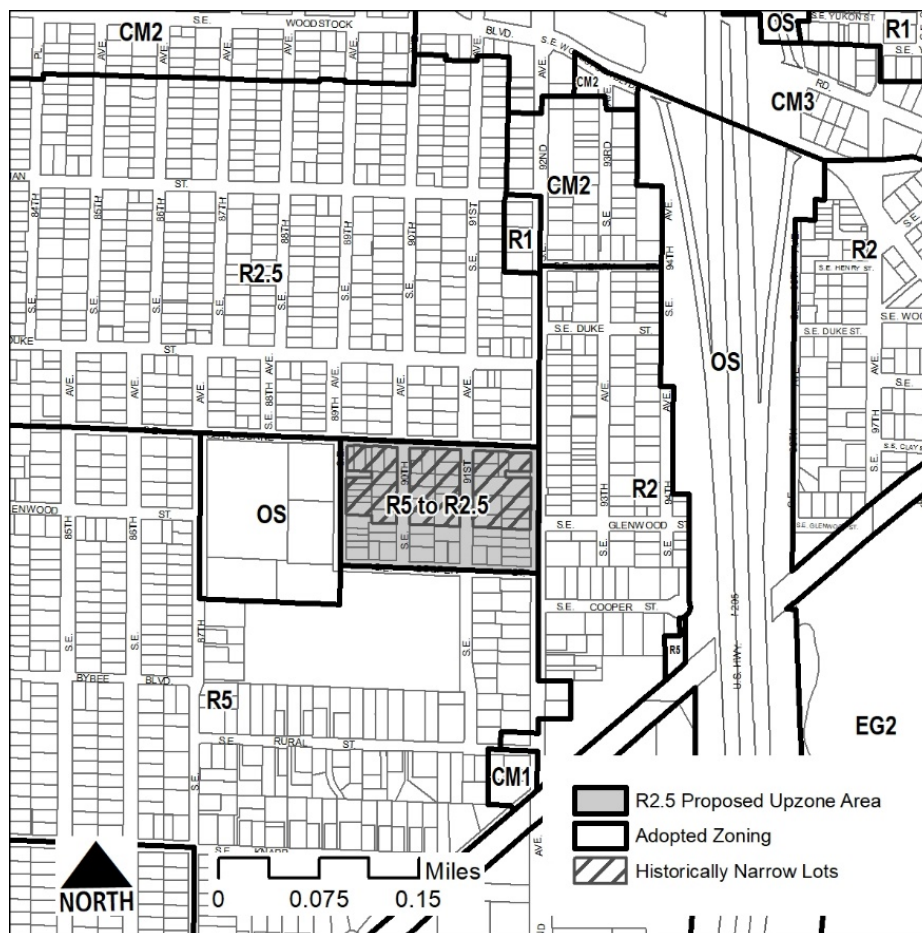
East – 1

**Description:** The R2.5 proposals are located from SE Claybourne Street south to SE Cooper Street between SE 89<sup>th</sup> Avenue and SE 91<sup>st</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the existing R2.5 zoning north, with R2 zoning directly to the east and R5 zoning directly to the south.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed properties are near commercial and transit services on SE 82<sup>nd</sup> Avenue, MAX Light Rail along the I-205 freeway and the Springwater Corridor Trail. The area is adjacent to Kelly Center Headstart, Kelly Street Elementary and Glenwood City Park.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development.





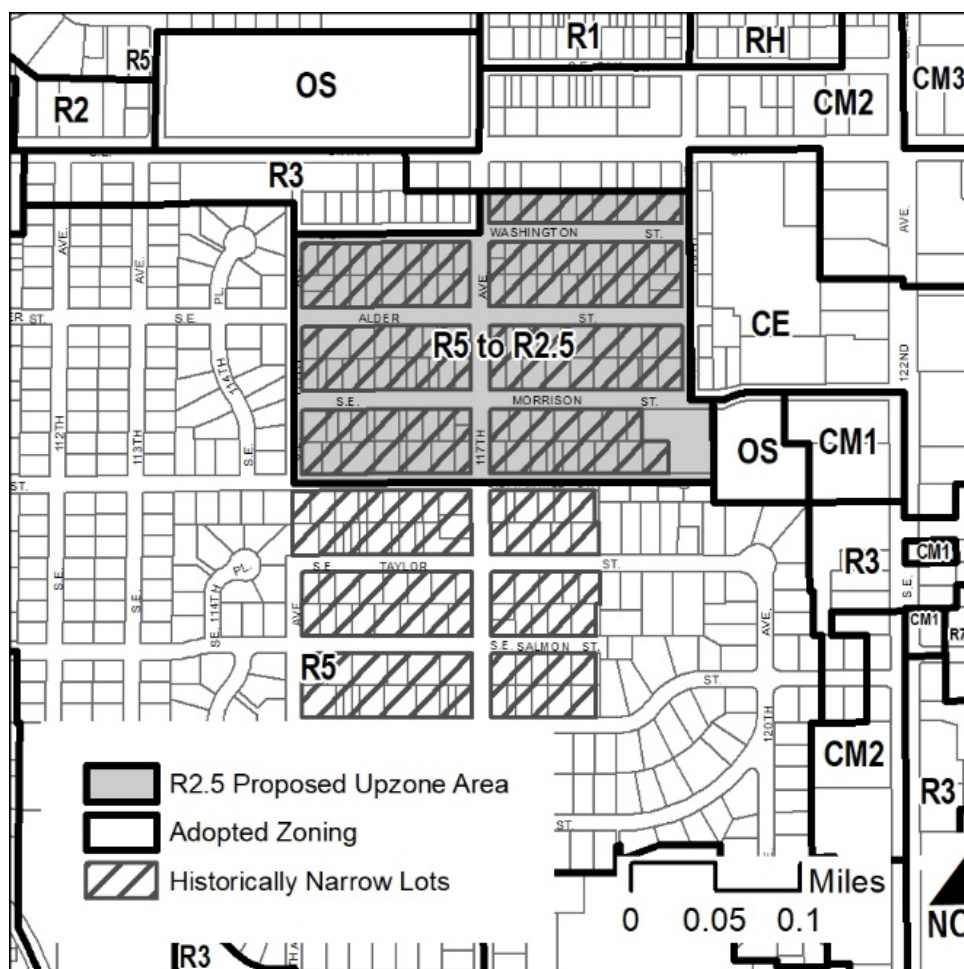
East – 2

**Description:** The R2.5 proposals are located from SE Washington Street south to SE Yamhill Street between SE 115<sup>th</sup> Avenue and SE 119<sup>th</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning is immediately south of commercial zoning on SE Stark Street and provides a transition to R5 zoning to the south.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed properties are within one block of commercial and transit services along Stark and within three blocks of commercial and transit services on SE 122<sup>nd</sup> Avenue. Ventura Park, Midland City Park and Midland Library are adjacent.

**Physical Factors:** A number of lots have already taken advantage of historically narrow lots to create R2.5-density development.



## R2.5 Zone Change Proposals by District – West

There is one map that covers the areas of historically narrow lots proposed for zone changes from R5 to R2.5 in the West district.



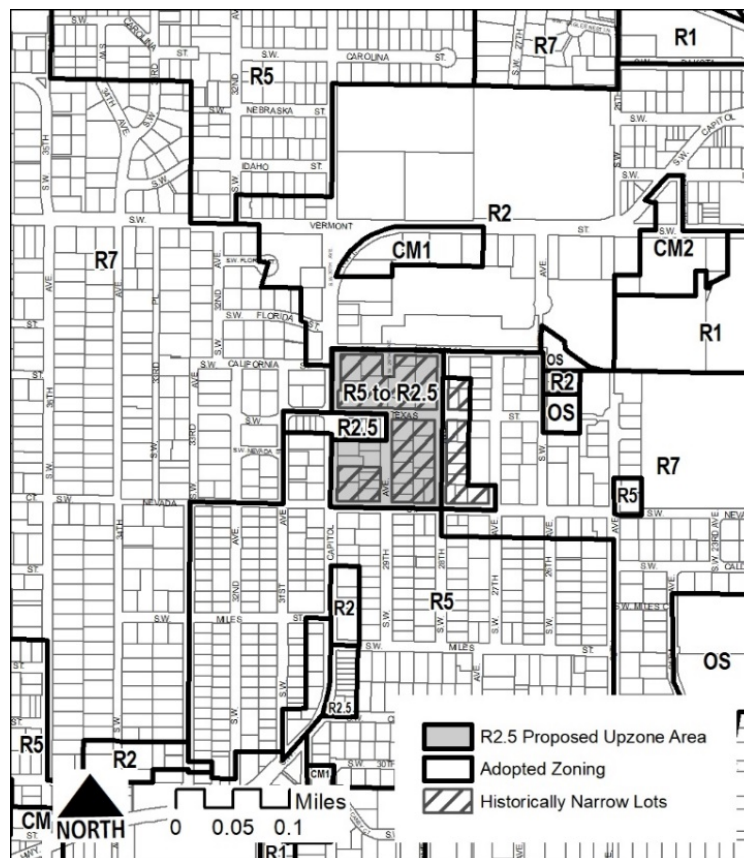
## West – 1

**Description:** The proposed area for R2.5 rezoning covers roughly two blocks bound by SW California Street, SW Nevada Street, SW Capitol Highway and SW 28<sup>th</sup> Avenue.

**Existing Zoning Pattern:** The proposed R2.5 zoning extends the existing R2.5 zoning located on SW Texas Street between SW 30<sup>th</sup> Avenue and SW 29<sup>th</sup> Avenue roughly one additional block to the north, south and east. The proposed R2.5 zoning provides a transition between the commercial and R2 zoning to the north and the surrounding lower-density R5- and R7-zoned areas.

**Proximity to Centers, Corridors and Neighborhood Amenities:** The proposed R2.5 properties are two to four blocks from commercial and transit services both to the north and south along SW Capitol Highway.

**Physical Factors:** While some of these blocks slope downward to the east from SW Capitol Highway, there are no features that would preclude R2.5-zoning development. Streets in this proposed four-block R2.5 area are developed to City standards and most, except SW Nevada Street, have curbs and sidewalks on at least one side.



# Portland's Historically Narrow Lots

## What are Historically Narrow Lots?

Some older parts of Portland neighborhoods that are zoned R5 today have a pattern of lots smaller than the predominant 50-foot-wide by 100-foot-deep lots. While most parts of inner Portland were platted with 50-foot wide by 100-foot deep lots, surveyors in the late 1800s and early 1900s sometimes platted lots that measured 25 feet or 33 feet wide by 100 feet deep. These “historically narrow lots” could be sold individually, or in bundles depending on the buyer’s preference.

Additionally, prior to 1979, the City did not have a formal property line adjustment or land division process. This allowed portions of lots to be conveyed through property deed exchanges. In other words, a property owner could sell off a part of his or her lot by recording a deed describing the property exchange with the County. In some cases, this created properties that were less than the zoning code required for developing.

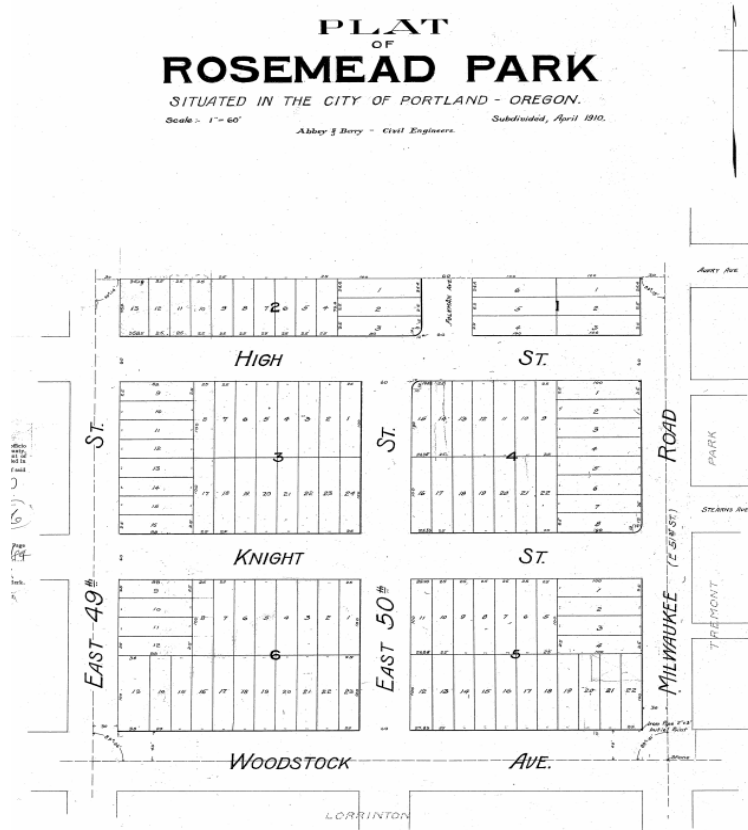


Figure 1: Plat for Rosemead Park, filed 1910. The lots in this plat are 25 feet wide, with varying depths.

In the R5 zone, current zoning and land division rules allow 1 lot per 5,000 square feet of site area. Each lot must be at least 3,000 square feet and 36 feet wide<sup>1</sup>. Historically narrow lots are considered sub-standard because they don’t meet these dimensional requirements. However, because they were legally created prior to the current zoning requirements, they must be recognized by the City<sup>2</sup>.

People who own multiple historically narrow lots (whose underlying lot lines are denoted by dashed lines on the county tax assessor’s maps, (see figure 2) can re-establish these previously created lots through a process called a “Lot Confirmation.” A Lot Confirmation can be used to separate ownership of legally established lots that have been combined into one ownership. A Lot Confirmation takes six to ten weeks and costs about \$1,000. In contrast, a two-lot land division can take between six months to a year and cost close to \$10,000.

<sup>1</sup> There are exceptions to lot dimension standards, for instance a Planned Development allows lot sizes and widths to be modified to suit unique site conditions. Alternatively, there are compatibility criteria in land divisions that allow lots to be less than 36 feet wide in the R5 zone.

<sup>2</sup> **92.017 When lawfully created lot or parcel remains discrete lot or parcel.** A lot or parcel lawfully created shall remain a discrete lot or parcel, unless the lot or parcel lines are vacated or the lot or parcel is further divided, as provided by law.

The current lot confirmation process involves a staff review of an application and supporting deed information to ensure:

- The lot was legally established;
- The lot meets dimensional requirements and conditions (in R5 this is either 3,000 square feet and 36 feet wide or, for a vacant lot, 2,400 square feet and 25 feet wide);
- Structures are not built over the underlying lot line; and
- Required parking and utilities are not being separated from the lot with the dwelling they are serving.

Other requirements that are reviewed with a land division (e.g. density, street improvements, tree preservation) are not considered because historically narrow lots were technically already “divided” for purposes of separate ownership.

After the City approves the Lot Confirmation, the County then assigns new tax lot numbers to the confirmed lots. The lots are then sellable to other owners and can be built on.

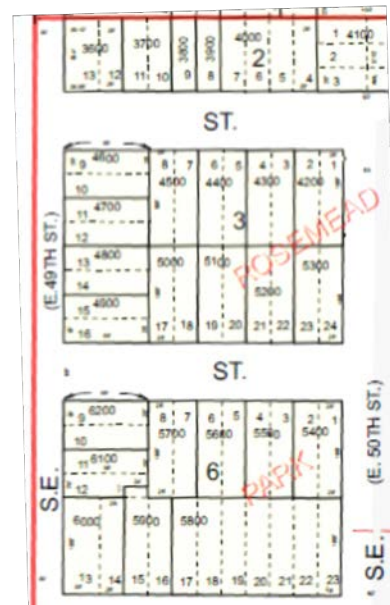


Figure 2: Tax map for lots in Rosemead Park. Tax lot numbers are 4-digits, lot numbers are 2-digits. Dashed lines show where multiple platted lots are under a single ownership.

## Distribution of Historically Narrow Lots

Of the plats across the city, there are almost 16,000 tax lots containing historically narrow lots. Most these – about 94 percent – are in the R5 zone, while less than 1,000, are in the R2.5 zone.

These historically narrow lots are randomly distributed throughout the city due to platting decisions made by developers in the early 1900s. Figure 3 below shows areas of the city with concentrations of historically narrow lots. Significant numbers of historically narrow lots exist in North and Northeast Portland. Smaller concentrations exist in Southeast Portland, mostly in the Brentwood-Darlington and Woodstock neighborhoods. There are three small pockets of narrow lots in West Portland around Linnton, between Hillsdale and Multnomah Village and a large concentration in West Portland Park. Both Linnton and West Portland Park plats have had additional zoning restrictions that require larger lot sizes (i.e. 5,000 square feet in R5 zone) due to infrastructure, natural hazards and emergency access concerns.

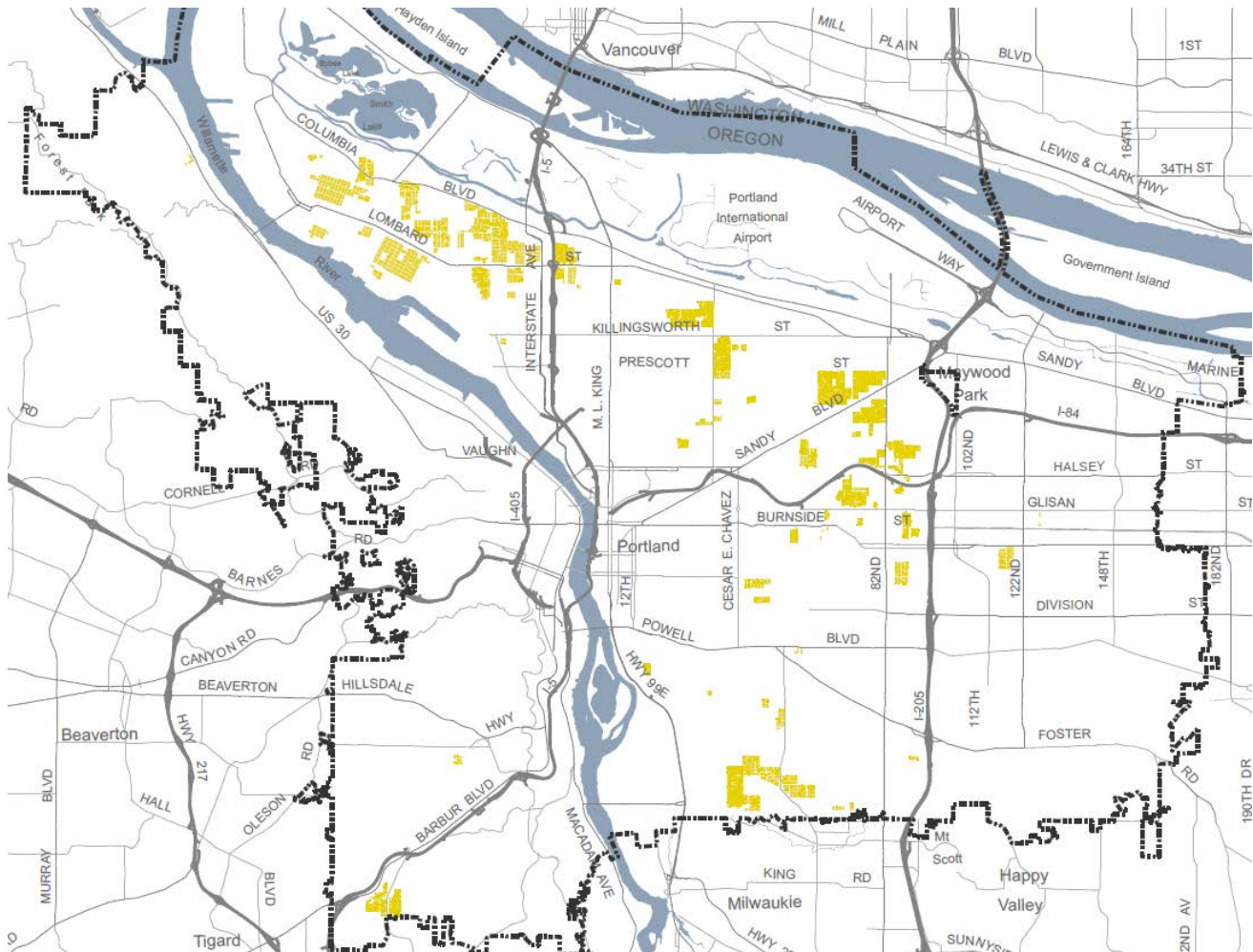


Figure 3: Map showing locations of plats with historically narrow lots in Portland.

## Narrow Lot Regulations

The City of Portland's regulations for development on historically narrow lots have undergone several changes throughout the years. A short summary is provided below.

### Early 20<sup>th</sup> century

In the early 1900s, pockets of land now in the City of Portland were platted as 25-foot-wide by 100-foot-deep lots. Until 1959, building houses on 25-foot-wide lots was allowed; however, most houses were built on parcels consisting of two or three platted lots.

### 1959 Zoning Code

In 1959, the City adopted a new zoning code establishing minimum lot sizes for residential areas. In the R5 zone, on a lot within a subdivision recorded prior to July 1, 1959, no building could be permitted on a lot with dimensions less than 4,000 sq. ft. in area, 40 ft. in width and 80 ft. in depth unless a variance was approved.

### 1983 Zoning Code

Minor revisions were made to the lot dimension standards so that in the R5 zone on a lot within a subdivision recorded prior to July 1, 1959, no building could be permitted on a lot with dimensions less than 3,750 sq. ft. in area, 35 ft. in width and 80 ft. in depth, unless a variance was approved.

### 1985 Oregon State Law

In 1985, the Oregon State Law ([ORS 92.017](#)) was changed to require cities and counties to recognize lawfully created lots as discrete pieces of property. In effect, in addition to lots that the city has approved through land divisions, the City must recognize lots created prior to July 26, 1979 as lawfully created lots, allowing them to be bought and sold. This is still the case today.

However, as was the case in 1985, the City still retains the zoning authority to determine when houses may be built on a lot. For example, while a piece of property may have existed on a separate deed record or was part of a historic plat, the City requires that the property meet certain minimum lot dimensions before a house is permitted to be built.

### 1991 Zoning Code

A major update to the Zoning Code was completed in 1991. R5-zoned lots that did not meet minimum lot dimension requirements (5,000 sq. ft. in area, 50 ft. in width and 80 ft. in depth) were considered “substandard lots.” An amendment was made that eliminated the minimum lot dimension standards for lots created prior to July 26, 1979. Therefore, a house could be built on any sized property in the R5 zone.

As development intensified in the 1990s, some houses were demolished and replaced with two houses on historically narrow lots. The houses were taller and narrower than existing houses. More importantly, they were built at twice the density allowed in the R5 zone. Neighbors grew concerned about demolitions and the architectural compatibility of these narrow houses.

### 2003 Changes to Historically Narrow Lot Rules

In August 2003, the Planning Commission recommended establishing a minimum lot size of 3,000 square feet for development on existing lots in R5. However, City Council rejected the amendment package, so development of houses on existing 25-foot-wide lots in R5 zone was still allowed.

The Council’s decision was appealed to the Land Use Board of Appeals (LUBA). Rather than await a decision from LUBA, Council voluntarily remanded their decision so they could develop a compromise proposal.

In November 2003, the Council adopted regulations to deter demolition of houses on historically narrow lots by establishing minimum lot sizes for development on existing lots, including a 3,000-square-foot minimum in the R5 zone.

In December 2003, City Council adopted a “vacant lot provision” that allowed for development on existing lots that were vacant but did not meet the recently-adopted 3,000-square-foot minimum. This meant that lots in the R5 zone that were less than 36 feet wide and 3,000 square feet could be developed if they had been vacant for 5 years. This was intended to discourage demolition while not stifling development on already-vacant sites by requiring a five-year period between when a house was demolished and the subsequent redevelopment of the underlying historically narrow lots.

Development standards applicable to narrow lot development in the 2003 code included:

- Limitations on garage width to 12 feet and requirement for living space above it,
- Requirements for materials and trims,
- Provisions for eaves, and

- Requirements for a porch and 15 percent window coverage on the front façade to orient the unit toward the street.

### 2004 to Present

After these changes, there have been several refinements of code language to address the architectural compatibility of narrow lot development.

Between June and December 2004, the City of Portland sponsored a design competition to facilitate the construction of architecturally compatible infill housing on narrow lots. Living Smart: Big Ideas for Small Lots received 426 entries from 22 countries and resulted in two publications that catalogued designs and site plans.

In 2005, the City selected two designs from the “People’s Choice” category and worked with the architects to develop ready-to-build plan sets for use in a new program in which developers could build these “permit-ready houses” through an expedited approval process.

In March 2006, City Council approved the two permit-ready house designs as well as amendments to the Zoning Code that would allow them to be built. These permit-ready houses could only be built on lots less than 36 feet wide outside historic and conservation districts.



*Permit Ready Houses: Higgins Design*



*Vargas Design*

The permit-ready housing program ended in 2009 due in part to decreased City resources caused by the economic downturn. Only eleven houses were built through the program between 2006 and 2009.

Today, houses built on historically narrow lots is subject to the following current development standards:

- There must be a main entrance within 4 feet of grade (this applies to all houses).
- Garages up to 12 feet wide garage are allowed (but not required).
- Building coverage is limited to 40 percent of site area.
- Height is limited to 1.5x width of house in R5 (and R2.5).
- Exceptions to development standards require design review (not adjustments).



## Current Development Scenarios for Historically Narrow Lots in the R5 Zone

Figure 4 illustrates the intent of the 2003 vacant lot provision. This recognized that there were opportunities for infill development and increasing housing supply, and attempted to limit home demolitions by requiring that these narrow lots be vacant for at least 5 years. However, sometimes a house would be demolished, with a narrow house built on one side of the lot, and another built 5 years later (Figure 5).

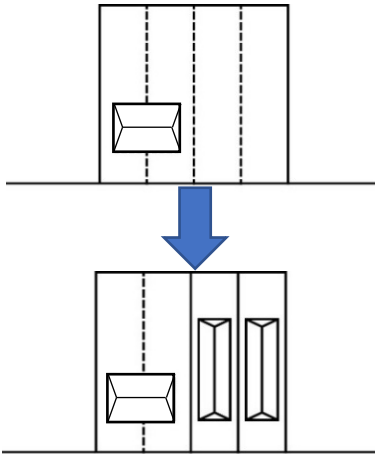


Figure 4 – Already vacant lots can develop with skinny houses.

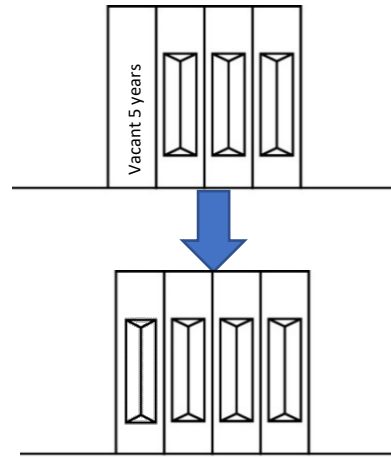


Figure 5 – Houses may be demolished and one lot can be built today, and the other 5 years later.

Figure 6 shows that when there are at least three narrow lots, a property line can be adjusted concurrently to make each property at least 36 feet wide and 3,000 square feet. When those conditions are met, the vacant lot provision does not apply because the lots are no longer “substandard.” In 2010, an exception was added to the code to allow a property line adjustment on corner lots to reduce lot sizes to 1,600 s.f. and determine the vacancy of the lot on the reconfigured lot to encourage retention of existing houses (Figure 7).

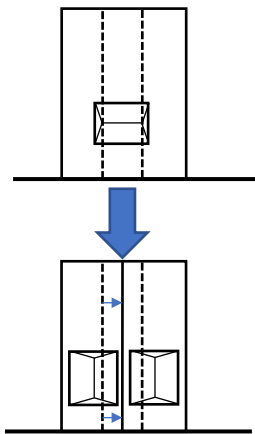


Figure 6 – By using a property line adjustment, historically narrow lots are no longer “substandard” and are not required to be vacant for 5 years.

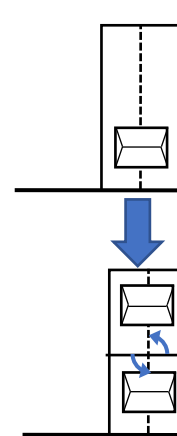


Figure 7 – Property line adjustment can also be used to rotate the lot line on a corner lot. The vacant lot provision applies to the reconfigured lot.

## A Closer Look at Historically Narrow Lot Neighborhoods

Staff examined three neighborhoods with concentrations of historically narrow lots – St. Johns, Kenton, and Montavilla. These areas were studied in more detail to understand the development potential on these lots if no demolitions were to occur. The table below shows that not many vacant historically narrow lots exist – six percent in the St. Johns area (72 out of 1,279), five percent in the Kenton area (57 out of 1,193), and five percent in the Montavilla area (44 out of 966).

Proposal #12 of the Residential Infill Project Discussion Draft includes allowing property line adjustments to create flag lots when an existing house is being retained (Figure 8). This would permit an owner to create a small flag lot for a new house, as opposed to demolishing their house to create two side-by-side houses. This option provided between 8 and 10 percent of added infill opportunities.

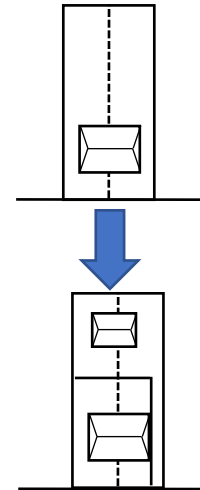


Figure 8 – Concept for allowing property line adjustments to form flag lots when retaining an existing house.

	St. Johns	Kenton	Montavilla
Number of tax lots	682	614	495
Number of underlying lots ( <i>i.e. historically narrow lots</i> )	1,279	1,193	966
Number of existing houses	667	597	488
Vacant historically narrow lots	72	57	44
Percentage of vacant historically narrow lots ( <i>Vacant narrow lots / Total narrow lots</i> )	6%	5%	5%
Potential flag lots	123	100	94
Percentage of historically narrow lots with flag lot potential ( <i>Potential flag lots / Total narrow lots</i> )	10%	8%	10%
<b>Combined infill potential of vacant lot/flag lot</b> ( <i>vacant lots + potential flag lots</i> )	<b>195</b>	<b>157</b>	<b>138</b>

## Conclusion

While historically narrow lots in Portland are a product of history that were platted over a century ago, City regulations have evolved throughout the years to balance the benefits and drawbacks of developing these lots. Benefits include additional housing opportunities, including fee-simple and potentially lower cost homeownership options, and drawbacks include neighborhood concerns about architectural compatibility with existing patterns and unexpected degrees of density based on the zone.

## Glossary

**Buildable.** A plot of land that was lawfully created and meets the applicable lot dimension to allow the construction of a primary structure (e.g. a house).

**Deed.** A legal document that is signed and recorded with the county recorder, especially one regarding the ownership of property or legal rights.

**Historically Narrow Lot** – this term is used by the Residential Infill Project to describe lots that were created prior to the City adopting formal land division rules and that are less than 36 feet wide.

*Note: this term is not used in the zoning code. These lots are described as “Lots and Lots of Record Created Before July 26, 1979 that don’t meet the minimum width requirements of Table 110-6”*

**Lot.** A lot is a legally defined piece of land other than a tract that is the result of a land division. This definition includes the State definition of both lot, (result of subdividing), and parcel, (result of partitioning). See also, Ownership and Site.

**Plat.** Diagrams, drawings and other writing containing all the descriptions, locations, dedications, provisions, and information concerning a land division. This term includes the State law definitions of “partition plat” and “subdivision plat”.

**Tax Lot.** A “tax lot” is a geographically mapped tax account and does not necessarily indicate the boundary of the lot or lot of record. The presence of a tax lot does not indicate whether that property is “buildable”.