



Residential Infill Project

Planning and Sustainability Commission Briefing

Economic Analysis of Revised Proposal

December 11, 2018



Bureau of Planning and Sustainability
Innovation. Collaboration. Practical Solutions.



Follow along...

The PSC materials are available on the project website:

www.portlandoregon.gov/bps/76961

Or go to www.portlandoregon.gov/bps/infill

Look for “documents and resources”

and then look for

“Planning and Sustainability Commission Materials”

Agenda

- Housing mix background
- Comparison of proposals
- Market trends
- Economic analysis methodology
- Results from revised proposal
- Summary of key findings

Current Housing Mix

57%



28%



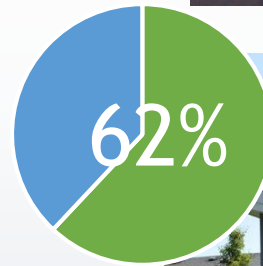
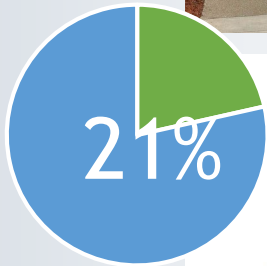
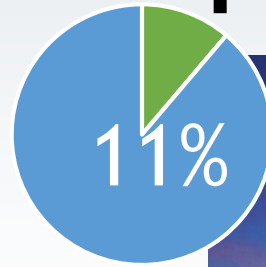
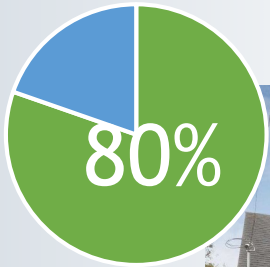
13%



2%



Current Ownership Tenure Mix



2035 Growth Share

+21%



+72%



+5%



+2%



Comparing Proposals

April 2018

FAR

- R2.5 = .7
- R5 = .5
- R7 = .4

Up to 3 units

- Duplex
- Corner Triplex

September 2018

FAR

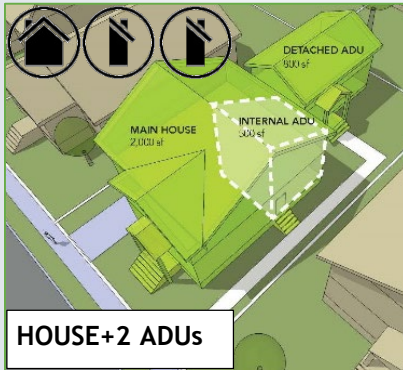
- R2.5 = .7 to .9
- R5 = .5 to .7
- R7 = .4 to .6

■ Up to 4 units

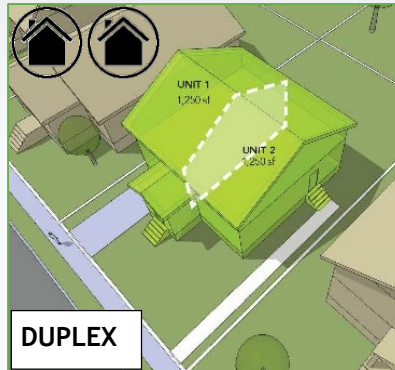
- Duplex
- Triplex
- Fourplex

April proposal: One FAR

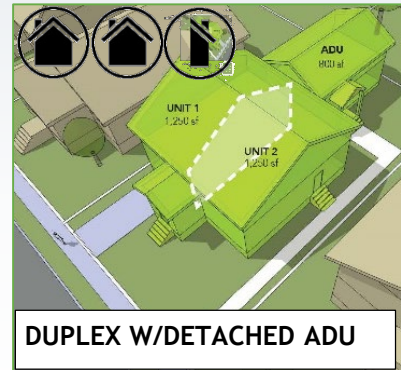
2,500sf + 750sf



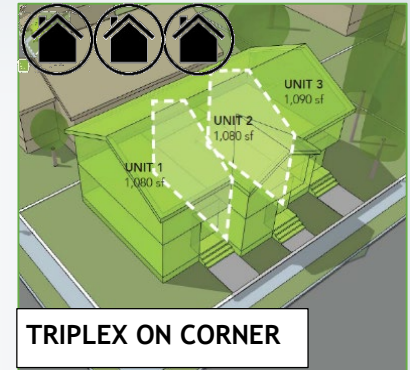
2,500sf + 750sf



2,500sf + 750sf

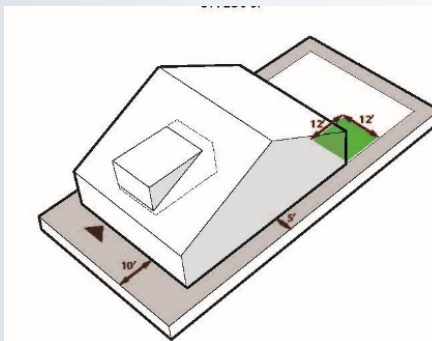


3,250sf



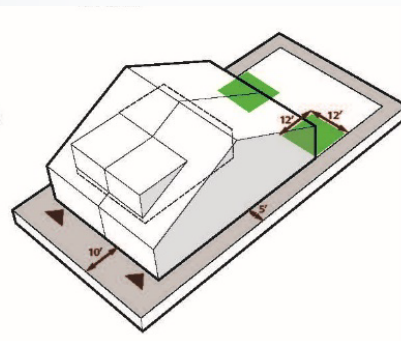
September proposal: Increase FAR by unit

2,500sf



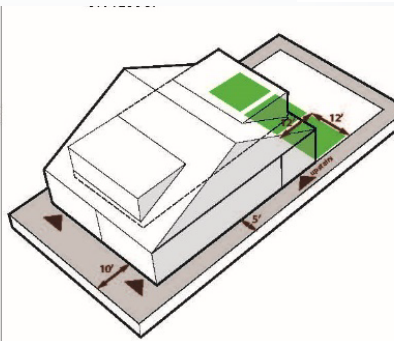
- House

3,000sf

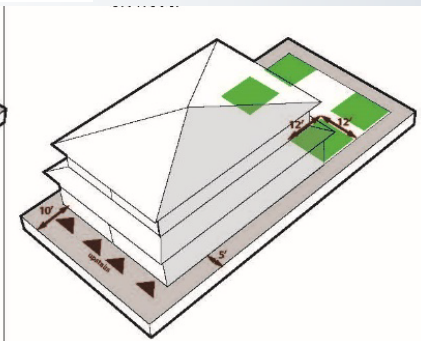


- House +ADU
- Duplex

3,500sf



- House +2 ADUs
- Duplex +1 ADU
- Triplex

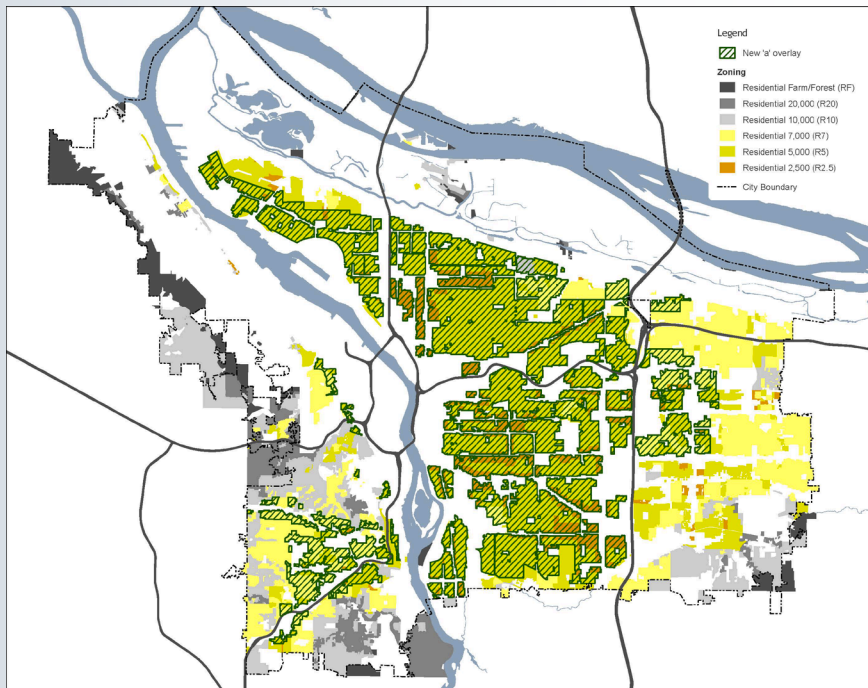


- Fourplex

Comparing Proposals

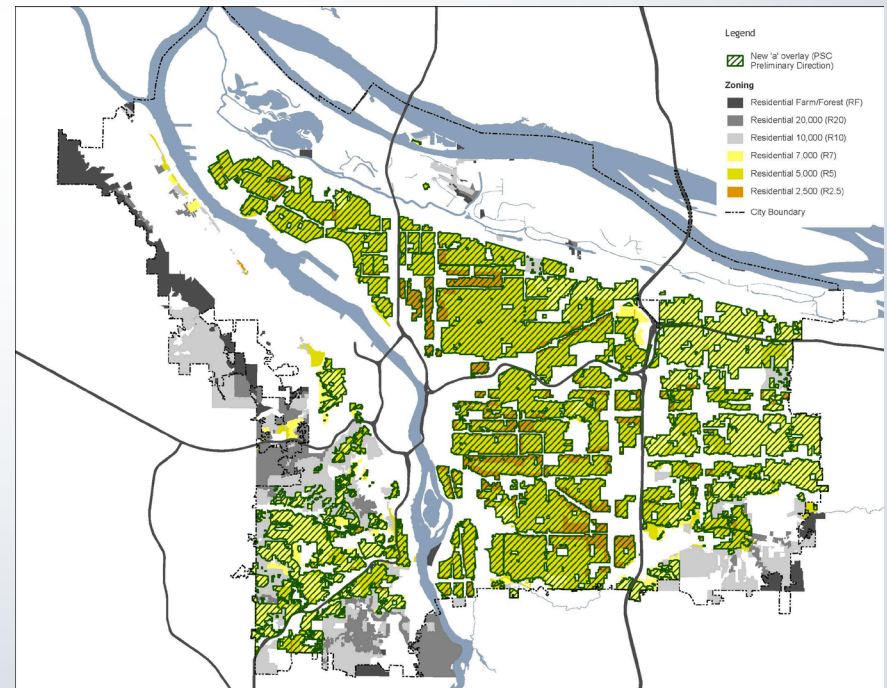
April 2018

~66% of R2.5-R7 zones



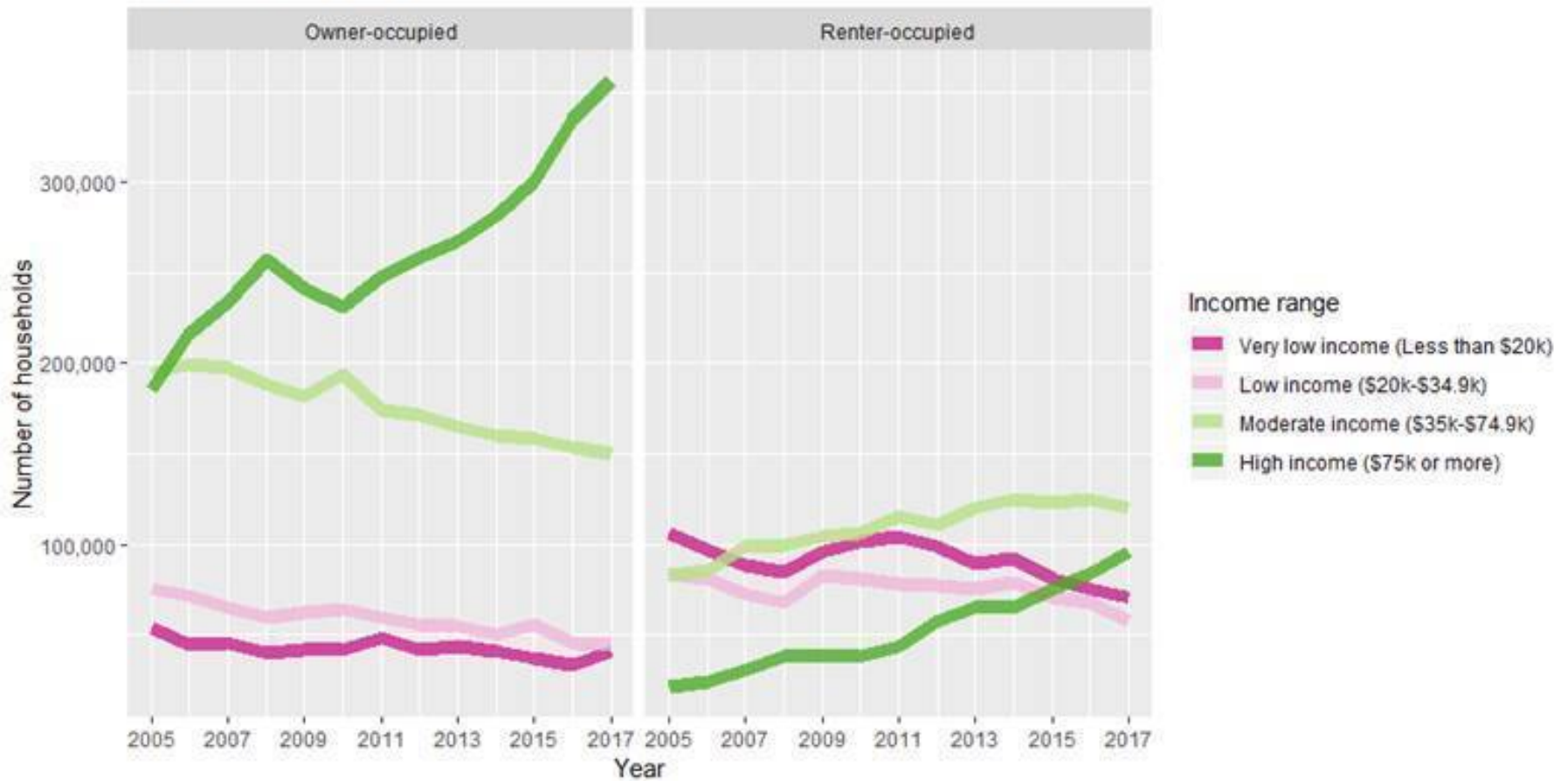
September 2018

~96% of R2.5-R7 zones



Housing Affordability

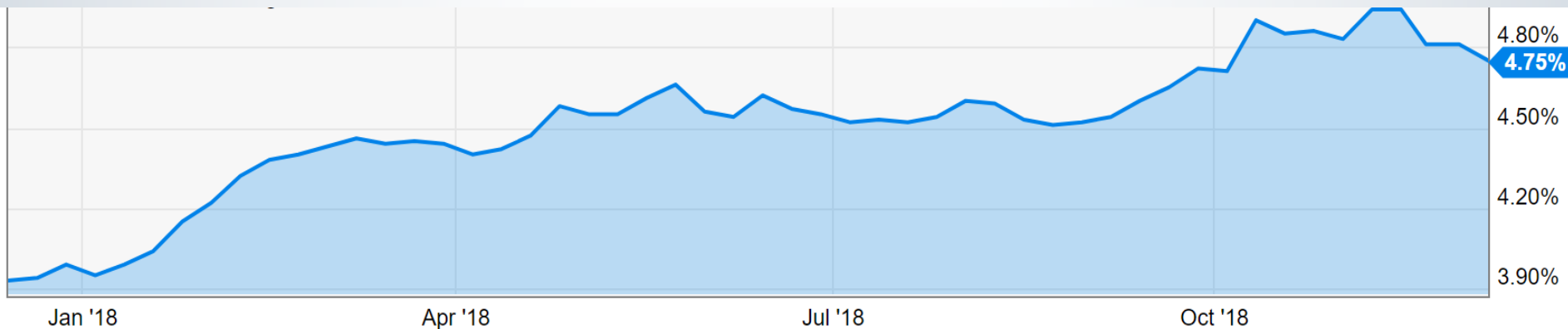
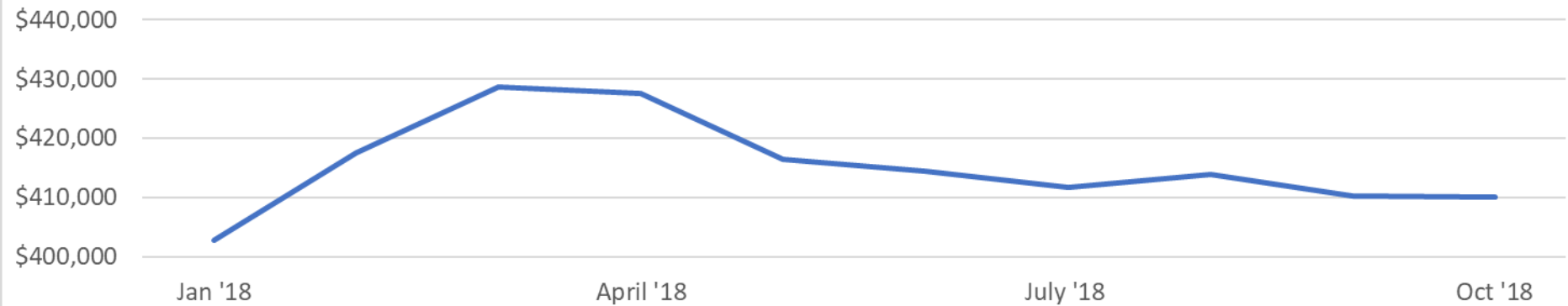
Change in number of households by household income
Portland-Vancouver MSA, 2005-2017



Source: ACS 1-year estimates, Table B25118; Portland Bureau of Planning and Sustainability.
Note: Adjusted for inflation in 2017 dollars using CPI-U West.

2018 Housing Price and Interest Rate Changes

2018 Median Sales Price



2018 Housing Price and Interest Rate Changes

March 2018

Average House Price - \$428,000

Interest Rate - 4.4% APR

October 2018

Average House Price - \$410,000

Interest Rate - 4.8% APR

Mortgage Repayment Summary

\$2,214.61

PMI

Monthly Payment

not required

\$85,600.00

20.00%

Down payment amount

Down payment %

Mortgage Repayment Summary

\$2,220.90

PMI

Monthly Payment

not required

\$82,000.00

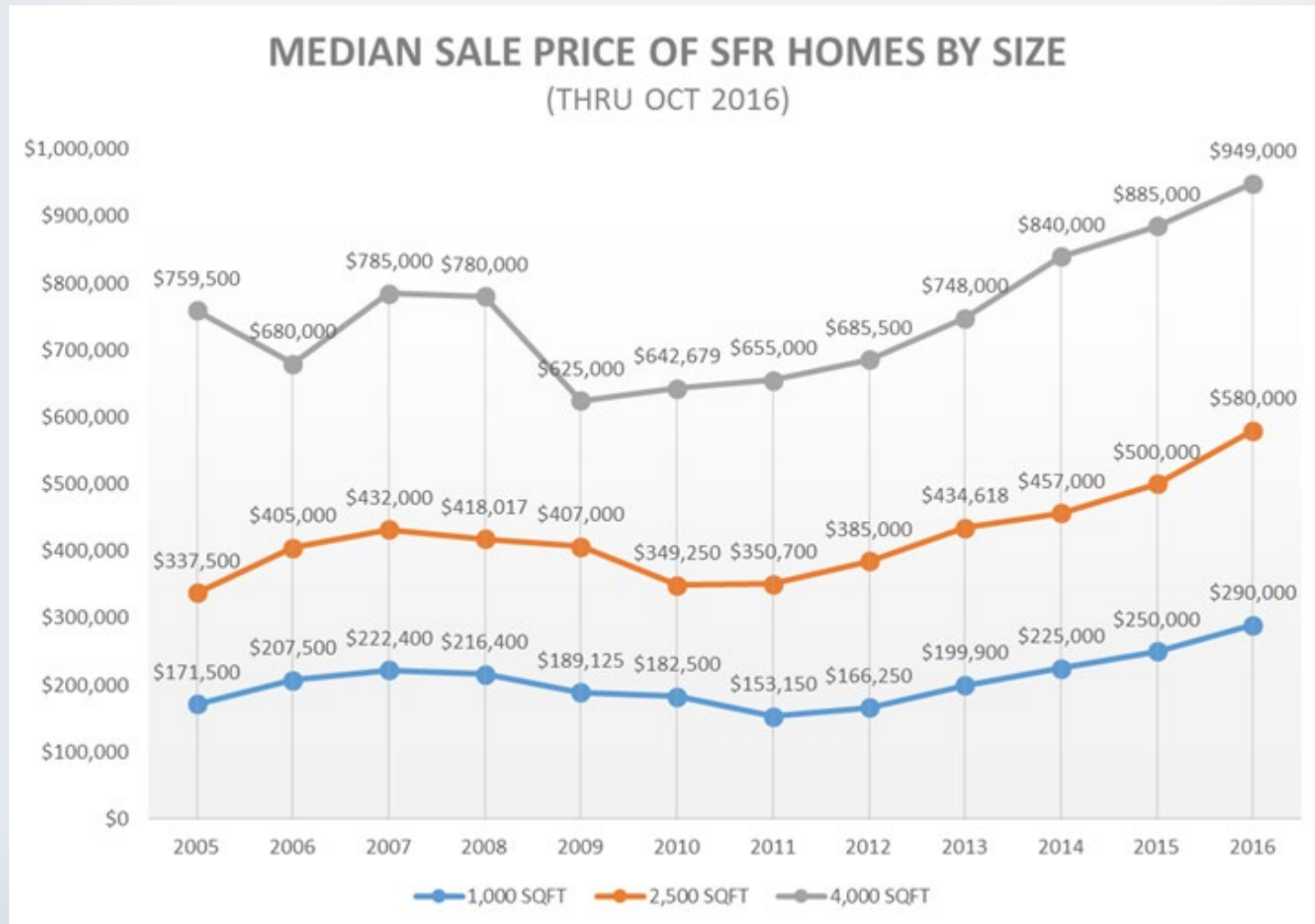
20.00%

Down payment amount

Down payment %

How do scale and cost relate?

By absolute unit size



Description of Economic Analysis

Comparison of development allowances
Revised proposal vs. current allowances

Units	Allowed Housing Type	R7	R5	R2.5
Minimum Lot Size (1-2 Units)		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
Minimum Lot Size (3+ Units)		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			
Current Allowed FAR		1.1 FAR	1.35 FAR	1.75 FAR

Description of Economic Analysis

Development prototype proformas

Physical program

- Site size
- FAR allowance
- Number of units

Development Costs

- Hard costs (materials and labor)
- Soft costs (permitting, design, engineering, etc.)

Revenue/income

- Sale price
- Rents
- Number of units

Development feasibility indicators

- Residual land value

Description of Economic Analysis

Development prototype proformas

Physical program

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Development feasibility indicators

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		New Zoning Assumptions					
		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
PROGRAM	Property Assumptions						
	Site Size (SF)	4,200	4,200	4,200	4,500	3,800	4,500
	Density	10	10	21	39	46	29
	Unit Count	1	1	2	4	4	3
	Ave Unit Size	2,100	2,940	1,260	731	713	1,050
	Building Square Feet	2,100	2,940	2,520	2,925	2,850	3,150
	Stories	2	2	2	2	2	2
	Bldg Footprint	1,050	1,470	1,260	1,463	1,463	1,575
	FAR	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	1.00
	Total Parking Spaces	2	1	2	2	2	2
	Parking SF/Space - Surface	350	350	350	350	350	350
	Parking SF/Space - Structure	350	350	-	-	-	-
	Parking Spaces - Surface	-	1	-	-	-	-
	Parking Spaces - Structure	2	-	2	2	2	2
	Structured Parking %	100%	0%	100%	100%	100%	100%
	Cost Assumptions						
	Base Construction Cost/SF	\$204	\$204	\$204	\$204	\$204	\$204
INCOME	Adjustment Factor	0%	0%	0%	0%	0%	0%
	Construction Cost/SF	\$204	\$204	\$204	\$204	\$204	\$204
	Base Parking Costs/Space	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
	Adjustment Factor	0%	0%	0%	0%	0%	0%
	Parking Cost/Space	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
	Income Assumptions						
	Sales Price/SF	\$278	\$278	\$278	\$278	\$278	\$278
	Adjustment Factor	0%	0%	0%	0%	0%	0%
	Achievable Pricing	\$278	\$278	\$278	\$278	\$278	\$278
	Parking Charges/Space	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875	\$21,875
	Expenses						
	Sales Commission	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
SUPPORTABLE PROPERTY VALUE	Cost						
	Cost/Construct w/o prkg.	\$427,350	\$598,290	\$512,820	\$595,238	\$579,975	\$641,025
	Total Parking Costs	\$30,000	\$0	\$40,000	\$40,000	\$40,000	\$40,000
	Estimated Project Cost	\$457,350	\$598,290	\$552,820	\$635,238	\$619,975	\$681,025
	Income						
	Gross Income - Units	\$583,128	\$816,379	\$699,754	\$812,214	\$791,388	\$874,692
	Gross Income - Parking	\$32,813	\$0	\$43,750	\$43,750	\$43,750	\$43,750
	Gross Sales Income	\$615,941	\$816,379	\$743,504	\$855,964	\$835,138	\$918,442
	Less: Commission	(\$24,638)	(\$32,655)	(\$29,740)	(\$34,239)	(\$33,406)	(\$36,738)
	Effective Gross Income	\$591,303	\$783,724	\$713,763	\$821,725	\$801,732	\$881,704
	Property Valuation						
	Return on Sales	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%
	Residual Property Value	\$56,826	\$83,209	\$67,844	\$79,306	\$77,184	\$85,674
	RPV/SF	\$13.53	\$19.81	\$16.15	\$17.62	\$20.31	\$19.04

Description of Economic Analysis

Pricing bin analysis

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

Description of Economic Analysis

Pricing bin results

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%

Description of Economic Analysis

Pricing bin results

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Total/Avg.	118,528	\$1.91	\$273	13,665	\$4,159	38,115	\$1,823	24,450	(\$2,336)	-56%

How do unit size and cost relate?

Single Family



Duplex



Average Size	2,500 Square Feet	1,500 Square Feet
Average Sale Price	\$772,500	\$463,500
Average Price per SF	\$309/SF	\$309/SF
Average Rent	\$5,400/month	\$3,255/month
Average Rent per SF	\$2.17/SF	\$2.17/SF

How do unit size and cost relate?

Single Family



170% MFI

Duplex



110% MFI

Average Size	2,500 Square Feet	1,500 Square Feet
Average Sale Price	\$772,500	\$463,500
Average Price per SF	\$309/SF	\$309/SF
Average Rent	\$5,400/month	\$3,255/month
Average Rent per SF	\$2.17/SF	\$2.17/SF

How do unit size and cost relate?

Triplex



Fourplex



Average Size	1,166 Square Feet	875 Square Feet
Average Sale Price	\$360,500	\$270,375
Average Price per SF	\$309/SF	\$309/SF
Average Rent	\$2,500/month	\$1,900/month
Average Rent per SF	\$2.17/sf	\$2.17/SF

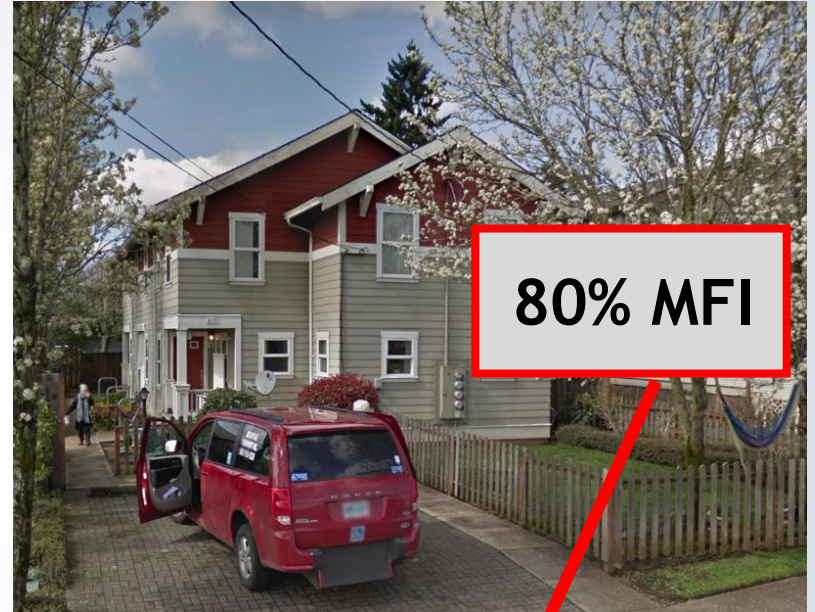
How do unit size and cost relate?

Triplex



90% MFI

Fourplex



80% MFI

Average Size	1,166 Square Feet	875 Square Feet
Average Sale Price	\$360,500	\$270,375
Average Price per SF	\$309/SF	\$309/SF
Average Rent	\$2,500/month	\$1,900/month
Average Rent per SF	\$2.17/sf	\$2.17/SF

120% MFI

100% MFI

Description of Economic Analysis

Summary results

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

Econ Analysis Comparison

Proposed draft vs. revised proposed draft

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

Findings Summary - Staff Proposed Draft

Increasing allowable units without increasing FARs provides a small market incentive to build an alternative to a single family house.

- Significant reduction of replaced units (lower FAR)
- Modest increase in new units
- Reduced total construction investment
- Units smaller and less expensive than a new single house
- Units predominantly ownership with limited new rental housing



Findings Summary - Revised Proposed Draft

Increasing FAR allowances with the number of units provides a more significant incentive to build housing types other than a single house.

- Significant increases in unit production
- Greater construction investment
- Modest increase in replaced units
- Units smaller and less expensive than a new single house.
- Allowances for three and four units further reduced unit sizes.
- Resulting unit sizes bring the average rent into a range that could support new construction rental units.



Findings Summary - Revised Proposed Draft

- Broader market depth and need for ownership units at prices supported in two, three, four bedroom development types than single house prices for both current and future Portlanders.
- Diversity in housing types will occur because every development type serves separate markets:
 - ☐ Single house demand
 - ☐ Duplex - fee simple and larger attached units
 - ☐ Triplex - smaller 2 and 3 bedroom ownership options and potential for three bedroom rentals
 - ☐ Fourplex - smaller 2 bedrooms ownership options and housing choice for renters.

Additional Q&A