Mixed-use Zones

Evaluation of Development Incentives

DRAFT May 2016

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ECONorthwest prepared this report for the City of Portland's Bureau of Planning and Sustainability, with substantial assistance from the Portland Development Commission.

That assistance notwithstanding, ECONorthwest is responsible for the content of this report. Staff at ECONorthwest prepared this report based on their general knowledge of development economics, and on information derived from government agencies, private statistical services, the reports of others, interviews of individuals, or other sources believed to be reliable. ECONorthwest has not independently verified the accuracy of all such information, and makes no representation regarding its accuracy or completeness. Any statements nonfactual in nature constitute the authors' current opinions, which may change as more information becomes available.

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Purpose and Approach

Through its Comprehensive Plan update, the City of Portland has proposed a simpler array of commercial mixed-use base zones that better implement the Comprehensive Plan's Urban Design Framework and Mixed-use Designations. In addition, the City is exploring adding density bonuses to its mixed-use zoning code to incent the production of public benefits, including affordable housing and/or affordable commercial space. The Bureau of Planning and Sustainability (BPS) asked ECONorthwest to evaluate the role that density bonuses could play in the creation of affordable housing and commercial space.

The purpose of this report is to summarize the results of our evaluation of the proposed density bonuses and provide implications for the City as it moves towards implementation of density bonuses and other similar policies.

Predicting whether a developer will accept the proposed density incentives (and which incentives offer the best financial returns) requires an analysis that reflects a developer's decision-making process and cash flow equation. Would the additional density create more value than the cost of construction and operations of the public amenity? If not, a developer is unlikely to accept the additional density, and may choose to just develop to the base zoning instead. This is the central tension explored through this analysis: are the incentives calibrated to motivate private-sector investment in the desired public good (affordable housing and commercial space) without otherwise limiting development outcomes? The answers to these questions vary geographically across the city, over time as market cycles change, and based upon development form and construction type.

ECONorthwest, together with MapCraft, a partner software development and planning firm, created a financial pro forma model to test the value of the density bonuses among developers in achieving the goals of creating new affordable housing and commercial space. The model tested millions of permutations of market inputs, building configurations and density, bonus configurations, and other variables to predict which prototype would offer the greatest financial returns based on the take up of the bonuses.

The remainder of this section describes the methods used and provides an overview of the policies evaluated.

About Density Bonuses

Density bonuses are widely used throughout the country in various forms. In Portland, they have been available in the Central City for many years. Density bonuses allow a developer to increase the amount of development on a site beyond what is allowed in the base zone, provided that the developer delivers some public good in return.

Density bonuses under consideration in Portland's mixed-use zones would provide incentives for the provision of affordable housing and affordable commercial space.

Methods

There are numerous inputs into pro forma real estate assessments, all of which are consequential to the developer's financial analysis. Using standard tools like Excel spreadsheets, one can only manipulate a relatively small number of inputs to test the implications of variations in supply-side inputs (such as construction costs) and demand-side inputs (such as rents).

Given the City's desire to test different inputs across many submarkets in the city, our team's computational approach allowed for a standard pro forma to be translated into fast-running scripts that can be varied to produce millions of permutations. We used these permutations to conduct sensitivity analysis and determine the optimal financial performance given different development scenarios. This model allowed us to test real estate investment proposals that vary in scale and scope (for example, different building heights and ground floor use mixes) under different market realities (for example, varied construction costs and achievable rents) while constrained by local policies (for example, zoning restrictions and parking requirements).

Our analysis had four steps:

- **DETERMINE MARKET TYPOLOGIES:** We demonstrated how the market for residential and mixed-use development varies geographically, to provide insight into how rents and the proposed mixed-use zones align, where incentives are likely to enjoy the greatest take up, and to provide inputs into the remainder of the evaluation.

- **ANALYZE DEVELOPMENT FEASIBILITY:** We provided analysis on how the development market responds to additional density in the mixed-use zones. The team developed a customized, scalable mixed-use residential model that reflects Portland's market, construction, parcel characteristics, and policy conditions. Further, the team modeled the proposed MUZ code so that pro forma variants could be limited to real estate development options that adhered to the full suite of the City of Portland's land use policies, including setbacks, use restrictions, height restrictions, active ground floor minimums (usually retail), parking requirements, and other considerations.

- **DETERMINE POLICIES TO EVALUATE:** All density bonuses were measured in floor area ratio,[1] or FAR, which is a frequently used measure that is generally a more flexible approach to regulating and incenting density than height limits or bonuses. FAR is the total square feet of a building divided by the total square feet of the parcel of land. Higher FARs tend to indicate more urban (dense) construction. A developer can choose to take a portion of the bonus, if they provide a proportionate amount of public benefit.

- **CONDUCT SENSITIVITY ANALYSIS:** To test the application of the proposed code, particularly its density bonus policies, we modeled real estate development prototypes that varied incrementally in size from the base zoning thresholds to the maximums allowed in the proposed density bonus policy. For each building configuration prototype, the team tested whether a development would likely take advantage of the density bonus.

These steps are detailed more fully in **Appendix B: Methods.**

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[1] Floor area ratio, or FAR, is a ratio of the lot size to the total amount of square footage in a building. For example, an FAR of 1 on a 10,000 square foot lot could mean that the developer could either build a one-story building with a 10,000 square foot floorplate, or a two story building with a 5,000 square foot. Both would have an FAR of 1.

Policies Evaluated

This section provides an overview of the proposed density bonuses and the process that BPS used to narrow the list of incentives under consideration.

Initial Policy Proposal and Evaluation Results

In its earlier proposals for the mixed-use zones, the City of Portland proposed four density bonuses (which varied by zone) that would allow developers to build additional density in exchange for providing some combination of the following:

- **Affordable housing**: The initial policy proposed that 25% of the bonus square footage must be dedicated to affordable housing units to achieve up to 100% of the additional density allowed with the bonus.

- **Affordable commercial space**: For every one square foot of commercial space offered at 75% of current commercial market rent, developer gains two square feet of FAR, to a max of 50% of the allowable additional density in the bonus.

- **Plaza/open space:** For every one square foot of plaza or open space provided in a project, a developer would gain five square feet of FAR. Bonus maxes at 50% of the allowable additional density.

- **Green building:** If a developer met LEED standards, he or she may take up to 50% of the allowable additional density.

ECONorthwest initially evaluated all four of these density bonuses, their interaction with development feasibility across the market, and their relative incentive power when all four were offered simultaneously. **This review resulted in the findings that strongly suggested the need to revise and refocus the policies, because they were effective only in limited circumstances.** In particular:

- The plaza / open space bonus was the most attractive bonus, as structured in the proposed bonuses initially evaluated. This bonus allowed developers to trade off a one-time investment in building a plaza for the long-term benefit of market-rate income in additional residential units. The relative attractiveness of this bonus would have limited take up of the other bonuses.

- The affordable housing bonus was attractive in certain limited circumstances, where land values were low and achievable rents were very high. When the affordable housing bonus was financially beneficial, such that a developer might use it, it produced relatively few units of affordable housing per building.

- The affordable commercial bonus, as structured, was generally unattractive. It offered too little benefit to developers relative to the cost imposed.

- The green building bonus was difficult to model, as there is little consensus in the development community about how much cost is imposed through achieving LEED Platinum status. However, as modeled, it was generally unattractive to developers.

This initial review also found that optimal outcome for many developers would be only partial take up of the bonus (for example, taking 50% of the allowable maximum FAR in exchange for providing 50% of the required public benefit). In part, this was related to the structure of the City's parking requirements,

which are triggered when certain unit counts are met. If developers could take the bonus such that these parking requirements were not triggered, the bonus would be beneficial. In many cases, triggering parking requirements and building the additional incremental density would change the developers cost equation such that the full bonus take-up would reduce overall developer return.

These results are described in detail in **Appendix A** (an interim findings memorandum produced after this initial policy analysis was complete). As a result of these findings, BPS revised the policies and asked ECONorthwest to evaluate the refined set of policies. The remainder of this report focuses on the review of the revised policies, though some of the findings from the initial policy analysis are referenced as appropriate throughout.

Policies Evaluated in this Report

Based in part on the results of our analysis of the initial policies, BPS narrowed the list of bonuses to two candidate bonuses: (1) **affordable housing bonus** and (2) **affordable commercial bonus**. For each, the policy parameters were also revised, as described in Exhibit 1.

Exhibit 1. Overview of Modeled Requirements and BPS Interim Proposal

Variable	BPS Interim Bonus Structure			Proposed requirements as modeled in this analysis*
Affordable Housing				
% of Bonus SF	25% of the bonus square footage must be dedicated to affordable housing units to achieve up to 100% of the additional density allowed with the bonus.			20% or 25% of the bonus square footage must be dedicated to affordable housing units to achieve up to 100% of the additional density allowed with the bonus.
MFI Targets	Target of 80% of MFI (median family income) up to 100% of density bonus.			60%, 80%, and 100% of MFI, up to 100% of density bonus.
Zones	**Zone**	**Base Zone FAR**	**MAX FAR w/ Bonus**	CM1**, CM2, CM3
	CM1	1.5	2.5	
	CM2	2.5	4.0	
	CM3	3.0	5.0	
Unit Sizes	Not addressed			Assumed a proportionate mix of unit sizes in the units allowed in the bonused area (including for affordable units)
Parking Ratio	Remove parking requirements for <u>affordable units</u> created through the density bonus.			Modeled both standard parking requirements for affordable bonused units, and removing the parking requirement for affordable bonused units.
Affordable commercial space				
Bonus	For every **one square foot** of commercial space offered at 75% of current commercial market rent, developer gains **two square feet** of FAR, to a max of 50% of the allowable additional density in the bonus.			Modeled as proposed only.

Source: Bureau of Planning and Sustainability and ECONorthwest, 2016. See https://www.portlandoregon.gov/bps/63621 for more details, including maps of the mixed-use zones. Notes: *ECONorthwest, in some cases, modeled alternate policy parameters for the purpose of assisting with policy calibration. **In all cases and in all zones, ECONorthwest only modeled podium construction projects in all zones. In the CM1 zone, we found virtually no bonus take up. However, particularly in the CM1 zone, lower allowable densities and market variables may support stick-built construction types that are generally less costly to construct. The current BPS proposal applies to wood construction projects, where there may be some take up that ECONorthwest did not model. As a result, for the purposes of this report, we focus results on the CM2 and CM3 zones.

Part I: Affordable Housing Bonus Results

PROPOSED BONUS STRUCTURE: A developer seeking this bonus for a project could earn up to 100% of the total bonus. To earn bonus area, projects would be required to construct 25% of all floor area in excess of base zone regulations as affordable housing at an income target established by Portland Housing Bureau and set forth in an administrative rule. The affordability target is 80% of median family income (MFI);[2] however, this target is subject to change based on development of the administrative rule. The term of affordability is expected to be 60 years.

> With passage of inclusionary zoning legislation in Spring 2016 (SB 1533), the administrative and other aspects of this incentive program could be modified, and potentially applied to a broader range of zones, with different affordability requirements, and in different types of circumstances.

KEY FINDINGS OVERVIEW

- As with all density incentives, the density bonus would only have value for developers and produce public outcomes where development is occurring. If the bonus were in place right now, Portland would be most likely to see developers use it in places where development is currently occurring, and specifically in those areas with lower land land values, such as St. Johns and other areas of north and northeast Portland where achievable rents for new apartments is at least $2.50 per square foot. **See page 7 for details.**

- Density bonus programs "work" (incent development that would not otherwise be feasible) when revenue from additional units is sufficient to profitably overcome the additional cost of constructing additional units. Construction costs and achievable rents—market variables over which regulatory zoning authority has very limited control—have the largest impact on development feasibility, while floor area ratio (or additional density) has a limited impact on overall development feasibility. However, in certain circumstances, access to additional zoned density can make an important difference for developers. **See page 10 for details.**

- We would typically expect a significant difference in development feasibility based on the size of the set-aside (percentage of units required to be "set aside" as affordable) requirement. However, given the structure of the bonus in the mixed-use zones, we find only a modest effect on overall development feasibility when we vary the set-aside requirement between 20% and 25% of bonus units. Given this situation, it makes sense to increase the set-aside requirement to 25% to encourage a greater number of units to be produced. **See page 12 for details.**

- The income eligibility target for the units also affects feasibility. In general, when targeted incomes are at 60% of MFI, development feasibility is challenged. At 80%, it improves. **See page 13 for details.**

- Across all possible combinations of building configuration, increases in rent make more development more feasible. As rents increase, the density bonus program would have greater incentive power. While take-up varies somewhat by zone, where development is occurring in the current market, a financially motivated developer will be indifferent to the bonuses. **See page 14 for details.**

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[2] Affordability targets are almost always set relative to median family income, or MFI. For this analysis, we used a standard, HUD supported definition of affordability, and assumed that unit costs would be affordable (not more than 30% of monthly income) for families making 60%, 80%, and 100% of that threshold. The 30% cap includes rent and assumed utility costs.

- One incentive currently proposed is removing requirements for additional units to provide parking. Because parking can be so expensive to provide, it affects feasibility even in the absence of bonus requirements. Removing parking requirements as an incentive provides benefits to developers in certain situations, especially when it allows a developer to avoid building underground or structured parking. **See page 16** for details.

Geography

Market conditions across the City, even within the same zoning classification, can be quite different. To test and visualize this diversity, ECONorthwest created market typologies using a machine learning algorithm that calculates and groups census block groups into clusters based on: 1) the greatest level of similarity to other census tracts, and 2) how different each typology is from from every other typology.

The typologies use the following characteristics at the census block group level as cluster variables: (1) current rent levels for October 2015, (2) rent change in previous 12 months, and (3) number of new apartment units production per acre of land (excluding water area) since 2007, capturing all development activity that has occurred during the recovery from the Great Recession. We grouped census tracts with similar market conditions to create the market typologies shown in Exhibit 2.
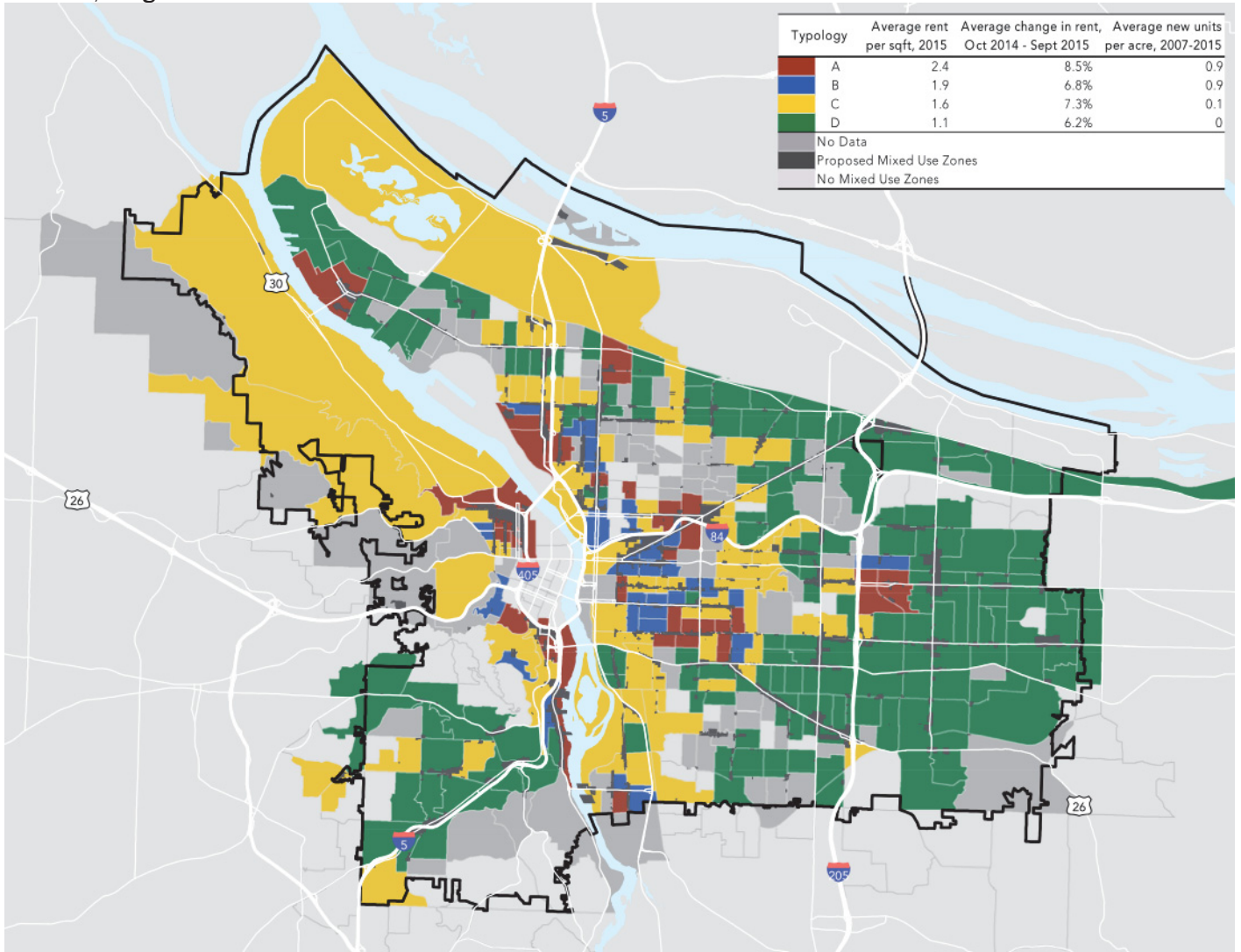
We also mapped May 2016 apartment rents in Exhibit 3.

KEY TAKEAWAY: The development market is far from geographically homogenous. In 2015 alone, about 6,000 new multi-family units were delivered[3]. However, new development is occurring primarily in inner-ring neighborhoods near the Central City and in St. Johns and other parts of North Portland. The City is unlikely to see new development occurring in geographies with lower rents. As such, these maps are good representations of where new development is most likely to occur in the near term, and a starting place for understanding where incentives are likely to have the greatest value for developers.

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[3] Co-Star, 2016.

Exhibit 2. Market Typologies Based on Rent, Change in Rent, and New Unit Production, Census Block Groups in Portland, Oregon

| Typology	Average rent per sqft, 2015	Average change in rent, Oct 2014 - Sept 2015	Average new units per acre, 2007-2015
A	2.4	8.5%	0.9
B	1.9	6.8%	0.9
C	1.6	7.3%	0.1
D	1.1	6.2%	0
No Data			
Proposed Mixed Use Zones			
No Mixed Use Zones			

Source: ECONorthwest analysis based on data from Co-Star, Construction Monitor, RLIS 2015
Note 1: Block groups with fewer than 2 rent observations were excluded from the analysis, and shown here as "no data."
Note 2: The area near Gateway along I-205 shown as part of Typology A is probably reflecting data that, while accurate, are outliers in the sample. New senior living development in this area is achieving rents that may not be representative of the development market in this area.

Exhibit 3. Rents by Census Block Group, Portland Oregon, May 2016

Multi Family Average Rent per Sq. Ft.
- < 1.30
- 1.31 - 1.84
- > 1.85
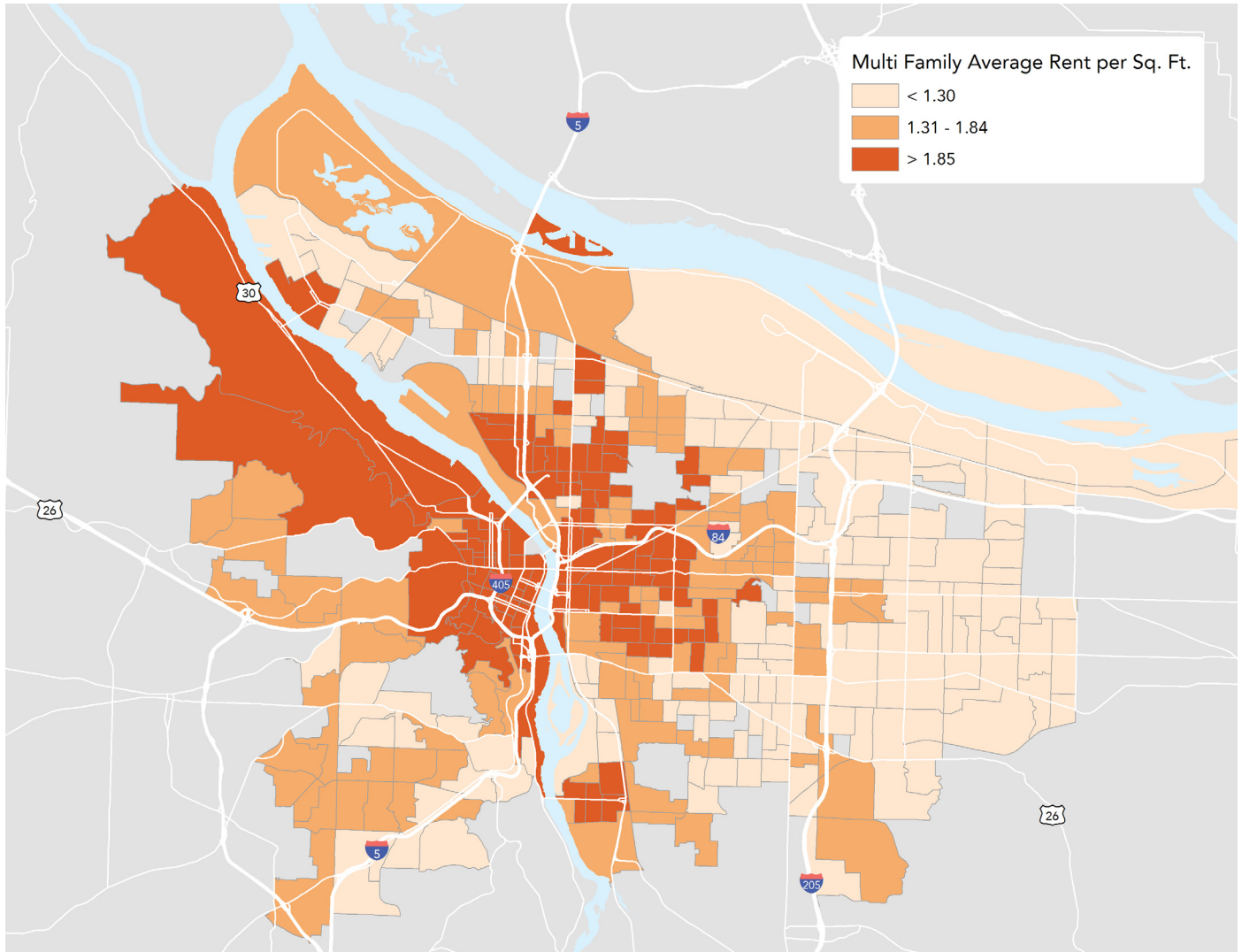
Source: ECONorthwest analysis based on data from Co-Star, May 2016
Note 1: Block groups with fewer than 2 rent observations were excluded from the analysis, and shown here as "no data."

The Role of FAR in Development Feasibility

Density bonus programs "work" (incent development that would not otherwise be feasible) when revenue from additional units is sufficient to profitably overcome the additional cost of constructing those additional units. To provide context, we evaluated the role that additional density (measured as floor area ratio) might play in incenting new development.

KEY TAKEAWAYS: Of all of the cost drivers for development, changes in rent and construction costs have the biggest impact on the development pro forma. This basic fact emphasizes the importance of creating an incentive program that can flexibly respond to changes in market cycles. For example, as the development cycle reaches its peak, construction costs get bid up, which generally creates a constraint to additional development.

As shown in Exhibit 4, changes in allowable FAR are less of a lever for increasing feasibility than other market variables that are less directly controlled by public policy.[4] For this analysis, we measured feasibility as *residual land value*. Residual land value is one way of considering feasibility from a developer's perspective: it is an estimate of what a developer would be willing to pay for land, given the cost of development and the likely return from leases or sales. Residual land value was calculated using the *cap rate*,[5] plus a spread of 1.5% to account for developer risk and a profit margin. When a residual land value is negative, someone would have to pay a developer to undertake a project on that property.

Exhibit 4. Development Feasibility Dashboard: Mean Values – Individual Variables (Min/Max) at $2.75 PSF/month rent
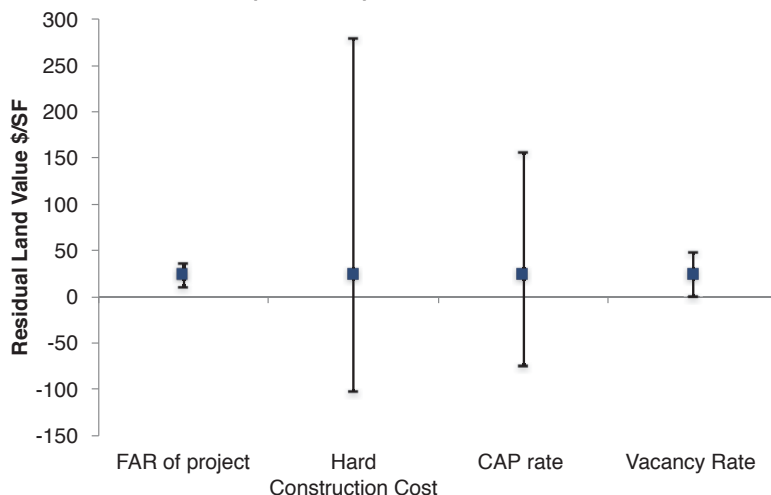
Source: ECONorthwest, 2016

Exhibit 4 represents the range of impacts of several of the key development variables that this analysis tested (FAR, hard construction costs, cap rates, etc) when rents are assumed to be $2.75 per square foot per month. At $2.75 per square foot, the residual land value (represented with the blue boxes in the

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[4] These findings used a simplified "pencil sketch" model that excluded all parking and commercial/retail from the building configuration. It isn't expected, however, that a more detailed model would have different findings—for instance, adding a parking requirement is a further financial burden as additional density increases the incremental costs.

[5] The *cap rate* is the rate of return on a property based on the income that the property is expected to generate. It is the ratio of net operating income to current market value.

center of the range) is positive, meaning that, on average, regardless of what is happening with construction costs, cap rates, or FAR, the developer's feasibility equation is positive and development would move forward, assuming the developer could find land available at about $30 per square foot. This finding is logical: new construction is happening in Portland at rents of about $2.75.

The length of the vertical bars shows how much the residual land value changes as the variables increase or decrease from this starting point, holding every other variable constant. In other words, decreasing construction costs to the lowest amount tested in this analysis ($150 in hard costs)[6] increases residual land value from under $50 per square foot to about $300 per square foot, which is a large increase in development feasibility. Similarly, changes in cap rates can move residual land values from about $30 per square foot to about $150 per square foot. In this market situation however, additional floor area ratio has a very small impact on overall feasibility.

This analysis does not mean that additional density is not a useful incentive; it does, however, suggest that its utility will be situational.

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[6] Excluding "soft costs", or permit fees, architectural fees, etc.

# Set-aside Requirement: 20% requirement vs. 25% requirement

To assist with calibrating the density bonuses to the greatest take up, we tested some of the fundamental program design elements, including the set-aside requirements, or portion of units required to be "set aside" as affordable. What happens if 20% of bonus units to be set aside as affordable, as opposed to 25% of bonus units?

KEY TAKEAWAY:

The result of this comparison is shown in Exhibit 5. As density is added beyond the allowed baseline in each zone, the residual land value changes. The residual land value line on this exhibit (and other similar exhibits in this report) shows the maximum achievable residual land value amongst all the possible building configurations modeled for each 10% increment of density bonus. The zig zag pattern is the result of changing building configuration (adding parking, changing efficiency of lot coverage, etc.) but also the result of intricacies and nuances of the building and zoning codes, and the fact that we modeled discrete increments of building configurations—rather than a continuous range—to better reflect the reality of how a building would be constructed.

While we would typically expect a significant difference in outcome based on the size of the set-aside requirement, given the structure of the bonus in the MUZ, we find only a modest effect on overall development feasibility when we vary the set-aside requirement between 20% and 25% of bonus units. In this case, because the overall bonus take up is less than 100% on most sites and the overall number of units produced in each building is small, the difference in affordable unit production and in development feasibility is nearly inconsequential from a policy perspective. The City should re-evaluate this finding for different program configurations that could be considered through the City's inclusionary housing policy design process. For example, if the set-aside were 25% of *all units* instead of 25% of *bonus units*, the differences in feasibility could be more significant.

Exhibit 5. CM2 Bonus Take up by Set-Aside Percentage (40K SF lot, 80% MFI)
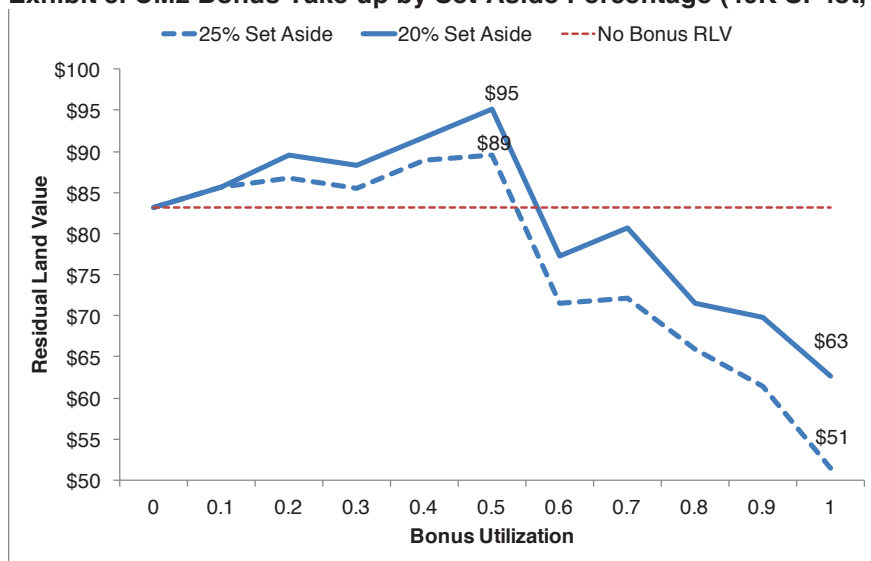
Source: ECONorthwest.
Note: This exhibit shows results in the CM2 zone, on 40,000 sf lots, at 80% MFI affordability target. We completed the analysis for other zones and in other lot sizes, and found similar patterns when comparing 20 and 25% set-asides.

Affordability Target

Another key program parameter is the affordability target, or the income target for eligibility for the units. We modeled how total and affordable unit production varies when the incentive targets different affordability thresholds: 60%, 80% and 100% of median family income (MFI).

KEY TAKEAWAY:

Not surprisingly, the density bonus performs best from a financial perspective when higher incomes are targeted. At 60% of MFI, the rent from the affordable units is generally too low to support development feasibility. To achieve the production of units at 60% MFI, greater subsidy would be required. Without additional subsidy, the policy risks lowering overall unit production; the analysis finds that a developer would be likely to choose to develop at the base zone density or not at all, rather than taking the bonus of the additional density. At 80% and 100% MFI, bonus take up improves.

Exhibit 6 shows results in the CM3 zone, on 40,000 square foot lots, assuming a 25% set-aside. We completed the analysis for other zones and in other lot sizes, and found similar patterns in the difference in take up between 60%, 80%, and 100% of MFI. The overall shape of the lines changed as we evaluated different configurations, but the relationship among the lines did not.

State legislation regarding inclusionary zoning passed in early 2016 (SB 1533) provides authorization for jurisdictions to, in certain circumstances, mandate the inclusion of affordable units to 80% MFI. As the City of Portland explores the development of mandatory inclusionary zoning policies and evaluates the financial off-sets it will provide for developers, re-evaluation of the income requirements may be warranted.

Exhibit 6. CM 3 Residential Bonus Take up by Affordability (MFI) Target
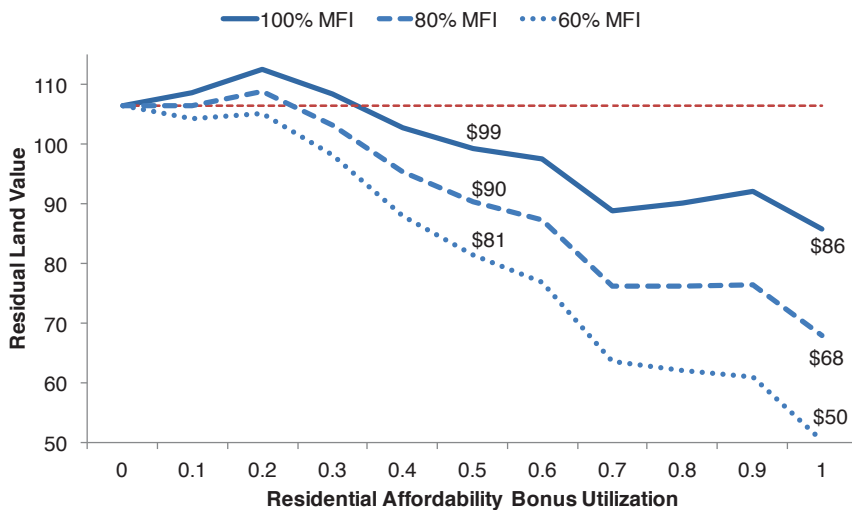
Source: ECONorthwest
Note: This exhibit shows results in the CM3 zone, on 40,000 sf lots, assuming a 25% set-aside. We completed the analysis for other zones and in other lot sizes, and found similar patterns relative to 60, 80, and 100% MFI.

Rent and Zone Sensitivity

The majority of model analysis and policy calibration was conducted using an assumed market rent of $2.75. Based on our analysis, rents lower than $2.50 do not generally support podium construction, and are therefore are not relevant when calculating the likely density bonus take up. To test the sensitivity of findings to changes in market inputs, we evaluated an alternative scenario using a higher market rent level of $3.25 per square foot (which represents the current high end of the market in the City of Portland). We also evaluated differences across mixed-use zones.

KEY TAKEWAY:

The residual land values that can be supported with increased rents are higher in all scenarios. Of interest is that the incentive for the density bonus is also much stronger across all zones and lot sizes. Exhibit 7 displays the CM2 zone residential bonus take up for each of the market rent assumptions—the incentive for bonus take up is limited at $2.75 rent, however, there is a financial incentive to use all of the bonus with $3.25 rent.

Exhibit 7. CM 2 Residential Bonus by Market Rent (40K SF lot with a 25% set-aside bonus) $2.75 vs. $3.25 rent
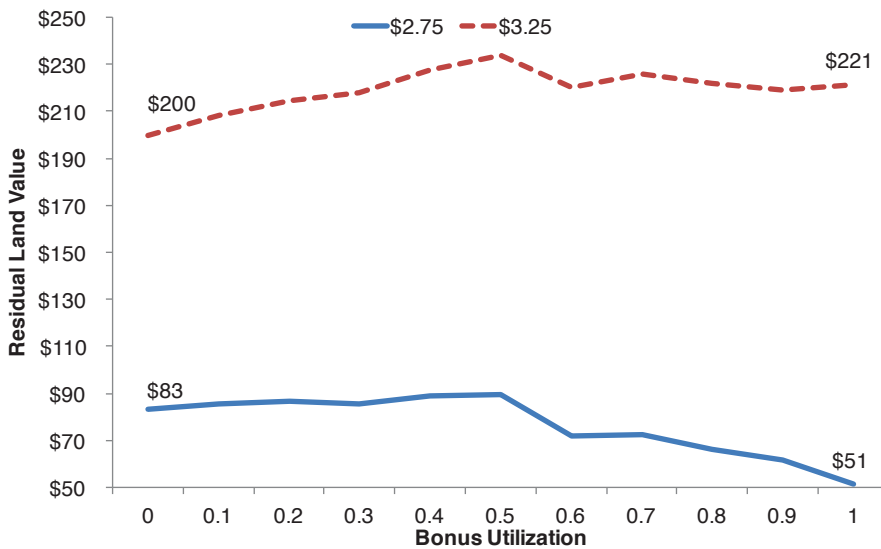

Exhibit 8 shows the impact of the proposed policy in each mixed-use zone. This exhibit shows that developers will be indifferent to the incentives, and development will occur or not based on the larger market variables (rents, construction costs, etc) evaluated in this analysis. Where development is occurring, a financially motivated developer will be indifferent to the bonuses.

Exhibit 8. Impact of Proposed 80% MFI Affordable Housing Density Bonus on Residual Land Value, in each Mixed-use Zone (10K SF lot, 80% MFI)
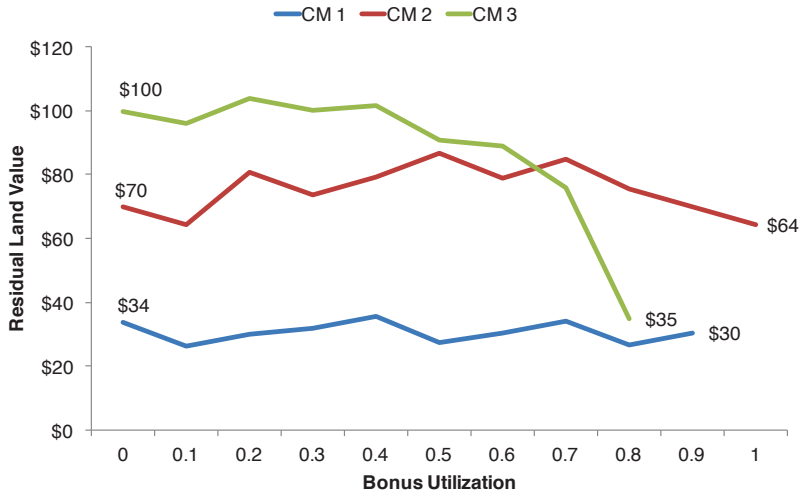
Source: ECONorthwest, 2016
Note: This exhibit shows only the results at 80% MFI. Results at 60% MFI are generally unattractive in all zones, and were not included. Results at 100% MFI were generally more attractive, but are not the policy target. See page 12 for details regarding program take up at different affordability thresholds.

Parking Requirements

Parking is a key variable in the feasibility equation. We modeled development outcomes based on three parking scenarios:

- Parking requirements are the same for all units in the building
- Parking requirements waived for new units created through the bonus
- Automated (mechanical) car stackers (using standard parking requirements)

Mechanical stacked parking is beginning to appear in new developments in Portland as a cost-effective and space-efficient alternative. Many predict that within a few years, it may be the norm for urban residential developments. We looked at the effect of automated car stackers on each pro forma. Since this is a new technology, it is not clear yet how it could affect the market as a whole.

KEY TAKEAWAY:

Parking affects feasibility even in the absence of bonus requirements. As additional density is added, Portland's development code requires parking to be provided for buildings larger than 30 units, and the cost per space increases as parking form shifts from surface, to podium, to underground. The additional parking adds cost that in many lower-rent markets cannot be overcome by the additional density allowed through the bonuses. This is one variable that contributes to the limited attractiveness of the bonuses.

Some developers choose to provide more parking than is required in their project to increase the project's attractiveness in the market. This is especially common for buildings that are farther from the Central City and do not have strong access to high capacity transit lines.

Removing parking requirement for affordable units created through the bonus offers an incremental financial incentive. This proposed policy offers reduced incentive compared to the larger returns achieved through the assumption of the use of mechanical stacker units. Its benefit is situational, but important for the following situations:

- Parking is required for the building, but the building is well-located near transit and does not need additional parking to be competitive in the market
- Removing parking allows the developer to avoid the 30 unit threshold for requiring parking
- Removing parking requirements means that the developer can avoid underground or structured parking

Exhibit 9 shows the bonus take-up by parking policy in the CM2 zone, showing that take-up may increase after 50% with stackers, but not with other parking scenarios

Exhibit 9. CM2 Residential Bonus Take up by Parking Policy
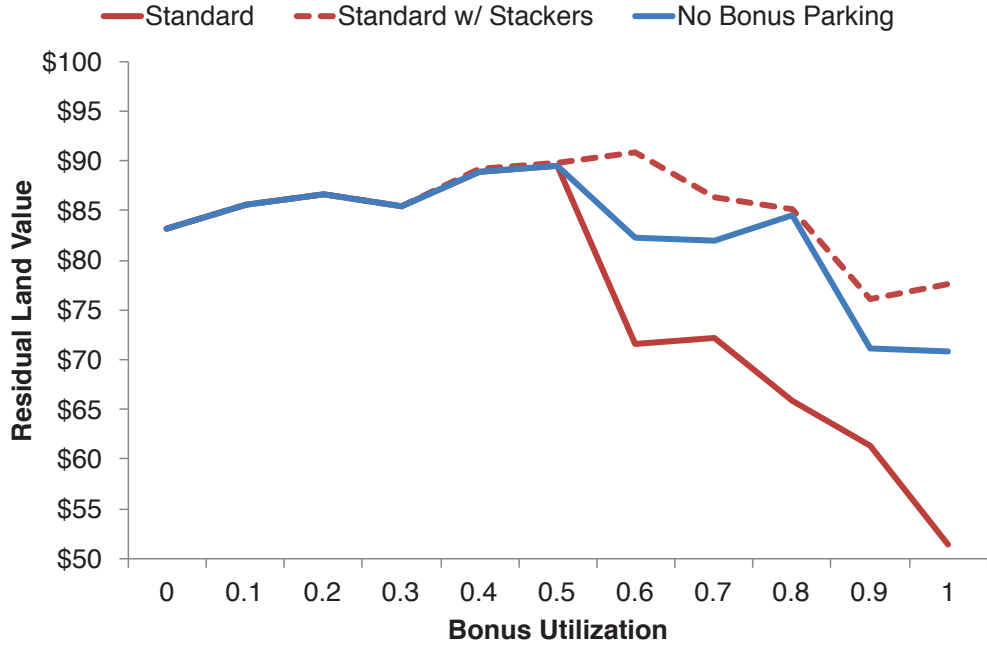
Source: ECONorthwest, 2016
Note: Modeled in CM2 zone

Part 2: Affordable Commercial and the Combined Incentives

Overview of the Affordable Commercial Bonus

BONUS STRUCTURE: A development proposal seeking this bonus could earn up to 50% of the total bonus floor area. Projects would earn two square feet of additional/bonus floor area for each square foot of commercial space that is made available at "affordable" rates. Commercial space priced at a rate of 25% below market rents is being targeted. However, specific rates, affordability targets, and qualifying business types will be further studied and described in an administrative rule to be administered by a partner agency or entity. The term of affordability is expected to be 20 years. As structured, this bonus is less attractive than the affordable housing bonus but can still provide an incentive for applicable projects.

KEY TAKEAWAYS: Retail is often a "loss leader" in a development project, meaning that developers hope that retail spaces can be at least revenue neutral and support an overall project that is financially feasible based on the rents achievable in the residential units in the building. Requiring below-market rents in the commercial space widens the feasibility gap, and requires additional parking spaces, which together create an unattractive financial equation.

Exhibit 10 shows the impact of the proposed commercial affordability density bonus on residual land values. The bonus is attractive in the CM2 zone, but not in the CM1 or CM3 zones.

Exhibit 10. Impact of Proposed Affordable Commercial Space Density Bonus on Residual Land Value, in each Mixed-Use Zone
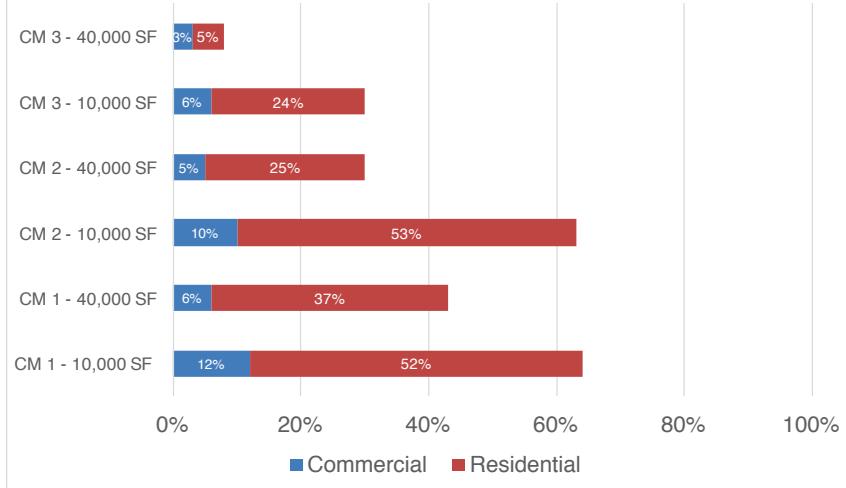

Source: ECONorthwest, 2016

Combined Bonus Utilization

A key question for this analysis was: how do the incentives interact with each other? Is one preferable to the other? We modeled the interaction of the bonuses, recognizing that the mixed-use zone policies allow the developer to take only part of the additional density, so long as they provide proportionate benefit (measured as affordable housing or commercial space). The financial model allows measurement of results for partial take up (for example, 10%, 50%, or 75%) of the proposed density bonus based on the financial incentive for bonus use.

KEY TAKEAWAYS: The optimal outcome for many developers would be partial take-up of the bonus. In other words, a developer may choose to take only 50% of the allowed additional FAR. Thus, even when the affordable housing bonus is financially beneficial, it produces relatively few units of affordable housing per building. In many cases, feasibility increased with partial take-up until parking requirements were triggered at 30 units, and were unattractive at the maximum allowed additional density.

Exhibit 11 shows the results of our comparative analysis across zones and parcel sizes. We modeled the top ten scenarios with the largest financial return and measured the bonus take up for each of the building prototypes. On average, the optimal number of units produced through the density bonus was fewer than two and no more than four units of affordable housing per building (depending on zone, lot size, and other variables). In these scenarios, affordable units comprise just 2% of all units in a building. Bonus take up was greatest in the CM1 zone and decreased as the lot size and base zoning entitlements increased.

Exhibit 11. Residential and Commercial Bonus Take Up by Parcel Size (average of top 10 prototypes) (80% MFI, 25% set-aside for bonus units, 50% commercial affordability)

Source: ECONorthwest, 2016

Conclusions and Next Steps

This section relates back to policies and provides recommendations for further analysis. As a summary of overall findings, Exhibit 12 describes bonus take-up by zone.

Exhibit 12. Summary of Results: Are the Bonuses "Attractive" to Developers?

	CM1	CM2	CM3
Affordable Housing	Limited take up where rents are high and land costs are low.	Partial take up situationally attractive, where rents are high, land costs are low	Partial take up attractive, where rents are high, land costs are low, and parking requirements or incentives align with market demand for parking
Commercial Affordability	Yes, where rents are high.	Yes, where rents are high.	Indifferent to bonus

Program Design

- ***The set-aside amount does not matter much in the case of the affordable housing or commercial density bonus, primarily because of the way the bonus proposal is structured.*** Moving forward, the set-aside requirement could become a much more important program consideration as the city transitions to consideration of an inclusionary housing policy.

- ***Parking waivers*** for affordable units could be beneficial in certain circumstances, ***and should be included among the incentives.*** At the same time, it will be important to ***keep up-to-date with the latest technologies related to parking.*** Parking costs are a major driver of construction costs, and the parking associated with the additional units allowed by the density bonus can affect program take-up. Mechanical stacked parking is beginning to appear in new developments in the Portland market as a cost-effective and space-efficient alternative. Many predict that within years, it may be the norm. The City should consider modeling the impact of stacked parking in future related analyses.

- ***The City should consider whether the policy should require the same distribution of unit size for affordable units as the market rate units.*** Without this requirement, even where affordable units are produced, the developer will opt for development of smaller studio units. This question leads to an important policy discussion about the trade-offs between development of more total units (which are likely to be smaller units) versus a smaller number of units that might accommodate families. Is the desired policy outcome *more* units? Or *family* units?

- ***We recommend the City study the impacts of different affordability periods for both density bonus incentives and upcoming studies related to inclusionary zoning***. The literature for inclusionary zoning finds that longer timeframes for affordability are not a significant limiting factor for the feasibility of including affordable units, given how developments are planned and underwritten.

- Regarding the affordable commercial program, ***the bonus should be at 80% of market rate rents.***

Program Implementation

- ***The City should consider structuring bonus policies to flexibly respond to market cycles, or be updated frequently.*** Development markets are cyclical and should be expected to change. As a result, the findings of this analysis are very sensitive to changes in rents and construction costs. In the coming years, if rents increase faster than construction and other up-front development costs, the density bonuses will become more attractive.

- ***A fee-in-lieu approach*** could increase take up of the density bonus while providing funds to dedicate to affordable housing. As a next step, the City would like to establish a fee-in-lieu system and a set of parameters for fee use. An in-lieu fee would allow developers to pay into a housing fund rather than building new affordable housing units. Developers may be reluctant to encumber an entire development project with a limited number of affordable units that must remain compliant with affordable housing programs over long periods of time. And, the administrative costs for the City to ensure compliance for these units may be prohibitive.

- ***We recommend simplifying monitoring and compliance for owner/operators***. This is important for both affordable residential and commercial.

- ***As a next step, the City should study the potential unit creation from density bonuses on the homeownership products.*** This analysis detailed in this report looked specifically at rental products. If the City is also interested in encouraging mixed-income ownership projects, it should look into the potential impacts on the pro forma for condo and other ownership projects. The program might be effective when paired with other incentives and partnerships, including Community Land Trusts.

- ***For the commercial bonus, the City should work with its partners to integrate the incentive into the current bundle of tools available to business owners.*** We recommend pairing this incentive with other business support programs offered through PDC or other non-profit partners for outreach and ongoing monitoring and compliance.

Integration with Related Policies

The City may need to re-evaluate the density bonus program with coming policy changes that will affect development form and costs, including a new construction excise tax, a possible linkage fee, and changes in Changes in Transportation Demand Management requirements.

In addition, Oregon legislators passed Senate Bill 1533 in February 2016 which allows jurisdictions to require affordability in new multifamily structures of over 20 units. The legislation also requires that jurisdictions provide development incentives for affordable housing. As of Spring 2016, City staff had not fully reconciled the provisions of SB 1533 with development incentives and allowances proposed in the Mixed-use Zones Project.

Appendices

- A: Interim Findings Memorandum
- B: Detailed Methodology