BIA | BAY AREA

BUILDING INDUSTRY ASSOCIATION

DATE: March 31, 2025

TO: Mayor Ron Bernal, Mayor Pro Tem Louie Rocha and Councilmembers
             Don Freitas, Monica Wilson and Tamisha Torres-Walker

TO: Planning Commission Chair Kevin Riley, Vice Chair Seth Webber and
             Commissioners Jennifer Perez, Robert Martin, Christian Hills and
             Cortney Jones

CC: Antioch City Manager Bessie Marie Scott, Community Development
             Director Kwame Reed and Planning Manager Zoe Merideth

FROM: East Bay Governmental Affairs Executive Director Lisa Vorderbrueggen

RE: Proposed Inclusionary Zoning Ordinance

Dear Mayor Bernal, Councilmembers and Planning Commissioners:

BIA|Bay Area is an association that represents more than 400 member companies engaged in the entitlement, development, design and construction of new homes throughout the region including Antioch. We thank you for including us among the stakeholders participating in your outreach efforts as the city explores the formation of a potential inclusionary zoning ordinance.

During the stakeholder outreach virtual meeting on Feb. 4, 2025, Antioch staff indicated that the city plans to hold study sessions with the planning commission and the city council on a proposed inclusionary zoning ordinance. In advance of the first study session set for April 2, 2025, BIA|Bay Area would like to provide the following comments, background information and questions:

Origins of Inclusionary Proposal – The city's certified 2023-2024 Housing Element states that the city will "evaluate an inclusionary housing ordinance to help provide more affordable units."

During the outreach meeting on Feb. 4, 2025, however, a city consultant incorrectly stated that Antioch had already decided to adopt an inclusionary ordinance and that the meeting was being held to gather information about what such a program would entail. The consultant corrected his statement but the material presented during the outreach meeting largely assumed that an inclusionary policy would be adopted.

It is important to note that the California Housing & Community Development staff informs us that no jurisdiction is required to study the feasibility of an inclusionary ordinance or adopt such a program as part of the housing element review process. This is consistent with HCD's position on inclusionary ordinances dating back to 2004. In the attached letter, then-HCD Director Lucetta Dunn wrote that "neither state law nor department policy requires the adoption of any local inclusionary ordinance (or the amendment of an existing ordinance to make it more stringent) in order to secure approval of a jurisdiction's housing element."

On the contrary, HCD requires local jurisdictions with <u>existing</u> mandatory inclusionary policies to analyze these programs as <u>potential governmental constraints</u> on housing production. (*Emphasis added.*)

Are Inclusionary Programs Really a 'Strong Tool for Affordable Housing?' – Despite this oft-repeated phrase, empirical studies of the effectiveness of inclusionary programs reveal a far less rosy outcome.

A [policy brief published by the Mercatus Center at George Mason University](#) (attached) in 2019 and updated in 2021 found that <u>none</u> of the six major studies of inclusionary programs show that they increase the housing supply or lower prices. Instead, much of the research comes to the opposite conclusion: Except for a very small number of people lucky enough to secure one of the affordable units, inclusionary programs cause overall housing prices and rents to rise, further reducing affordability for everyone else.

"Relying on new housing construction to provide subsidized units is not a strategy that can lead to more housing that's affordable for more people," wrote research fellow Emily Hamilton. "In cases where inclusionary zoning raises house prices generally, the costs of the policy fall hardest on the lowest-income residents who aren't lucky enough to qualify for one of the units that's been designated as affordable."

Rather than layering inclusionary costs on top of zoning that already limits the construction of relatively more affordable multi-family housing, the study recommends that jurisdictions incentivize the production of the type of housing that will benefit greater numbers of people who need less expensive places to live.

A [joint study by the Terner Center for Housing Innovation at UC Berkeley and the Lewis Center for Regional Policy Studies](#) released earlier this year (attached) also found that inclusionary policies trigger significant tradeoffs between affordable housing and market rate housing production levels: The higher the inclusionary requirement, the fewer market-rate homes are constructed.

"One of IZ's (inclusionary) fundamental shortcomings is that it does not address – and likely exacerbates – the housing scarcity that drives higher rents and home prices," the authors concluded. "It improves housing affordability for a few at the risk of worsening affordability for many, and it taxes precisely the activity needed to ameliorate the housing shortage and bring down rents: development."

Much like the Mercatus analysis, the Terner-Lewis report advises policymakers to rely on land use reforms for "increasing overall housing production to improve affordability and choice in the wider housing market. (Policymakers) should use other tools, including increased public subsidies, to produce BMR homes and assist lower-income households."

Imposing additional costs on housing production through an inclusionary requirement will almost certainly lead to fewer homes being constructed, higher rents and more costly sales prices, further exacerbating Antioch's unaffordability crisis. How will Antioch balance these trade-offs and avoid worsening the housing crisis?

Is Inclusionary Housing Really Free of Public Subsidy? – Advocates often tout that inclusionary housing doesn't require public subsidy. This is inaccurate.

Local jurisdictions with inclusionary programs administer and monitor for compliance the below-market-rate (BMR) units for the duration of the affordability term. This requires funding for staff and related resources.

In addition, the large subsidies necessary for the provision of low- and very-low affordable housing nearly always requires multiple sources of funding ranging from public agency grants to federal and state tax credits.

Staff's recommendation for a 15 percent inclusionary across-the-board program fails to recognize contrary financial feasibility findings. – According to the consultant's findings outlined in the planning commission staff report for the study session on April 2, 2025, a 10 percent and a 15 percent inclusionary requirement is infeasible for all single-family large lot developments and only partially feasible for single-family small lot and townhome developments. On the rental side, only high-density multifamily projects are fully feasible for very low, low and moderate income households. The market for very dense rental housing in Antioch is limited, at best. Overall, adopting a 10 or 15 percent inclusionary requirement will result in fewer homes being built in Antioch.

Last month, Vacaville staff and its consultant team similarly suggested to the city that adoption of an inclusionary requirement was a fait accompli but after hearing from the homebuilding community, the city council directed staff to work with the development industry on alternative incentive-based approaches. We encourage Antioch to follow Vacaville's example.

Again, we thank Antioch's elected officials and staff for the opportunity to provide input into the city's inclusionary housing discussion. We urge the city council and planning commission to pursue policies that address Policy 1.1 (Page 7-2) in the city's housing element: Ensure safe, decent and sound housing for **ALL** residents.

Please feel free to reach out to me with any additional questions or comments.

Sincerely yours,

Lisa A. Vorderbrueggen
BIA|Bay Area East Bay Executive Director for Government Affairs
1000 Burnett Ave., Ste. 340, Concord, CA 94520
925-348-1956 (cell)
lvorderbrueggen@biabayarea.org

Attachments:

1. Policy Brief, "Inclusionary Zoning Hurts More Than It Helps," Mercatus Center at George Mason University, September 2019/Revised February 2021
2. White Paper, *"Modeling Inclusionary Zoning's Impact on Housing Protection in Los Angeles: Tradeoffs and Policy Implications,"* Terner Center for Housing Innovation, UC Berkeley and Lewis Center for Regional Policy Studies at UCLA, April 2024

TERNER CENTER FOR HOUSING INNOVATION
UC BERKELEY

UCLA Lewis Center
for Regional Policy Studies

Modeling Inclusionary Zoning's Impact on Housing Production in Los Angeles: Tradeoffs and Policy Implications

AUTHOR:

SHANE PHILLIPS,

UCLA LEWIS CENTER FOR REGIONAL POLICY STUDIES

Executive Summary

Recent California reforms have increased **pressure on cities to produce more** below market-rate (BMR) homes, and inclusionary zoning (IZ) is viewed as one potential strategy to achieve this goal. IZ requires or incentivizes multifamily home **builders to rent some units to lower-income households at below-market** prices. But while IZ has been shown to produce BMR housing, it is also sometimes associated with reduced overall housing **production and increased rents and/or** house prices. Evaluating IZ through the lens of production tradeoffs is important to ensure that policy makers' decisions improve housing affordability—or at least generate more benefits than costs.

In this report I use the City of Los Angeles' Transit Oriented Communities (TOC) program parameters with the Terner Housing Policy Simulator—developed for the city—to estimate potential impacts of different IZ requirements on housing production and the supply of below-market units. TOC is an incentive-based, **voluntary program regarded as a model for** successful IZ. While the modeled scenarios **do not represent actual production** numbers, they illustrate how adjusting IZ requirements can lead to sharply different outcomes for affordability.

The analysis shows:

- Changing the IZ level entails significant tradeoffs between BMR and market-rate production. As the IZ requirement rises, there are diminishing returns **to BMR production and accelerating** losses to overall housing production. Beyond a certain level, higher IZ **requirements produce less BMR and** less market-rate housing.

- BMR units produced by for-profit **developers represent a large private** subsidy of affordable housing. For example, with a 16 percent IZ requirement, the Simulator model yields an estimated 41,700 extremely low-income units over 10 years. These units have an annual value of approximately $1.4 billion in year 10.

- However, I also find that even small increases in rent growth in the **unrestricted rental market would be** enough to negate the value of private IZ subsidies. For example, compared to a no-IZ scenario, additional rent growth of just 0.8 percent per year in the 16 percent scenario would negate the value of private subsidies from IZ.

The fact that poorly calibrated IZ policies could lead to reduced housing production and higher rents and housing prices— or both—should prompt caution about increasing IZ requirements to meet BMR production targets. The voluntary and incentive-based nature of the TOC program minimizes some downside risks of IZ. Yet even well-designed IZ policies have limits, and producing BMR units through IZ may have more costs than benefits. Instead, policymakers should generally reserve the use of land use reforms for increasing overall housing production to improve affordability and choice in the wider housing market. They should use other **tools, including increased public subsidies,** to produce BMR homes and assist lower-income households. Public subsidies will be more cost-effective in this context.

Introduction

Inclusionary zoning (IZ) requires or incentivizes homebuilders to rent some units in their new multifamily construction projects to lower-income households at below-market prices. Many view IZ **as an appealing strategy for producing** affordable (below market-price) housing without the use of scarce public subsidy dollars, and hundreds of U.S. cities have adopted IZ policies.[1]

The strategy's appeal may be particularly strong in California, where cities are **increasingly looking for tools to increase** affordable housing production following the passage of Senate Bill 828 in 2018. By reforming the Regional Housing Needs Allocation (RHNA) process, this law dramatically increased the amount of housing cities must plan for in their guiding land use documents.

IZ offers cities a way to boost their affordable housing production through private, rather than public, subsidy. The City of Los Angeles is targeting 456,000 new homes from 2021 through 2029, including 185,000 units for low- and very low-income households. This is up from 82,000 total homes during the previous eight-year cycle. At current costs of $500,000 or more per subsidized unit, meeting this goal with only public funding is unlikely.

However, how IZ programs are designed, and the share of units that need to be priced at below-market rates (BMR), have significant implications not only for the **production of BMR units**, **but potentially** for overall rental market affordability as well. Researchers find that IZ can be associated with higher prices for the new market-rate units in IZ projects, and in some cases, for the wider housing

market.[2,3] Policy makers—especially those in California who may feel pressured to increase IZ requirements to meet low-income RHNA goals—must weigh the benefits of generating additional BMR units with IZ against the potential cost of lower total housing production and higher **prices for new and existing market-rate units.**

In this paper, I use the Terner Housing Policy Simulator, developed for the City of Los Angeles, to estimate the potential impacts of different IZ requirements on housing production in LA. The Simulator, which uses parcel data, econometric modeling, housing pro formas, and MapCraft Labs' analytics and mapping software, allows researchers and policymakers to model changes to the cost, feasibility, characteristics, and likelihood **of development across every parcel in** the city under different zoning and policy conditions, including changes to IZ policy. I examine three potential effects of IZ:

- How does the production of BMR and market-rate units change at different levels of IZ requirements?

- What is the approximate value of private subsidies that go into IZ BMR units under different scenarios?

- How much faster would rents in the **wider market need to increase to** negate the value of privately subsidized BMR units?

I examine these questions through the lens of Los Angeles's Transit Oriented Communities (TOC) program. TOC is an ambitious IZ policy adopted in 2017. It is designed to expand the production of mixed-income and affordable housing near transit through IZ and development bonuses. In areas located near transit stops, TOC provides density bonuses

and other incentives—including reduced parking requirements—in exchange for a certain share of affordable housing units (See Table 1). Since its inception in 2018, developers have proposed nearly 50,000 dwelling units as part of the program, one-third of all proposed new units in the city. Building permit data reveal that TOC projects supply primarily extremely low-income (ELI) housing units to meet the IZ requirement, with research showing that the required mix of ELI units under the TOC program is more financially attractive to developers.[4]

Using the TOC program and the production of ELI units as an illustrative example, I find that changing the level of IZ entails significant tradeoffs between BMR and market-rate production. The simulation shows that up to a point, higher affordability requirements do produce more BMR housing. But increasing the IZ requirement also substantially reduces overall housing production over a 10-year period, with relatively limited gains to below-market housing.

For example, increasing the IZ require-ment needed for TOC development bonuses from the current 11 percent extremely low-income (ELI) level to 25 percent would increase ELI housing production by an estimated 17,700 units. It would also, however, reduce market-rate production by 108,700 units. After estimating the value of private subsidies invested in IZ BMR units under different scenarios, I also find that these subsi-dies would be entirely negated if reduced market-rate housing production leads to rent increases of 0.3 to 0.9 percent per year above baseline. These findings have significant implications for how IZ policies are designed, and raise broader questions about how cities like Los Angeles should

plan for housing at different income levels.

This report begins with a discussion of how I used the Simulator to produce these findings, followed by sections on how changing IZ requirements affects housing production, what happens to private subsidy with different IZ scenarios, and which rent increase levels negate BMR housing's value. It concludes with policy recommendations that suggest strategies to minimize IZ's downside risk, recognize the limits of using development bonuses to produce below-market housing, and argue for caution against using land use policy as a substitute for broadly shared taxes and public subsidies.

Methodology

Evaluating the impacts of IZ on housing market outcomes is difficult, in part because IZ policies at the local level can vary in so many ways. They differ in the share of below-market units and depth of affordability required, whether the policy is mandatory or voluntary, whether development bonuses are provided and the scope and scale of the bonuses, the size under which projects are exempt from IZ requirements, the availability of alternative compliance measures such as in-lieu fees, and more. Cities that adopt IZ may also differ from other cities in ways that are difficult to measure, potentially confounding study results.

Nevertheless, it is important to under-stand IZ's costs and benefits, and existing research suggests that IZ can have unin-tended consequences. Because in effect it operates as a tax on development, IZ should reduce housing production and increase the overall price of housing in the market, all else being equal.[5] The evidence on this is mixed: researchers have found

that IZ leads to reduced housing production in some jurisdictions[6] **but not in others.**[7] Although market conditions likely influence the size of these effects, their impacts can be meaningful. Hamilton finds that for every year a mandatory IZ is in place, there is an associated 0.81 to 1.1 percent increase in the housing price per square foot.[8] Similarly, Schuetz, et. al. find that in strong housing markets, a 1 percent increase in the age of an IZ policy is associated with a 0.014 percent increase in prices.[9]

I employ the data and analytics underlying the Terner Housing Policy Simulator to examine different IZ scenarios and their impacts using the City of Los Angeles' TOC program. The Simulator overlays a real estate pro forma—the calculations that determine whether a new building is financially feasible to build—on top **of parcel-level land use and regulatory** data. Users can then toggle a broad range **of market and policy factors to observe** how those changes might impact how much housing gets built. Those parcel-level estimates are aggregated across the city, and by adjusting dozens of inputs, can indicate the citywide impact that a suite of market or policy changes have on development potential.

Readers interested in a description of the Simulator's assumptions are encouraged to read the Terner Center report which includes a detailed methodology.[10] **Here,** I just provide the key assumptions and methods needed to understand the analysis in this paper.

In the Simulator, each parcel in the city **is assigned an optimal development** type—e.g., small multifamily or high-rise apartment building—and unit count corresponding to the project with the best set of estimated financial outcomes.

Optimal development types and unit counts are based on model inputs such as maximum building heights and floor **area, minimum parking requirements, construction and operating costs, annual rent appreciation, entitlement fees, and** permitting and construction timelines.

The Simulator then estimates the probability that a building and associated units are built on a parcel within the next 10 years, which is estimated separately as a function of the project's financial outcomes. This includes an estimate of both the project's net present value and residual land value to understand how much a developer might be willing to spend to acquire the property for development. Both the residual land value and the net present value calculation incorporate the cost of the IZ policy being modeled. The "expected" impact of a policy is then estimated as the optimal unit count multiplied by the probability of development. For example, a parcel with an optimal dwelling unit count of 100 and a development probability of 20 percent has an expected dwelling unit count of 20. Total housing production under each model scenario is the sum of expected dwelling units.

A core assumption in the Simulator is estimating the rents of new units. I calculate the private subsidy that developers are contributing to each BMR unit by taking the difference between market rents for new multifamily housing and below-market IZ rents. To simplify private subsidy calculations, I estimate the citywide median rent for an average mid-tier apartment in 2020 using Fair Market Rents linked to each census tract in the Simulator, weighting rents by the total expected dwelling units for each tract under the 11 percent IZ simulation (existing city policy). I estimate

a median Fair Market Rent of $2,130 in neighborhoods where housing production is anticipated, and with this figure I calculate a **median rent for new multifamily apartments of $2,481 per month** ($2,130 adjusted by a 28 percent rent premium and 9 percent multifamily rent discount).

For the simulations in this paper, I focus on Los Angeles's TOC program. Under TOC, projects receive development bonuses **including additional dwelling units and** floor area and reduced parking when they **restrict some apartments to lower-income** households (see Table 1 for a full list of by-right, "base" incentives). There are four TOC "tiers," with Tier 4 providing the largest development incentives and highest affordability requirements. TOC **encourages developers to rent units at** prices affordable to extremely low-income (ELI) households, those earning no more than 30 percent of area median income (AMI). To be eligible for the development bonuses, projects must allocate 8 to 11 percent of units for ELI households. While developers can choose to build a higher proportion of low- or very low-income **units instead, most mixed-income** TOC developers have been building ELI **units, indicating a comparative advantage** resulting in the highest baseline production.[11]

It is worth noting that this level of affordability in IZ programs is rare: policies in other cities generally target households up to 50 percent, 80 percent, or 120 percent of AMI (very low income, low income, and moderate income, respectively), in part due to the challenges associated with making projects financially feasible at deeper affordability levels. However, given the prevalence of developers choosing to build ELI units as part of the TOC program in

Los Angeles, I adopt the ELI unit requirements as a benchmark for the simulations in this paper. The monthly rent for a new ELI unit is $503.

Higher tiers are the most geographically limited. Many more parcels are eligible for Tier 1 and 2 benefits than Tiers 3 and 4. I select Simulator settings that ensure projects are always eligible for the highest tier available based on their location. In other words, all projects in an 11 percent IZ scenario must set aside 11 percent of units for ELI households; this analysis does not capture the slightly reduced requirement for lower tiers.

Using the Simulator, I model expected housing production for 41 separate scenarios, from a 0 percent ELI inclusionary requirement, to the 11 percent TOC currently requires, all the way up to 40 percent (e.g., 0, 1, 2, 3, ... 40). For every parcel, the Simulator calculates the probable number of units that will be developed over 10 years, taking into account the project's financial feasibility based on total development costs, the anticipated rent returns from the BMR and market-**rate units, and parcel zoning constraints** (including the bonuses from the TOC incentive). These simulations allow me to assess how many ELI and market-rate units could be built in Los Angeles over the next 10 years for every level of IZ requirement.

In the second phase, I estimate the private subsidy from ELI units produced by for-profit developers. I subtract the rent for ELI units from the rent for new market-rate units, which can be interpreted as the forgone rent to the developer from including IZ units in their property. I then convert this difference to an annual subsidy

Table 1: "Base" Development Incentives by Location Tier, Transit Oriented Communities Program

	Tier 1 (Low)	Tier 2 (Med)	Tier 3 (High)	Tier 4 (Regional)
Affordable Housing Requirement	8 % ELI	9% ELI	10% ELI	11% ELI
	11% VL	12% VL	14% VL	15% VL
	20% Low	21% Low	23% Low	25% Low
Density	50% Increase	60% Increase	70% Increase	80% Increase
Restricted Density Zones Exception	35% Increase	35% Increase	40% Increase	45% Increase
FAR Residential	40% Increase	45% Increase	50% Increase	55% Increase
Commercial Zones	At least 2.75:1	At least 3.25:1	At least 3.75:1	At least 4.25:1
Residential Parking (allows for unbundled)	0.5 per bedroom	0.5 per bedroom	0.5 per unit	None
Ground Floor Commercial	10% Reduction	20% Reduction	30% Reduction	40% Reduction

Note: Additional incentives including increased height and setback reductions are also available but require discretionary approval.

For the full table of conditions, including exceptions, see City of Los Angeles, Transit Oriented Communities Affordable Housing Incentive Program: https://planning.lacity.gov/odocument/87b-0f2c2-8422-4767-a104-b7cd323ee26f/Transit-Oriented_Communities_-_Affordable_Housing_Incentive_Program_(FAQ).pdf

figure, and multiply by the cumulative number of ELI units produced at year 10. I assume the same 4 percent rent increase as with the market rate units.[12]

Having estimated the value of private subsidies invested in ELI units (the primary benefit of IZ), I then determine the incremental rent growth in existing market-rate units that would be necessary to fully offset this benefit. An estimated 870,800 renter households in Los Angeles paid cash rent in 2019, and I assume 740,180—85 percent, or slightly fewer than the 88 percent who pay market rent in the LA metro area according to the American Housing Survey—are therefore impacted by higher rents.

I start with the median rent that households paid in 2019. I apply the Simulator model's assumed baseline 4 percent annual rent increase until year 10, yielding a median annual rent of $26,542. This is the median private market rent under baseline conditions. To calculate the median rent needed to negate the value of IZ-produced ELI housing, I apply the

4 percent rent increase and an additional incremental increase annually until year 10.[13] This second figure, the incremental rent hike, is the rate that raises aggregate costs for private market renters by an amount equal to the total private subsidy of ELI units under each IZ scenario (both in year 10).

Before turning to the findings, a few caveats are important to bear in mind. The housing production figures presented below are the result of a modeling exercise using the Terner Housing Policy Simulator, and do not represent actual production numbers. Future production in Los Angeles will **depend on myriad policy, economic**, political, and demographic trends and changes. The modeled scenarios are useful mainly in relationship to one another, illustrating how adjusting IZ requirements can lead to sharply different outcomes.

The analysis also has some limitations. First, the modeled scenarios assume the specified IZ requirements apply to all **new multifamily buildings, but in practice** some smaller projects would be exempt (e.g., the TOC program currently applies only to projects with five or more units). The potential effects of these exemptions are uncertain. On the one hand, exempt projects would not contribute to ELI housing production, reducing the private subsidy generated by the IZ policy. On the other, some small projects rendered infeasible in these scenarios would go forward, curbing the negative impact of reduced housing production. It is difficult to know which effect is larger, but neither **is likely to be strong because relatively few** new units in Los Angeles are in smaller buildings (e.g., under 10 units).

Second, some of the assumptions powering the Simulator may not bear out.

For example, while 2010 to 2020 did see strong rental growth, rents have flattened in many markets in recent years. Assuming 4 percent year-over-year rent growth for the next 10 years may be too high. If this assumption is toggled down, the number of projected market-rate and ELI units would be lower than indicated.

Finally, the Simulator does not account for general equilibrium effects, like the shortage of construction and planning bandwidth that might arise from greatly increased housing production.

For all these reasons, readers should not interpret this analysis as identifying an "optimal" IZ requirement, or predicting the future effects of TOC. Instead, it is intended to highlight the tradeoffs inherent to IZ policy and raise these issues for policy makers and practitioners.

Impact of Changing IZ Requirements on Market-Rate and Below-Market Housing Production

The first simulation asks "how does changing IZ requirements in Los Angeles impact the production of both market-rate and ELI units?" Figure 1 shows total, market-rate, and ELI production for each scenario, from 0 to 40 percent ELI requirements. TOC development bonuses are available to all projects within the areas where TOC is available. Eliminating the IZ requirement entirely while maintaining TOC development bonuses yields a total of 398,800 housing units over 10 years, a 38 percent increase compared to the existing policy of 11 percent IZ. Notably, this is still fewer than the 456,000 units

contemplated in the city's revised Housing Element, highlighting the need for multiple overlapping reforms to meet this goal.

Increasing the affordability requirement from 0 to 1 percent has a dramatic impact on market-rate housing production, which falls by approximately 71,400 units.[14] The **number of market-rate units continues** declining after 1 percent IZ, but less steeply. Between 1 and 16 percent, each **percentage point increase in requirements** is associated with a reduction of between 4,600 and 11,900 market-rate units.[15] By 17 percent, market-rate production is cut by nearly half (49 percent), and at 25 percent IZ total production is lowered by half. At these higher IZ levels, the cost of producing the ELI units (and forgone rents) make many housing developments financially infeasible, even with the density and other development incentives the TOC program provides.

As intended, ELI unit production increases alongside rising IZ requirements. At 6 percent IZ, developers would contribute 16,300 new ELI units over a 10-year period, and at 11 percent that increases to nearly 32,000 units. However, I also find that the rate of ELI unit growth slows markedly around 8 to 11 percent IZ, and continues to flatten until 25 percent, when the number of ELI units produced reaches its peak.

After this point, ELI and market-rate unit **production begin to decline as a greater** share of developments become financially infeasible. At 25 percent IZ, the market would produce an estimated 49,500 ELI units, increasing by only 7,800 units from the 16 percent level, suggesting diminishing returns from higher inclusionary requirements. By 40 percent IZ, total production falls to 96,200 units, including 38,500 extremely low-income units.

Figure 1. Simulator Model Outputs of 10-year Housing Production for IZ Scenarios Ranging from 0 to 40% IZ
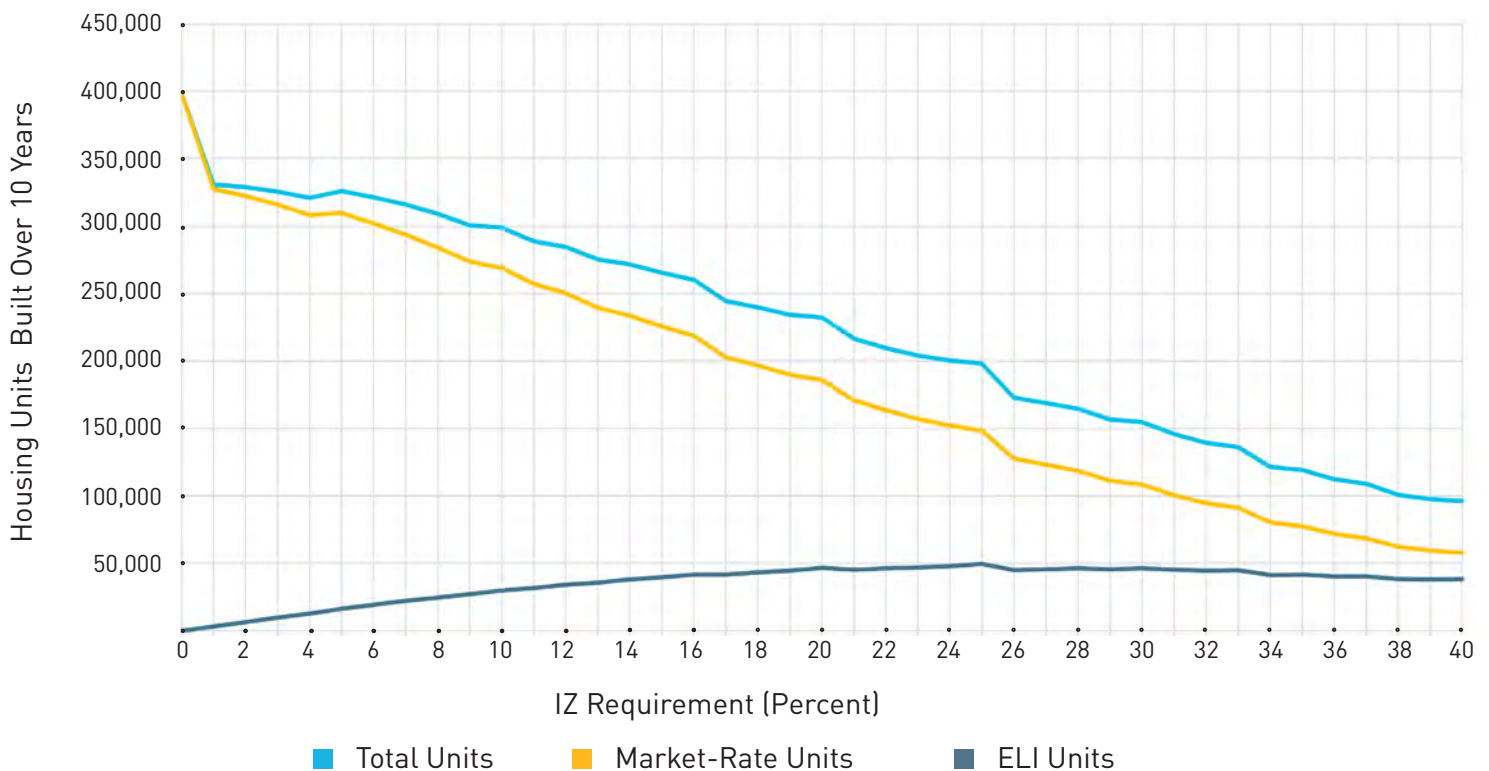
Figure 1 shows that IZ requirements entail a strong tradeoff between ELI and market-rate housing production. Even though ELI production is highest at 25 percent IZ—at 49,500 units—it comes at great cost: compared to 16 percent IZ, nearly 9 market-rate units are lost for every additional BMR unit.

Table 2 illustrates this "exchange rate" between market-rate units and ELI units in greater detail, showing the model outputs for total and ELI housing production for selected IZ scenarios. The table also shows reductions in market-rate units compared to the no-IZ scenario (i.e., the loss of total units plus the units now restricted to ELI households). The last row shows the exchange rate. For example, compared to the no-IZ scenario, an 11 percent IZ requirement reduces market-rate production by 4.5 units for every unit of ELI housing added, and at 40 percent IZ this ratio increases to 8.9. Figure 2 shows the ratio for each simulation from 1 to 40 percent IZ.

Among the selected scenarios with inclusionary requirements, 16 percent IZ yields the lowest exchange rate between market-rate units and ELI units.

Nonetheless, more than four market-rate units are lost for every ELI unit gained.

The analysis above shows how housing production might increase or decrease in response to changing IZ requirements while maintaining TOC program development bonuses. These development bonuses are critical to IZ outcomes. Table 3 shows how housing production would respond to different IZ requirements without development bonuses to compensate for IZ costs.

Unsurprisingly, removing development bonuses results in less housing production at all IZ levels. The most striking result from these simulations is that a policy landscape without the TOC program and without IZ produces fewer total units than simulations that maintain TOC and have an IZ requirement of 16 percent or lower—245,300 compared to at least 260,300 units, respectively. The TOC program with a 16 percent IZ requirement produces more ELI but fewer market-rate units than the no-TOC, no-IZ scenario. TOC with an 11 percent IZ requirement yields more of both.

Two lessons from this section's findings

Table 2. Simulator Model Outputs for Housing Production Over 10 Years Under Selected IZ Scenarios with TOC Bonuses

IZ Requirement	0%	11%	16%	25%	40%
Privately-Subsidized ELI Units	0	31,800	41,700	49,500	38,500
Market-Rate Units	398,800	257,200	218,700	148,500	57,700
Total Housing Units*	398,800	289,000	260,300	198,000	96,200
Change in Market-Rate Units Relative to 0% IZ*	-	(141,600)	(180,200)	(250,300)	(341,100)
Market-Rate-to-ELI Unit Exchange Rate**	-	4.5	4.3	5.1	8.9

Notes: *May not sum to total due to rounding.

**Exchange rate is the ratio of market-rate units lost to ELI units gained relative to a 0% IZ baseline.

Figure 2. Ratio of Market-Rate Units Lost to ELI Units Gained, Relative to a 0% IZ Baseline, for Each Simulation from 1 to 40% IZ
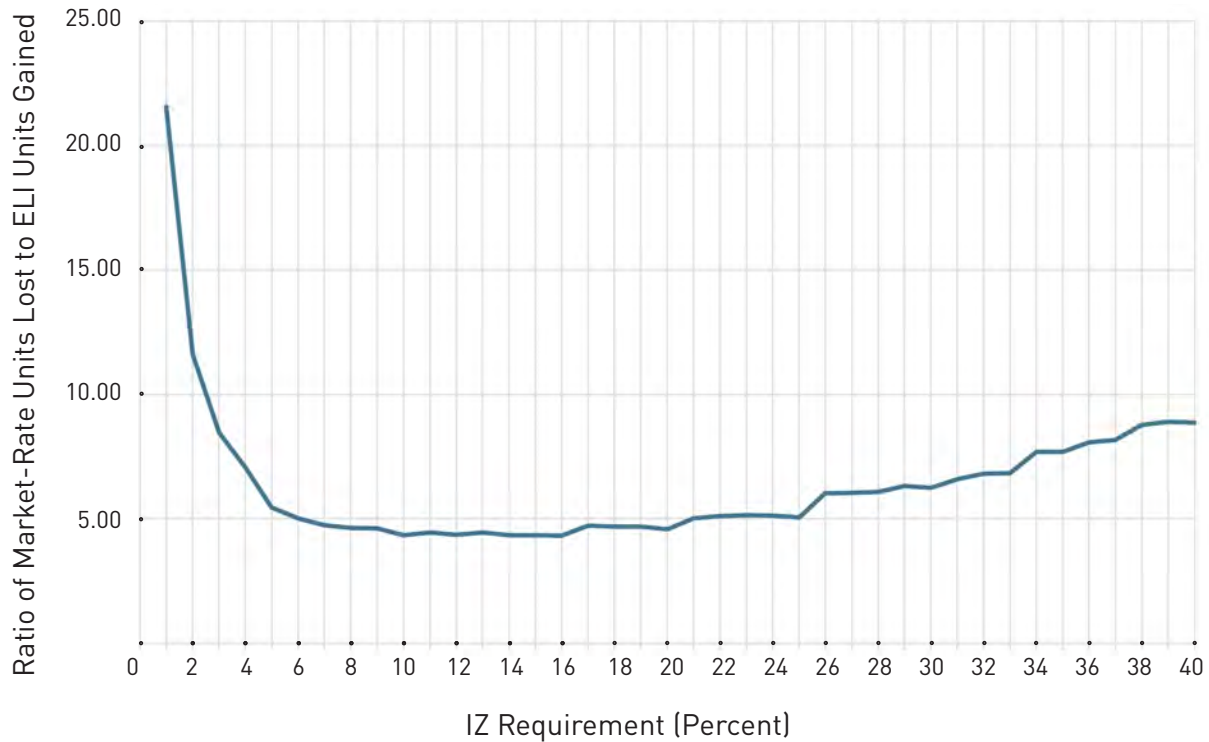

Table 3. Simulator Model Outputs for Housing Production Over 10 Years Under Selected IZ Scenarios Without TOC Bonuses

IZ Requirement	0%	11%	16%	25%	40%
Privately-Subsidized ELI Units	-	20,700	28,000	33,100	26,400
Market-Rate Units	245,300	167,800	147,200	99,300	39,500
Total Housing Units*	245,300	188,600	175,300	132,500	65,900

Notes: *May not sum to total due to rounding.

are worth highlighting. First, adopting the TOC program likely increased Los Angeles' supply of below-market homes and reduced housing scarcity overall. Second, raising the TOC program's IZ requirements to a higher level would **likely produce additional BMR units**, but it would also exacerbate the city's housing shortage compared to the status quo.

Estimated Private Subsidy of ELI Housing Under Different IZ Scenarios

In this section I estimate the value of private subsidies developers invest into ELI units under different IZ scenarios. These **subsidies represent a cost for developers and a benefit for the public—particularly for the extremely low-income households who live in the units.** Estimating these subsidies' value is important for understanding how the benefits of IZ policies compare to the costs of reduced housing production and potentially higher rents overall.

Because the Simulator model output is 10-year housing production, I report the annual subsidy for all ELI units in year 10. I calculate per-unit subsidies by escalating new market-rate and ELI monthly rents by 4 percent annually for 9 years, converting to annual rent, then deducting annual ELI **rent from annual market rate rent in year 10.** Per-unit subsidies are then multiplied by cumulative ELI unit production at year 10.

Table 4 shows the estimated total annual private subsidy by for-profit developers under four IZ scenarios. The 5 percent **scenario models a rolled-back requirement** compared to the current 11 percent IZ policy, 16 percent IZ has the lowest market-rate-to-BMR exchange rate (4.3), and 25 percent produces the most ELI units, and therefore the largest private subsidy.

Estimated private subsidy of ELI housing in year 10 ranges from $551 million under the 5 percent IZ policy to $1.67 billion at 25 percent. Although 25 percent IZ requires 5 times as much ELI housing per project as 5 percent, it generates only 3 times as much subsidy, reflecting diminishing returns to production as the IZ threshold increases.

There are also costs associated with producing ELI units with IZ. Lower overall production reduces the amount of construction activity in the city, negatively **impacting labor income and various tax** revenues. Property taxes are especially affected, with fewer new units (which are **taxed at full value, in contrast to older** units, which are taxed at less than market value to varying extents). Fewer residents

Table 4. Estimated Value of Private Subsidy of Extremely Low-Income Units Produced Under Different IZ Scenarios

IZ Requirement	5%	11%	16%	25%
Total Housing Units	326,100	289,000	260,300	198,000
Privately-Subsidized ELI Units	16,300	31,800	41,700	49,500
Annual Rent Discount on ELI Units (Year 10)	$33,784			
Total Value of Private Subsidy of ELI Units (Year 10)	$551 million	$1.08 billion	$1.41 billion	$1.67 billion

can live, spend money, and pay taxes in the city. On average, new market-rate units produce one-time and recurring fiscal surpluses for the city,[16] **and fewer are built in higher IZ requirement scenarios.**

Another potential cost is higher rents for the roughly 85 percent of tenants in housing that is neither publicly owned nor receives government subsidies other than portable housing vouchers. I discuss this cost and its relationship to the value of private subsidy of BMR units in IZ projects in the next section.

Estimated Rent Increases Needed to Negate the Value of IZ-Produced BMR Housing

One of IZ's benefits is that it creates lower-income housing without public subsidies. A drawback is that the cost of renting some **units at a loss is likely passed on, at least in part,** to the market-rate unit tenants in IZ projects. However, developers cannot **arbitrarily raise rents simply because** IZ increases their costs. They may be able to reduce some expenses through "value engineering" of building design or

increase revenues by targeting a higher-income clientele, but there are limits to these approaches. And both will tend to narrow demand for new housing: if new homes are not as high quality, renters may be more likely to seek out older units; if they are too luxurious then fewer renters can afford them.

A potentially larger and broader drawback of IZ is its effect on affordability in the wider housing market. If IZ reduces housing production, dampened supply is likely to increase housing costs overall, **including for renters in older market-rate** units. Estimating the impact of reduced production on rents in Los Angeles is beyond the scope of this analysis, but it is possible to estimate the marginal increase in rents that would negate the private subsidy of ELI housing.

In the previous section I estimated the value of IZ-produced below market-rate housing under different policy scenarios, and here I identify the incremental rent growth rate that would raise housing **costs for private-market renters by an** equal amount. Table 5 shows the results of this analysis, highlighting the relatively small rent increases that, if they came to **pass, would result in zero or negative net** welfare—costs of IZ meeting or exceeding its benefits.[17]

Table 5. Incremental Rent Increase Needed to Raise Rents for Private Market Renters by an Amount Equal to the Value of Private Subsidy of ELI Units Under Different IZ Scenarios

IZ Requirement	5%	11%	16%	25%
Reduction in Market-Rate Units (Compared to 0% IZ Baseline)	(89,000)	(141,600)	(180,200)	(250,300)
Incremental Annual Rent Increase Needed to Negate Private Subsidy of ELI Units	0.3%	0.6%	0.8%	0.9%

Notes: Incremental rent increase is multiplicative, above 4% baseline annual increase.

The main takeaway from this exercise is that minor changes in rent can produce large additional costs for renters in the aggregate. In the 5 percent IZ scenario, only 0.3 percent faster annual rent growth—2.8 percent over 9 years—increases private market renters' aggregate costs by an estimated $550 million in year 10. This is a very small incremental rent hike, and a plausible consequence of building 89,000 fewer market-rate units over a decade. The 25 percent IZ scenario yields 63 percent reduction in market-rate housing production, yet the estimated value of IZ-produced ELI units would be fully offset by only 0.9 percent faster annual rent growth.

Discussion

Using the Terner Housing Policy Simulator to model the housing production impacts of different IZ policies in Los Angeles, I find that increasing the IZ requirement would reduce overall housing production substantially over a 10-year period, with **relatively modest gains to below-market housing**.

For example, increasing the IZ require-ment needed to use TOC development bonuses from the current 11 percent ELI to 25 percent would increase ELI housing production by an estimated 17,700 units **but reduce market-rate production by 108,700 units**. An IZ requirement of 16 percent produces the largest amount of ELI housing relative to lost market-rate units, but is nonetheless quite costly, exchanging 4.3 market-rate units for every ELI unit. Beyond 25 percent, higher affordability thresholds produce less below-market and market-rate housing.

These findings have implications for policy makers considering using IZ to expand the supply of BMR units.

It is important to evaluate tradeoffs between using IZ to produce BMR units and its impacts on market-rate production.

While not a critique of the TOC program, the analysis presented in this paper should be interpreted as a warning against increasing IZ requirements. The fact that poorly calibrated IZ policies could lead to reduced housing production, higher rents and housing prices, or both, should prompt caution. Up to a point, higher IZ **levels may increase BMR production, but** likely at the cost of substantially lower market-rate housing production. Beyond a certain threshold, higher IZ requirements **are likely to reduce market-rate and BMR** housing production.

Caution is particularly warranted given the importance of housing supply for **reducing overall rents**[18] **and creating new** housing opportunities for renters at all income levels.[19] The majority of renters in Los Angeles live in the unrestricted rental market. In the Los Angeles-Long Beach metro area, only 283,000 (12 **percent) of renter-occupied units are publicly owned or receive a government** subsidy or other rent reductions that require income verification. Affordability in the unrestricted market is critical for the majority of renters, many of whom are low-income. If IZ reduces the supply of those units, and increases prices, these unintended consequences might outweigh the benefits of the increase in BMR units it provides.[20]

It is important to acknowledge that this analysis offers a crude comparison of costs and benefits, and does not account for the marginal utility of public or private investments. Specifically, I do not attempt to determine the extent to which a dollar

of private subsidy invested in an ELI unit may be more impactful than a dollar a renter saves on the private market, nor can I distinguish between private market renters by income, wealth, race, or other characteristics. In practice, there is good **reason to assign more value to assisting** extremely low-income households, due in part to their greater need and higher risk of homelessness. At the same time, rates of homelessness are strongly correlated with median rents, so affordability in the **wider market is still relevant to very poor** households.[21]

Policy makers must consider whether a policy that may drive up rents for all tenants (and also costs for homebuyers) is the best approach for subsidizing a small share of housing. The high cost of land and construction means that providing **assistance to extremely low-income households via privately subsidized development is expensive compared to** alternative strategies. For example, in this analysis per-unit subsidies are nearly $24,000 in year 1, while the Housing Authority of the City of Los Angeles spent $13,800 per household on the Housing Choice voucher program in 2021.[22]

Two aspects of inclusionary zoning are critical: providing development incentives when market-rate developers include BMR units, and making program participation voluntary.

Because TOC provides development incentives, a developer who might have built 100 market-rate units prior to the program can now build a project— depending on its location—with as many as 180 total units, including 20 for extremely low-income households (or 45 for low-income households). As a comparison

between Tables 2 and 3 shows, the TOC program has likely encouraged more market-rate and below-market housing— and at deeper levels of affordability for BMR units—because of its development incentives.

Voluntary participation is also important. Mandatory IZ policies without **development bonuses are a worst-case** approach, but even mandatory IZ with bonuses increases the risk that the **policy will negatively impact market-rate** production. If the IZ requirements or **development bonuses are miscalibrated** such that the cost of below-market units exceeds the revenues from additional market-rate units, then projects become financially infeasible. And even when IZ policies are carefully designed, they rarely take into account impacts on different neighborhoods or development types (e.g., low-rise vs. high-rise multifamily) or adapt to changing market conditions.

An advantage of voluntary IZ is that if the balance of mandates and incentives is miscalibrated, or if the market changes, then developers can elect to build without **development incentives and market-rate** production is not unintentionally stymied. To be clear, the purpose of a voluntary IZ policy is not to exempt developers from building below-market housing: a well-designed IZ program should have nearly 100 percent utilization, as is the case in Los Angeles. Assembly Bill 1505 (2017) requires cities to do a formal economic analysis of any IZ policy they enact. It also subjects that analysis to state review if its IZ level goes above a certain amount, which could over the long-term **encourage cities to assess and recalibrate** their IZ policies. However, this remains more art than science; voluntary compliance at a minimum ensures that IZ poli-

cies intended to increase below-market production do not only decrease market-rate production instead.

Density bonuses and other incentive-based housing production policies have limits, suggesting that increasing development incentives won't necessarily make higher IZ requirements feasible.

The analysis shows that even with well-designed IZ policies, the market's ability to produce BMR units has its limits and may have unintended consequences. Policymakers in Los Angeles and elsewhere may look at TOC's success and be tempted to double down with **additional development bonuses and** higher affordability mandates, assuming this will further increase market-rate and BMR production.

Development costs do not increase linearly with project size, however, suggesting that additional density, floor area, or height may not make more IZ units feasible. Higher-cost construction materials and methods are required as building height increases, particularly as they exceed 7 to 8 stories. At this threshold, building **structures transition from primarily wood** (Type III to V) to concrete or steel (Type I). The Los Angeles Department of Building and Safety estimates that, all else being equal, Type I construction is approximately 30 percent more expensive per square foot than Type III construction and 43 percent costlier than Type V.[23] **Many** TOC projects are already seven to eight stories. Increasing density by an additional 50 percent might allow a 12-story building where only 8 stories is permitted today, but this does not guarantee financial feasibility or the ability to accommodate a higher IZ requirement.

For example, imagine an apartment development in a Tier 3 TOC area using a 70 percent density bonus. The TOC incentives allow an 8-story, 100,000 square foot building. If construction and materials for this building are $300 per square foot (psf), the total construction and materials cost is $30 million. If allowable density and floor area increases by an additional 50 percent, the developer could build a 12-story, 150,000 square foot building. However, the increased height boosts construction costs to at least $360 psf, meaning the total cost of construction rises to $54 million. Density increased by 50 percent, but costs grew by 80 percent. In this scenario the 12-story project is less feasible than the 8-story, even without higher affordability requirements.

Higher IZ requirements have their limits **even if construction costs did scale linearly** with project size. In this case, imagine a parcel zoned to allow a 100-unit market-rate building. If each additional market-rate unit earns a profit of $100,000 and each ELI unit loses $400,000, then a bonus that allows 100 percent more density and requires 10 percent of units for ELI households may be feasible: the project adds 100 units at a 4 to 1 market-rate-to-BMR ratio. What if the bonus is increased to 300 percent—can the IZ requirement also be tripled? It cannot. A 300 percent bonus adds 300 units, of which at least 240 must be market-rate for the project to be feasible. In this case, the IZ requirement cannot exceed 18 percent. A 1,000 percent bonus permits only a 22 percent IZ requirement. The value capture potential of development bonuses has diminishing returns.

Broad-based land use reforms combined with increased public funding are likely to have greater benefits and fewer unintended consequences than IZ policies.

One of IZ's fundamental shortcomings is that it does not address—and likely exacerbates—the housing scarcity that drives higher rents and home prices. It improves housing affordability for a few at the risk of worsening affordability for many, and it taxes precisely the activity needed to ameliorate the housing shortage and bring down rents: development.[24] This analysis shows that increasing IZ requirements **may not produce substantially more below market-rate units**, and is very likely to reduce future housing production. Policy makers must identify strategies that **encourage building more market-rate and** below-market housing.

As noted above, Los Angeles is unlikely to resolve its housing shortage only by enlarging density bonuses and further **concentrating development in already-dense neighborhoods**. It must also expand the areas where low- and mid-rise multifamily development is allowed. Currently, only 28 percent of land zoned for residential uses in the City of Los Angeles and 22 percent in the region allows multifamily housing.[25] Opening up more neighborhoods to multifamily housing would lower per-unit land and construction costs and expand the number of parcels where redevelopment is feasible, increasing housing production and diversity and limiting rent growth.[26]

In isolation, broad land use reforms are **unlikely to directly produce large amounts** of housing affordable to low-, very low-, and extremely low-income households. However, **expanding low-cost multifamily**

development opportunities can reduce costs for subsidized affordable housing developers and rent assistance voucher providers, thereby increasing below-market housing production indirectly.[27] IZ seeks to address the need for below-market **units more directly, but it may indirectly** undermine BMR production from other sources—such as the Low-Income Housing Tax Credit and Housing Choice Voucher program—by accelerating rent growth.

Different tools have different strengths, **and land use policy may be best suited** to improving affordability in the wider housing market, while public subsidies are best for producing below-market homes. IZ seeks to produce affordable homes by **substituting land use policy in place of** broadly shared taxes and public subsidies. This analysis suggests that the public may be paying either way, and that the costs of IZ are both higher and more regressive than the alternative.

ENDNOTES

1.   Wang, R., & Balachandran, S. (2023). "Inclusionary housing in the United States: dynamics of local policy and outcomes in diverse markets." Housing Studies, 38(6), 1068–1087. https://doi.org/10.1080/02673037.2021.1929863.

2.   Bento, A., et. al. (2009). "Housing market effects of inclusionary zoning." Cityscape, 7–26, https://www.jstor.org/stable/20868701. Hamilton, E. (2021). "Inclusionary zoning and housing market outcomes." Cityscape, 23(1), 161–194, https://www.jstor.org/stable/26999944. Schuetz, J., et. al. (2011). "Silver bullet or Trojan horse? The effects of inclusionary zoning on local housing markets in the United States." Urban Studies, 48(2), 297–329. https://www.jstor.org/stable/43081738.

3.   For example, Hamilton (2021) finds that for each year a mandatory IZ policy is in place, there is a 0.81 to 1.1 percent increase in the price per square foot of housing. Schuetz et al. (2011) similarly find that in strong housing markets, a 1 percent increase in an IZ policy's age is associated with a 0.014 percent increase in prices. Researchers have found that IZ leads to reduced housing production in some jurisdictions (see: Means, T. & Stringham, E. (2012); Schuetz, J., et al. (2011)) but not in others (Bento, A., et al. (2009); Hamilton, 2021; Mukhija, V., et al. (2010) "Can Inclusionary Zoning Be an Effective and Efficient Housing Policy? Evidence from Los Angeles and Orange Counties." Journal of Urban Affairs, 32(2), 229–252. https://doi.org/10.1111/j.1467-9906.2010.00495.x.

4.   Zhu, L. et al. (2021). "Los Angeles' Housing Crisis and Local Planning Responses: An Evaluation of Inclusionary Zoning and the Transit Oriented Communities Plan as Policy Solutions in Los Angeles," Cityscape, 23(1): 133-160. Retrieved from: https://www.huduser.gov/portal/periodicals/cityscpe/vol23num1/ch5.pdf.

5.   Ellickson, R. C. (1980). "The irony of inclusionary zoning." Southern California Law Review, 54, 1167- 1216 .

6.   Means, T., & Stringham, E. P. (2012). "Unintended or Intended Consequences? The Effect of Below–market Housing Mandates on Housing Markets in California." Journal of Public Finance and Public Choice, 30(1–3), 39–64. Schuetz, J., et al. (2011). "Silver bullet or Trojan horse? The effects of inclusionary zoning on local housing markets in the United States." Urban Studies, 48(2), 297–329.

7.   Bento, A., et al. (2009). "Housing market effects of inclusionary zoning." Cityscape,11(2). 7–26. Hamilton, E. (2021). "Inclusionary zoning and housing market outcomes." Cityscape, 23(1), 161–194. Mukhija, V., et al. (2010). "Can inclusionary zoning be an effective and efficient housing policy? Evidence from Los Angeles and Orange Counties." Journal of Urban Affairs, 32(2), 229–252.

8.   Hamilton, E. (2021). "Inclusionary zoning and housing market outcomes." Cityscape, 23(1), 161–194.

9.   Schuetz, J., et al. (2011). "Silver bullet or Trojan horse? The effects of inclusionary zoning on local housing markets in the United States." Urban Studies, 48(2), 297–329.

10.   Additional background on the Terner Center Housing Policy Simulator, including methodology: https://ternercenter.berkeley.edu/blog/policy-dashboard-los-angeles/.

11.   Zhu, L. et al. (2021). "Los Angeles' Housing Crisis and Local Planning Responses: An Evaluation of Inclusionary Zoning and the Transit Oriented Communities Plan as Policy Solutions in Los Angeles," Cityscape, 23(1): 133-160. Retrieved from: https://www.huduser.gov/portal/periodicals/cityscpe/vol23num1/ch5.pdf.   This may seem counterintuitive because ELI housing requires larger subsidies than low- and very low-income housing. However, developers who provide low- or very low-income units must also set aside a larger share of units for below-market households, more than offsetting the lower per-unit subsidy required of these units. For example, a 100-unit project (after bonuses) must provide 11 extremely low-income units, 15 very low-income units, or 25 low-income units to receive the most generous Tier 4 bonuses. If a new market-rate two-bedroom apartment rents for approximately $3,500 per month and similar ELI units rent for $700, providing 11 ELI units requires a monthly subsidy of $30,800 (a $2,800 discount multiplied by 11 units). Very low-income units rent for roughly $1,200, and multiplying this $2,300 discount by 15 units results in a total monthly subsidy of $34,500. The implicit subsidy for 25 low-income units is even larger.

12.   In practice, ELI rents are pegged to increases in area median income. In Los Angeles County, median incomes grew by 2.95 percent per year from 2000 to 2021, 3.57 percent annually from 2010 to 2021, and 5.61 percent annually from 2017 to 2021. However, to simplify the analysis, I use the same rental adjustment as for market rentals in the Simulator.

13.   For example, in the baseline 0 percent IZ scenario, if median rent is $1,000 in year 1, it would rise by 4 percent to $1,040 in year 2 (i.e., 1,000 * 1.04). In the 11 percent scenario, if the annual incremental rent increase is 0.6 percent, median rent would rise by 4.624 percent to $1,046 in year two (i.e., 1,000 * 1.04 * 1.006).

14.   This initial stark decline is likely explained by IZ policies rounding up when calculating the required number of BMR units. For example, under a 1 percent IZ policy a 10-unit building would be required to provide 1 BMR unit, or 10 percent—it rounds up to 1 unit rather than down to zero. A 3-unit development would set aside 33 percent of dwellings (i.e., 1 unit) at a below-market price. Inclusionary zoning policies therefore tend to impact smaller projects more heavily than larger projects.

15.   The one exception is the shift from 4 to 5 percent IZ, where both market-rate and ELI unit production increase slightly. This is likely an artifact of the model, and it demonstrates why model outputs should not be interpreted as precise estimates.

16.   Los Angeles Business Council Institute. (2017). "Housing Pays Report: Capturing the economic and fiscal benefits of increased housing production in L.A." Retrieved from https://drive.google.com/file/d/1aTUwdk-D-kQNLVQ_pcA69fgNYZsNztt5/view

17.   Home values will also increase more rapidly under reduced-production scenarios, though gains to current homeowners from rising home values are offset by losses to future homebuyers, and estimating the balance of other costs and benefits is difficult. On the one hand, rapidly increasing home values increase government tax revenues. On the other, rising prices undermine racial and economic equity and likely increase public service demands to address homelessness and other consequences of high housing prices.

Costs and benefits of rising home values are not estimated in this brief, but the costs are **disproportionately borne by renters, younger people, people of color, and lower-income** and non-wealthy households.

18.   Asquith, B. J., et al. (2023). "Local effects of large new apartment buildings in low-income areas." The Review of Economics and Statistics, 105(2), 359–375. Been, V., et al. (2019). "Supply skepticism: Housing supply and affordability." Housing Policy Debate, 29(1), 25–40. Saks, R. E. (2008). "Job creation and housing construction: Constraints on metropolitan area employment growth." Journal of Urban Economics, 64(1), 178–195.

19.   Bratu, C., et al. (2023). "JUE Insight: City-wide effects of new housing supply: Evidence from moving chains." Journal of Urban Economics, 133, 103528. Mast, E. (2023). "JUE Insight: The effect of new market-rate housing construction on the low-income housing market." Journal of Urban Economics, 133, 103383.

20.   Corinth, K., & Irvine, A. (2023). "JUE Insight: The Effect of Relaxing Local Housing Market Regulations on Federal Rental Assistance Programs." Journal of Urban Economics, 136, 103572.

21.   Colburn, G., & Aldern, C. P. (2022). Homelessness is a housing problem: How structural factors explain US patterns. University of California Press.

22.   From HACLA's "About Section 8 Department" webpage: https://www.hacla.org/en/about-section-8.

23.   City of Los Angeles Department of Building and Safety report. (2019). "Report Relative To Expanding Fire District 1, California Department Of Forestry, Very High Fire Hazard Severity Zone, City High Wind Velocity Zone." CF 19-0603, 32. https://clkrep.lacity.org/onlinedocs/2019/19-0603_rpt_dbs_%205-27-21.pdf

24.   Manville, M. (2021). "Value Capture Reconsidered: What if LA was Actually Building Too Little?" UCLA Lewis Center for Regional Policy Studies. Retrieved from: https://www.lewis.ucla.edu/research/value-capture-reconsidered/.

25.   City of Los Angeles Department of City Planning. (2023). "How will the Citywide Housing Incentive Program impact Single-Family Zones?" Retrieved from: https://planning.lacity.gov/plans-policies/community-plan-update/housing-element-rezoning-program-news/how-will-citywide. Menendian, S., et al. (2022). "Single-Family Zoning in Greater Los Angeles." Othering & Belonging Institute, UC Berkeley. Retrieved from: https://belonging.berkeley.edu/single-family-zoning-greater-los-angeles.

26.   Phillips, S. (2020). "LA's COVID-19 Response Should Prioritize Long-Term Rent-Stabilized Tenants for Housing Assistance." UCLA Lewis Center for Regional Policy Studies. Retrieved from: https://www.lewis.ucla.edu/research/covid-response-housing-assistance/.

27.   Corinth, K., & Irvine, A. (2023). "JUE Insight: The Effect of Relaxing Local Housing Market Regulations on Federal Rental Assistance Programs." Journal of Urban Economics, vol. 123, 103572. https://doi.org/10.1016/j.jue.2023.103572.

Inclusionary Zoning Hurts More Than It Helps

Emily Hamilton

September 2019, rev. February 2021

Housing affordability is a serious problem across the country. Nationally, most households in the lowest income quintile are extremely rent-burdened, meaning that they spend half or more of their income on rent.[1] In coastal cities, where land use regulations severely limit housing construction, housing costs are a problem for middle-income households as well. In the Bay Area, even households earning $100,000 will struggle to find housing that costs 30 percent or less of their income in most zip codes.[2]

In response to these affordability challenges in both high- and low-cost cities, local governments have adopted inclusionary zoning programs. These policies require or incentivize developers to designate a portion of new housing units as affordable for households making low or moderate incomes in exchange for density bonuses, allowing developers to build more market-rate housing than they would otherwise be allowed. But has inclusionary zoning actually improved housing affordability?

Inclusionary zoning programs vary widely in their implementation. While most offer density bonuses to fully or partially offset the cost of providing below-market-rate units, not all do. Some programs require developers to provide income-restricted units as a condition of building new market-rate housing, while others offer density bonuses in exchange for the optional provision of income-restricted homes. In some jurisdictions, inclusionary zoning units must be affordable to low-income residents (those earning less than half of their region's median income) while in others, inclusionary zoning units are targeted to those earning the median income or even higher.

The term "inclusionary zoning" implies that the policy should alleviate the effects of exclusionary zoning. Exclusionary zoning includes rules that limit multifamily housing construction and mandate minimum lot sizes for single-family homes. Exclusionary zoning restricts the number of

households that can live in a jurisdiction, leading home prices to be bid up by those who can afford to pay them. Empirical findings indicate that rules that restrict new housing development are a key driver of high house prices that strain the budgets of households who make at least moderate incomes or higher for their region.[3]

The density bonuses that inclusionary zoning programs include to offset the cost of providing below-market-rate units derive their value from underlying exclusionary zoning that prevents developers from building as much housing as they would under more liberal zoning. If inclusionary zoning density bonuses don't fully offset the cost of requiring new development to include subsidized units, the policy may further exacerbate housing shortages, driving up prices for everyone who doesn't receive a subsidized unit.

Inclusionary zoning is popular among policymakers for two reasons. First, it appears "free." It produces affordable housing units without an outlay of tax dollars. Second, it allows policymakers to appear as if they're adopting a pro-affordability agenda without reforming the exclusionary zoning that leads to high house prices in the first place. Policymakers should not pursue inclusionary zoning as an affordability strategy. Rather, policymakers who want to create an environment of housing stability for households of all incomes should pursue land use liberalization (allowing for more abundant housing supply) along with subsidies targeted to those households that need them to afford market-rate housing.

INCLUSIONARY ZONING IN ACTION

At least 886 jurisdictions across the country have adopted inclusionary zoning programs.[4] Inclusionary zoning is perhaps the most popular policy tool for attempting to improve housing affordability in the United States today. In policy discussions, mandatory and optional inclusionary zoning programs are often lumped together, but they can be expected to have different effects on housing markets. If the cost of providing affordable units under mandatory programs is not outweighed by the benefit of density bonuses for developers, the program as a whole will tax new housing development, resulting in less new construction. Optional programs can only increase new housing supply relative to the status quo if density bonuses make it worthwhile for developers to provide affordable housing.

Nonetheless, optional inclusionary zoning is not a path to broad-based affordability. If land use policy allows new housing to be built at diverse price points in response to demand increases, developers will not participate in optional programs because their density bonuses won't offer them value.

The value of density bonuses depends on many factors, including house prices and how much the underlying zoning restricts development. Their value will vary from neighborhood to neighborhood, increasing with land prices. In places where zoning severely restricts housing construction relative to what a freer market would provide, and house prices are high as a result, density

bonuses will be very valuable. In contrast, where land use policy allows developers to provide as much housing as is profitable, density bonuses will have no value, and inclusionary zoning programs will be a clear tax on construction.

I have studied inclusionary zoning in the Baltimore-Washington region. In this area, 15 jurisdictions have mandatory inclusionary zoning programs, and 8 have optional programs. Among those with optional programs, only Alexandria, VA, and Falls Church, VA, have produced any units.[5] Relative to other jurisdictions with optional inclusionary zoning programs, these jurisdictions have high house prices, owing in large part to their otherwise exclusionary zoning and high demand for housing. Across the region, the median house price per square foot is $206. Among all those jurisdictions with optional inclusionary zoning, it's $210 on average, but in Alexandria, it's $361 and in Falls Church it's $417.[6]

High house prices and limitations on new housing supply make density bonuses highly valuable in Alexandria and Falls Church. Because these jurisdictions allow much less new housing than what developers would provide absent land use regulations, developers are willing to provide affordable units in exchange for providing more, very-high-priced market-rate housing units. In other jurisdictions with optional programs, underlying zoning is less binding, so density bonuses are an insufficient incentive for affordable housing construction.

Inclusionary zoning programs produce few units relative to the number of households who qualify for them based on their income. In his book *Order without Design*, Alain Bertaud reports that in New York City, with more than 8.5 million people, inclusionary zoning produced only 172 units per year in the program's first 25 years.[7] Other programs across the country have also tended to produce few units relative to the demand for them. A 2010 estimate finds that nationally, inclusionary zoning policies have delivered between 129,000 and 150,000 affordable units during the entire time they've been implemented.[8]

The difference between the price caps on inclusionary zoning units and the prices of market-rate units is a key component in determining the size of the inclusionary zoning "tax." In very expensive markets such as New York City, this difference may be very large. In the case of one new apartment building, subsidized rents range from $565 to $1,067, compared to unsubsidized rents, which range from $3,400 to $8,957. On a yearly basis, some inclusionary zoning tenants are subsidized by nearly $100,000.[9] Bertaud explains, "The program is likely to have the same distributional impact as a lottery, rather than that of a social program aiming to provide affordable housing to low- and middle-income populations."[10]

MEASURING THE EFFECTS OF INCLUSIONARY ZONING

Inclusionary zoning provides huge benefits to a small percentage of low- and moderate-income households. But its general effect on affordability depends on whether the inclusionary zoning

tax is outweighed by the density bonuses many programs include—if it is, inclusionary zoning could lead to more abundant housing overall. Six studies have attempted to measure the effects of inclusionary zoning on jurisdictions' new housing supply and house prices; four of these studies use data from California.

1. Bento et al. find that inclusionary zoning causes prices to rise 2 to 3 percent faster in California for those jurisdictions that have adopted it, compared to what they could have expected without inclusionary zoning.[11] They find that inclusionary zoning decreased single family home starts but had no effect on multifamily starts. They also find that inclusionary zoning reduced the size of housing units relative to jurisdictions without inclusionary zoning.

2. Tom Means and Ed Stringham find that inclusionary zoning programs drastically reduced overall housing affordability in the California jurisdictions that adopted them. They find that inclusionary zoning reduced housing supply by 7 percent and increased prices by 20 percent between 1990 and 2000.[12]

3. Ann Hollingshead also studied inclusionary zoning in California, looking at the effect of a court decision that reduced the tax effect of inclusionary zoning by leading some jurisdictions to increase their density bonuses and to transition from mandatory to optional programs.[13] She finds that reducing the burden of inclusionary zoning programs led to an increase in median rents.

4. Schuetz et al. find that in the Bay Area, inclusionary zoning caused increased prices during strong markets but caused further price declines during times of broadly falling rents for the jurisdictions that adopted it, relative to what they could have expected without it. In the Bay Area they find no relationship between inclusionary zoning and new housing supply.[14]

5. In the same paper, Schuetz et al. estimate the effects of inclusionary zoning in the Boston region. They find that when jurisdictions adopt inclusionary zoning, doing so reduces housing supply and raises house prices, but only during periods of broadly rising house prices.[15]

6. Finally, in my study of inclusionary zoning in the Baltimore-Washington region, I find that mandatory inclusionary zoning has raised house prices more than 1 percent per year the program is in place, relative to what jurisdictions could have expected without it.[16] Like Schuetz et al. find for the Bay Area, I find a price increase, but no effect on housing supply.

Of the six studies, four find that inclusionary zoning increases prices. Hollingshead finds that reducing the inclusionary tax effect increased market-rate prices, and Schuetz et al. find that it contributes to price increases during times of broadly rising prices but causes price decreases during times of falling prices in the Bay Area. On the supply side, three find that inclusionary zoning reduces the quantity of new housing, two find no effect, and one doesn't examine supply effects.

All six of these studies examine the effect of inclusionary zoning on housing market outcomes *taking these jurisdictions' exclusionary zoning policies as a given.* Under traditional zoning rules,

localities restrict landowners' rights to build housing, and typically they most stringently restrict the right to build the lowest-cost type of new housing—no-frills, multifamily apartments. Under inclusionary zoning programs, localities return some of these property rights with the condition that development includes subsidized units. Without a baseline of traditional zoning rules, the density bonuses included in most inclusionary zoning programs would have no value and inclusionary zoning would be a clear tax on new housing construction.

A BETTER PATH TO AFFORDABILITY

Relying on new housing construction to provide subsidized units is not a strategy that can lead to more housing that's affordable for more people. In cases where inclusionary zoning raises house prices generally, the costs of the policy fall hardest on the lowest-income residents who aren't lucky enough to qualify for one of the units that's been designated as affordable. Repealing exclusionary zoning is a necessary step for achieving housing markets that serve low-income people well. Layering inclusionary zoning on top of the rules that stand in the way of new relatively low-cost multifamily housing will never produce housing markets that serve the majority of low- and moderate-income households well.

High and rising house prices are not a necessary feature of large, thriving cities. Historically, US housing markets served low-income residents with low-cost housing options, such as single-room-occupancy residences and boarding houses.[17] These low-cost housing options have largely been banned through city zoning regulations. Beyond eliminating shelter designed to serve low-income people, almost all American cities have designated large swaths of their land as exclusively for single-family detached housing, walling out anyone who can't afford the price of entry to expensive neighborhoods and jurisdictions. Liberalizing land use policy can allow anyone making at least a moderate income to find safe, market-rate housing that they can afford. Today, cities from Houston to Tokyo show that this is possible.[18]

In regions where housing is allowed to be built in response to increasing demand, new construction can be built that's affordable to households making close to median incomes, but not always for low-income residents. Over time, though, in a market where new construction is reliably delivered year after year, housing stock "filters" down as wealthier households move to newer units, leaving older homes available to the less wealthy. One study finds that the filtering process reduces inflation-adjusted home prices by 1.9 percent per year.[19] A new house that costs $200,000 today can be expected to cost $153,000 in 15 years in today's dollars. Allowing for low-cost housing typologies, including low-rise multifamily buildings, mobile homes, and the subdivision of existing homes into multiple units allows the filtering process to start at a lower price point and to work at a faster rate.

Even with land use policy that permits abundant housing construction, however, some low-income households will struggle to afford housing. Housing security for these households requires sub-

sidies, nonprofit housing, or government-built housing. Subsidies for these households should be funded by tax dollars, not through taxing new housing construction with inclusionary zoning.

Redistributive policies, including housing vouchers or government housing, are more effective and feasible at the federal level rather than the local level, where the tax base is smaller and large tax increases may cause residents to leave for lower-tax jurisdictions. But the limits on local governments' potential to finance housing support does not mean that they should pursue inclusionary zoning in the absence of federal support. Rather, local governments should focus on doing what they can to reform exclusionary zoning rather than relying on it to give value to density bonuses. By giving the appearance of "doing something" to address housing affordability, inclusionary zoning gives local officials political cover while they fail to implement zoning reform or fund real housing support.

One argument in favor of inclusionary zoning over other housing supports is that inclusionary zoning leads to low- and high-income residents living in the same building. Research shows that low-income children benefit from moving out of high-poverty neighborhoods.[20] But these benefits are found at the neighborhood level, not at the building level. Low-income residents who are given vouchers that allow them to choose where to use them offer the benefit of allowing low-income people to live in cities and neighborhoods that offer economic and educational opportunities and mixed socioeconomic communities.

Reforming exclusionary zoning is a clear win for housing affordability, but it's extremely politically difficult. Some have argued that inclusionary zoning reduces opposition to new construction because neighbors support affordable housing, if not market-rate housing.[21] This theory is not borne out in any empirical findings. While not all empirical studies of inclusionary zoning find that it reduces housing supply, none find that it increases it.

CONCLUSION

Inclusionary zoning, a policy intended to address the problem of households struggling to afford housing, may actually increase house prices generally. No studies of its effects indicate that it increases housing supply or contributes to broadly lower prices. It benefits a small portion of low- and moderate-income households rather than targeting aid at the households that need it most.

Serious improvement to housing affordability requires substantial land use policy reform that will allow significantly more housing construction, including low-cost housing typologies. Under land use policy that allows new housing to be built in response to increasing demand, inclusionary zoning would be a clear tax on construction because density bonuses wouldn't provide an offset to developers.

Even under vastly liberalized housing policy, some households will struggle to afford shelter. But taxing housing construction with the goal of creating more abundant housing for people of rela-

tively low income levels doesn't make sense. Rather than using inclusionary zoning to appear as if they're pursuing housing affordability, policymakers who are actually concerned about affordability should reform exclusionary zoning and provide targeted support to those households that need it.

ABOUT THE AUTHOR

Emily Hamilton is a research fellow at the Mercatus Center at George Mason University. Her research focuses on urban economics and land use policy. Hamilton has authored numerous academic articles and policy papers. Her writing has appeared in *USA Today*, the *Christian Science Monitor*, *Economic Affairs*, and the *Philadelphia Inquirer*. She contributes to the blog *Market Urbanism*.

NOTES

1. Jenny Schuetz, "Housing Trade-Offs: Affordability Not the Only Stressor for the Middle Class," *Up Front* (Brookings Institution), May 2019.

2. Katy Murphy, "Where in the Bay Area Can You Afford to Rent on $100,000?," *Mercury News*, April 19, 2019.

3. For a review of the economic literature on the relationship between land use regulations and housing supply, see Joseph Gyourko and Raven Molloy, "Regulation and Housing Supply" (NBER Working Paper No. 20536, National Bureau of Economic Research, Cambridge, MA, October 2014).

4. Emily Thaden and Ruoniu Wang, "Inclusionary Housing in the United States: Prevalence, Impact, and Practices" (Working Paper No. WP17ET1, Lincoln Institute of Land Policy, Cambridge, MA, September 2017).

5. Emily Hamilton, "Inclusionary Zoning and Housing Market Outcomes" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, forthcoming 2019).

6. Hamilton, "Inclusionary Zoning and Housing Market Outcomes."

7. Alain Bertaud, *Order without Design: How Markets Shape Cities* (Cambridge, MA: MIT Press).

8. Brian Stromberg and Lisa Sturtevant, *What Makes Inclusionary Zoning Happen?* (Washington, DC: National Housing Conference, 2016).

9. Bertaud, *Order without Design*.

10. Bertaud.

11. Antonio Bento et al., "Housing Market Effects of Inclusionary Zoning," *Cityscape* 11, no. 2 (2009): 7–26.

12. Tom Means and Edward P. Stringham, "Unintended or Intended Consequences? The Effect of Below-Market Housing Mandates on Housing Markets in California," *Journal of Public Finance and Public Choice* 30, no. 1-3 (2015): 39–64.

13. Ann Hollingshead, *When and How Should Cities Implement Inclusionary Housing Policies?* (Berkeley, CA: Richard and Rhoda Goldman School of Public Policy, University of California Berkeley, 2015).

14. Hollingshead, *When and How Should Cities Implement Inclusionary Housing Policies?*

15. Jenny Schuetz, Rachel Meltzer, and Vicki Been, "Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets in the United States," *Urban Studies* 48, no. 2 (2011): 297–329.

16. Hamilton, "Inclusionary Zoning and Housing Market Outcomes."

17. Paul E. Groth, *Living Downtown: The History of Residential Hotels in the United States* (Berkeley, CA: University of California Press, 1994), 306–10.

18. Olivia Pulsinelli, "Houston's Median Home Prices Hit All-Time Record, Leases Skyrocketed in May," *Houston Business Journal*, June 13, 2017; River Davis, "What Housing Crisis? In Japan, Home Prices Stay Flat," *Wall Street Journal*, April 2, 2019.

19. Stuart S. Rosenthal, "Are Private Markets and Filtering a Viable Source of Low-Income Housing? Estimates from a 'Repeat Income' Model," *American Economic Review* 104, no. 2 (2014): 697–706.

20. Raj Chetty, Nathaniel Hendren, and Lawrence F. Katz, "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Project," *American Economic Review* 106, no. 4 (2016): 855–902.

21. Anthony Flint, "Backyard Brouhaha: Could Inclusionary Housing Break the YIMBY Deadlock?," *Land Lines*, April 2019, 8–19.