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Working Paper Low-rise multifamily and housing supply: A case study of Seattle

AEI Economics Working Paper Series, No. 2024-21

Provided in Cooperation with: American Enterprise Institute (AEI), Washington, DC

Suggested Citation: Peter, Tobias; Pinto, Edward; Tracy, Joseph S. (2024) : Low-rise multifamily and housing supply: A case study of Seattle, AEI Economics Working Paper Series, No. 2024-21, American Enterprise Institute (AEI), Washington, DC

This Version is available at: https://hdl.handle.net/10419/309154

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Low-Rise Multifamily and Housing Supply: A Case Study of Seattle

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> AEI Economics Working Paper 2024-21 November 2024

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Low-Rise Multifamily and Housing Supply: A Case Study of Seattle

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November 2024

Abstract

We provide an in-depth case study of land use reforms in Seattle to highlight how redevelopment of aging single-family housing to townhomes can lead to a significant increase in market-rate housing that promotes affordability. The key is to allow market forces to use by-right zoning to drive small-scale development, when also supported by clear and simplified regulatory frameworks. We have dubbed this the <u>Housing Abundance</u> <u>Success Sequence</u>, which is supported by this study along with over two dozen others. We document that such policies can lead to a sustained 2 percent per year increase in the housing stock. Importantly, this approach requires no government subsidies and leads to higher local tax revenues. Our findings underscore the potential of thoughtful land use reforms to create more inclusive, affordable, and resilient housing markets, while also demonstrating that inclusionary zoning mandates do not work and can stop market-rate developers in their tracks.

We would like to thank Sissi Li, Ashley Choi and Anker Zhao for their capable assistance.

Introduction

This study, for the first time to our knowledge, provides an in-depth case study of Seattle's upzoning of a relatively small area from single-family (SF) to low-rise multifamily (LRM) zoning in the 1990s. We analyze the price trajectories of single-family homes that were torn down and replaced with newly built townhomes, investigating how these SF-to-townhome (SF2TH) conversions have affected affordability in LRM zones and attracted a broader range of buyers. Additionally, we examine the profiles of builders engaged in these SF2TH conversions, their financing strategies and how the imposition of an inclusionary zoning mandate in 2019 influenced their decisions. We also compare home price trends between SF and LRM zones, finding no significant differences, and conduct an economic feasibility analysis to estimate the untapped potential for SF2TH conversions in Seattle's single-family zones. This comprehensive approach sheds light on how zoning changes, informed by market principles, can influence housing affordability, developer behavior and the buyer demographics across different zones.

Also, this case study along with over twenty-four others comprise an authoritative and growing compendium on land use regulations. The case study approach is a robust method for analyzing land use changes. They allow for detailed examinations which provide clearer insights into the dynamics of urban planning and a more accurate assessment of how land use reforms affect housing markets. Additionally, in many cases, they span long periods facilitating the measurement of outcomes over time. This approach promises to enhance our understanding of the nuanced dynamics of land use reform and its effects, offering valuable insights for researchers, policymakers and the public. Collectively, these case studies can provide a deeper understanding of the complexities and interactions associated with land use reforms.

From this body of work, we have derived several generalizable insights. To have a significant impact, effective land use reforms should be straightforward and comply with the "keep is short and simple" (KISS) principle. The case studies identify a "success sequence" that if followed can have a meaningful impact of approximately 2 percent in supply additions per year. The steps in this sequence are (1) enable by-right zoning, (2) allow greater density in many areas particularly those that are walkable and amenity-rich, and (3) implement short and simple land use rules, fast permitting and reasonable building standards without side constraints. We believe that without adhering to these principles, the efficacy of land use reforms is likely to be limited.

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Literature Review

Housing affordability is typically measured by comparing house prices/rents to area income. High ratios indicate an affordability problem and can reflect either issues in the local housing and/or the local labor market (Glaeser and Gyourko, 2003). If land values comprise a relatively large fraction of the total property value, this reflects issues in the housing market. On the other hand, if land values comprise a relatively normal fraction of the total property value, the high price/rent to income ratio reflects issues in the labor market. To identify markets with housing related problems, Glaeser and Gyourko (2003) estimate the cost of construction for properties and back out the land values from self-reported house values. They find that most housing markets do not have relatively high land shares. In their words

"The majority of homes in this country are priced—even in the midst of a so-called housing affordability crisis—close to construction costs. The value of land generally seems modest, probably 20 percent or less of the value of the house." [page 22]

They also find that local markets where land values comprise a much larger share of the total value tend to be spatially concentrated (for example in California) and the resulting affordability problems appear to be persistent over time.

The impact of land use regulations on housing affordability depends on how these regulations impact house prices (and rents). The empirical challenge in estimating the impacts of land use regulations on local house prices is summarized by Quigley and Raphael (2005)

"Measuring the effect of local land use regulation on housing prices is a formidable empirical challenge. ... Measuring the economic constraints imposed by actual regulatory behavior and decision making, as opposed to merely observing formal rules as adopted, is a difficult empirical problem, and comparisons across metropolitan areas are frustrated by the sheer variety of local practices" [page 69] "Perhaps the most important reason why empirical research is not definitive is the difficulty of measuring the regulatory environment facing households and builders in a satisfactory manner...regulations vary along a variety of dimensions and the enforcement of these rules may vary systematically." [page 100]

Collecting measures of land use regulations that vary over time and across housing markets and that can be succinctly summarized has been an elusive goal. Several studies use data on a specific geography and time period. Skidmore and Peddle (1998) examine 26 municipalities from DuPage County, IL over the period 1977-1992. Quigley and Raphael (2005) use a 1992 survey on 15 growth measures for cities in CA. Ihlanfeldt (2007) examines house sales in 100 cities in FL over 2000-2002. The most used multi-state, multi-city regulatory data are the Wharton Surveys (Linneman and Summers, 1991; Gyourko et al., 2008). The most common measure of regulatory restrictiveness is a count (or weighted count) of specific land use regulations. Consequently, this does not identify which land use regulations within the index have the largest impacts, nor does it allow for interactions between different land use regulations.

In addition to the difficulty in capturing the complexity of land use regulations and how they interact, these surveys do not typically record when each regulation was enacted. To the extent that the impact a policy has on house prices or housing supply depends on how long the policy has been in effect, this timing effect cannot be controlled for in the analysis. In addition, these surveys are often conducted at a single point in time and so provide no time-series variation in policies within a housing market.

Theory suggests that many of these land use regulations may have offsetting effects on house prices (Quigley and Rosenthal, 2005). To the extent that these rules are binding and prevent builders from putting land to its best development use, this should reduce land values. On the other hand, to the extent that these land use regulations limit the effective supply of housing, they would be expected to raise land values. The reduction in effective supply comes through lowering the housing density per acre of land for new construction, as well as incentivizing "filtering up" of existing properties (Somerville and Mayer, 2003). If land use regulations mainly increase builders' costs, then the economic incidence of these higher costs between landowners and home buyers will depend on the relative housing demand and supply elasticities (assuming an elastic supply of construction services). A second consideration is that residents may view these land use regulations as providing amenities. The value of these amenities to marginal buyers should be capitalized into higher land values (Brueckner, 1998). To the extent that higher income communities demand more amenities produced by land use restrictions, researchers need to treat these restrictions as endogenous (Ihlanfeldt, 2007).

An implication is that even if empirical analysis establishes a positive relationship between land use regulations and house prices, it is not clear if this reflects a supply reduction and/or capitalization of perceived amenities. This led researchers to try to directly estimate supply effects as well as separately estimate impacts on house values and vacant land prices. For these studies, when data over time on the change to the housing stock was unavailable, housing permits are used as a proxy.

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Land use regulations can affect both construction of new housing and maintenance decisions for existing housing. Quigley and Rapheal (2005) use data on land use regulations in CA and find that each additional restriction reduces the growth of single-family housing by 40 basis points. Mayer and Somerville (2000) find that cities with a high degree of regulation have steadystate new construction levels that are up to 45 percent lower than in cities with less regulation. Mayer and Somerville (2003) use American Housing Survey (AHS) data to identify affordable units.¹ Using the panel structure of the AHS data, they estimate the fraction of affordable units over time that remain affordable, the fraction that become unaffordable (filter up) and the fraction of unaffordable that become affordable (filter down). They use the Wharton Urban Decentralization Project Data and estimate that increases in the number of approaches a city uses for growth management raises the probability of filtering up.

Land use regulations can also affect the industrial organization of housing supply (Mayer and Somerville, 2000). To the extent that regulations add costs (direct and time-related) and uncertainty, these are easier to manage for large as compared to small builders. To the extent that some of the added costs are relatively fixed, large builders can spread these costs out over more projects. Also, large builders can better manage uncertainty over permitting timelines by holding an inventory of permitted lots to develop. At the same time, small builders are placed at a disadvantage. With smaller staffs and capital resources, they are less able to handle bureaucratic complexities, costs and delays. They also lack the bandwidth, staffing expertise and desire to participate in complex and costly government subsidy programs.

A growing literature documents that housing supply constraints arising from zoning restrictions as well as geographic barriers have contributed to higher house prices over the past several decades (see for example Glaeser and Gyourko, 2003; Quigley and Raphael, 2005; Ihlanfeldt, 2007, Zabel and Dalton, 2011 and Albouy and Ehrilich, 2018). Ihlanfeldt (2007) finds that land use restrictions reduce the value of vacant land which casts doubt on the amenity channel. One interpretation of these findings is that combining strong and relatively inelastic housing demand due to job growth with relatively elastic supply of land and construction costs (in many cities) leads to the economic incidence of "land use taxes" falling on purchasers of homes.

¹ Affordable units are defined as having a gross rent less than our equal to 30 percent of household income for a household with 35 percent of median MSA household income

More recently, Molloy et al. (2022) argue that a more appropriate measure of affordability is the quality adjusted rent per unit of housing services rather than house prices (or house prices normalized by income). Using Wharton Survey (Wharton Residential Land Use Regulatory Index) data on land use regulations, they find little effect of supply constraints on rents but larger effects on price-to-rent. They interpret this as reflecting an expectation that continued strong demand and supply constraints will lead to higher future rents. These higher expected rents are capitalized into current house prices.

A recent effort to build a panel dataset on land use regulations was undertaken by Stacy et al., 2023 (hereafter Urban Institute study). They used machine-learning algorithms to search U.S. newspapers between 2000-2019 for major zoning code regulatory changes. The data covers 1,136 cities. At first glance, this would appear to be a major data advance in the ability to understand the connections between zoning and housing supply and prices. However, Peter et al. (2024) conducted a detailed review of a 20 percent random sample of their identified major regulatory changes. In this sample, the review identified that only 14 percent of identified changes in the Urban Institute study were accurately classified as major, while, in contrast, 33 percent were found to be minor. In an additional 11 percent of the cases the changes were likely ineffective due to restrictive provisions that made the change unlikely to be effective. Finally, in 22 percent of the cases the authors could not verify the specifics of the change, while the rest were either incorrectly classified, unrelated articles or op-eds. These data issues call into question the Urban Study's findings and reinforces the challenges discussed by Quigley and Raphael (2005).

Glaeser and Gyourko (2003) noted this concluding policy observation:

"...if policy advocates are interested in reducing housing costs, they would do well to start with zoning reform. Building small numbers of subsidized housing units is likely to have a trivial impact on average housing prices (given any reasonable demand elasticity), even if well targeted toward deserving poor households." [page 35]

To evaluate and advance this policy observation, an alternative approach is needed. The goal should be to develop an authoritative panel dataset on land use regulations that are informed by detailed case studies. By focusing on specific markets with well-documented land-use changes, researchers can do a much more comprehensive job of collecting all of the relevant land use regulations and when they were enacted. These case studies will shed light on the likely combinations of regulatory reforms that produce the best and worst supply responses. This knowledge can focus and streamline future efforts to generalize this knowledge into a useful land use panel dataset.

The case study approach focuses on the market response to implemented land use changes at fine levels of geography (preferably down to the parcel or lot level). This response is inextricably tied to two considerations. The first is a parcel's highest and best use that is legal (HBU). The Appraisal Institute defines HBU as: "The reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, and financially feasible and that results in the highest value."² The Appraisal Institute defines four tests used in making this finding:³

- 1. **Legally permissible:** Which use cases are permissible by law, zoning and other land use regulations?
- 2. **Physically possible:** Constructing buildings on the side of a mountain or in a swamp probably aren't possible or cost effective.
- 3. **Financially feasible:** Does the use case of the property suit the demographics and market of the area well?
- 4. Maximally productive: Does the intended use optimize the potential of the land?

The second consideration is that while land is considered to be permanent, structures suffer from depreciation and obsolescence. The process of land share increasing as an existing structure's economic value declines leads to a desire by property owners to optimize the potential of land to the extent it is physically possible, financially feasible **and** legally permissible. That is, as single-family homes depreciate and are replaced, removing imposed land use restrictions and having governments step out of the way will allow redevelopment to take advantage of a parcel's higher and better use, which usually means more density. This process, over time, has the best chance to increase the supply of housing in high priced markets by driving down the land premiums per square foot of living space and increasing affordability.

As we will illustrate in the case of Seattle, housing markets with a high concentration of older single-family homes have an opportunity to increase housing supply by allowing more redevelopment options as these older properties are replaced. Maintaining restrictive single-family

² https://www.altusgroup.com/insights/highest-and-best-use-real-estate-

appraisal/?utm_source=google&utm_medium=organic

³ Ibid.

zoning or other restrictions that limit the economic return to higher density redevelopment will result in a generational missed opportunity to increase housing supply and improve affordability.

Background on Seattle

Seattle's population growth from the 1880s into the early 1900s can be explained by three factors: the expansion of the American railway system into the West, the advent of the late gold rush and the annexation boom of the 1890s. The creation of the transcontinental railroad's western terminus in Tacoma, some forty miles south of Seattle, began the first wave of migrants in the late 1880s. This growth built upon Seattle's primary lumber and coal industries, incorporating fishing, wholesale trading, shipbuilding and shipping as industries fueling the town's economic expansion and population growth well into the 1900s.

At the same time, in 1897 the discovery of gold along Canada's Yukon Territory catapulted the Klondike Gold Rush. Capitalizing on its proximity to the Canada-U.S. border and its already established shipping lines, Seattle marketed itself as the premier outfitting point for prospectors creating another population boom. From the early 1900s to 1910, Seattle began annexing surrounding land including Ballard, West Seattle and much of South Seattle, thereby increasing its population.

Seattle's population grew rapidly at the outset of the 20th century as shown in Figure 1. From 1990 to 1930 its population grew nearly 400 percent from 80 thousand to 315 thousand. The city's population stagnated during the Depression and then rose rapidly from 1940 to 1960 from 365 thousand to 557 thousand. Over the next 20 years, the city's population drifted lower reaching 494 thousand in 1980. It then resumed growing with the pace accelerating between 2010 and 2020 when the population reached 737 thousand.

Seattle's building code published in 1909 focused on construction and safety standards. This focus was an outgrowth of Seattle's "great fire" in the Summer of 1889 that consumed over 100 acres of the city's business district and waterfront. At this time, there were no zoning ordinances that focused on single-family housing.⁴ That is, low-rise multi-family housing could be built anywhere within the city.

⁴ For details see: <u>https://www.sightline.org/2018/05/23/this-is-how-you-slow-walk-into-a-housing-shortage/</u>

As a consequence, in the early 1900s up to the 1920s Seattle neighborhoods provided a mix of housing densities in close proximity. This is illustrated in Figure 2. There was a marked decrease in the pace of multi-family housing construction in Seattle following the end of the Great Depression relative to the earlier 1900-1920 period. This is illustrated in Figure 3. At the same time, there was an acceleration in the pace of single-family housing construction. An important factor contributing to the relative shift to single-family construction was the adoption in 1923 of Seattle's first zoning ordinance (Ordinance 45382). The ordinance was designed by Harland Bartholomew and was based on his 1919 plan for St. Louis (see Bartholomew, 1919).⁵

The zoning code contained just six zoning types of which only two were residential. The code designated between a quarter and a third of the city as "first residence districts." These districts were the predecessor to today's single-family zone. Within these districts, builders could only construct single-family detached homes and a few non-residential buildings such as schools and churches. Existing multi-family buildings were grandfathered. In "second resident districts", which covered less than a quarter of the city, builders could construct any type of residential dwellings from single-family to duplexes and apartments buildings. These zones were typically located closer to the city's downtown core.⁶

One aim of Bartholomew's zoning plan was to promote segregation of neighborhoods by income and consequently by race. Single-family housing is more land-intensive than multi-family housing which increases its relative cost and therefore makes it unaffordable for low- to moderateincome families. The zoning code was rewritten in 1957 adding new zoning classifications, downzoning many second residence districts, and designating even a greater percentage of the city to exclusively single-family detached homes. From 1960 to 1995 as the city's population declined and then slowly began to recover, little new single- or multi-family housing was built.

In 1994, Seattle was a much smaller city than it is today with about 530,000 people,. The city, however, was finally recovering from the "<u>Boeing bust</u>" layoffs in early 1970s and the accompanying population decline. Regional transit funding was still struggling to turn the page from failed rail packages in <u>1968 and 1970</u>. However, there were many reasons to be optimistic about Seattle's

⁵ Bartholomew, known as the "Dean of U.S. City Planners," was hired by St. Louis in 1919 as the first fulltime planner in an American city.

⁶ For more details see https://www.sightline.org/2017/03/01/returning-seattle-to-its-diverse-housing-types/

future. A young company named Microsoft was expanding nearby and the city was no longer as dependent on Boeing for its economic future.

The <u>Washington State Growth Management Act (GMA) of 1990</u> required Seattle and other cities in the state to create a plan for designating growth in specific areas. The GMA saw this as a necessary step to accommodate future growth without further destruction of farmland and natural areas on the urban fringe. Localities were asked to develop comprehensive plans that concentrated growth within designated areas and addressed the concerns of housing, employment and industry. A mandatory element of these comprehensive plans was to identify sufficient capacity of land for housing within an urban growth area boundary.⁷

An implication of Seattle's historical pattern of housing construction is that when we get to the mid-1990s and the GMA a significant faction of Seattle's housing stock is aging single-family housing. This presents both a challenge and an opportunity in terms of how to design a plan to manage the city's redevelopment and provide sufficient capacity of land for housing. The challenge is that, based on the principles of highest and best use (HBU), it is expensive to replace an aging single-family detached house with a new single-family detached house. If SFD is the only permissible HBU and land is expensive, such parcels are effectively zoned only for conversion to larger, more expensive homes. This replacement process puts more upward pressure on house prices. The opportunity is that changing zoning at this time so that more of this aging single-family housing can be replaced with higher-density multi-family housing would improve the return for builders, supply more affordable housing to the market and relieve the excess housing demand due to population growth.

The 1994-2014 Seattle Comprehensive Plan

From 1990 to 1992, the Seattle Department of Planning conducted extensive community outreach for input into the key elements of a plan. Criticism was voiced that early drafts of the plan placed too much emphasis on higher density development and affordability. A revised draft plan was published in 1991 for public comment and the mayor's "Recommended Framework Policies" was published in 1992. In 1993, the mayor's "Recommended Draft Comprehensive Plan" was released followed by a series of public meetings and workshops. A final plan was submitted that year for City

⁷ https://app.leg.wa.gov/rcw/default.aspx?cite=36.70A&full=true&pdf=true

Council review. *Toward a Sustainable Seattle* was the city's first comprehensive plan complying with the State's GMA legislation and was adopted in 1994.

The urban village concept was a core component of the new plan. Four types were articulated: 1) urban centers as the densest neighborhoods in the city that provide a diverse mix of uses, housing and employment opportunities; 2) residential urban villages with low to moderate density housing in areas projected to see little employment growth; 3) Hub urban villages containing both housing and employment as well as commercial centers located outside urban areas; and 4) manufacturing/industrial centers. A Neighborhood Planning Office was created to help manage specific neighborhood plans. The aim was to maximize growth opportunities in carefully demarcated boundaries while allowing neighborhood councils to decide on many of the specific "qualities" for these urban villages. In total, 37 neighborhood plans were approved.

Urban Villages, as outlined in the plan, are designated areas where growth is concentrated to promote mixed-use development. These areas aim to combine residential, commercial and retail spaces, enhancing both walkability and transit use. Urban Villages incorporate a variety of housing types while also striving to create complete, self-sustained neighborhoods that include jobs, services and amenities within close proximity. Low-Rise Multifamily (LRM) Zones, created as part of the urban village strategy, are specific zoning classifications that allow for the development of lowerdensity multifamily housing, such as townhomes, duplexes, triplexes, and small apartment buildings typically up to three stories tall. These zones focus on moderately increasing housing density while maintaining a residential neighborhood character.

In the mid-2000s, Seattle streamlined the low-rise zoning categories, reducing them from four to three zones—LR1, LR2, and LR3—to simplify development regulations and encourage moderate density in appropriate areas. Within these LRM zones, the construction of townhomes, rowhouses, duplexes/triplexes and small apartment buildings is allowed "by-right", meaning that developments conforming to zoning standards can proceed without needing special permissions or variances. This helps to simplify and expedite the city's redevelopment process within designated urban villages.

The zoning laws in these areas define allowable Floor Area Ratios (FARs)—measures of a building's floor space relative to its lot size. Per Krause (2015), allowable FARs typically range from

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1.0 (LR1) to 1.4 (LR3).⁸After the 1994 reform, approximately ten times as much land in Seattle was zoned for single-family as for low-rise multi-family. This is illustrated in Figure 4.

Since the population in the early 1990s was still below the prior peak in the 1960s, inflation adjusted median house prices were not much higher than what they had been over the prior 50 years. This can be seen in Figure 5. There was a short run-up in median inflation adjusted prices in King County between 1975 and 1980, with median prices subsequently trending back down over the 1980s. This was followed by another run-up in the late 1980s due to the emergence of low-doc/no-doc loans which expanded the supply of housing credit. A significant uptick occurred in the late 1990s and early 2000s due to looser lending standards in the run-up to the Great Financial Crisis. After a correction of 28 percent, prices bottomed out in 2011 and increased significantly thereafter due to supply shortages, job and wage growth in the area.

Impact of the Seattle Plan

We examine the impact of Seattle's zoning reforms on its Urban Village (UV) zones and Single-Family (SF) zones utilizing primarily public records deed information and most recent assessor data.⁹ The focus is on how the rezoning to LRM in UV zones led to significant increases in built density and housing supply, while the SF zones, which were largely untouched by these reforms, remained static in terms of density and added little supply.

Built Density: Urban Villages vs. Single-family Zones

Following the mid-1990s zoning changes, as shown in Figure 6, UV zones saw a notable increase in housing density largely due to the introduction of LRM zoning which allowed for the construction of higher-density housing forms such as townhomes, duplexes, triplexes and fourplexes.¹⁰ This stands in contrast to the SF zones where the built density remained mostly unchanged as development continued to focus on single-family detached homes.

⁸ For details, see

https://www.seattle.gov/documents/Departments/SDCI/Codes/MultifamilyZoningSummary.pdf.

⁹ The most recent assessor data include zoning information, land use details, and the year built for all properties as of their latest assessment. This data provides a current snapshot, meaning that homes that previously existed but were torn down are no longer recorded. The deed data contain transaction prices, buyer and seller names, as well as the financing.

¹⁰ We define these zoning areas based on the Zoning variable in the tax assessor data. We define Urban Village areas as those with units coded as "LR" (low-rise) or "RSL" (residential small lot). In these areas,

Following the HBU principles, the higher-density allowance in LRM zones made it economically viable for developers to engage in teardowns of existing single-family homes, replacing them with multi-unit developments consisting of mostly townhomes (SF2TH). In comparison, the SF zones experienced no similar transformation, and new construction in these areas continued to focus on replacing older homes with newer and larger single-family structures. A consequence of this differential development is that, over time, the housing stock in SF zones became relatively older and new development had a negligible effect on increasing housing supply.

The LRM zoning in Urban Villages triggered a construction boom that began in the mid-1990s and accelerated in the 2000s despite macroeconomic disruptions such as the Financial Crisis. This is shown in Figure 7. Since 1994, we estimate that around 20,000 new townhome units have been built in Seattle's LRM zones. At a rate of conversion of 4:1, private builders converted around 5,000 single-family homes. Per current tax assessor data, there are about 15,000 SFs left in the LRM zones, which suggests that in 1994, there were about 20,000 SFs in these zones. This renders a net increase in supply from 1994 to 2024 of 15,000 units from SF2TH conversions which translates into a rate of additional housing supply per year of about 2.5 percent.¹¹ These new units have played a critical role in expanding Seattle's housing supply, particularly in areas that were previously dominated by single-family homes. In contrast, as also seen in Figure 7, the SF zones did not experience a corresponding increase in housing units.

Figure 8 illustrates an example of the transformation of a residential lot through the process of SF2TH redevelopment. Both photos show the same parcels, one taken in 2007 and the other in 2023. The top image from 2007 shows two original single-family detached homes, each situated on its own separate lot. The homes are traditional smaller structures with simple architectural designs typical of older residential neighborhoods, which make them ideal candidates for SF2TH conversion.¹² The bottom image from 2023 shows the same lots after being redeveloped into multistory residential units. The original two homes have been replaced by two duplexes in the front, with additional units in the back, making a total of seven units now occupying the same land area. Each

significant shares of new constructions since 1994 have been townhomes. We define Single-Family areas as units coded as "NR" (Neighborhood Residential). In these zones, over 90% of new constructions have been single-family homes. We exclude all other zones, which tilt heavily towards larger multifamily.

¹¹ Assuming all of the 20,000 single-family units were economically viable for conversion and 15,000 new units were added over a 30-year period.

¹² See for example Krause (2015), who uses a longitudinal dataset from the City of Seattle to estimate that underutilized lots are about twice as likely to be redeveloped.

unit has its own entrance and there is a shared driveway providing access to the rear units. This example illustrates how light-touch density (LTD) redevelopment can replace older, single-family homes with multiple new housing units thereby significantly increasing the housing capacity on the same parcel of land.

Affordability and Density: Economic Implications

The economic advantages of LTD development in LRM zones are clear. By replacing singlefamily homes with multiple townhomes on the same parcel of land, developers can offer lower perunit prices resulting in enhanced housing affordability. Our data identifies approximately 3,000 single-family-to-townhome (SF2TH) conversions, representing around 60 percent of the total redevelopment in our study. These conversions typically follow a pattern wherein a single-family home is purchased, torn down and then replaced with several townhomes, thereby significantly increasing the housing supply. In terms of affordability, the societal advantages are also clear. Finally, LTD development in limited LRM zones is an important step in providing sufficient capacity of land for housing, as required by the GMA.

Our methodology links public records of builder purchases of SF homes with subsequent sales of townhomes built on the same parcels by the same builder within 3 years of each other.¹³ While this methodology occasionally encounters challenges—such as misspelled builder names or changes in street addresses (e.g., corner lots)—it enables us to track critical variables: (1) the initial purchase price of the single-family home, which in the case of tear downs approximates the land value; (2) the number of new homes built on the same parcel and their price points; and (3) the builder's name and financing details.

The implications for affordability are substantial. Our data shows that higher-density conversions have a meaningful effect on housing prices as shown in Figure 9. For example, when a single-family detached home is replaced by a new larger single-family home, the new home sells for approximately double the price of the original home . By contrast, if the same home is replaced by a four-unit townhome development, each unit sells for roughly the same price as the original home,

¹³ We have not found an APN tie-back table for Seattle, like the one available in Houston, where the city publishes a file linking original single-family homes with subsequent townhomes built on the same parcel (see Wegmann, 2023). Instead, we connect deed transactions with substantial manual effort. To establish a match, we verify that the name of a buyer of a home aligns with the subsequent sale of various homes on the same street name. To maintain accuracy, we limit this linkage to purchases and sales occurring within 3 years of each other and to homes that were built after the initial purchase.

effectively adding three additional affordable units. In cases where five to eight units are built on a parcel, the new units tend to sell at approximately 25 percent below the price of the original home, significantly improving affordability. These findings suggest that SF2TH conversions can promote social inclusion and ultimately filtering down. Similar to Hamilton (2024) we do not find that upzoning leads to a significant increase in land prices.

In Seattle's LRM zones townhome developments have become the predominant form of housing construction despite the fact that developers retain the option to build larger, single-family homes. This shift towards higher-density development is driven by both market forces and new opportunities afforded from deregulation of land use policies. SF2TH conversions offer several distinct advantages over traditional low-density housing models.

For instance, consider a property with an initial market value of \$1 million. If this property is redeveloped at a higher density, such as through the construction of multiple townhomes, several outcomes that benefit both the private sector and the public sphere are realized. First, the parcel's total value is significantly increased by replacing a single-family home with multiple smaller units, thus enhancing the financial returns for developers. This increase in the parcel's overall value also leads to a commensurate rise in property tax revenues for the city without the need for extensive new infrastructure investments or public subsidies.

Furthermore, the development of multiple smaller housing units instead of a single, larger structure has important implications for housing affordability. Higher-density projects like townhomes provide more housing options at lower price points compared to new single-family homes, thereby making homeownership more accessible to a broader demographic. This increase in housing supply at more affordable price points can help alleviate some of the pressures of existing housing scarcity, which are particularly acute in urban centers such as Seattle.

We assess the current price points for single-family homes (SF) and townhomes built after 1985 in the tax assessor data, using an Automated Valuation Model (AVM) from Dec. 2023, as shown in Figure 10.¹⁴ The valuation of single-family homes in SF zones has nearly doubled, increasing from approximately \$1 million for homes built in the 1990s to nearly \$2 million today.

¹⁴ We rely on the assessor data and an AVM rather than the deed data for several reasons: 1) the combination of assessor data and AVM allow us to evaluate nearly every property, while the deed data are limited to only the ones that sold. 2) The AVM values all properties on Dec. 2023, while the deed transaction data would have to be adjusted using a constant-quality home price index at fine levels of geography.

This significant growth can be attributed to a substantial increase in the average living area of these homes, which grew from around 2,200 square feet in the early 1990s to roughly 3,200 square feet by the late 2010s, while lot sizes remained constant.

In contrast, townhomes in LRM zones have maintained a more stable valuation, hovering around \$800,000. This stability is partly due to the consistent size of these homes, which have maintained an average living area of 1,400 square feet, even as their lot sizes shrank from approximately 1,800 square feet in the early 1990s to around 900 square feet today.¹⁵

For a household in the Seattle metro area with a 2024 median income of \$158,700, this results in a price-to-income ratio of about 5 times for townhomes, but over 10 times for single-family homes. Introducing lot splitting and increasing housing density has helped boost housing supply and kept home values more attainable by creating smaller, more accessible housing options for buyers.

From the city's perspective, the shift toward higher-density development in LRM zones aligns with broader goals of increasing housing availability, enhancing tax revenues and fostering inclusive growth. As a result, higher-density development is not only the preferred choice for developers due to the enhanced profitability, but also serves the city's strategic interests by expanding the housing supply and increasing property tax revenues. Thus, the proliferation of townhomes in LRM zones reflects a convergence of public and private interests, demonstrating the efficacy of density-focused zoning policies in addressing urban housing challenges.

Single-Family vs. Townhomes: Divergent Development Patterns

In SF zones where townhome construction is not permitted the prevalence of new singlefamily detached conversions to larger, more expensive homes is notable. Rather than utilizing the land for higher-density developments, developers in SF zones typically replace older single-family homes with larger, more expensive single-family homes. To counteract the resulting negative affordability effects, Seattle introduced floor-area-ratio (FAR) limits in these zones, but this

¹⁵ This is further evidence that the financial feasibility test of the principle of highest and best use will lead to smaller lot sizes over time.

regulatory effort has had limited success in addressing the underlying issues of affordability and density.¹⁶

By contrast, LRM zones have become a hub for increasing land intensive townhome development, offering a more affordable and inclusive alternative to new single-family homes. According to American Community Survey (ACS) data, approximately three-quarters of newly built townhome units are owner-occupied, compared to only 10 percent of newly built multi-family units in large buildings and to 46 percent for the entire city. Additionally, townhomes offer more spacious living arrangements, averaging 2.6 bedrooms per unit, compared to 0.9 bedrooms in newly built multi-family units and on a per bedroom basis, a more cost-effective rent or ownership option.¹⁷

The Impact on Homeownership and Demographics

The proliferation of townhomes in LRM zones has had a democratizing effect on homeownership in Seattle. The lower prices and higher availability of townhomes have made homeownership more accessible to a diverse range of households, spanning various income levels, age groups and racial/ethnic backgrounds. By combining public deed transaction data with Home Mortgage Disclosure Act (HMDA) data from 2012-2023 (the match rate is around 50 percent), we find that converting to higher densities enables families of similar or even somewhat lower incomes, younger ages, and more diverse backgrounds to buy into the neighborhood, thereby promoting inclusion as shown in Figure 11.¹⁸

The zoning change to the LRM zones has enabled 1) a more economically diverse group of buyers, with a larger share of buyers below 120 percent of area median income (AMI), 2) more younger buyers (<35 years old), and 3) a more diverse buyer population with fewer non-Hispanic white buyers compared to SF zones. These results highlight the greater diversity in terms of income, age and race in LRM zones compared to SF zones.

¹⁶ In July 2019, the Seattle City Council voted to that "FAR limits apply to development in single-family zones. New houses (i.e., principal structures) are subject to an FAR limit of 0.5 or 2,500 square feet, whichever is greater. Below-grade floor area and floor area in an ADU is exempt." See for example: <u>https://seattle.curbed.com/2019/7/1/20677616/backyard-cottage-mother-in-law-apartment-zoning</u> or <u>https://www.seattle.gov/council/issues/past-issues/backyard-cottages-and-basement-</u> <u>units#:~:text=FAR%20limits%20apply%20to%20development,in%20an%20ADU%20is%20exempt</u>.

¹⁷ For example, per ACS data the median rent per bedroom is \$2,300 for units in buildings with 20 or more units and \$1,100 for single-family attached homes.

¹⁸ For more information on the match, see the appendix in Davis et al. (2020).

These results sharply contrast with research from The Urbanist, which found that "Single-Family Zones Are the Biggest Culprits in the Displacement of Black Seattleites."¹⁹ The shift in LRM zones demonstrates that more flexible zoning can lead to broader inclusivity, while rigid singlefamily zoning perpetuates exclusion and contributes to rising home prices, which necessitates higher incomes and assets of prospective buyers. The changes in LRM zoning highlight the potential for creating more equitable housing opportunities through thoughtful policy reform.

Between 2012 and 2023, approximately 43,000 1-4 unit home sales occurred in LRM zones, compared to 67,000 in SF zones, despite differences in 1-4 unit housing stock (53,000 vs. 119,000).²⁰ Most notably, townhomes built since 2000 in LRM zones were purchased by buyers with a median income of 133% of AMI, compared to 231% of AMI required to purchase single-family homes built since 2000 in SF zones.²¹ This disparity emphasizes the greater accessibility and affordability of townhomes in LRM zones. There is a key lesson to be learned here. If Seattle aims to maintain or increase its current homeownership rate of 48 percent and promote affordability, it is crucial that the city strategically increases the proportion of townhomes relative to units in large apartment buildings.²² Townhomes offer a more attainable (especially on a per bedroom basis) and desirable path to homeownership for many residents, particularly those who are priced out of the single-family home market but still aspire to own property rather than rent.

Crucially, the increase in housing supply has helped with "filtering" in the LRM zones. Leveraging a unique dataset that links buyer's incomes sequentially to properties, we analyze the income levels of buyers in successive home sales, adjusting these incomes to each year's area median income (AMI) to ensure comparability over time. Our dataset includes approximately 8,400 home sale pairs in Seattle, where the incomes of both the initial and subsequent buyers are known. This data spans from 2009 to 2022, representing about 7 percent of all sales pairs during this period.²³ We examine the rate of filtering in single-family zones compared to LRM zones.

¹⁹ For details see: <u>https://www.theurbanist.org/2024/06/19/single-family-displacement-of-black-seattleites/</u>

²⁰ According to the full deed transaction data,

²¹ According to the matched data described above.

²² The homeownership rate is calculated using 2018-2022 5-year ACS data. The universe are households with a home value between \$100,000 and \$5,000,000 and monthly rents between \$400 and \$5,000.

²³ We use the combined public records deed transaction data with Home Mortgage Disclosure Act (HMDA) data described above. Additionally, we require that the buyer of a parcel in an initial transaction matches with a second transaction where the buyer is now the seller. This matching process does lead to a reduction in sample size.

Our analysis reveals that, given Seattle's housing shortage, homes are increasingly filtering up—that is, being sold to buyers with higher relative incomes. However, there are notable differences between zones. In LRM zones, the median rate of filtering is 100.9 percent, meaning the subsequent buyer's income is, on average, 100.9 percent of the prior buyer's income. In contrast, this rate reaches 108.0 percent in single-family zones, which is statistically significant different at the 1 percent level. These findings underscore the varying dynamics of filtering across different zones, reflecting the effects of the city's upzoning on housing supply and buyer demographics.

The key lesson is that if Seattle had upzoned more than the roughly 10 percent of singlefamily zoned land for low-rise multifamily housing in 1994, a greater number of housing units could have been built. This might have allowed over time more homes to "filter down" in affordability rather than "filter up," making housing more accessible to a broader range of income levels, thereby alleviating some of the city's housing affordability challenges.

Entrepreneurship and Small-scale Development

Seattle's zoning reforms also fostered a surge in small-scale entrepreneurship. Our analysis of around 2,800 infill property redevelopments between 1993 and 2024 shows that up to 1,100 unique builders and developers were involved, with no single developer accounting for more than 2.3 percent of the total volume—see Table 1.²⁴ Interestingly, the nation's largest builders, which typically focus on large-scale subdivisions, did not participate in Seattle's infill development likely due to the small scale of these projects. Thus, infill SF2TH conversions helped to grow and sustain home construction with the work typically done by small local builders.²⁵

On the financing side, about 30 percent of parcels were cash financed, while the remaining 70 percent were financed through various means. A total of 408 unique lenders were involved, with banks financing 71 percent of developments for builders with at least 23 projects. This diversity in financing models further underscores the decentralized, small-scale nature of infill development in Seattle. This same pattern has been found in Houston, Philadelphia, Los Angeles, Palisades Park, NJ among others.

²⁴ This figure may slightly overcount unique builders, as some create LLCs specific to individual developments, which can inflate the total number of unique builders. However, such cases are rare in the data. We also include data from 1993, the year before Seattle officially adopted the Urban Villages strategy, as there is evidence that some builders began assembling parcels in anticipation of the policy change. ²⁵ https://www.strongtowns.org/journal/2021/2/3/unleash-the-swarm

Housing Price Appreciation and Market Dynamics

We also analyze the rate of constant-quality home price appreciation (HPA) in the SF zones compared to the LRM zones. We use a quasi-constant-quality methodology described in Davis et al. (2020), where we use an Automated Valuation Model (AVM) from Dec. 2023 as a "second sale." This allows us to include in the estimation each property where we have an AVM rather than just properties that resold. We calculate the HPA on an annual basis using the following formula:

$$ln(Price) = b_0 + b_1 ln(AVM) + b_3 (LRM * Year) + e$$

where *price* represents the sale price, *AVM* is the December 2023 AVM of the property sold, LRM is a dummy variable indicating whether the property is located within a Low-Rise Multifamily or within a single-family zone, *Year* is a set of annual dummy variables for the period between 1992 and 2023.

We use public deed records data for Seattle going back to 1992. We limit the analysis to Seattle City and to 1-4 unit homes (single family, townhomes, condo, and 2-4-plexes). We merge the deed records data with the most recent assessor data, which contain the zoning information, the land use information and the year built of all the properties as of their last assessment. Since we only have access to today's assessor data, we exclude all sales transactions that have a year built after the sale occurred (i.e. properties that were subsequently torn down).

Our methodology requires an AVM and so we drop around 0.3 percent of sales without one. We trim the top and bottom 2.5 percent per quarter based on the ratio of AVM to actual sale price. This eliminates extreme outliers where either the AVM or the sale price was likely inaccurate. We limit the data to properties zoned either SF or LRM. The final dataset contains almost 300,000 sales.

The results shown in Figure 12 indicate little difference in the rate of home price appreciation between the two zones, with both experiencing similar growth until the onset of the COVID-19 pandemic in 2020. Since then, there has been a slight divergence with larger singlefamily homes in SF zones appreciating more rapidly, likely reflecting changing household preferences for larger homes during the pandemic. This suggests that townhomes, despite being more affordable and higher in density, do not depress home price appreciation in surrounding neighborhoods

Policy Implications and Future Directions: Learning from Seattle's Experience

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Seattle's zoning reforms, particularly the introduction of LRM zones, have had a transformative effect on the city's housing landscape. These reforms have proven successful in increasing housing supply, enhancing affordability, promoting small-scale entrepreneurship and expanding homeownership opportunities. The LTD policies that underpinned these changes provide valuable insights for addressing urban housing crises across the country. However, there remain important lessons for future policy interventions, particularly as Seattle faces new challenges with its recent Mandatory Housing Affordability (MHA) program which we discuss below.

The Success of Light-Touch Density and Its Potential Expansion

The LRM zoning policy has clearly demonstrated the effectiveness of LTD in increasing housing density while maintaining affordability. By enabling the construction of townhomes, duplexes and other multi-unit buildings on parcels traditionally limited to single-family homes, Seattle has substantially expanded its housing stock without resorting to high-rise developments in areas formerly known for their low-rise single-family character. This market-driven approach has allowed for incremental increases in density which, in turn, have provided opportunities for a wider range of potential homeowners, including younger and lower-income households.

Despite these successes, the persistence of restrictive SF zoning across much of Seattle continues to limit the city's ability to meet its growing housing needs. To ensure that Seattle's housing market remains accessible and inclusive, policymakers could prioritize the expansion of LTD policies to additional areas, particularly those still zoned exclusively for single-family homes. Allowing moderately higher density in walkable, amenity-rich areas currently zoned for SF housing could unleash a new wave of small-scale developers, replicating the success seen in the LRM zones.

The potential for SF2TH conversions in Seattle's SF zones remains largely untapped. If zoning in SF areas were amended to allow for townhomes and similar multi-unit housing, this would also provide a pathway for addressing the city's affordability challenges while avoiding the displacement pressures associated with large-scale developments. Figure 13 shows the potential in the city where SF2TH conversion is currently economically viable, while Table 2 shows the various levels of new units that could be created at a roughly 2 percent conversion rate per year under various unit allowances.

Challenges with the Mandatory Housing Affordability Program

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In 2019, Seattle passed the Mandatory Housing Affordability (MHA) program with the goal of creating thousands of new subsidized housing units made affordable through fees on development, while also boosting overall housing production. This new program is on track to destroy Seattle's SF2TH conversion progress. Under MHA, builders have a choice between designating up to 11 percent of units as income-restricted or paying a hefty fee.²⁶ Based on a 2021 survey of trade group members of the Master Builders Association of King and Snohomish Counties, "the average MHA fee per townhome unit is \$32,743, or \$130,972 for an average four-unit project."²⁷

These substantial fees effectively double the predevelopment costs for townhomes, discouraging their development. As a result, as shown in Figure 14, new townhome permits in MHA areas have plummeted 80 percent—from around 150 townhome permits per month to around 30— with the decline in townhome development occurring immediately after MHA's imposition. In contrast, construction in SF zones, which are not subject to MHA requirements, has remained largely unchanged. It wasn't until late 2022, with the onset of higher interest rates that construction slowed across the board.

The failure of MHA to maintain the townhome building boom, while simultaneously boosting development costs, underscores the importance of the KISS principle. Housing reform must focus on market-driven, streamlined processes that avoid the complexity and inefficiency of one-size-fits-all solutions. Yet HUD's Regulatory Barriers Clearinghouse assessment of Seattle's MHA highlighted the creation of hundreds of new affordable units since its inception in 2019. It failed, though, to account for the unintended consequence of the thousands of units that were not built because of MHA.

Accessory Dwelling Units: An Alternative to Townhomes?

²⁶ Based on MHA, the income level required for rental housing to be designated as affordable is that a households cannot earn more than 60% of the area median income (AMI) and for owner-occupied housing it is 80% of AMI. Since builders cannot designate a fraction of a unit as income restricted, builders must round up, which is especially prohibit on townhome projects, which may only have three or four units in total. ²⁷ "The Decline of Seattle Townhomes under MHA." *Master Builders Association of King and Snohomish Counties*, Dec. 2021, <u>www.mbaks.com/docs/default-source/documents/advocacy/issue-briefs/the-decline-of-seattle-townhomes-report.pdf.</u>

The legalization of Accessory Dwelling Units (ADUs) in Seattle, first in 1994 and then further expanded in 2010 and 2019, offers another prism into the city's zoning reforms. While ADUs initially faced cumbersome regulations, subsequent reforms enabled their construction across most residential zones (see Kimmel and Wang, 2023). However, as shown in Figure 15, ADU development has not provided a full substitute for the decline in townhomes. In MHA areas, townhome construction was initially preferred as it allowed for higher density. Since 2019, builders have increasingly shifted their focus to ADUs due to fewer opportunities for townhome developments under MHA.

Interestingly, there was only a small uptake in ADU construction in MHA areas, presumably either because there are fewer opportunities for ADUs in MHA areas (because of prior infill conversion) or because builders or owners are preserving higher quality lots for a time after the MHA.

An illustrative example is shown in Figure 16 where a developer was able to build two main units with four ADUs, resulting in a total of six units (5 additional units). While this circumvents the MHA requirements, the same lot could have supported up to eight townhomes, potentially providing even more housing supply. ADUs, which are typically sold with the main structure, are also not a true solution for first-time buyers, as they do not offer the lower-priced ownership opportunities that townhomes could provide. An additional complication of adding an ADU to an existing structure, rather than allowing a single-family home to be converted to townhomes (SF2TH), is that properties with ADUs are significantly less likely to undergo conversion at a later stage (Krause 2015). This effectively removes the future flexibility for such a property to be converted into higher-density housing.

The Housing Failure Sequence: What Doesn't Work

While rezoning efforts are essential for increasing housing density and addressing urban housing shortages, certain policies can inadvertently undermine the intended benefits of such reforms. These policies, which impose restrictions or requirements that either complicate or reduce the economic feasibility of higher-density development, can significantly limit the supply effects of rezoning. Land use indices that are unweighted or weighted counts of specific regulations will not adequately capture the interactions between the policies listed below and zoning reforms. Below are some examples, but by no means all, of policies that can hinder the successful implementation of rezoning initiatives by failing to follow the KISS principle:

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• Low Maximum Floor-Area Ratio (FAR) Requirements

One common policy that can limit the impact of rezoning is the imposition or maintenance of low maximum FAR requirements. For instance, when Minneapolis rezoned formerly singlefamily-only areas in 2019 to allow two- and three-unit buildings, the maximum allowable FAR remained at 50 percent.²⁸ This restriction significantly hinders the ability to effectively build these housing types. On a typical 5,000-square-foot lot with this FAR restriction, a maximum of 2,500 square feet of living area is allowed. This makes it challenging to design and construct a duplex or triplex that is both functional and financially viable. Low FAR limits can thus stifle the potential for increased density that rezoning aims to achieve.

• High Minimum Lot Size Requirements

Another restrictive policy is the imposition of high minimum lot size requirements for multiunit structures. For example, in Oahu, HI, and Ridgefield Park, NJ, local regulations require that duplexes be built on lots that are twice the size required for single-family homes.²⁹ This defeats the purpose of increasing density by imposing the same spatial requirements for a duplex as for a singlefamily home, effectively neutralizing any potential density gains. By maintaining high minimum lot sizes, these jurisdictions limit the ability of developers to build more housing units on a given piece of land, thereby restricting housing supply growth.

• Restrictive Design Standards

Design standards can also play a significant role in limiting the effectiveness of rezoning efforts. In Ridgefield, NJ, for instance, the construction of duplexes is restricted to an up-down configuration, rather than the more popular side-by-side design. Additionally, the town mandates minimum ceiling heights for basement ADUs, which can add unnecessary costs and complications to development projects. These design restrictions not only limit the flexibility of developers, but also reduce the appeal and marketability of new housing units, thereby discouraging the construction of higher-density developments.

²⁸ See: <u>https://reason.com/2022/05/11/eliminating-single-family-zoning-isnt-the-reason-minneapolis-is-a-yimby-success-story/</u>

²⁹ For example, Ridgefield Park requires a minimum lot size of 10,000 square feet for a two-unit structure, even though the average lot size in the area is only 5,600 square feet.

• Limitations on Building Coverage and Height

Some jurisdictions severely limit the potential for increased density by imposing limitations on the maximum building coverage and height for multi-unit structures. In Ridgefield Park, NJ, for example, the maximum building coverage for a two-unit structure is restricted to 2,500 square feet and the height is limited to two floors. Such stringent requirements not only constrain the physical footprint of new developments, but also increase the cost of construction making it less economically feasible for developers to pursue higher-density projects.

• Permit Caps

Permit caps can also significantly restrict the potential for increased housing supply following rezoning. In Arlington, VA, the local government allows a total of only 285 permits over a five-year period, far below the city's need and potential. By capping the number of permits, the jurisdiction effectively limits the number of new housing units that can be built, regardless of the demand or the capacity for increased density.

• Excessive Parking and Other Requirements

Excessive parking requirements and other regulatory burdens can also deter developers from pursuing higher-density projects. These requirements, which often significantly increase construction costs, can render LTD developments financially unviable. For instance, mandating multiple parking spaces per unit in areas where land is scarce or expensive can reduce the number of units that can be built on a parcel, thereby limiting the overall increase in housing supply.

• Income Limits, Affordable Housing Fees, and Mandates

Policies that impose income limits, affordable housing fees and mandates – as seen with Seattle's MHA fund – can also restrict the potential supply effects of rezoning. Inclusionary zoning, which requires a certain percentage of units in new developments to be set aside as affordable housing, can increase development costs and reduce the financial viability of projects. Similarly, rental bans or rent control measures can deter investment in new housing, as they limit the potential returns for developers.

• Owner-Occupancy Requirements and High Impact Fees

Owner-occupancy requirements, which mandate that the owner of a property must live in one of the units, can discourage the development of multi-unit structures, particularly in areas where demand for rental housing is high. Additionally, unjustifiably high impact fees—charges levied on developers to cover the cost of related and unrelated improvements—can further increase the cost of development, making it less attractive for builders to pursue new projects.

Conclusion

To fully realize the benefits of rezoning and increase housing supply effectively, policymakers must carefully consider the impact of other restrictive policies. While zoning reforms are essential for addressing housing shortages, they must be implemented in a way that minimizes regulatory barriers and allows for the efficient development of higher-density housing. By avoiding overly restrictive requirements and following principles that prioritize market-driven solutions, cities can better leverage rezoning efforts to meet the growing demand for affordable housing.

The formula for housing abundance is relatively simple:

- Enable by-right zoning,
- Allow greater density in lots of areas particularly around walkable and amenity-rich areas, and
- Implement short and simple land use rules, fast permitting and reasonable building standards without any side constraints.

These actions will relax the economic constraints allowing builders of all sizes to build abundant market-rate housing over time. As demonstrated by Seattle's experience, as well as other similar case studies of zoning reforms, such policies can lead to an approximate 2 percent annual increase in the housing stock. The implications for policy are clear: by reducing regulatory barriers and allowing market forces to operate more freely, housing development and financing will naturally expand to meet demand. This approach underscores the importance of minimizing governmental overreach in favor of facilitating market-driven solutions to the housing crisis. Importantly, as noted earlier, no public subsidies are necessary and property tax revenues will increase over time.

In contrast, micro-managing the housing development process with intricate regulations like MHA has proven counterproductive. This approach increases development costs, discourages new construction and ultimately fails to meet the city's housing needs. By contrast, LTD reforms have demonstrated that allowing market forces to drive small-scale developments, supported by clear and simplified regulatory frameworks, can effectively expand housing supply and improve affordability.

Another takeaway from Seattle's experience is the need to be cautious about federal housing recommendations. These often advocate for complex, one-size-fits-all solutions. While wellintentioned, these proposed solutions frequently do not align with the specific needs of local housing markets. Instead, local governments should prioritize flexibility, enabling communities to tailor zoning reforms to their unique economic and demographic conditions. The experience of Seattle provides valuable lessons for other cities seeking to address housing shortages and affordability crises.

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Type of Financing	Share	Top 5 Lenders	# of Financed Parcels	Top 5 Builders/Developers	# of Conversions	Share
Cash	28%	Blueprint Capital	166	Isola Real Estate LLC	64	2.3%
Construction Loan	36%	Golf Savings Bank	153	MRN Homes LLC	54	2.0%
Seller Financing	19%	Frontier Bank	98	Sage Homes Northwes	36	1.3%
Institutional Lender Financing	16%	1st Security Bank	73	Howland Homes LLC	34	1.2%
Total	100%	Sterling Savings Bank	71	Greenbuild Developm	33	1.2%

Table 1. Builder and Financing Characteristics of SF2TH Conversions

Note: We analyze around 2,800 of the around 5,000 in-fill property parcels redeveloped over the period 1993-2024. This study focuses on, for each conversion, the original purchase by the builder/developer and the financing.

Source: AEI Housing Center, www.AEI.org/housing.

Table 2. Po	otential for	Single-fam	ily to Tow	nhome (Conversions	per Year
		()	/			

Maximum number of	Cumulative net additional housing units			
units allowed per parcel	Count	As a % of housing stock		
ADU	300	0.1%		
2	1,800	0.5%		
3	3,650	1.0%		
4	5,050	1.4%		
5	5,950	1.6%		
6	6,350	1.7%		
7	6,600	1.8%		
8	6,800	1.9%		

Note: We assume that infill conversion is by-right and regulations short and simple. Then, we estimate that 2% of single-family detached homes built before 1980 with a land share greater than 60% will be converted each year. This assumption is based on various case studies. For details, see the methodology. We believe that these conversions will continue for the next 30-40 years or until the economics change.

Source: 2017-2021 5-year ACS Survey and AEI Housing Center, www.AEI.org/housing.



Figure 1. Seattle Population Growth Over 120 Years

Source: U.S. Census Bureau. "Decennial Census of Population and Housing." U.S. Department of Commerce. Accessed September 30, 2024. https://www.census.gov/programs-surveys/decennial-census/decade.html.

Figure 2. Select Housing Units Built 1900-1920 that are still in existence today



Source: AEI Housing Center, <u>www.AEI.org/housing</u>.



Figure 3. Existing Housing Stock in Today's Single-Family Zones: By Decade Built

Note: The data are based on today's tax assessor data, which means that homes that have been torn down are no longer counted.

Source: City of Seattle and AEI Housing Center, <u>www.AEI.org/housing</u>.

Figure 4. City of Seattle Zoning Map



Note: For clarity, we simplify the city's zoning map into three primary categories. Source: City of Seattle and AEI Housing Center, <u>www.AEI.org/housing</u>.



Figure 5. Historical Median Sales Prices for King County (in 2007 dollars)

Note: Data are adopted from the <u>Central Puget Sound Real Estate Research Report</u> (originally known as the Seattle Real Estate Research Report), which were originally published on https://seattlebubble.com/. Data from 1993 are from deed transactions. Both series are spliced together and deflated using the CPI. Source: <u>https://seattlebubble.com/</u>, BLS and AEI Housing Center.



Figure 6. Density Comparison Pre- and Post-1994

Note: Data are for single-family detached homes, duplex, triplex and townhomes only. Source: AEI Housing Center, <u>www.AEI.org/housing</u>.

Figure 7. Existing Housing Units Built 1990-2024: by Zone



* Partial data due to latency.

Source: AEI Housing Center, <u>www.AEI.org/housing</u>.

Figure 8. Example of SF2TH conversion



Note: Both photos show the same parcels at different points in time (top in 2007 and bottom in 2023). Source: Google and AEI Housing Center, <u>www.AEI.org/housing</u>.



Figure 9. Median Price Change between the Unit Replaced and the New Units Built

Note: For conversion properties in Seattle. A conversion is defined as the act of tearing down an existing single-family detached structure and replacing it with a new structure of varying unit totals. Data pertain to over 3,000 conversions identified in Seattle, which resulted in about 12,000 new units from the mid-1990s onward.

Source: AEI Housing Center, <u>www.AEI.org/housing</u>.



Figure 10. Median Dec. 2023 AVM by Type and Zone: Homes Built 1985-2023

Note: Data exclude years where counts are less than 10 observations. Source: AEI Housing Center, <u>www.AEI.org/housing</u>.

Figure 11. Divergence in Homebuyer Characteristics



Note: Data are for 1-4 unit homes.

Source: HMDA and AEI Housing Center, www.AEI.org/housing.





Note: Data are limited to 1-4 units homes in these zones. Source: AEI Housing Center, <u>www.AEI.org/housing</u>.



Figure 13. Potential for Single-family to Townhome Conversions at the Census Tract

Estimated additional units from LTD over 10 years (% of current SFD)

>0%	20%	40%	60%	80%+			
Not Applicable / Insufficient Data							
Click on the map to show data							

Notes: Estimates are based on a maximum of 8 units on an existing single-family parcel. Conversion estimates are based on a series of economic feasibility tests. For details, see the <u>methodology</u>. Source: AEI Housing Center, <u>www.AEI.org/housing</u>.



Figure 14. Housing Permit Applications: by Zone

Notes: The dashed line indicates the imposition of MHA in April 2019. Source: City of Seattle and AEI Housing Center, <u>www.AEI.org/housing</u>.

Figure 15. Housing Permit Applications: by Zone



Notes: The first dashed line indicates the imposition of MHA in April 2019, while the second one indicates the passage of new ADU regulations that took effect in August 2019. Source: City of Seattle, Seattle Times, and AEI Housing Center, <u>www.AEI.org/housing</u>.

Figure 16. Example of a SF2ADU Conversion



Note: One example from 9715 4th Ave NW, Seattle, WA 98117. The original lot of about 12,000 sq. ft. was subdivided into two halves. On each half, a developer is now building a detached home with 2 detached ADUs. While this has created a total of 6 housing units, the lot could have easily supported 8 or more townhomes.

Source: Google and AEI Housing Center, <u>www.AEI.org/housing</u>.