

How Government Policy Made Housing Expensive and Scarce, and How Unleashing Market Forces Can Address It

Edward Pinto

Tobias Peter

American Enterprise Institute

The views expressed are those of the authors alone and do not necessarily represent those of the American Enterprise Institute or of any individual who provided comments.

Abstract

In 1922, the federal government began promoting the widespread adoption of zoning by municipalities, which particularly encouraged single-family detached zoning as a backdoor to achieving constitutionally prohibited racial segregation. This legacy of zoning and land use continues today: residential districts are economically segregated as the original planners intended, with the vast majority of zoning codes reserving large areas of land exclusively for single-family detached homes. By freezing land use, government action—not builders or markets—has prevented the building of enough housing to sustain our growing population. To repair this broken legacy and enable more people to access the American Dream of homeownership, policymakers at the state and local levels must address the supply crisis at its core by implementing by-right **light-touch density (LTD)**, which permits incremental increases to allowable density.¹ LTD can potentially create up to an estimated 930,000 additional housing units annually (depending on the maximum allowed density) for the next 30 to 40 years. This moderate density increase would expand the construction of more naturally affordable and inclusionary housing, thereby keeping home prices more aligned with incomes and keeping housing displacement pressures low. LTD policies appeal to a broad coalition, as they have found success in California and Washington and the cities of Minneapolis, Minnesota, and Arlington, Virginia. A model zoning bill that draws on lessons from numerous case studies is detailed in a following section. The model bills emphasize that the key to success for LTD is simplicity. We also demonstrate that adding affordable housing requirements will have the unintended consequence of greatly reducing or even eliminating the opportunity for LTD to add meaningful supply.

¹ See light-touch density ebook, <https://www.aei.org/wp-content/uploads/2022/01/Light-Touch-Density-Compiled-FINAL-1.12.2022.pdf?x91208>.

Introduction

A growing housing shortage, high home prices, and a greater recognition of the racial roots of exclusionary zoning policies have catalyzed a national zoning reform debate. These policies can be traced to the leadership of Secretary of Commerce Herbert Hoover, who oversaw the development of the 1922 Standard State Zoning Enabling Act (SZEA), which established a legal basis for establishing single-family detached residence-only districts as the goal at the outset.² All other structure types—including one-, two-, three-, and four-unit structures, townhouses, small apartments, accessory dwelling units, and cottage court buildings—could be legally excluded under the Commerce Standard State Enabling Act.

The promotion of exclusionary single-family detached (SFD) zoning in the United States as a tool for directly segregating real estate economically by price point, consequently segregated real estate indirectly by race. Before the SZEA, all these types of small residential structures were considered compatible with SFD. These building types were less costly to construct, making them more affordable to wage earners (Nolen, 1914). Many localities enacted the SZEA beginning in the 1920s, and in 1926, the U.S. Supreme Court upheld its constitutionality. The direct result was that single-family detached zones came to predominate, and LTD housing types—a set of housing structures that use moderately higher density (also known as missing middle housing)—were made illegal and excluded from single-family detached zones.

Although zoning codes that severely restricted land use were widely implemented in the first half of the 20th century, issuing building permits was still a ministerial act—meaning without the exercise of individual discretion. Thus, property owners had the right to build units allowed under the local zoning ordinance. By the 1950s and 1960s, some state and local policymakers began to erode by-right approval of building permits by adopting discretionary approval processes, many of which required a public hearing. Under this process, development proposals and building permits could now be blocked through this discretionary review process, which allowed for individual discretion by policymakers. This process ended up empowering neighborhood groups that often sought to limit development of any type, including smaller and less expensive single-family and multifamily units. Taken together, the United States transitioned from virtually nonexistent zoning in the 1920s—which provided a range of property types, structures, and price points within the same neighborhood—to today’s widespread exclusionary and discretionary zoning regime, which delays or entirely prevents construction of housing types that could improve housing affordability. Today, LTD remains illegal or subject to discretionary constraints in all but a few jurisdictions.

These policies replaced private property rights and legitimate health, safety, or nuisance policies with vague and nebulous community rights and the elevated opinions of planners. In doing so, the market is prevented from responding to price signals and converting land to its highest and best use.

If the market were allowed to function properly, SFD homes on expensive land could be converted to multi-unit structures on the same plot, having three distinct advantages:

² “With proper restrictions, [limiting population density] will make possible the creation of one-family residence districts.” *A Standard State Zoning Enabling Act* (Advisory Committee on Zoning, U.S. Department of Commerce, 1922).

1. By building more than one home per parcel, supply increases, helping to tamp down home price appreciation.
2. With the same parcel divided into smaller lots, each home uses less land, helping reduce the cost. Because builders generally do not over-improve land, the resulting units on these smaller lots are also smaller, reducing the cost and making them more naturally affordable.
3. Naturally affordable units expand the housing supply in the middle of the price spectrum, bringing housing within the reach of lower-income households through a process known as filtering. As homeowners outgrow their lower-priced homes, higher-income households sell their vacated lower-priced homes to lower-income households. This process then repeats as the buy-sell transactions continue down the housing ladder. More filtering occurs as more new housing is built. With all else being equal, the lower the price point of the added new housing units, the fewer steps in the filtering chain until a lower-income household reaches a more depreciated but serviceable housing unit. Adding new moderately priced units speeds up the filtering process and allows more first-time buyers to get a foothold on the housing ladder.

Although the market cannot provide newly constructed housing units at low price points for people of low or very-low means, it can add an abundant supply of new housing units at moderate price points for people of more moderate means. The evidence from many case studies—including Seattle, Houston, and Palisades Park, New Jersey—shows that when given a choice between building multiple moderately priced smaller LTD units or a McMansion, builders opt for the former. Not only does building new LTD units open up homeownership opportunities for a wider group of people but it also opens up rental opportunities at the lower end of the housing market when combined with robust filtering. Thus, the lack of affordable housing is not a market failure; it rather is a government or regulatory failure stemming from the implementation of SFD zoning, thus effectively outlawing LTD construction and impeding the natural filtering process.

When the market can respond to price signals, housing is more affordable and plentiful, while displacement pressures, such as homelessness, out-migration, doubling up, moving in with parents, etc., stay low. Elected officials have been motivated to pursue zoning reform due to escalating housing costs and the growing national housing shortage, which is estimated to range from 4 to 20 million units.³ Areas such as California, Washington, and Minneapolis deregulated their land use and permitted LTD, allowing moderately higher density and enabling the market to respond to price signals again.⁴ [Other areas](#) are debating similar approaches.

Although the results from these recent bills will take time to materialize, documented cases such as Seattle, Houston, and Palisades Park, New Jersey, have restored market primacy by deregulating land use, either by design or a zoning quirk. These cities reestablished by-right LTD zoning and unleashed bottled-up market forces. This materialization forms a [steady swarm of mostly small-scale builders](#) that “[do] this [small-scale, incremental development] work separately but together,

³ Estimates by the [Up for Growth report](#) that relied on decreased rates of household formation found that the United States underproduced slightly fewer than 4 million homes. [Corinth and Dante](#) (2022) used the price of land to estimate that the United States’ underproduction was around 20 million homes.

⁴ Light-touch density gradually creates more housing supply and diversity through the conversion or building of smaller homes, townhouses, duplexes, triplexes, accessory dwelling units (ADUs), and condominiums.

in harmony but without one guiding hand” (Herriges, 2021).⁵ Housing construction flourished without excessive red tape, and diverse housing types present throughout the country in the 1920s were restored in these areas. However, as demonstrated in this article, the imposition of complex and notoriously hard-to-enforce affordability mandates can stop this small-developer construction swarm in its tracks.

Informed by these case studies, the American Enterprise Institute (AEI) Housing Center developed a [model zoning bill](#) allowing LTD housing to be approved by-right, with simple rules on the number of units, floor-area ratio, and height restrictions permitted on a given parcel. The model bill requires local input, allowing an area to tailor the bill’s implementation to the area’s particular needs and preferences. Broad-based adoption of the model LTD bill could result in an estimated 260,000 (at a density of up to two units per lot) and 930,000 (at up to eight units per lot) net new units per year over the next 30 to 40 years [across the country](#). These units would be naturally affordable, thus limiting displacement pressures, and would not require any subsidies.

As the recent legislative successes around LTD prove, housing affordability can be tackled at the state and local levels with the right arguments. Surveys suggest that arguments about the implementation of LTD should be framed around enabling [young people and families to afford homes](#) and [driving economic growth](#).⁶ The 2021 California Senate Bill (S.B.) 9 and S.B. 10 enactment shows that LTD represents a winning formula, whereas [Portland](#) demonstrates that LTD can unite different groups of progressives to overcome not in my backyard (NIMBY) opposition.

Policymakers in other jurisdictions should learn from these examples to build on the momentum around LTD; however, they should also heed the warnings from 100 years ago: a heavy-handed, one-size-fits-all federal intervention could produce disastrous outcomes similar to those produced by the SZEA.

How Zoning and Discretionary Reviews Have Broken the Market

The legacy of exclusionary zoning is two-fold. First, it made it economically prohibitive for African-Americans to afford neighborhoods zoned exclusively for single-family detached homes. By the early 1930s, the Federal Housing Administration (FHA) added explicit racial segregation policies to its underwriting guidelines. Second, it prevented the United States from building enough housing to accommodate population growth and account for declining household size.

⁵ Please see *Unleash the Swarm: Reviving small-scale development in America’s cities*. <https://static1.squarespace.com/static/53dd6676e4b0fedfbc26ea91/t/61b8c9ed85e11c1ed4cfa43/1639500274297/Unleash+the+Swarm+-+updated.pdf>

⁶ Please see the following report from the Cato Institute on the results of their survey on housing affordability. https://www.cato.org/survey-reports/poll-87-americans-worry-about-cost-housing-69-worry-their-kids-grandkids-wont-be?utm_source=social&utm_medium=linkedin&utm_campaign=Cato%20Social%20Share. Also see *How to convince a NIMBY to build more housing* by Jerusalem Demsas. <https://www.vox.com/22297328/affordable-housing-nimby-housing-prices-rising-poll-data-for-progress>.

The Early Days of Zoning

The process by which neighborhoods exclude a growing number of people who cannot clear the bar of owning an SFD home is not so much a bug as it is a zoning feature. In the 1920s, the early zoning framers realized that creating explicit economic residential zones was a back door to achieving constitutionally prohibited racial segregation. Consequently, these policies blocked generations from accessing economic opportunities, municipal services, and schools in countless desirable neighborhoods.

In the early 20th century, localities from Baltimore to Los Angeles limited the rights of individuals to own property or do business in certain neighborhoods on the basis of their race. In the 1917 case *Buchanan v. Warley*, the Supreme Court determined that these local rules violated the due process protections of the Fourteenth Amendment.⁸

Under the exercise of police power by a governmental entity to further the health, safety, or the general welfare, policymakers turned to zoning as their next alternative. Zoning turned into a tool for directly segregating real estate economically by price point, consequently segregating real estate indirectly by race. Before the 1920s, development in the United States was not restrained generally by zoning. Until that point, different types of residential units and small commercial developments were commonly interspersed or adjacent to each other. The varied residential stock created opportunities for people of different income levels to live and work in the same neighborhoods. In 1921, the federal government encouraged the widespread adoption of zoning by municipalities, particularly SFD zoning. The U.S. Department of Commerce, its Building and Housing Division, and its long-time cabinet secretary—and later U.S. president—Herbert Hoover, spearheaded the effort.

Secretary Hoover assembled what he considered to be the country's best and brightest zoning and planning experts in the Advisory Committee on Zoning in 1921. In 1922, the Department of Commerce published *A Zoning Primer*,⁹ stating the following:

For several years there had been developing a feeling that some agency of the Federal government should interest itself in building and housing. The Congress of the United States made an appropriation for such activities for the year 1921–1922. The department was to “collect and disseminate such scientific, practical, and statistical information as may be procured, showing or tending to show approved methods in building, planning, and construction.”¹⁰

⁷ The following section has been adapted for this article from an earlier ebook on light touch density. The ebook can be viewed at <https://www.aei.org/wp-content/uploads/2022/01/Light-Touch-Density-Compiled-FINAL-1.12.2022.pdf?x91208>.

⁸ *Buchanan v. Warley*, 245 U.S. 60 (1917).

⁹ The source of data and quotes for the next several paragraphs (until otherwise noted) is the Advisory Committee on Zoning, 1922.

¹⁰ Committee members included the president of the National Association of Real Estate Boards (now National Association of REALTORS®), two representatives from the U.S. Chamber of Commerce, president of the American Civic Association, president of the American Society of Landscape Architects (and past president of the American City Planning Institute), secretary and director of the National Housing Association, counsel of the Zoning Committee of New York, and a representative of the National Conference on City Planning and National Municipal League (and past president of the American City Planning Institute). The president of The American Society of Landscape Architects was Frederick Law Olmsted, Jr., son of famed landscape architect Frederick Law Olmsted, Sr. Three members of the committee were involved in promoting and crafting New York City's first zoning ordinance.

That same year, the Commerce Department published its first SZEA, which state legislators could adopt as a means of granting zoning authority to their localities. The primer and the SZEA provided a how-to guide for implementing district-based zoning. Both documents encouraged state and local policymakers to adopt zoning that established exclusive SFD zoning districts that excluded other, more affordable structure types, including attached single-family developments, two- to four-unit structures, and larger apartment buildings.

The 1922 primer focused on the perceived evils of residential density:

A zoning law, if enacted in time, prevents an apartment house from becoming a giant airless hive, housing human beings like crowded bees. It provides that buildings may not be so high and so close that men and women must work in rooms never freshened by sunshine or lighted from the open sky.

The primer spoke favorably of a 1920 Ohio court case that held that “[o]ne and two-family houses were less subject to noise, litter, danger of contagion, and fire risk than multifamily houses, and that they could be placed in different districts under the police power.” The Department of Commerce SZEA noted that the grant of zoning power under the state’s police power is “for the purpose of promoting health, safety, morals, or the general welfare.” However, the act went beyond addressing health, safety, or nuisance concerns; it contradicted the primer’s favorable view of placing one- and two-family houses in the same district by explicitly stating the ultimate desired result: “With proper restrictions, [limiting population density] will make possible the creation of one-family residence districts.” Thus, the goal from the start was to create zones where all structure types but single-family homes were outlawed, and two-or-more-unit family structures and other light-touch density (LTD) housing were relegated to other zones.

The SZEA established a legal basis for single-family detached residence districts, and it went on to argue that the “essence of zoning” is the ability to have “regulations [on the use of buildings and structures] in one district ... differ from this in other districts.” These regulations included limitations on the minimum lot size; building sizes; front, back, and side setbacks; and maximum building height and number of stories—driving up the cost of such homes.

As of September 1921, only 48 cities and towns, with fewer than 11,000,000 total inhabitants, had adopted zoning ordinances. As local zoning ordinances spread rapidly during the 1920s, most municipalities shifted to dividing residential districts into subdistricts; SFD districts separated from all other districts with more affordable housing types. By 1931, 46,000,000 U.S. inhabitants lived under zoning, accounting for 67 percent of the urban U.S. population (Advisory Committee on City Planning and Zoning, 1931).

In 1926, a pivotal Supreme Court decision gave the federal government-led zoning wave an important legal victory. *Ambler Realty Co.* sued the village of Euclid, Ohio, arguing that the town’s zoning ordinance on 68 acres of *Ambler’s* land had reduced the value of the property through single-family zoning without compensation.¹¹ However, the Supreme Court ruled on the side of Euclid, finding that local land use restrictions, including single-family zoning, were a valid use of police

¹¹ *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926).

powers. The Supreme Court foreshadowed the arguments of many modern-day NIMBY supporters, describing apartments as “very often . . . a mere parasite” and “very near to being nuisances.”

By 1928, Stanley McMichael and Robert Bingham, leading observers of real estate markets and the growth of cities, noted the following:

A most troublesome problem in assimilation which has confronted American cities for many years is what to do with the negro population. . . . High wages offered by labor agents to the colored people of the south easily persuaded them to move northward. . . . With the increase in colored people coming to many northern cities, they have overrun their old districts, and swept into adjoining ones, or passes to other sections and formed new ones. This naturally has had a decidedly detrimental effect on land values, for few white people, however inclined to be sympathetic with the problems of the colored race, care to live near them. (McMichael and Bingham, 1928: 342–343)

Segregation of negroes seems to be a reasonable solution of the problem, no matter how unpleasant or objectionable the thought may be to colored residents. . . . Frankly, rigid segregation seems to be the only manner in which the difficulty can be effectively controlled. (McMichael and Bingham, 1928: 343)

They also confirmed that exclusionary SFD zoning would have—

[a] tendency to force rents higher than laboring classes can stand because fewer small buildings are erected for rental purposes and larger ones are more expensive to construct because of restrictive conditions. (McMichael and Bingham, 1928: 362)

Although the district court’s decision in the Euclid case was overturned by the U.S. Supreme Court, Judge Westenhaver identified the true purpose of Euclid’s zoning ordinance in his opinion:

The purpose to be accomplished is really to regulate the mode of living of persons who may hereafter inhabit it. In the last analysis, the result to be accomplished is to classify the population and segregate them according to their income or situation in life.¹²

The exclusionary tendency of SFD zoning to force rents and sales prices higher was not a bug but was a feature that made zoning an effective tool for promoting racial segregation.

The Federal Housing Administration Used Single-Family Zoning as a Means to Advance Racial Segregation

In 1934, Congress and the Roosevelt Administration established the Federal Housing Administration (FHA) to expand access to mortgage credit. The FHA insured private mortgages, reducing risk to lenders and home builders and expanding access to credit by encouraging lending with longer terms, lower interest rates, and lower down payment requirements. However, FHA-insured loans were largely only available to White Americans because the FHA explicitly discriminated against African-Americans and other minority groups.

¹² *Village of Euclid v. Ambler Realty Co.*, 272 U.S. at 365.

FHA's underwriting policies directly addressed the perceived concerns of White homebuyers noted by McMichael and Bingham:

Neighborhoods populated by white persons have been invaded by colored families, and often aristocratic residential districts have suffered tremendous lessening of property values because of the appearance of a Negro resident. Many parents were unwilling to send their children to schools where the children of all classes, nationalities and races mingle and congregate. (McMichael and Bingham, 1928: 370)

As the FHA made it easier for White homebuyers to purchase single-family houses, it subsidized their decisions to move out of denser neighborhoods that were more integrated in terms of housing typologies and, in some cases, race. The FHA created underwriting manuals for participating lenders, limiting federal underwriting to only those "areas surrounding the location to determine whether or not incompatible racial and social groups are present, to the end that an intelligent prediction may be made regarding the possibility or probability of the location being invaded by such groups" (FHA, 1936: Sec. 233). Maps delineating such areas were created as early as 1934.¹³

The FHA made the connection between zoning and segregation explicit:

The best artificial means of providing protection from adverse influences is through the medium of appropriate and well-drawn zoning ordinances. (FHA, 1936: Sec. 227)

The goal of segregation was explicit and detailed in the FHA's underwriting standards:

- "Areas in which development has been accomplished in accordance with accepted principles of good housing are quite apt to be much more stable than those areas where little thought or attention has been paid to ... controlled similarity of structures." (FHA, 1936: Sec. 210)
- "The [FHA] Valuator should investigate areas surrounding the location to determine whether or not incompatible racial and social groups are present, to that end an intelligent prediction may be made regarding the possibility or probability of the locations being invaded by such groups.... A change in social or racial occupancy leads to instability and reduction in values.... Once the character of a neighborhood has been established it is usually impossible to induce a higher social class than those already in the neighborhood to purchase and occupy properties in its various locations." (FHA, 1936: Sec. 210)
- "Of prime consideration to the [FHA] Valuator is the presence or lack of homogeneity regarding types of dwellings and classes of people living in the neighborhood." (FHA, 1936: Sec. 252)
- "[I]f the children of people living [in a pleasant area] are compelled to attend school where the majority or a goodly number of the pupils represent a far lower level of society or an incompatible racial element, the neighborhood will prove far less stable and desirable than if this condition did not exist." (FHA, 1936: Sec. 266)

¹³ See maps dating to 1934 in Hoyt, 1939.

- “Recommended [deed] restrictions include [. . .] prohibition of the occupancy of properties except by the race for which they were intended.” (FHA, 1936: Sec. 284)
- “The [new] development which bases its sales program solely upon lower-cost land in order to compensate for its inaccessibility to community and cultural centers, especially when the sales appeal to a low-income group, will seldom prove successful.” (FHA, 1936: Sec. 289)

From 1935 onward, the FHA was a significant force in real estate finance whose underwriting standards were widely adopted, cementing existing patterns of segregation in place by encouraging investment in exclusively White neighborhoods and discouraging it in predominantly African-American or integrated neighborhoods (Rothstein, 2017: 77).

In addition to creating new barriers to racial integration, the FHA's practices built on the Hoover Administration's efforts to promote low-density, single-family zoning across U.S. localities. By 1940, 80 percent of the subdivisions built to FHA underwriting standards were exclusively single-family constructions, at an average density of 3.26 houses per acre (Whittemore, 2012). Developments were denied FHA financing in localities from Los Angeles to upstate New York because their zoning ordinances did not confine development to low-density single-family strictly enough (Whittemore, 2012).¹⁴

California Replaces Ministerial Zoning with Discretionary Zoning

Although the zoning and land use laws limited development rights substantially, owners generally retained the right to build what was permitted legally within a zone with by-right approval. By-right approval, or ministerial review, allows projects to be permitted if they meet the criteria of existing building codes and zoning laws. However, by the 1950s, some state and local policymakers adopted discretionary approval processes that required public hearings by zoning boards or city officials, making the permitting process subject to public pressures even when the proposed project met the established criteria for new construction. Policymakers in San Francisco and other California localities were early adopters of discretionary review. In 1954, the San Francisco City Attorney determined that “the city had ‘supreme control’ to issue building permits and could use its own discretion to decide whether projects were compliant” (Oatman-Stanford, 2018). As discretionary review processes became common across the country, they have been abused by neighborhood groups seeking to limit development, especially of smaller, less expensive single-family and multifamily units. In effect, individual property rights were replaced with community-based decisionmaking. This development devolved into ever more virulent forms of NIMBYism.

Widespread Housing Unaffordability

The consequences of the SZEA and the implementation of discretionary approval across the country are profound. These policies replaced private property rights and legitimate local building codes designed to address health, safety, or nuisance concerns with vague and nebulous community rights and the elevated opinions of planners. In doing so, the market is hindered from responding to price signals and converting land to its highest and best use.

¹⁴ This equates to about 13,000 square feet per one-unit detached structure. That amount of land could comfortably accommodate 4 to 20 LTD units.

When restrictive policies freeze land use, home prices rise more quickly due to the following three economic truths of urban land economics:

1. The value of a home consists of two factors: land and structure. Absent major improvements, the value of a structure generally only depreciates; thus, rising home prices reflect a rise in the utility of the land.
2. Builders construct new housing at price points that keep the land share—the ratio of the land value to the combined value of land and structure—to about 20 to 30 percent in a “normal” location.
3. Rising land prices signal that land is under-used, and a more intensive use would be appropriate. The highest and best use of the land maximizes the land’s productivity, and market forces will generally achieve this use if legally allowed.

Because most residential land is [generally zoned exclusively for SFD structures](#), the highest and best legal use of a parcel often remains an SFD home. When this situation is the case, two things tend to happen:

1. Supply in high-demand places fails to keep up, and home prices tend to rise faster than incomes, leading to unaffordability over time. Across the country, once-affordable neighborhoods gradually priced out existing residents and potential newcomers; high land prices make even older, smaller homes unaffordable to moderate-income buyers and renters. Nowhere is this trend more visible than in California, which had home price-to-income ratios not too different from the national average in the 1970s. In the following decades, a booming economy, coupled with restrictive land use regulations and NIMBY residents abusing environmental reviews, prevented the market from responding to any additional demand. In 2020, the price-to-income ratio in California was nearly double the level of the entire country (8.4:1 relative to 4.4:1 for the United States).
2. As the land value share of the property price increases above a certain elevated level (approximately 70 or 80 percent), older single-family detached homes are converted into McMansions.¹⁵ As this conversion takes place, a lower-priced home is removed from the market and replaced with an expensive home. This process eliminates a crucial source of entry-level housing and transforms once-affordable neighborhoods into high-end enclaves, squeezing moderate-income buyers out of homeownership and rental opportunities. Overall, higher per-unit land prices increase displacement pressures for homeowners and renters—resulting in greater homelessness, if left unchecked

This phenomenon can be illustrated by a case study from Vienna, Virginia—a suburb of Washington, D.C.—but it applies to any area or neighborhood with high land prices that limits the highest and best *legal* use of the land through single-family-only detached zoning. As seen in the picture below, the house at 315 Berry Street was developed originally in the 1950s as a modest-sized starter home on one-half acre of land, but it is valued today at around \$800,000 (see Figure 1). The

¹⁵ The Merriam-Webster dictionary defines *McMansion* as “a very large house usually built in a suburban neighborhood or development, *especially*: one thought of as too big or showy.”

same was probably also true of the original 1950 house on 309 Berry Street; in 2004, a McMansion more than twice the price of the original home replaced the starter home.

Because the land became much more valuable than the structure, 309 Berry Street became an ideal teardown candidate; however, the newer home needed to be much larger to justify the demolition cost and to return the land share to a normal level. This process happens naturally as homes age and land values increase. Developers or individuals buy property for the attractiveness of being near amenities (good schools, beaches, etc.) but do not want to reside in small, older homes. Hence, they buy the house for the land and tear down the existing structure. Due to SFD zoning, such conversions occur in higher-priced areas all over the country.

Figure 1

As-is and McMansion Conversion: Example from Vienna, Virginia



*Note: Data were accessed February 2021.
Source: AEI Housing Center, Zillow, and Google*

The combination of SFD zoning and regulations is on track to achieve the original goal of the promulgators of zoning to segregate real estate economically by price point. The resulting high home prices are a self-inflicted wound brought about by SFD and discretionary reviews, empowering NIMBYs and planners over the market. These regulations and barriers to development have driven up costs for developers, making building economically infeasible for all residences except at the very high end of the market.

The [Wharton Index](#), which measures the degree of land use regulation using survey data from local governments, finds a very strong correlation between regulatory burdens and high home prices because responding with additional housing supply to meet demand is more difficult for

the market (Gyourko, Hartley, and Krimmel, 2021).¹⁶ Although policymakers have recognized the immense affordability challenges facing the United States, they have often drawn entirely wrong conclusions from the past 100 years. Policymakers blame markets for the lack of affordable housing when, in fact, the culprit is government regulatory failure. In doing so, many cities and states have historically relied on top-down solutions that placate NIMBY homeowners, such as exclusionary zoning, housing subsidies, inclusionary zoning with cross-subsidies, income limits, rent caps, and complex regulations, failing to address housing unaffordability over the past 70 years.

The composition of the neighborhood changes and prices out all but the highest earners as more \$800,000 starter homes convert to \$1.7 million McMansions. Insufficient housing construction threatens the fabric of our communities, as families need to move out of the area to find housing that they can afford. In the case of San Francisco, one of the most restricted housing markets in the country, residents are pushed to distant Bay Area suburbs, more affordable California cities such as Sacramento and Riverside, or out of state to Nevada, Texas, Arizona, Oregon, or other states.¹⁷

To Solve the Affordability Problem, Restore the Market Using Light-Touch Density

As shown in this article, exclusionary single-family detached (SFD) zoning and discretionary review stop the housing market from working. Thus, the overarching goal of policymakers should be to break the primacy of housing planners and return to market principles that largely governed land use before the implementation of widespread SFD zoning and excessive regulation. The tool to achieve this goal is light-touch density zoning, and the following section outlines how and why it leads to more abundant, naturally affordable, and inclusive housing.

What is light-touch density (LTD)?

Light-touch density (LTD) represents the low-hanging fruit in zoning reform, as it allows for modestly higher density than SFD zoning in many different ways, providing options for a jurisdiction to implement at least one.

For urban areas or nearby suburbs already built up, replacing SFD units with more LTD units or adding more LTD units to existing single-family units increases the units per acre, creating more naturally affordable units. The following are ways to increase the housing stock in infill areas:

¹⁶ The Wharton Index is constructed using survey data on local residential land uses across 2,450 primarily suburban communities.

¹⁷ As reported in the *Washington Post*, San Francisco has among the highest concentrations of remote workers. This shift, plus the exorbitant house prices in the Bay Area, has induced more residents to move elsewhere, especially to distant exburbs or to seek more affordable metros within California, such as Sacramento and Riverside. Please see “The remote work revolution is already reshaping America,” Andrew Van Dam, *Washington Post*, <https://www.washingtonpost.com/business/2022/08/19/remote-work-hybrid-employment-revolution/>. “People are leaving S.F., but not for Austin or Miami. USPS data shows where they went,” J.K. Dineen, *San Francisco Chronicle*, <https://www.sfchronicle.com/bayarea/article/People-are-leaving-S-F-but-not-for-Austin-or-1595527.php>.

- Existing single-family detached units can add a junior accessory dwelling unit (JADU) within the existing structure or build a separate freestanding detached or attached ADU on the same lot.¹⁸
- Older infill units can be torn down and replaced with a new duplex, triplex, fourplex, townhome, small multifamily structure, or cottage court.
- Single land parcels can be divided into two, and an additional single-family unit or multiplex unit could be built on the new parcel and sold off separately.

Builders can construct more affordable LTD units in outer suburbs or undeveloped areas—also called greenfield land:

- Increase the allowed density of undeveloped land.
- For both greenfield and infill projects, add additional floors or reduce the size of units in a planned apartment building to enable the land to be used more efficiently, decreasing the price point for each unit.

Implementing these LTD zoning reforms would align market incentives with the need for more housing, resulting in greater housing supply at lower price points for both renters and owners, thus relieving displacement pressures. LTD represents a gradual return to the housing typographies that were present before the widespread implementation of SFD zoning.¹⁹

On the basis of multiple case studies and conditions favorable to LTD, approximately 2 to 3 percent of eligible units could be converted annually to LTD, which could add between 260,000 (at a density of up to two units per lot) and 930,000 (at up to eight units per lot) net new units per year nationwide over the next 30 to 40 years.²⁰ The conversion within a neighborhood is slow and takes place over decades (as seen in Figure 2) because a homeowner generally needs to sell before a builder can come in and convert a home.

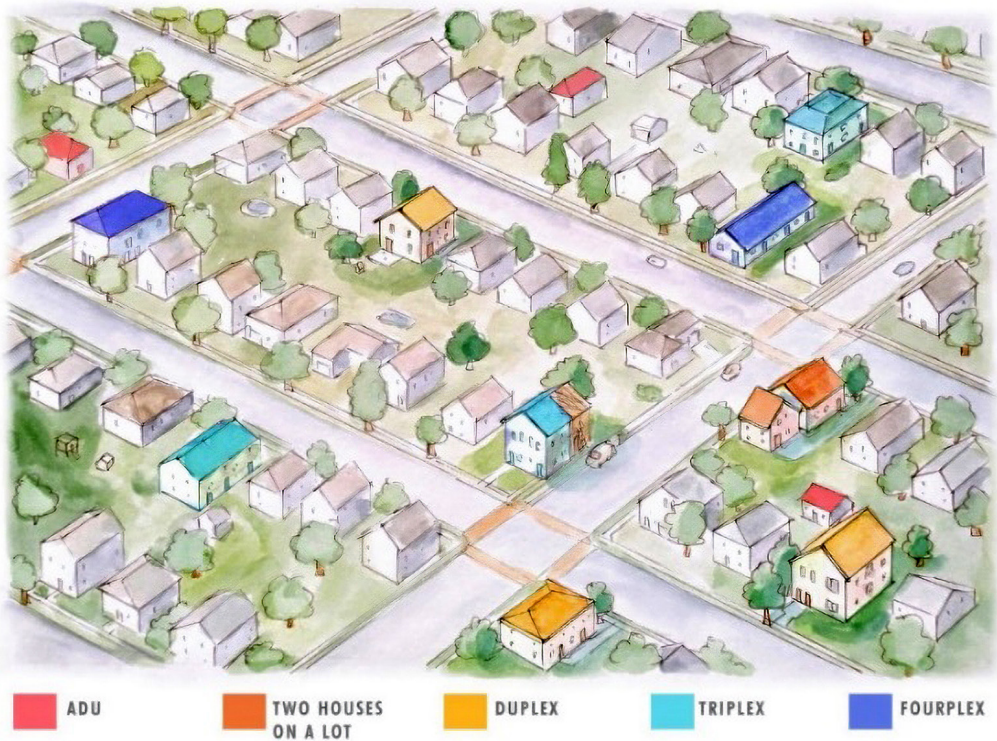
¹⁸ With either a JADU or an ADU, the original structure is left intact and the JADU or ADU is sold in combination with the main structure. The gross living area (GLA) of the JADU or the ADU can vary from small to large and is not a defining attribute unless GLA is set by statute or ordinance.

¹⁹ The share of LTD as a percentage of the national housing stock has shrunk drastically over time as local zoning ordinances enacted by municipal governments prohibited their construction on much or all of their land starting in 1920. From 1940 to 2018, the combined share of single-family attached units (SFA) and two- to four-unit structures as a share of all one- to four-unit structures declined from 26.5 percent in 1940 to 18.4 percent in 2019; had the 1940 percentage of LTD housing remained unchanged, the nation's housing supply would have increased by some 8 million units.

²⁰ These estimates resulted from evaluating every single-family residential property in the United States for its potential for LTD. For older residential properties on lots of sufficient size, an estimate is first made for an existing structure value, allowing an estimate of the current land share. For properties with a high enough land share, calculations are made to determine if a teardown and subsequent reconstruction of two to eight units (of varying sizes) on the same lots is feasible by assuming the construction cost per square foot of gross living area by using new single-family detached housing units built in the same area over the past 7–10 years. For more on the methodology, see appendix A.

Figure 2

An Illustration of Neighborhoods with Light Touch Density



Source: AEI Housing Center

Light-Touch Density Reduces the Cost of Land per Unit, Enabling More Moderately Priced and Abundant Housing

The Vienna example mentioned previously outlines an important principle in urban land economics, that the value of a home consists of two factors: land and structure. In the case of the Vienna property, the buyer of the property on 309 Berry Street bought the property in 2004, intending to tear down the structure and replace it with a new one, implying that the value of the structure was close to zero and the land represented almost 100 percent of the total package value.

Richard Ely, widely considered the father of urban land economics, observed that the price of land is the number one driver of the cost of housing. The general rule for greenfield development has long been that the land value should make up 20 percent of the new construction sale price. If a builder acquires land for \$40,000, he or she would need to add a structure value of around \$160,000 for the property to sell for \$200,000. The lower the land cost, the lower the property

cost, and vice versa. Builders generally do not over-improve the land because they would not be able to sell the property.²¹

Absent major improvements, the value of a structure generally only depreciates; thus, rising home prices reflect a rise in the utility of the land. As pointed out by Richard Hurd in 1903, land derives value from proximity to amenities.²² Rising inflation-adjusted land prices per acre signal that land is under-used and should be used more intensively.

Market forces naturally maximize the land's productivity if legally allowed. The highest and best use of a parcel in the middle of Iowa may be farmland, whereas, in downtown Manhattan, it may be a skyscraper with a mix of retail and commercial space. However, with by-right approval processes in place, the owner of a parcel is further empowered to improve his or her land—or not. A property owner in an area with high land prices may not want to use the land more extensively, but the discretionary review process should not block the owner from improving upon it if desired.

More intensive use of the land would return the land share to more normal levels, which, in suburban or urban areas, may be as high as 30 or 40 percent, depending on the quantity and quality of nearby amenities. To return the land to a more normal share, the structure value on the parcel must increase because the land value is—more or less—fixed. Under by-right zoning, land values can return to a normal share of the sale price in various ways:

- Through a McMansion: tearing down the existing structure and replacing it with a newer, more expensive structure (see Vienna McMansion example)
- Through a second structure: adding another home (if the placement of the first structure allows) or an ADU or splitting the lot
- Through a conversion: tearing down the existing structure and replacing it with a multiplex

When land values reach a certain level, adding a second unit or tearing down an older home and converting it to a multiplex becomes economical. This decision happens naturally when a builder can sell the new unit(s) for more than the price of acquiring the property, tearing down the existing structure, and rebuilding a new structure plus profit.

Figure 3 shows a stylized example of the economics of this process at various land shares before converting an SFD unit to higher and better use. At a land share of less than 50 percent, converting a home to a higher and better use is very difficult because the land share would be too low after the

²¹ The guidance, going back at least 100 years for new home development at the rural land and new development boundary is that the cost of a finished lot should be about 20 percent of the combined land and improvement value of a newly constructed home, resulting in a 20-percent land share. This general rule helps guide a developer to not over- or under-improve a lot. To illustrate this concept, consider a lot that started out in 1955 at a land share of 20 percent. Due to land use constraints that made land artificially scarce and drove up the price, the land share grew to 80 percent, even though the structure has remained largely unchanged since 1955. Under exclusionary single-family detached zoning, the only legal use is another single-family home. Thus, it would be foolhardy for a builder to put a new structure at a cost of \$400,000 on a lot worth \$1 million, as this would yield a land share of more than 70 percent, and the lot with this structure would be considered underdeveloped. Instead, the builder could put a \$3 million structure on the lot, yielding a 25-percent land share. This logic is why McMansions get built in high land cost areas where zoning limits structures exclusively to SFDs.

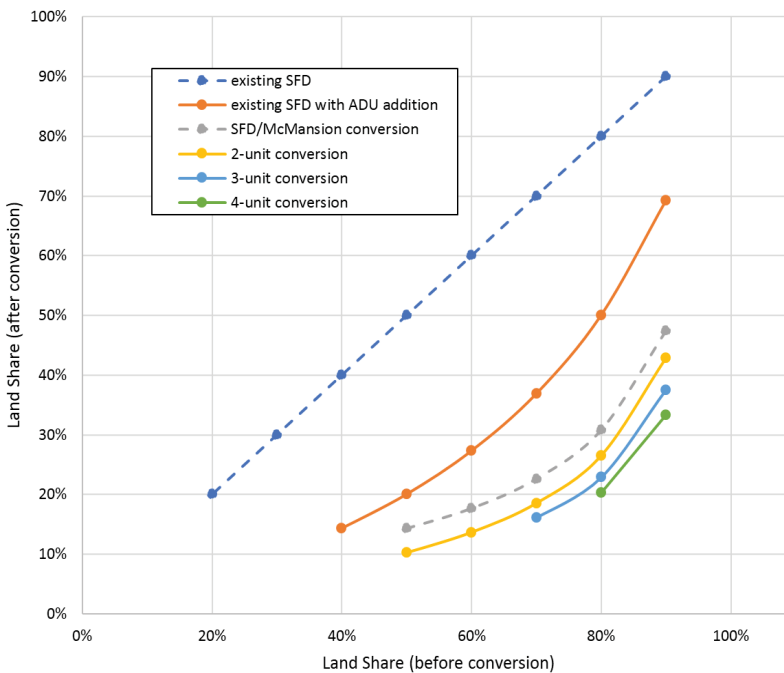
²² “Since value depends on economic rent, and rent on location, and location on convenience, and convenience on nearness, the intermediate steps may be eliminated and say that value depends on nearness” (Hurd, 1903).

conversion. However, at higher land shares, the economics change, and ADUs (because they do not require a total rebuild), McMansions, 2- to 4-unit homes, and eventually multiplexes of 5 or more units (although not shown in the graphic) progressively become feasible.

Figure 3 shows that the economic incentives align for the market to produce more housing if it is legally allowed. As land prices—and subsequently house prices—rise, the building incentives for more small-unit housing are even greater. In 2021, the estimated median land share in the United States was 39.2 percent, with approximately 34 percent of SFD housing units in ZIP Codes with a land share exceeding 50 percent.²³ This graph points to the fact that McMansions are not built because they are the most profitable structure—quite the opposite; selling a home is much harder at the high end of the market, where demand is sparse, than in the middle of the market, where demand is high and stable. Multiple smaller unit structures on one parcel bring in more revenue than one McMansion; however, restrictive zoning regimes prevent these affordable structures from being built, further contributing to the housing affordability crisis afflicting cities across the country. This phenomenon is demonstrated further in examples from case studies as diverse as Seattle, Palisades Park, Charlotte, or Houston, showing that given a choice between a McMansion and a multiplex, a multiplex will almost always be built rather than an SFD unit (see Table 1).

Figure 3

Land Share After Conversion at Various Land Shares Before Conversion



Source: AEI Housing Center

²³ The calculation is based on Davis et al., 2019, which we adjust to account for appraisal anchoring. The methodology is described here: <https://www.aei.org/wp-content/uploads/2021/05/AEI-adjusted-Land-Price-and-Land-Share-Indicators-Methodology.pdf?x91208>. The housing units come from the American Community Survey (ACS) 2017–2021 5-year estimates. <https://www.fhfa.gov/PolicyProgramsResearch/Research/Pages/wp1901.aspx>.

Table 1

Light-Touch Density Case Studies

Case Study	Study Topic	Finding(s)
Seattle	Housing outcomes in the Lowrise Multifamily (allows for LTD) vs. SFD zone	LTD added ~3% to housing stock per year. LTD units are naturally affordable.
	The effect of a 2019 inclusionary zoning requirement on townhome development	Requirement halted most LTD development.
Palisades Park	Housing outcomes in Palisades Park vs. surrounding boroughs	LTD added ~2% to housing stock per year, which supported population growth. Lower property taxes and greater economic vibrancy resulted. Although legally permissible, procedural barriers such as greater lot size regulations stymie LTD.
Houston	Housing outcomes after Houston reduced the minimum lot size requirements within the I-610 Inner Loop	LTD added ~2% to housing stock per year. LTD units are naturally affordable.
Charlotte	Micro-level analysis of housing types in the R-22 vs. R-5 zone	Greater housing type diversity from LTD leads to lower-priced homes and greater economic diversity of residents.
Tokyo, Japan	Housing affordability and supply in Tokyo vs. other major global metropolitan areas	LTD added ~2% to the housing stock.
	Tokyo's zoning code	A market and property rights-based system governs land use and zoning, with minimal opportunity for interference from local homeowners, neighborhood groups, or elected officials.
Relationship Between Density, Gross Living Area (GLA), and Price	More than 500 counties in the largest 200 metropolitan areas	For single-family detached and attached homes built between 2000 and 2022, the greater the as-built density (number of units built per acre), the lower the GLA and home price. These reductions in price stem from the smaller GLA and lot size.
Rent by Structure Type and Year Built	50 states and the District of Columbia	LTD units are naturally affordable and inclusionary. Recently built (2010–21) LTD structures between 2 and 4 units have rents significantly lower than recently built 20+ units or single-family units, respectively.
Filtering	Homebuyer income as a percentage of seller income for more than 600,000 sales	Homebuyers tend to have lower incomes than sellers. Metropolitan areas with more economical homes tend to show greater levels of filtering down. Many of the metropolitan areas with modest filtering have high home values.
	Income of occupant households relative to their county median income in both 1980 and 2020 for single-family attached and detached homes built from 1960–79 for 100 counties	Across the board, older housing built for relatively affluent households had filtered down to less affluent households by 2020, and housing built for households closer to the area median income had filtered down to lower-income households.

Source: AEI Housing Center

Which Is Better: Single-Family Density or Light-Touch Density Zoning?

Overall, LTD zoning allows for abundant and more affordable units, which are sorely needed due to a national shortage of starter homes. As households move into these new units, they free up their older, less expensive units for lower-income households. This process is generally known as filtering, and adding new units at moderate price points speeds up this process, allowing more first-time buyers to get a foothold on the housing ladder.

Under single-family zoning, which governs most residential districts, the country's supply shortage will continue to build, and starter homes will continue to be converted to McMansions in high-demand neighborhoods, removing affordable units from the market. This demand is familiar in many parts of the country, where displacement pressures price out lower- and middle-income households from expensive neighborhoods, so they must look elsewhere.

In the case of the McMansion in Vienna previously noted, if LTD had been allowed at the time of the conversion, the 309 Berry lot could have easily sustained four units, perhaps each with three bedrooms and two baths, for a combined 1,500 square feet of living area. These new homes would be estimated to be valued at around \$900,000. Thus, allowing moderately higher density would add a net of three relatively affordable units to the same parcel. The city's property tax revenue for this lot would increase, but more importantly, it would allow lower- and middle-income households to rent or buy in this high-demand, amenity-rich area.

This logic does not apply only to high-cost metropolitan areas with tight housing markets. AEI Housing Center research in [more than 500 counties](#) shows that for homes built in the past 20 years, the greater the density, the lower the home's gross living area and price point. Furthermore, 5-year microdata from the [American Community Survey](#) confirm that LTD units have lower rents than most other housing types around the country after controlling for the year they were built. For cities concerned about rising housing costs, LTD is the key to getting ahead of price pressures that squeeze out residents.

How Light-Touch Density (LTD) Works when Properly Implemented

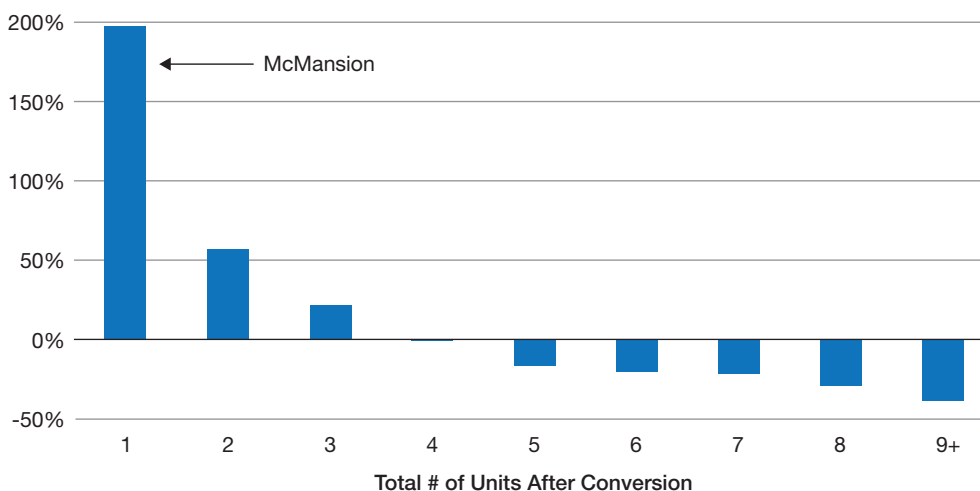
The conversion of older housing stock to newer, more plentiful housing stock releases housing price pressures and decreases displacement pressures. Freed from single-family detached (SFD) zoning and discretionary reviews, such conversion will occur naturally because builder incentives align with the market demand for more moderately priced housing.

A case study from Seattle, which allows LTD in Lowrise Multifamily (LRM) zones, demonstrates that homebuilders will always choose to maximize their profit, which, in this case, includes building moderately priced housing at a greater density. Figure 4 compares the median price of the property that the builder bought and eventually sold for approximately 12,000 conversions at various levels of total units after the conversion. When the builder built a McMansion, presumably because zoning limited the highest and best use, the sales price was almost 200 percent of the original unit price that the builder purchased. At higher units after conversion, that premium drops until the price change level is 0 percent at four units, and each unit sells at roughly the same price as the original

purchase price. For additional units, the median price of the new units is lower than for the existing unit that the builder replaced. Not only does converting single units to multiple units create more net housing, but the price of housing for each unit goes down as more units are built.

Figure 4

Conversion Properties: Median Price Change Between the Unit Replaced and the Median of the New Units Built, by Total Number of New Units

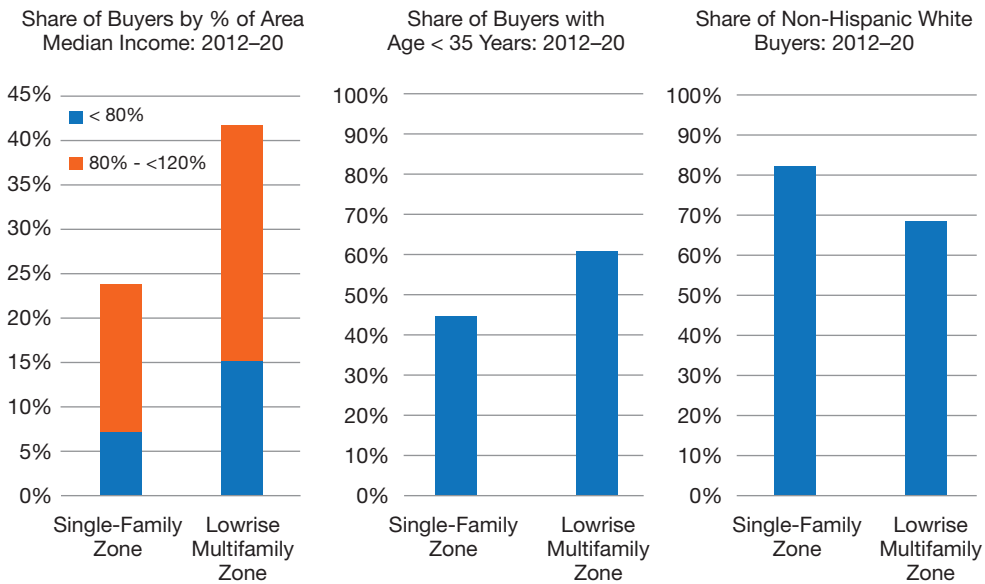


Notes: A conversion is defined as the act of tearing down an existing single-family detached structure and replacing it with a new structure of varying unit totals. Data pertain to more than 3,000 conversions identified in Seattle, which resulted in approximately 12,000 new units from the mid-1990s onward. Source: AEI Housing Center

The additional moderately priced units also open up greater homeownership opportunities for a wider group of households. Seattle’s experience shows that across income levels, age ranges, and racial/ethnic backgrounds, a more diverse group of people can purchase homes in its Lowrise Multifamily zone than in the SFD zone (see Figure 5).

Figure 5

Seattle’s LTD Zone Enables Homeownership for a Wider Group of Households



Source: AEI Housing Center

Converting neighborhoods to LTD zoning restores and expands inclusivity because neighborhoods can have various unit types, tenures, and price points in their housing, opening up homeownership opportunities to a wider breadth of buyers. Another example of this process is demonstrated by the Charlotte, North Carolina, case study, in which the housing types and socioeconomic backgrounds of people living in two different zoning regimes in the same neighborhood are examined. Both Pecan Avenue and Kensington Drive are zoned for 22 units per acre, or LTD, whereas The Plaza is zoned for 5 units per acre, or SFD.

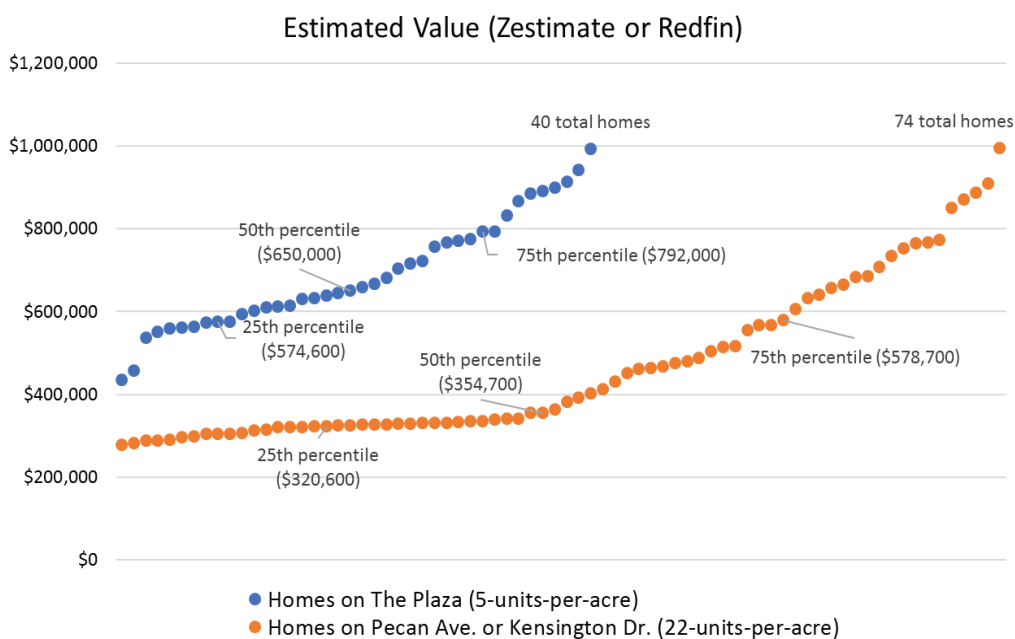
As a result of the increased density, Pecan and Kensington housing units range from smaller SFD homes on smaller lots to ADUs, duplexes, townhouses, and condominiums. The as-built density for the Pecan and Kensington housing is approximately 11 units per acre, one-half of what is allowed and approximately double the as-built density of The Plaza. The median-priced home on Pecan and Kensington (\$354,700) is below the lowest-priced home on The Plaza (approximately \$410,000). The most expensive homes on both streets are approximately \$1 million, but the least expensive unit on Pecan and Kensington is \$277,000. The housing type diversity enabled by LTD allows a greater range of price points, particularly at the middle and low end. There are more housing units at more affordable prices on Pecan and Kensington, with 39 units valued at less than \$400,000, making the street ideal for first-time buyers (see Figure 6).

According to U.S. Census Bureau data, a greater share of renters and younger residents live on Pecan Avenue and Kensington Drive which suggests that the increased density increases housing access to a wider range of incomes, particularly younger individuals and families with less

financial wherewithal. Generally, these groups are among the first to be priced out of lower-density neighborhoods; however, the R-22 MF zoning restored these streets to the pre-1920s status quo, when LTD was intermixed with SFD homes.

Figure 6

Charlotte: R-22 MF Zoning Offers a Wide Range of Price Points Compared with R5-Zoning



Note: Every dot is a house on Pecan Avenue, Kensington Drive, or The Plaza, ordered by estimated value by Zillow or Redfin.

Sources: AEI Housing Center; Zillow; Redfin

The positive effect of more housing supply is reflected in the data on housing prices. AEI Housing Center research finds that a 1-percentage-point increase in total units from 2010 to 2020 was associated with a 10-point decrease in cumulative Home Price Appreciation from 2012 to 2019 in high-employment metropolitan areas.²⁴ A literature review on the effects of new market-rate housing on rents found that in five out of six studies, this new supply decreased rents for residents across the income spectrum (Pennington, 2021; Phillips, Manville, and Lense, 2021).

Filtering—How Does It Work?

Richard Ratcliff (1949: 321) observed, “[I]t is not economically feasible to build and operate new rental properties under a rent scale that is within the reach of low-income families.”²⁵ However, a healthy market will provide market-rate low-income housing through a process known as

²⁴ The results were cross-validated using a regression approach, different construction data sources, and various cut-points of employment growth and time periods. Across these different variations, similar results with slightly different magnitudes emerged.

²⁵ The lack of new low-rent housing is essentially the result of the inherently costly nature of housing.

“filtering,” and new housing construction can contribute to broad-based housing affordability without needing to provide publicly funded affordable housing.

Filtering works in four ways to keep home prices naturally affordable and displacement pressures low:

1. Under normal circumstances, homes move down in quality and value as they age (Ratcliff, 1949: 321).
2. On average, a homebuyer has a lower income than the sellers of the same home up and down the price range. This gap is wider and the buyer’s income relative to the Area Median Income (AMI) is lower when more of the supply is affordable.
3. Naturally affordable homes contribute the most to the filtering process, as they quickly free up units for lower-income households. Units added at the highest price points require more households to move up before freeing an affordable unit; on the other hand, units at moderate price points require fewer households to move up before freeing an affordable unit.
4. As more supply is built, home price appreciation decelerates and rises at a rate more in line with wage growth. In turn, this relationship allows more filtering to occur, as the expanded stock of homes is more naturally affordable than if no additional stock was available.

This process can be better illustrated by looking at a market with a lot of filtering: the car market. With few barriers to increasing new car supply, additional cars can be built quickly at [various price points](#) in response to increased demand.²⁶ Although a lower-income household cannot afford a new Mercedes due to the high cost, they may be able to afford a 15-year-old Mercedes or a 5-year-old Chevrolet, which sell at a fraction of the new Mercedes. The new and used car market has naturally affordable options for households of all different economic means. In a functioning market, with new supply added at various price points, filtering ensures that households of virtually all incomes can afford a serviceable car and easily change cars as they move up the economic ladder.

If car manufacturers could only legally build Ferraris, fewer new cars would be sold because fewer people could afford the high-priced Ferraris. With fewer cars being added to the market, the prices of existing cars would skyrocket. People willing to upgrade to a newer car would struggle to find a seller. The filtering-down of used cars would slow to a trickle. Cars that would otherwise be demolished would remain on the roads because they would become more valuable. The hypothetical case of only allowing the manufacturing of Ferraris is not dissimilar to the housing market, in which SFD zoning and discretionary review have all but outlawed the production of naturally affordable housing.

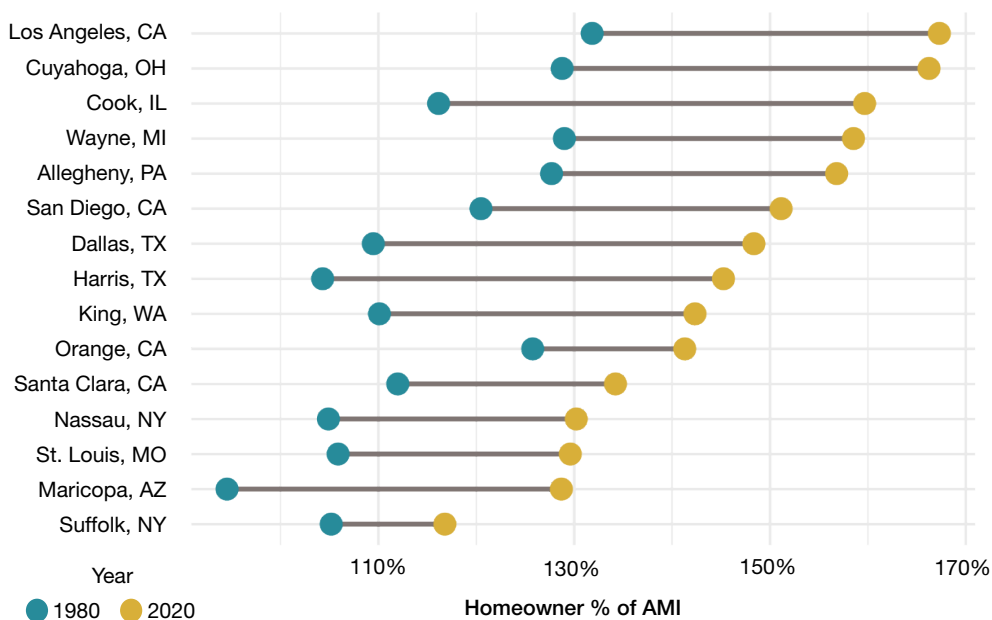
To observe filtering effects, the income of occupant households can be calculated relative to their county median income in both 1980 and 2020 for single-family attached and detached homes built from 1960 through 1979 for 100 counties. Filtering can be tracked over time because most of these homes still exist. Figure 7 shows that for the 15 largest counties (by 1980 single-family units)

²⁶ This filtering car market did not work during the [COVID-19 pandemic](#), as a chip shortage constrained new car construction, increasing the price of the existing used car stock.

across the board, housing built for relatively affluent households filtered down to less-affluent households by 2020, and housing built for households closer to the area median income filtered down to lower-income households.

Figure 7

Income of Homeowners Living in Single-Family Detached and Attached Units Built 1960–1979: 1980 and 2020



AMI = County Area Median Income of Households.

Note: Data show the top 15 tracked counties by number of single-family units in 1980.

Sources: AEI Housing Center; IPUMS; U.S. Census Bureau

In the case of the McMansion conversion on 309 Berry previously noted, a relatively affordable unit that would sell for around \$800,000 today was replaced with the equivalent of a housing Ferrari, valued at \$1,700,000 in 2004. The housing stock remained the same, but the filtering process was set back by \$900,000 because the value of the unit increased.

Zoning, and SFD zoning in particular, artificially limits the highest and best use of the land. Additional units cannot be built on already developed, high-demand land; thus, home prices rise, and the filtering process breaks down. This process worsens when existing housing units are converted to McMansions.

Although newly built LTD housing is not affordable to many people with low incomes, an abundance of moderately priced new housing supply has been shown to enable greater homeownership opportunities for moderate-income, younger, and more diverse borrowers. Furthermore, the Seattle case study clearly shows that builders prefer to build moderately priced LTD units over exorbitantly expensive McMansions when given the option. This additional supply

can keep home price appreciation more in line with wage growth. The evidence is clear: Freed from the limitations of SFD zoning, markets can provide abundant housing for everyone through light-touch density and filtering. More state and local governments need to learn from the best practices of LTD zoning reform in Charlotte, Houston, Palisades Park, and Seattle.

How to Implement Light-Touch Density

Approximately 100 years ago, the federal government began meddling in state and local affairs through the SZEA, which broke the housing market across the country, leading to widespread unaffordability over time. If history is any guide, caution must be taken with one-size-fits-all federal solutions imposed on localities—even if the motivation has changed from explicit racial bias to undoing past wrongs.

Zoning and land use remain fundamentally state and local issues and need to be tackled at those levels. Some jurisdictions have already moved in this direction: [Arlington, Virginia](#); [Minneapolis, Minnesota](#); [Charlotte, North Carolina](#); [California](#); [Washington](#); [Montana](#); and [Oregon](#) recently passed LTD legislation deregulating their land use.²⁷ Those areas have permitted moderately higher density through lot splits or permitting multiplexes or townhomes in areas typically reserved for SFD homes. Similar bills have been introduced in Colorado and New York but failed to pass.

The previous section conclusively shows that land use deregulation at the state and local level pushes back against the damage done by excessive zoning regimes and discretionary review processes, ultimately leading to improved housing affordability. The following section proposes a model LTD bill based on the best and worst practices learned from various case studies, including discussing how to persuade the public at the state and local levels.

A “Keep it Simple and Short” (KISS) Approach to Housing

As previously discussed, the economics of housing construction favor moderately higher density and by-right LTD. These policies would allow for higher and better land use, unleashing what Strong Towns calls a “swarm” of property owners, small-scale builders, and local contractors to take on small-scale LTD conversion projects. Evidence from the case studies indicates that small-scale builders, many of whom are disproportionately minority-owned, carry out the majority of these LTD projects. To achieve this result, here are the lessons learned.

²⁷ For more information on these recent zoning reforms see links below. For Arlington, Virginia, see “Arlington ends single-family-only zoning” by Teo Armus in the *Washington Post*. <https://www.washingtonpost.com/dc-md-va/2023/03/22/arlington-missing-middle-vote-zoning/>. For Minneapolis, Minnesota, see “Eliminating Single-Family Zoning Isn’t the Reason Minneapolis Is a YIMBY Success Story” by Christian Britschgi in *Reason*. <https://reason.com/2022/05/11/eliminating-single-family-zoning-isnt-the-reason-minneapolis-is-a-yimby-success-story/>. For Charlotte, North Carolina, see the text for Charlotte’s *Unified Development Ordinance (UDO)* at <https://charlotteudo.org/>. For California, see “California Enacts Two Important New Zoning Reform Laws” by Ilya Somin in *Reason*. <https://reason.com/volokh/2021/09/17/california-enacts-two-important-new-zoning-reform-laws/>. For Oregon, see “Eight ingredients for a state-level zoning reform” by Michael Andersen for *Sightline Institute*. <https://www.sightline.org/2021/08/13/eight-ingredients-for-a-state-level-zoning-reform/>. For Montana, see “Montana Passes Sweeping Legislative Package to Rescind ‘California-Style-Zoning’” by James Brasuell in *Planetizen*. <https://www.planetizen.com/news/2023/04/122638-montana-passes-sweeping-legislative-package-rescind-california-style-zoning>.

What is required?

- By-right approval of LTD housing
- Simple rules regarding the number of units, floor-area ratio, and height restrictions permitted in a given lot

What helps?

- Relaxing parking requirements (Harrison, 2023)
- Instituting shot clocks, which can accelerate the timelines in [slow-moving areas](#) and create more dependable schedules for builders and homeowners attempting to plan for future construction
- Preapproved design standards

What hurts?

- Low maximum floor-area ratio requirements
- High minimum lot size requirements
- Outsized parking or other requirements that increase construction costs or de facto prevent building LTD entirely
- Income limits and affordable housing fees and mandates
- Rental bans
- Owner-occupancy requirements
- Rent controls
- Inclusionary zoning
- Impact fees
- Anything not required for single-family homes

LTD successfully unleashed a swarm of developers in Seattle's LRM zone, in Palisades Park, and in Houston because of the simplicity of the rules, which removed discretionary approval and allowed builders to move forward with projects quickly.

Pro-housing legislators continue trying to ease Senate Bill (S.B.) 9 permitting statewide after the successful passage of S.B. 9 in California, allowing up to four units in areas previously zoned only for single-family homes. A recently introduced S.B. 9 cleanup bill called S.B. 450 would standardize local measures, holding S.B. 9 units to the same codes and design standards as SFD units, simplifying the standards and streamlining S.B. 9 conversations.

California also experienced success with accessory dwelling unit (ADU) legislation in 2016 (S.B. 1069 and Assembly Bill [A.B.] 2299), which made ADU construction by-right, added a 120-day shot clock for cities to approve or deny the project,²⁸ and eliminated parking requirements near transit while creating a one-per-unit parking maximum elsewhere. Localities have streamlined their permitting processes since California removed restrictions in 2016 regarding building ADUs. For example, as of March 2023, Los Angeles had [66 preapproved ADU designs](#) compatible with [neighborhood character](#), minimizing risks to homeowners and builders because they knew that this design was approved.²⁹

As a result, ADU permits increased statewide from 2,000 in 2016 to 19,000 in 2021. In 2021, one in four housing units added in Los Angeles was an ADU, indicating that LTD policies have the potential to affect filtering and affordability greatly.³⁰ Increasing density through these channels gives renters more options, particularly in resource-rich areas. UC Berkeley research on ADU construction showed that ADU rents in California were naturally affordable to two-person households (Chapple, Ganetsos, and Lopez, 2021). A more holistic pro-housing framework, such as the model LTD bill, would scale this ADU model for duplexes, townhomes, and condominiums across the United States.

On the other hand, although Seattle experienced immense success building thousands of needed townhomes, implementing the Mandatory Housing Affordability (MHA) program in 2019 attached either income limits or a hefty fine to small-scale townhome projects. The predictable result is that builders have often completely forgone applying for new townhome projects.³¹ Whereas permits averaged about 40 units per month in the 2 years before the MHA took effect, they now average approximately 10 (Figure 8). Because one permit is used for a multi-unit proposal, this reduction in permitting means that thousands fewer townhomes will be built. The restrictions, which are not tied to SFD units, hurt LTD development and block meaningful pathways to homeownership.

These circuitous affordable housing requirements tilt the scale squarely in favor of professionalized, deep-pocketed firms with attorneys who can make sense of rules that even Seattle officials admit are “[large in scope and complex](#).” The result is that small-scale, local, and often demographically diverse developers, contractors, and architects who primarily build LTD units often are left out.

²⁸ Both [Texas](#) and [North Carolina](#) passed shot clock bills in 2019 that mandated the review of new housing within 30 days or 15 business days, respectively.

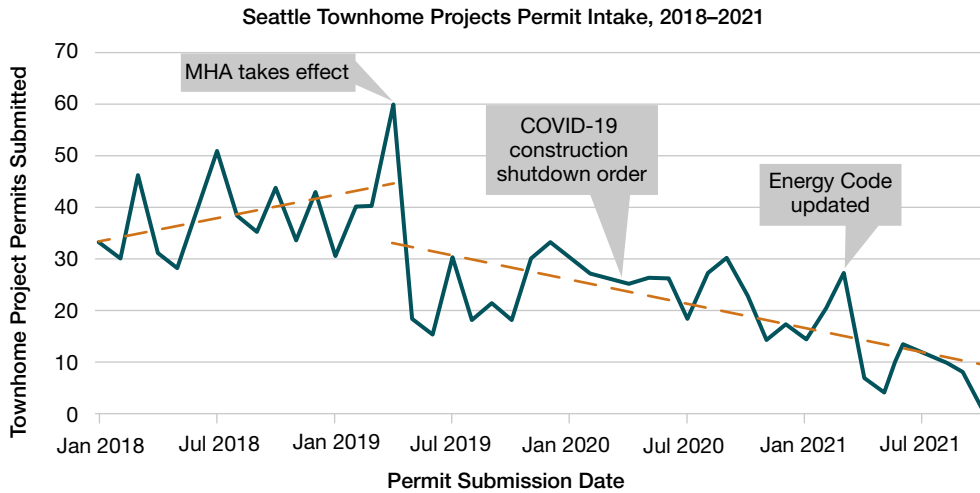
²⁹ [South Bend](#) has a variety of preapproved designs for LTD projects ready for construction.

³⁰ The [Los Angeles City Government](#) created a helpful map on ADU development across the area.

³¹ The MHA program attached onerous restrictions for building townhouses and other multifamily housing units—but not single-family detached units—with the goal of creating 6,000 new subsidized housing units through 2025. Builders were given a choice between designating a certain number of units as income-restricted or opting out by paying a hefty fee, yet the sale price of income-restricted units as outlined by MHA largely only covers the cost of the land without any structure cost. Paying the fee is not much better. A recent survey by the [Master Builders Association of King and Snohomish Counties](#) finds that the upfront fee can be as high as \$130,000 for an average four-unit townhome project. Often, neither option is financially feasible.

Figure 8

Seattle Townhome Projects Permit Intake, 2018–21



Sources: Master Builder Association of King and Snohomish Counties. “The Decline of Seattle Townhomes Under MHA,” Dec. 2021; AEI Housing Center

The Colorado LTD bill, [S.B. 23-213](#)—which ultimately failed—emphasized “developing a menu of affordability strategies,” or implementing income-based subsidies and income restrictions that have already worsened affordability woes. California’s A.B. 68, which expands by-right zoning in walkable-oriented development areas, also has affordability requirements. Adding such requirements creates complexity and renders many projects infeasible because builders cannot profit. As demonstrated in Seattle, these costly requirements can be the death knell for small-scale development projects.

No study examining the impact of Inclusionary Zoning (IZ) has concluded that it expands housing supply or “contributes to broadly lower prices (Hamilton, 2021).” One study focusing on the impact of various policies on housing affordability asks, “Can relaxed IZ substitute for land-use regulations?” and concludes that, on the whole, no (Kulka, Sood, and Chiumenti, 2022). Work by the Manhattan Institute finds that IZ drives up market rents, reduces housing construction, and negatively affects the overall health of the housing market (Harris, 2021). The California Legislative Analyst’s Office (LAO) found that displacement was lowest in communities that built more housing, and that the relationship was not dependent on inclusionary zoning regimes (Taylor, 2016).

In other cases, such as in Oahu, Hawaii, regulations legally allow duplexes but make them practically impossible to build, hindering LTD development. Although both a duplex and a detached two-family dwelling are allowed in R-3.5, R-5, and R-7.5 zones in Oahu, any parcel with a two-family dwelling requires significantly more land than a detached single-family dwelling, making these types of structures practically not buildable in these residential zones (See Table 2).³²

³² For example, in R-7.5, the median lot square footage is approximately 7,500 square feet, yet a duplex (two units) or a two-family dwelling effectively requires 14,000 square feet.

As a result, few-to-no LTD-style units are built, perpetuating the reliance on SFD units that are not naturally affordable to many Oahu residents.

Table 2

Development Standard		District				
		R-3.5	R-5	R-7.5	R-10	R-20
Minimum lot area (square feet)	One-family dwelling, detached, and other uses	3,500	5,000	7,500	10,000	20,000
	Two-family dwelling, detached	7,000	7,500	14,000	Use not permitted	Use not permitted
	Duplex	3,500	3,750	7,000	Use not permitted	Use not permitted
Minimum lot width and depth (feet)		30 per duplex unit, 50 for other uses	35 per duplex unit, 65 for other uses	65 for dwellings, 100 for other uses	100	
Yards (feet)	Front	10 for dwellings, 30 for other uses				
	Side and rear	5 for dwellings, ¹ 15 for other uses			5 for dwellings, 15 for other uses	
Maximum building area		50 percent of the zoning lot				
Maximum height (feet) ²		25-30				
Height setbacks		per Sec. 21-3.70-1(c)				

¹ For duplex lots, 5 feet for any portion of any structure not located on the common property line; the required side yard is zero feet for that portion of the lot containing the common wall.

² Heights above the minima of the given range may require height setbacks or may be subject to other requirements. See the appropriate section for the zoning district for additional development standards concerning height.

(Added by Ord. 99-12)

Sources: Oahu City Government; AEI Housing Center

LTD is the common denominator in zoning reform and has received widespread support. However, the devil is in the details. Following the “Keep It Simple and Short” (KISS) rule can unleash the potential of LTD.

Housing bills with more strings attached often fail in state legislatures. Gubernatorial-supported bills in New York and Colorado failed to garner support for proposed sweeping housing reforms that included elements of LTD because the wide-reaching nature of the bills ostracized potential supporters and galvanized detractors. In 2019, pro-housing California legislators proposed a transit-oriented development (TOD) measure called *S.B. 50*, which permitted high-density buildings near transit; it ultimately failed in the State Senate. California Yes In My Backyard (YIMBY) chief executive [Brian Hanlon](#) said, “S.B. 50 was a big bill that had something for everyone but also something for everyone to hate.”³³

³³ See *The New York Times* article, “After Years of Failure, California Lawmakers Pave the Way for More Housing.” <https://www.nytimes.com/2021/08/26/business/california-duplex-senate-bill-9.html>

By contrast, in 2021, California passed two LTD bills: S.B. 9 and S.B. 10.³⁴ As *The New York Times* summarized, “in housing legislation, smaller is better.” These LTD units are built more gradually while being compatible with residential neighborhoods relative to TOD and have the potential to make a meaningful dent in the housing affordability crisis. California shows that LTD, not TOD, represents the winning formula.³⁵

Model Light-Touch Density Legislation

To facilitate and support the transition from SFD to LTD zoning using the KISS principle, the AEI Housing Center developed [a model LTD bill](#) for state and local jurisdictions (included in appendix B). The bill is flexible, allowing the locality to decide the manner and type of LTD units built and the density level within different zones. It builds on the principles outlined previously and enables by-right (ministerial) approval of LTD housing either through building more units on a single lot (infill), lot splitting (infill), or creating smaller lots for new single-family subdivisions (greenfield).

This bill was developed independently of other model legislation, such as [AARP’s Re-legalizing Middle Housing](#). Both bills aim to remove discretionary procedures from building light-touch or middle housing processes. The crucial distinction between the two efforts is that the AEI model draws on lessons learned and case studies from successful LTD implementations, and the AARP model draws on lessons learned from relatively recent state legislative efforts in passing LTD legislation—enactments that have not proven their ability to generate substantial LTD supply additions.

Further, the AARP bill provides jurisdictions with a plethora of options, some contradicting the KISS principle and hindering the chances for success of enactments based on the AARP model middle housing bill. Examples include the following:

- Requirements for “affordable or accessible” middle housing similar to those in Seattle, which resulted in disastrous consequences.
- Requirements for “accessible or visitable” middle housing that could increase developer costs and reduce economic viability.
- The option for disadvantaged or high-opportunity residential areas to opt out of moderately increased density, which adds needless complexity and a loophole for NIMBY supporters to undermine the intended goal of the legislation.
- Exemptions for tenant-occupied or rent-controlled housing, which create hurdles and complexity for small-scale builders.

³⁴ [S.B. 9](#) allows for up to [two to four units of housing](#) in most areas previously zoned exclusively for single-family homes. Homeowners can add a second unit on their lot, split their lot and sell that land to another family, or build two units per lot by-right. Under [S.B. 10](#), cities can choose to authorize construction of up to 10 units on a single parcel without requiring an environmental review, at a height specified in the ordinance, if the parcel is in a transit-rich area or urban infill site.

³⁵ As of March 2023, California has an [S.B. 9](#) cleanup bill, [S.B. 450](#), on its docket, which would ensure that [S.B. 9](#) standards are the same as for new SFD developments and that applications be approved or denied within 60 days. These changes would restrict bad-faith local government actions taken to constrain [S.B. 9](#) developments. [S.B. 450](#) built upon previous ADU cleanup bills passed by the California legislature in 2016 that similarly incorporated LTD concepts.

By contrast, the AEI bill allows by-right LTD development following the KISS principle, which has been successful in Charlotte, Houston, Palisades Park, Seattle, and elsewhere. The AEI LTD provision for infill housing would be implemented by one of two means—stipulating the desired residential units per parcel or the desired residential units per acre. The bill provides a range of maximum allowable density levels from which areas can choose:

- Authorize LTD housing containing no more than [stipulate two to eight] residential units on all lots in any zone in which housing is permitted without discretionary review or hearing unless zoning permits higher densities or intensities.
- Authorize LTD housing with a density of no more than [stipulate 10 to 35] residential units per acre on all lots in any zone in which housing is permitted without discretionary review or hearing unless zoning permits higher densities or intensities.

As a further option, the bill provides jurisdictions a way to increase density to 6 to 12 residential units on parcels or 22 to 50 residential units per acre on parcels in transit/bus/walkable-oriented developments. This bill provides jurisdictions with a compromise to increase density in amenity-rich areas while diminishing NIMBY opposition by adopting lower density levels in residential areas farther from commercial corridors. The bill defines transit/bus/walkable-oriented developments as being close to transit and bus lines and within walking distance of many amenities and in-demand areas where people want to walk for daily errands, such as grocery stores, restaurants, and coffee shops.

The goal of the AEI bill is to moderately increase density, particularly in urban and suburban neighborhoods constrained by SFD-only zoning. The moderately higher density would enable much more economical housing to be built in high-demand neighborhoods with greater opportunities for upward mobility. Widespread enactment of the bill would bring localities back to the pre-1920s status quo, when LTD units were far more common, before the proliferation of formal zoning codes, largely built around SFD zoning. The key is the simplicity of the LTD model bill, which would unleash a swarm of [homeowners](#) and small developers to increase the housing stock by leveraging the value of their land, which was successful in the case studies.

How to Build a Winning Coalition with LTD

NIMBY supporters are believed to hold an outsized influence over local politics because most homeowners vote (Fischel, 2002). [Previous research](#) also found that homeowners were more likely to participate in local city council meetings, vote in local elections, donate to candidates, and negatively comment on housing-related issues; however, the passage of recent bills shows that the NIMBY coalition can be overcome with the right framing and coalition.

Housing market experts and economists agree that land use must be addressed. A survey by [Zillow and Pulsenomics in 2023](#) revealed that 73 percent of housing experts surveyed considered land deregulation as one of the “best ways to make homes more affordable.” Progressive and market-oriented organizations such as the [City Observatory](#), [Sightline Institute](#), [Upjohn Institute](#), [Vatt Institute](#), [Mercatus Center](#), [Grassroot Institute of Hawaii](#), and the AEI Housing Center indicate broad-based support for supply-oriented solutions.

However, policies such as LTD are also popular with the larger public. Polling by [Zillow](#) in 2022 shows the widespread popularity of moderate density increases relative to apartments in residential neighborhoods (Garcia, 2022). Support for construction in residential neighborhoods was higher for ADUs (67 percent) and duplexes and triplexes (61 percent) than for small and medium-sized apartments (57 percent). The survey also shows increased support for homeowners adding housing supply to their lot relative to the 2019 survey. These results illustrate a growing willingness to permit additional housing, as reflected in the number of LTD bills around the country. Zillow's poll found that a majority of residents in 26 metropolitan areas (except Atlanta) approved of the construction of duplexes, triplexes, and ADUs in residential neighborhoods.³⁶

Although momentum is building for a pro-housing coalition, zoning reform remains a contentious local issue. More work is needed to reframe the pro-housing message to homeowners that may be initially skeptical of zoning reform and to aid politicians in communicating the benefits of LTD to constituents. In a [Cato Institute survey](#), 51 percent of Americans supported building more housing, but when informed that building more housing made it easier for young people and families to afford homes, support rose to 72 percent. Housing affordability is an issue that affects millions, yet as recently pointed out in [The Atlantic](#), “shortage denialism”—the belief that there is no housing shortage—and “supply skepticism”—the belief that more housing will increase rather than decrease, home prices—runs deep. Hence, supporters of more housing need to communicate more effectively about how increased housing supply can ease housing pressures for residents feeling hurt by high rents and home prices.

These successes in LTD legislation show that it is possible to chip away at NIMBY arguments with targeted messaging and facts. Some pointers to push back against common anti-housing rhetoric include the following:

- LTD will not dramatically alter the look and feel of the neighborhood. All change is gradual and takes decades, but it will have a big impact over time.
- With the right design standards, the character of the neighborhood can be maintained because multiplexes (as illustrated with the bright red roof in Figure 9) can be designed to blend in seamlessly with single-family homes.
- It will not depress home values (as seen in Charlotte, Palisades Park, and Seattle).
- It restores property rights to the individual.
- It is market-driven, requiring no income limitations or taxpayer money for subsidies.
- LTD infill housing built in urban areas can have substantial climate benefits.³⁷

³⁶ The study also finds that a vast majority of residents in those communities support homeowners converting properties to add more units (Garcia, 2022).

³⁷ Greenfield development requires more climate emissions for commuting residents and leads to more environmental damage through infrastructure construction than infill development. [Research from UC Berkeley](#) found that building infill housing causes the largest reduction in greenhouse gases of any locally implemented policies in large cities such as Sacramento, San Diego, and San Francisco (Jones, Wheeler, and Kammen, 2018). One [study from the Turner Center](#) estimated that if all new construction between 2015-2030 was infill development, California would reduce greenhouse emissions by 1.79 million metric tons, equivalent to taking 378,000 cars off the road.

- Mild increases in density for both greenfield and infill construction benefit local government tax revenues, allowing for more money for services such as schools or tax refunds.³⁸
- Decreased supply constraints in high-productivity areas like the Bay Area or New York City can unleash obvious benefits to economic growth (Hsieh and Moretti, 2019).
- Many new homes will be owner-occupied rather than public housing, which requires large subsidies and has not been successful in providing quality housing to lower-income groups, a successful path to homeownership, or intergenerational wealth building.

Anyone affected by rising home prices and rents has a stake in issues around zoning and permitting processes. Building more naturally affordable housing in places where people want to live is a winning message that brings together diverse interests and stakeholders across the country. For example, in Colorado, a coalition of labor unions, environmentalists, AARP, homeless advocates, and the Denver Metro Chamber of Commerce supported the LTD bill [S.B. 23-213](#); in California, the Nature Conservancy and California YIMBY joined together to support A.B. 68, which allows higher by-right density on “climate-smart parcels,” defined as those in walkable-oriented development areas.³⁹

Despite growing partisanship on many other issues, LTD reforms have enjoyed support across the political aisle in California. LTD efforts in California—including [S.B. 1069](#), [S.B. 9](#), and [S.B. 10](#)—received bipartisan support.

Figure 9

Illustration of a Street with Light-Touch Density



Source: AEI Housing Center

³⁸ [Up For Growth](#) found that increased density drives more property tax revenues and increases fiscal benefits for local governments.

³⁹ As noted earlier, both bills have affordability requirements that would make LTD economically infeasible. A.B. 68 also has a prevailing wage requirement that would likely have a similar effect. Finally, A.B. 68 imposes new requirements on “climate-risk lands.”

Conclusion

Some [progressive critics](#) argue that market-based reforms will not improve housing supply and affordability; however, the evidence from Charlotte, Houston, Palisades Park, Seattle, and elsewhere suggests otherwise. Too often, builders can legally only build high-end single-family units because the zoning regime outlaws anything else. Fortunately, the takeaway from these case studies is that deregulating the market and instituting by-right approval processes leads to a swarm of homeowners, builders, developers, and contractors providing more abundant and affordable light-touch density (LTD) housing accessible to a wider range of renters and buyers across the income spectrum.

The alternatives to LTD are all inferior. Building government-subsidized housing is a misguided substitute for building market-rate housing. This costly, ineffective demand-side solution is politically beneficial for rent-seeking politicians, businesses, and advocacy groups that want to placate not-in-my-backyard (NIMBY) homeowners with little change to the built environment while *appearing* to stabilize housing markets. The ability of these units to be relatively inexpensive for tenants is propped up almost entirely by expensive subsidies. Consequently, these “affordable” units often come with a huge price tag. The Bay Area Economic Council found that the median cost to build one subsidized unit in the Bay Area was \$664,455 in 2019, taking valuable funds away from schools or other important government services (Bay Area Council Economic Institute, n.d.).

As the [City Observatory](#) notes, “[T]wo or three new \$600,000 single-family homes or condominiums built in the Bay Area in the last decade or so reduced displacement in the region by as much as building a new subsidized unit. . . . In addition to effectiveness, we also have to consider cost. . . . [B]uilding subsidizing housing is hugely expensive for the public sector” (Cortwright, 2017). The result of relying on government-subsidized housing is that a handful of housing Ferraris are available for the select few residents lucky enough to make it off a waitlist while everyone else faces a housing shortage.

The original framers of single-family-only zoning sought to segregate neighborhoods economically, and that goal has been realized. By mandating that the vast majority of residential land includes single-family detached (SFD) dwellings, the ability of the market to provide an abundant housing supply has been diminished. The combination of single-family-only zoning and discretionary review has led to rising land prices in many of the most dynamic and vibrant cities in America. Lower-income and middle-income residents are displaced as housing prices increase, becoming less affordable. As these pressures continue to mount, more people are removed from the housing market altogether. California, New York, Seattle, and Washington D.C. demonstrate this scenario, with former neighbors becoming homeless due to the scarcity of housing options.

Removing exclusionary zoning policies would go a long way in helping those hurt the most by housing displacement pressures but would also yield many broad-based benefits. If housing restrictions decreased in high-demand cities, the economic growth in high-productivity areas such as the San Francisco Bay Area and New York City would be enormous. Those cities were able to grow and adapt to a growing population in the past and become thriving economic centers because the land use and zoning permitted them to do so. Many high-demand areas currently handicap

their growth and economic potential by offering inflexible housing incentive structures that do not serve the needs of their residents.

The housing challenges today are overwhelmingly due to policy failures, not market failures. Housing unaffordability is a self-inflicted wound that has been brought on by SFD zoning and discretionary reviews empowered NIMBYs and planners over property owners and the market. Unfortunately, policymakers often learned the wrong lesson from the past 100 years by relying on government-subsidized affordable housing to address a housing crisis that government policies precipitated in the first place. These affordable housing policies and mandates have not addressed the scarcity of naturally affordable housing but have exacerbated it. Today, a diverse coalition is forming around the goal of using filtering and market mechanisms to restore housing affordability across the country. Many more families could be helped by expanding LTD to more areas of the country because building such units would be profitable for builders and more affordable for residents.

Appendix A

State and Local Upzoning Bill Light-Touch Density (LTD) Infill Conversion Estimates—Methodology

Note: Assumptions are highlighted in bold>.

The goal of this methodology is to identify single-family detached units that could be infill conversion candidates. The model evaluates the development potential of a parcel for LTD replacement with up to eight conversion units by considering the economics of the highest and best use.

Data

Full assessor data is limited to—

- one unit detached
- valid lot size, gross living area (GLA), year built, and automated valuation model (AVM)
- accurate geocode because we are merging on walkable-oriented development (WOD) delineations

We are using the Dec. 2022 AVM, which is the most recent one available. We refer to the Dec. 2022 AVM as simply AVM.

LTD Candidates

More specifically, the LTD estimates are limited to single-family detached (SFD) homes with—

- Lot size of 2.5k to 22k
- Year built before 1980 (One would not tear down a new home)

- Floor-area ratio < 50 percent (Larger homes may already be up-down duplexes per Palisades Park findings)
- Census tract population density of ≥ 750 people per square mile (A certain density is necessary)

Infill Conversion Candidates (from a teardown)

Construction Cost Estimate

Assumption: Newly built homes have a land share of 30 percent.⁴⁰

This assumption applies only to homes built since 2015 with an AVM of \$200 thousand to \$5 million. The math is as follows:

$$\text{Construction cost per GLA} = \text{AVM} * (1 - 0.3) / \text{GLA}$$

We calculate these estimates for each city, requiring at least five observations.

The *construction cost per GLA* has to be within the range of \$100 to \$700.

Construction cost per GLA is adjusted on the basis of the home's price tier. We place each home into quintiles based on each home's AVM and its metropolitan area. The construction cost is then adjusted by a *price tier adjustment factor* of 0.8, 0.9, 1, 1.1, and 1.2 for the respective quintile. (The assumption is that more expensive homes will have more custom features, higher-quality materials, etc., increasing construction costs.)

Structure Value

Structure value per square foot of GLA for existing SFD units built before 1980 is assumed to be a depreciated value of the current construction cost. The depreciation rate is assumed at 1.25 percent per year for homes in price tier quintiles 2, 3, and 4, at 1.0 percent for quintile 5 and 1.5 percent for quintile 1. The inherent assumption is that cities with higher construction costs also have higher structure values, all else equal.

The *structure value per square foot of GLA* ranges from about \$20 (in less dense areas) to \$240 (in mostly high-cost California cities).

Structure value per square foot of GLA * GLA.

The *land value* in Dec. 2022 is AVM - *structure value*.

The *land share* is $1 - (\text{structure value} / \text{AVM})$.

⁴⁰ We believe the Glaeser and Gyourko (2003) guidance that land costs typically account for less than or equal to 20 percent applied to land at the suburban-rural divide. We increase these costs to account for the higher amenity value of the land in more urban and suburban areas, where infill conversion generally occurs.

Infill Conversion Estimates

Infill conversion candidates are all SFD units that meet the above criteria and have a land share greater than 60 percent.

New units will vary in size depending on the number of units built. Due to space constraints, unit sizes become smaller as more units are built:

- Two units will each be 2,000 square feet GLA. Total will be 4,000 square feet GLA.
- Three units will each be 1,650 square feet GLA. Total will be 4,950 square feet GLA.
- Four units will each be 1,450 square feet GLA. Total will be 5,800 square feet GLA.
- Five units will each be 1,400 square feet GLA. Total will be 7,000 square feet GLA.
- Six units will each be 1,350 square feet GLA. Total will be 8,100 square feet GLA.
- Seven units will each be 1,300 square feet GLA. Total will be 9,100 square feet GLA.
- Eight units will each be 1,250 square feet GLA. Total will be 10,000 square feet GLA.

We then cycle through each property, calculating the economic feasibility of the infill conversions:

1. The land share of the *potential infill conversion units* must be between 20 and 60 percent.
2. The new *potential infill conversion units* must be priced between 50 and 180 percent of the torn down unit. (See below.)
3. The new *potential infill conversion units* must be priced between 50 and 150 percent of the median price per square foot of the existing homes of the census tract.
4. The floor area ratio of the *potential conversion infill units* cannot be greater than 140 percent.

If all four checks are affirmative, then the new supply added is "*potential infill conversion units* - 1" because we tore down one existing unit.

Each check is performed for each unit type, from two to eight units. The assumption is that each property will be improved to the highest and best use, but we also provide results for each unit number from two to eight.

Infill Conversion Price Estimates

With the total GLA of the *potential infill conversion units*, an estimated *construction cost per GLA*, and the purchase cost of the teardown (estimated from the AVM), we can calculate the unit price of each new *potential infill conversion unit*.

We assume that for each additional unit that can be developed on a parcel, the purchase price of that parcel increases by 5 percent for the developer. This premium reflects that the land has

become more valuable due to a policy change that allows for additional density rather than limiting the land to SFD zoning. This price premium is incorporated into the price of the new units built.

We also calculate the per-unit price as a percentage of Area Median Income (AMI). Our guideline of $(\text{unit price} / (\text{AMI} * 3))$ provides roughly the percentage of AMI at which the unit is affordable to a certain borrower.

Appendix B

Model Light-touch Density Bill⁴¹ Version: 6.27.23

A bill relating to creating more homes for [insert jurisdiction] by increasing light touch density (LTD) housing in areas traditionally restricted to single-family detached housing and other residentially zoned areas.

[Choose either LTD provision #1 or #2 and/or Transit/Bus/Walkable Oriented Development provision #1 or #2].

[LTD provision #1] This bill, among other things, would authorize light touch density housing containing no more than [insert a number from 2–8] residential units on all lots within any zone in which housing is permitted without discretionary review or hearing, unless zoning permits higher densities or intensities.

[LTD provision #2] This bill, among other things, would authorize light touch density housing with a density of no more than [insert a number from 10–35] residential units per acre on all lots within any zone in which housing is permitted without discretionary review or hearing, unless zoning permits higher densities or intensities.

This bill, among other things, would authorize proposed light touch density housing containing single-family attached homes on smaller lots and single-family detached homes on smaller lots within any zone in which housing is permitted without discretionary review or hearing, unless zoning permits higher densities or intensities.

[Transit/Bus/Walkable Oriented Development provision #1] This bill, among other things, would authorize light touch density housing containing no more than [insert a number from 6–12] residential units on all parcels within a one-half mile radius of a rail or trolley transit stop or a bus transfer station, within a one-quarter mile radius of a stop on a bus corridor with regular service, or within a walkable oriented development (WOD) zone without discretionary review or hearing.

[Transit/Bus/Walkable Oriented Development provision #2] This bill, among other things, would increase the current density of all residential parcels which are within a one-half mile radius of a rail or trolley transit stop or a bus transfer station, within a one-quarter mile radius of a stop on a bus corridor with regular service, or any walkable oriented development zone to [insert a number

⁴¹ Prepared by Edward Pinto (pintoedward1@gmail.com), senior fellow and director of the American Enterprise Institute (AEI) Housing Center. This document is reprinted exactly as it appears in the AEI Housing and Economic Analysis Toolkit (HEAT). For the most up-to-date Model Zoning Bill, please see https://heat.aeihousingcenter.org/toolkit/model_bill.

from 22–50] residential units per acre, unless the current zoning allows more than the specified number, in which case the density shall remain unchanged.

The bill would set forth what a local agency can and cannot require in approving the construction of light touch density housing generally and light touch density housing in transit, bus, and walkable oriented development zones, including, but not limited to, authorizing a local agency to impose objective zoning standards, objective subdivision standards, and objective health or safety standards, subject to certain limitations. A local agency may not regulate building design elements that are not directly related to health and safety.

The bill would include findings that (i) ensuring access to an adequate supply of housing is a matter of statewide concern, (ii) increasing housing options that are more affordable to various income levels is critical to providing an adequate supply of housing, (iii) there is continued need for the development of housing at all income levels, including light touch density housing that will provide a wider variety of housing options and configurations to allow residents of [insert jurisdiction] to live near where they work, (iv) ministerial approval of light touch density housing will unleash thousands of smaller, incremental investments, thereby adding supply that is critically needed, (v) light touch density housing is more affordable by design for residents of [insert jurisdiction] due to reduced construction and infrastructure costs, lower land requirements, more efficient household energy usage, and savings in transportation costs, and (vi) light touch density housing is more beneficial for the residents of the State of [insert name] and its local agencies due to reduced infrastructure costs, more efficient household energy usage, savings in transportation costs, health benefits, and enhanced tax revenues.

Bill Text

SECTION 1.

Definitions:

(a) “Accessory dwelling unit” means a separate dwelling unit, that (A) is located on the same lot as a principal dwelling unit of greater square footage, (B) has cooking facilities, and (C) complies with or is otherwise exempt from any applicable building code, fire code, and health and safety regulations;

(b) “Amenity points of interest” means amenities such as restaurants/bars, coffee shops, supermarkets/grocery stores, hardware stores, and/or pharmacies/drugstores.

(c) “Building coverage ratio” means the ratio of the building footprint area divided by the total area of the parcel.

(d) “Cluster of [insert a number from 6 – 10] or more amenity points of interest” means at least [insert a number from 6 – 10] [stipulate list of amenities such as restaurants/bars, coffee shops, supermarkets/grocery stores, hardware stores, and/or pharmacies/drugstores].

(e) “Cottage housing” means detached dwelling units arranged on two or more sides of a landscaped central area.

(f) “Courtyard apartments” means attached dwelling units arranged on two or more sides of a landscaped central courtyard.

(g) “Floor-area ratio” means the ratio of the total closed, conditioned floor area of the building divided by the total area of the parcel.

(h) “Light Touch Density Housing” or “LTD” means that it is inclusive of buildings that are compatible in scale, form, and character with single-family houses and contain two or more attached, detached, stacked, or clustered homes, two, three, or four family houses, duplexes, triplexes, fourplexes, fiveplexes, sixplexes, sevenplexes, eightplexes, townhouses, courtyard apartments, cottage housing, accessory dwelling units, single-family attached homes on smaller lots, and single-family detached homes on smaller lots.

(i) “Local agency” means a city, county, or city and county with zoning authority [stipulate any special home rule or Dillon Rule provisions].

(j) “Objective zoning standards,” “objective subdivision standards,” and “objective health or safety standards” mean standards that do not require or allow personal or subjective judgment by a public official, are uniformly verifiable by reference to an external and uniform benchmark or criterion available and knowable by both the development applicant or proponent and the public official prior to submittal, do not discourage the development of light touch density housing through unreasonable costs, fees, delays, or other requirements or actions which individually, or cumulatively, make impracticable the permitting, siting, or construction of all allowed light touch density housing types or the ownership of a light touch density housing unit, shall not require through development regulations any standards for light touch density housing that are more restrictive than those required for detached single-family residences, shall, to the maximum extent possible, be written both in language and substance, that is accessible and understandable to someone without a planning, development, or legal background, and such standards shall apply to light touch density housing the same development permit, environmental review, and available expedited processes that apply to detached single-family residences.

(k) “Single-family attached homes on smaller lots” means single-family homes on lots of between 1200–2500 square feet.

(l) “Single-family detached homes on smaller lots” means single-family homes on lots of between 1800–5000 square feet.

(m) “Ten minute walking isochrones” means catchment areas of equal time, which are calculated for each point of interest within a cluster of amenity points of interest, are evaluated and processed such that each property (every point) within a walkable oriented development zone is within a 10-minute walk of a cluster of [insert a number from 6–10] or more amenity points of interest, and each isochrone is based on ground conditions, not point-to-point.

(n) “Townhouses” means dwelling units constructed in a row of two or more attached units where each dwelling unit shares at least one common wall with an adjacent unit and is accessed by a separate outdoor entrance.

(o) “Walkable oriented development zone” or “WOD” means an area where the parcels are within ten minute walking isochrones of a cluster of [insert a number from 6–10] or more amenity points of interest and recognizing that there are multiple combinations of such clusters of amenity points of interest, a walkable oriented development zone may consist of just one such cluster or the combination of two, three, or a larger number of clusters of amenity points of interest.

SECTION 2.

[Choose either LTD provision #1 or #2 and/or Transit/Bus/Walkable Oriented Development provision #1 or #2].

[LTD provision #1] (a) Authorization of light touch density housing containing no more than [insert a number from 2–8] residential units on all lots within any zone in which housing is permitted without discretionary review or hearing, if the parcel subject to the proposed light touch density housing is located within a city, or, for unincorporated areas, a legal parcel wholly within the boundaries of an urbanized area or urban cluster, as designated by the United States Census Bureau, unless zoning permits higher densities or intensities.

[LTD provision #2] (a) Authorization of light touch density housing with a density of no more than [insert a number from 10–35] residential units per acre on all lots within any zone in which housing is permitted without discretionary review or hearing, if the parcel subject to the proposed light touch density housing is located within a city, or, for unincorporated areas, a legal parcel wholly within the boundaries of an urbanized area or urban cluster, as designated by the United States Census Bureau, unless zoning permits higher densities or intensities.

[Transit/Bus/Walkable Oriented Development provision #1] (b) Authorization of light touch density housing containing no more than [insert a number from 6–12] residential units on all parcels within a one-half mile radius of a rail or trolley transit stop or a bus transfer station, within a one-quarter mile radius of a stop on a bus corridor with regular service, or a within any walkable oriented development zone without discretionary review or hearing, unless zoning permits higher densities or intensities.

[Transit/Bus/Walkable Oriented Development provision #2] (b) Authorization of increases in the current density of all parcels within a one-half mile radius of a rail or trolley transit stop or a bus transfer station, within a one-quarter mile radius of a stop on a bus corridor with regular service, or within a walkable oriented development zone to [insert a number from 22–50] without discretionary review or hearing, unless zoning permits higher densities or intensities.

(c) (1) Notwithstanding any local law and except as provided in paragraph (2), a local agency may impose objective zoning standards, objective subdivision standards, and objective health or safety standards that do not conflict with this section.

(2) The local agency shall not impose objective zoning standards, objective subdivision standards, objective health or safety standards, or impose other requirements on proposed light touch density housing that would have the effect of:

- (i) setting a minimum or maximum unit size requirement.
- (ii) setting a minimum lot size requirement of greater than 1,200 square feet or setting any maximum lot size requirement.
- (iii) setting a maximum floor-area ratio of less than [insert a percentage from 80%–200%].
- (iv) setting a maximum building coverage ratio of less than [insert a percentage from 50%–80%].
- (v) physically precluding the construction of the stipulated number of a parcel due to a parcel having a flag lot configuration.
- (iii) in the case of (a) above, imposing a height limitation that would physically preclude any of the stipulated units from being at least [insert 3 or 4] stories in height or in the case of (b) above, imposing a height limitation that would physically preclude any of the stipulated number of units from being at least [insert 3 or 4] stories in height.
- (iv) imposing fee requirements,
- (v) imposing owner occupancy standards or income limitation.
- (d) Notwithstanding subparagraph (c),
 - (i) no setback shall be required for an existing structure or a structure constructed on the same parcel and to the same dimensions as an existing structure.
 - (ii) in all other circumstances not described in clause (i), a local agency may require any proposed light touch density housing covered by (a) of this section to have a front and rear setback of up to ten feet and side setbacks of five feet.
 - (iii) in all other circumstances not described in clause (i), a local agency may require any proposed light touch density housing covered by (b) of this section to have a front and rear setback of up to five feet and side setbacks of zero feet.
- (e) In addition to any conditions established in accordance with subdivision (c), a local agency may require the following condition when considering an application for residential units as provided for in this section:
 - (1) Off-street parking of up to one space per unit, except that a local agency shall not impose parking requirements if the parcel is located within a one-half mile radius of a rail or trolley transit stop or a bus transfer station, within a one-quarter mile radius of a stop on a bus corridor with regular service or within a walkable oriented development zone.
- (f) Notwithstanding paragraph (1) of subdivision (c), an application shall not be rejected solely because it proposes adjacent or connected structures provided that the structures meet building code safety standards and are sufficient to allow separate conveyance.

(g) Once a determination is made with respect to eligibility for an increase in density due a parcel being within a walkable oriented development zone, such determination shall not be affected by any change, which would no longer qualify the parcel as being within a walkable oriented development zone.

(h) A local agency may adopt an ordinance to implement the provisions of this section.

SECTION 3.

The Legislature finds and declares that (i) ensuring access to an adequate supply of housing is a matter of statewide concern, (ii) increasing housing options that are more affordable to various income levels is critical to providing an adequate supply of housing, (iii) there is continued need for the development of housing at all income levels, including light touch density housing that will provide a wider variety of housing options and configurations to allow residents of [insert jurisdiction] to live near where they work, (iv) ministerial approval of light touch density housing will unleash thousands of smaller, incremental investments, thereby adding supply that is critically needed, (v) light touch density housing is more affordable by design for residents of [insert jurisdiction] due to reduced construction and infrastructure costs, lower land requirements, more efficient household energy usage, and savings in transportation costs, and (vi) light touch density housing is more beneficial for the residents of the State of [insert name] and its local agencies due to reduced infrastructure costs, more efficient household energy usage, savings in transportation costs, health benefits, and enhanced tax revenues.

Acknowledgments

The authors would like to thank Karl Schneider and Hannah Florence for their research assistance.

Authors

Edward Pinto is the codirector of the American Enterprise Institute (AEI) Housing Center. He can be reached at pintoedward1@gmail.com. Tobias Peter is the codirector of the AEI Housing Center. He can be reached at Tobias.Peter@AEI.org.

References

Bay Area Council Economic Institute. n.d. "How Much Does It Cost to Construct One Unit of Below Market Housing in the Bay Area?" *Bay Area Council Economic Institute*. <http://www.bayareaeconomy.org/how-much-does-it-cost-to-produce-one-unit-of-below-market-housing-in-the-bay-area/#:~:text=In%202019%2C%20the%20average%20construction,of%20below%20market%20rate%20housing>.

- Chapple, Karen, Dori Ganetsos, and Emmanuel Lopez. 2021. "Implementing the Backyard Revolution: Perspectives of California's ADU Owners." Berkeley, CA: University of California Berkeley Center for Community Innovation. <https://www.aducalifornia.org/wp-content/uploads/2021/04/Implementing-the-Backyard-Revolution.pdf>.
- Corinth, Kevin, and Hugo Dante. 2022. *The Understated "Housing Shortage" in the United States*. IZA Institute of Labor Economics discussion paper no. 15447. <https://docs.iza.org/dp15447.pdf>.
- Cortwright, Joe. 2017. "The End of the Housing Supply Debate (Maybe)," *City Observatory*, August 11. <https://cityobservatory.org/the-end-of-the-housing-supply-debate-maybe/>.
- Davis, Morris A., William D. Larson, Stephen D. Oliner, and Jessica Shui. 2019. "The Price of Residential Land for Counties, ZIP Codes, and Census Tracts in the United States." *Federal Housing Finance Agency Working Paper Series*. Washington, DC: Federal Housing Finance Agency.
- Decker, Nathaniel, Carol Galante, Karen Chapple, Amy Martin, Ethan N. Elkind, and Marliee Hanson. *Right Type Right Place: Assessing the Environmental and Economic Impacts of Infill Residential Development through 2030*. Berkeley, CA: Next 10. <https://www.next10.org/sites/default/files/2019-06/right-type-right-place-web.pdf>.
- Federal Housing Administration (FHA). 1936. *Underwriting Manual: Underwriting and Valuation Procedure Under Title II of the National Housing Act*. Washington, DC: Government Printing Office: Pt. II, Sec. 2: Rating of Location, Sec. 233.
- Fischel, William A. 2002. *The Homevoter Hypothesis: How Home Values Influence Local Government Taxation, School Finance, and Land-use Policies*. Cambridge, MA: Harvard University Press.
- Garcia, Manny. 2022. "Across 26 Metro Areas, Residents Largely Support Allowing Missing Middle Homes in Residential Neighborhoods," *Zillow*, April 11. <https://www.zillow.com/research/modest-densification-zhar-30934/>.
- Glaeser E.L. and J. Gyourko. 2003. "The Impact of Building Restriction on Housing Affordability," *Economic Policy Review* 9 (2): 21–40.
- Gyourko, Joseph, Jonathan S. Hartley, and Jacob Krimmel. 2021. "The Local Residential Land Use Regulatory Environment Across U.S. Housing Markets: Evidence from a New Wharton Index," *Journal of Urban Economics* 124: 103337.
- Hamilton, Emily. 2021. "Inclusionary Zoning Hurts More Than It Helps." Mercatus Center Policy Briefs. Arlington, VA: George Mason University.
- Harris, Connor. 2021. "The Exclusionary Effects of Inclusionary Zoning: Economic Theory and Empirical Research." Manhattan Institute Issue Brief. New York City: Manhattan Institute. <https://media4.manhattan-institute.org/sites/default/files/exclusionary-effects-inclusionary-zoning-CH.pdf>.
- Harrison, David. 2023. "America Has Too Much Parking. Really," *Wall Street Journal*, April 2. <https://www.wsj.com/articles/parking-problem-too-much-cities-e94dcecf?mod=mhp>.

- Herriges, Daniel. 2021. *Unleash the Swarm: Reviving Small-Scale Development in America's Cities*. Brainerd, MN: Strong Towns. <https://static1.squarespace.com/static/53dd6676e4b0fedfbc26ea91/t/61b8c9ed85e11c1ed4cafa43/1639500274297/Unleash+the+Swarm+-+updated.pdf>.
- Hoyt, Homer. 1939. *The Structure and Growth of Residential Neighborhoods in American Cities*. Washington, DC: Federal Housing Administration.
- Hsieh, Chang-Tai, and Enrico Moretti. 2019. "Housing Constraints and Spatial Misallocation," *American Economic Journal: Macroeconomics* 11 (2): 1–39.
- Hurd, Richard M. 1903. New York: The Record and Guide.
- Jones, Christopher, Stephen Wheeler, and Daniel Kammen. 2018. "Carbon Footprint Planning: Quantifying Local and State Mitigation Opportunities for 700 California Cities," *Urban Planning* 3 (2): 35–51.
- Kingsella, Mike, and Leah MacArthur, eds. 2022. *Housing Underproduction in the U.S.* Washington DC: Up For Growth.
- Kulka, Amrita, Aradhya Sood, and Nicholas Chiumenti. 2022. "How to Increase Housing Affordability: Understanding Local Deterrents to Building Multifamily Housing." Federal Reserve Bank of Boston Working Paper no. 22-10. <https://doi.org/10.29412/res.wp.2022.10>.
- McMichael, Stanley L., and Robert Fry Bingham. 1928. *City Growth Essentials*. Cleveland, OH: Stanley McMichael Publishing Organization: 342–343.
- Nolen, J. 1917. A Good Home for Every Wage-Earner: An Address Delivered at the Twelfth Annual Convention of the American Civic Association, Washington, DC, December 15, 1916. *American Civic Association Committee on Country Planning* 2 (9).
- Oatman-Stanford, Hunter. 2018. "Demolishing the California Dream: How San Francisco Planned Its Own Housing Crisis," *Collectors Weekly*, September 21. <https://www.collectorsweekly.com/articles/demolishing-the-california-dream/>.
- Pennington, Kate. 2021. "Does Building New Housing Cause Displacement?: The Supply and Demand Effects of Construction in San Francisco." Social Science Research Network (SSRN) working paper. <https://dx.doi.org/10.2139/ssrn.3867764>.
- Phillips, Shane, Michael Manville, and Michael Lense. 2021. "Research Roundup: The Effect of Market-Rate Development on Neighborhood Rents." *University of California Los Angeles Lewis Center for Regional Policy Studies*. <https://www.lewis.ucla.edu/research/market-rate-development-impacts/>.
- Ratcliff, Richard. 1949. *Urban Land Economics*. New York: McGraw-Hill: 321.
- Rothstein, Richard. 2017. *The Color of Law: A Forgotten History of How Our Government Segregated America*. New York: Liveright Publishing: 77.

Taylor, Mac. 2016. "Perspectives on Helping Low-Income Californians Afford Housing." Legislative Analyst's Office brief. Sacramento, CA: California Legislative Analyst's Office. <https://lao.ca.gov/Reports/2016/3345/Low-Income-Housing-020816.pdf>.

U. S. Department of Commerce, Advisory Committee on Zoning. 1922. *A Zoning Primer*. Washington, DC: Government Printing Office.

U.S. Department of Commerce, Advisory Committee on City Planning and Zoning. 1931. *The Preparation of Zoning Ordinances: A Guide for Municipal Officials and Others in the Arrangement of Provisions of Zoning Regulations*. Washington, DC: Government Printing Office.

Whittemore, Andrew H. 2012. "How the Federal Government Zoned America: The Federal Housing Administration and Zoning." *Journal of Urban History* 39 (4). <https://doi.org/10.1177/0096144212470245>.

Zillow Research. 2023. "Zillow's Panel of Experts: Fix Zoning to Improve Housing Affordability," Zillow, March 8. <https://zillow.mediaroom.com/2023-03-08-Zillows-panel-of-experts-Fix-zoning-to-improve-housing-affordability>.