Title
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UCLA Lewis Center for Regional Policy Studies

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Abstract

U.S. cities spent much of the middle and late 20th century reducing capacity for new housing through extensive downzoning, leading to a shortage of homes and rising prices in high-demand locations. To combat this, many cities and states are now reversing course and upzoning to allow higher-density housing, usually in targeted locations such as individual neighborhoods or corridors. While these targeted upzones have increased housing production in some cases, they have also led to higher land prices that erode the affordability of new homes. In this paper I introduce the concept of the “zoning buffer” — the gap between the existing housing stock and the maximum number of homes allowed by current zoning — and describe how it affects land values and ultimately the production and affordability of housing. When upzoning produces a large zoning buffer, land values should not increase substantially because land with redevelopment potential is no longer scarce; property owners lack the leverage to demand more from a developer than a typical homebuyer. These properties can transact at lower prices, delivering lower-cost housing to residents. When zoning buffers remain small, upzoning will result in land value increases that are largely captured by incumbent property owners. I argue that improved housing affordability at a city-, metro-, or region-wide scale can only be achieved through “broad upzoning,” defined here as zoning changes that allow at least moderate density (roughly 6-10 units) on a large share of parcels (at least 25%-50%). With zoning reform receiving more attention across the country, policymakers should prioritize broad upzoning over other strategies that may be unlikely to improve long-term affordability.
Building Up the “Zoning Buffer”: Using Broad Upzones to Increase Housing Capacity Without Increasing Land Values

Cities in the United States used to have lots of legal room to grow. Growth was expected and often encouraged, so cities had policies in place to accommodate it. Los Angeles, for example, had a population of 2.5 million in 1960 and a zoning code that allowed for enough development to eventually house 10 million — quadruple its population at the time. New York City, similarly, had zoning capacity for 55 million people in 1957, roughly seven times the 7.9 million who called the city home that year. Cities planned for much more housing, and zoned to make it possible.

That’s no longer true in most places, including Los Angeles and New York. By 1980, after two decades of downzoning to limit the pace and scale of development, L.A.’s estimated capacity had fallen to 3.95 million even as its population increased to nearly 3 million (Figure 1). Over the next three decades, the city added another 1 million residents but its zoning capacity rose only slightly, to 4.3 million. With no changes to its borders, and only moderate population growth, Los Angeles transformed from a city with capacity for four times its population to one that was bursting at the seams — at least on paper. New York City reduced its capacity even more aggressively with its 1961 zoning code update, capping the five boroughs at fewer than 12 million people, down from 55 million (Figure 2).

Cities and towns across America have followed a similar path, either downzoning to more restrictive zoning or never allowing higher densities in the first place. The nation is now dominated by single-family-only zoning, sharply limiting housing production in the places it’s needed most. This shift has had profound consequences on the cost of development and the affordability of housing.

The gap between a city’s current population (or housing stock) and its estimated capacity is what I call the “zoning buffer.” Before 1960, the buffer in both New York and Los Angeles was at least 300%. New York’s fell to roughly 50% after the 1961 zoning update, and it was just 12% in Los
Figure 1.
City of Los Angeles zoning capacity and population, 1960-2030.

Source: 35 community plans, census data, and historical reports; used with permission of Greg Morrow.

Figure 2.
New York City population, current zoning capacity, and proposed zoning capacity in 1957.

Source: Rezoning New York City: a guide to the proposed comprehensive amendment to the zoning resolution of the city of New York.
Angeles in 2010. These latter numbers might seem perfectly adequate. U.S. cities don’t grow 12% per year — and certainly not 50% per year — and many don’t grow that much in a decade. As long as a city’s capacity exceeds its short- or medium-term growth, one might assume that modest zoning buffers pose no problems. This impression is understandable, but incorrect.

In this paper, I explain why small zoning buffers are insufficient to improve long-term housing affordability, and why a large buffer may in fact be critically important for achieving this goal. Using recent zoning changes in the Bundy Triangle neighborhood of West Los Angeles as a case study, I outline three approaches to zoning reform — value capture, windfalls, and broad upzoning — and argue that broad upzoning is the only approach that can plausibly reduce housing prices and improve affordability. I conclude with recommendations for the successful implementation of broad upzoning.

To help illustrate the drawbacks of small zoning buffers and benefits of larger buffers, let’s begin with the following thought experiment.

**A Simple Example: Capacity Measured by Vacant Parcels**

Imagine a small town where the average new house sells for $600,000. Of that $600,000 price tag, roughly half is the price of land and half is the price of the building itself. There are vacant sites distributed across the town, consisting only of land (no structures), and these are valued at $300,000. In this town, residents may only build a single, detached home on each parcel, so if they buy a vacant parcel and build a home on it, the total cost will be about $600,000 — the same as an average new home on the market.

Now, let’s imagine someone invents a new technology that makes it possible to build the same home for $100,000 instead of $300,000. Will the price of new homes fall to $400,000? The answer depends on the number of vacant parcels in the town.

If vacant parcels are numerous — perhaps three or four times as numerous as the parcels with homes on them — then the price of housing will probably fall. Almost anyone can buy a

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1 This is where the distinction between housing growth and population growth becomes important. Housing needs may increase due to household formation that occurs independent of population growth, for example when roommates split up to form their own households or children move out of their parents’ homes, but that is not my focus here.
When zoning capacity exceeds population by a wide margin, reductions to the cost of construction will benefit people looking to buy or rent a home. When capacity exceeds population by a narrow margin, cost reductions will benefit people who own land.

vacant plot of land and build a home on it for a total cost of $400,000; there’s no shortage of opportunities to do so. The new homes are just as good as the older homes, if not better, so the price of older homes will also fall: No one will pay $600,000 for them anymore. People selling older homes will need to adjust their price closer to $400,000 if they hope to find a buyer. In places where the capacity for new homes exceeds the current population by a wide margin, when someone discovers how to build housing less expensively the beneficiaries are people looking to buy (or rent) a home.²

But what if there are only a few vacant parcels in the town? Housing can be built more cheaply, but there are only a small number of sites where it’s possible to build. Many people want to build a home on these sites (it being such a good deal), so the land price is bid up above its original value of $300,000. In fact, the price of vacant land gets bid all the way up to $500,000. Why? We’ve established that the new homes are just as good as the existing homes, and we know based on the town’s average new home value that there are at least some people willing to pay $600,000 for the combination of land and a house — they’re already doing it. If only a small number of homes can be built, the few people willing to spend top dollar will pay $500,000 for the vacant parcels, and no land will be left over for anyone else. In places where the capacity for new homes exceeds

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² The U.S. has traditionally relied on large quantities of vacant land on the suburban fringe — sprawl development — to preserve the affordability of new housing, but this is associated with substantial environmental costs and doesn’t address the need for urban housing.
the current population by a narrow margin, when someone discovers how to build housing less expensively the beneficiaries are people who own land.\(^3\)

The latter example is how prosperous, opportunity-rich cities have operated for generations. Growth in the small town above is limited by the number of vacant parcels, and most growth in the U.S. is still low-density sprawl, but in built-out cities most growth occurs by building more densely on already-developed parcels. A parcel with nothing on it is functionally equivalent, for our purposes, to a parcel that holds one house even though it could legally hold four. In both situations the city has a larger capacity for new homes. Thus, rather than being limited by the number of vacant parcels, cities today are limited by the number of parcels on which denser housing is permitted and the level of density allowed on each parcel. They’re limited by zoning.

### The Real World: Capacity Measured by Zoning

The discussion above suggests that in the real world we don’t need to invent new construction techniques to reduce the cost of new housing; we just need to change our zoning.\(^4\) We can increase the amount of housing allowed on parcels that already have homes and businesses on them, but once again the effect depends on how widespread the capacity for new housing is. If we can rezone without changing the land prices dramatically, housing will become less expensive; if we can’t, it won’t.

Let’s return to the hypothetical town of identical $600,000 homes, but assume this time that it has no vacant parcels. Instead, to accommodate growth it needs to rezone parcels that already have structures on them and redevelop them at higher densities. We’ll consider two scenarios.

In the first scenario, 5% of parcels are upzoned to allow three homes each, enough to increase the total number of homes in the town by 10% (accounting for demolition of the original homes). Ideally, homes on the upzoned parcels would continue to sell for $600,000 each, or $200,000 in

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3  It’s often argued that developers are the primary beneficiaries of upzonings, but that’s only true in cases where the developer owned the land prior to the upzoning.
4  And, as noted above, if zoning capacity is limited then there won’t be much affordability benefit from such inventions anyway.
land cost per buildable unit. At a construction cost of $300,000 per unit, developers could build triplexes for $500,000 each.

But once again, because these parcels are in short supply and demand is high, their price rises to ensure that homes built on them meet or exceed the price of existing homes in the neighborhood — the price of the upzoned parcels will increase to roughly $900,000, or $300,000 per buildable unit. The landowners hold all the cards, and they’ll capture the value of minor zoning reforms before any home-seekers can benefit.

In our second scenario, the town upzones much more extensively, allowing triplexes on 50% of its parcels, which is enough to double the number of homes in the city. There’s land zoned for higher density everywhere; the right to build more is no longer a precious commodity. A property owner with an upzoned parcel can sell their home for $600,000 to another homebuyer, as they could prior to the upzoning. But can they sell for $900,000 — $300,000 per developable unit — as in the first scenario? The answer is no, they cannot.

The owner can’t sell for $900,000 because their neighbor will happily sell to a developer for $800,000, which is less than $900,000 but more than any homebuyer would pay. The developer can comfortably outbid the homebuyer at that price, and there’s no reason to pay more. Half the town’s parcels are zoned for triplexes, after all, so as a developer there’s no need to pay much more than a homebuyer would: if they lose this bid, there are plenty of other properties to choose from. And if one neighbor is willing to sell for $800,000, another will probably accept a price of $700,000 — again well above what a homebuyer would pay, ensuring that a developer will win the bid, but

5 In reality, the triplex units are probably smaller, share some walls with their neighbors, and have less outdoor space compared to the single-unit detached homes in the neighborhood, so they would naturally cost less to build and rent or sell for less. For the purposes of this thought experiment we can ignore this additional benefit of upzoning. The fact remains that land value will be captured by incumbent property owners to the extent possible.

6 This is a small town, remember, so a doubling of capacity may be sufficient to meet future demand. Cities or regions with greater demand will likely require a larger zoning buffer, closer to the 300% or more found in pre-1960s New York and Los Angeles.

7 “Developer” is defined loosely here. The universe of people who can afford to develop a property with a 10-unit building is much larger than the number that can build a 50- or 200-unit building, and includes people we might not traditionally think of as developers, such as those working in highly paid professional fields such as law and medicine, local non-profits and cooperatives, small business owners, etc.
well below the prices in the first scenario. The original owner, unable to capture the windfall for themselves, may settle for a price of $610,000 or $615,000.

In this case, the amount of land zoned for redevelopment — and crucially, the amount available for sale at any given time — exceeds the amount of land demanded by developers by a wide margin. This is important: Cities can’t do much to increase the number of parcels for sale, but they can increase the number with redevelopment potential. About 7% of U.S. homeowners move each year, so when a large number of parcels have redevelopment potential, natural turnover will ensure that property owners bid the sale price of these parcels down (relative to what developers are willing to pay) rather than developers bidding prices up (relative to what homeowners are willing to pay). Developers, therefore, can purchase properties at a cost of roughly $200,000 per developable unit and build three units for $300,000 each. New homes that once cost $600,000 to develop are now, after a more widespread upzoning, only $500,000. The capacity for housing has increased, but land values have not.

There are only a few modern examples of broad upzoning in the U.S., but their early results are promising. In Minneapolis, where single-unit zoning was abolished in 2018 and triplexes can now be built on residential parcels citywide, home prices on affected parcels increased by only 3%-5% compared to similar unaffected parcels in neighboring cities. Starting in 2016, California passed a series of laws requiring cities to approve accessory dwelling units (ADUs) and junior ADUs, effectively upzoning most of the state to a minimum of two to three units, with no obvious impact on land prices. Results are pending for Oregon, which in 2019 ended single-unit zoning in most of the state, and in California, which with the 2021 approval of Senate Bill 9 now allows up to four units on residential parcels statewide.

8 In a simple analysis of single-family homes sold in the city of Los Angeles in 2017, I actually find that properties which went on to receive a permit for new ADU construction sold for slightly less, on average, than those that did not receive an ADU permit.
Affordability and the Availability of Land

In high-demand cities, improving housing affordability depends on the widespread availability of land on which redevelopment is legal and feasible.

Today, and perhaps only during the past 50 to 75 years of human history, the demand for developable parcels exceeds the supply in many U.S. cities. This is not a consequence of increased developer demand: Adjusted for population, the U.S. now builds less than half as many homes each year as it did in the 1960s. It’s a result of reduced capacity — of zoning, which was invented in the early 1900s and became increasingly restrictive over the ensuing decades. What was once abundant is now scarce, not primarily because of physical, demographic, or economic changes, but because of prohibitions on the legal right to build more homes on most urban parcels.

So long as this artificial land scarcity persists, our cities will continue to provide insufficient housing. Prices will keep rising, or at best they will hold at current levels, unaffordable to too many households. We can continue to upzone modestly, barely keeping up with population growth, or we can devise increasingly clever and inexpensive ways to build homes — or we can do both — but the result will be the same: Property owners will capture the benefits of these changes at the expense of renters and homebuyers.

Figure 3.
Per capita new housing unit starts (privately owned only) in the U.S., 1959-present.

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9 Population growth has also slowed, so we may not need to build the same amount of housing as we did in the past (though the scarcity and high cost of housing likely limits population growth by reducing birth rates). In any case, rising prices, overcrowding, long commutes, and demographic shifts such as the rise of one-person households all point to a housing shortage.
Value Capture, Windfalls, or Broad Upzones

A lack of zoned capacity is what motivates the practice of “value capture,” a set of strategies employed by planners to capture the increased land value created by zoning changes, and direct it toward public rather than private benefit. If a lone parcel zoned for a maximum of one unit is rezoned to allow up to four homes, its value will almost certainly increase. If that parcel sold for $600,000 before, it might sell for $1 million after the zoning change. In theory, planners can “capture” much of this additional value by tying additional requirements to the redevelopment of the property (e.g., by mandating that one of the four units rent to a low-income household at a below-market price). Because this requirement represents a large financial loss to the developer (relative to the parcel’s potential in the absence of the requirement), they will need to pay less for the land for their project to remain profitable. Instead of $1 million, they might offer $700,000 to the property owner; the additional $300,000 that would have gone to the property owner is converted into the public benefit of an affordable unit. This appears to be a win-win in which the property owner earns a windfall on the sale of their property (but only a modest one) and an income-restricted unit is created without public subsidy.

We can see evidence of the value unlocked (or revealed, or transferred) by increased zoning capacity — as well as the interplay of windfalls and value capture — in a recent community plan update near the Metro Rail E Line (Expo) in Los Angeles. As a part of the Exposition Corridor Transit Neighborhood Plan, the city was set to rezone land around several new E Line rail stations. After successful lobbying by pro-housing advocates, the area to be upzoned around the Expo/Bundy Station was expanded to include several dozen parcels in a neighborhood known as Bundy Triangle. These parcels were rezoned from R1 (single-family only) to R3 or RAS4, designations that allow for mid-rise multifamily housing. On a 6,250-square-foot parcel zoned RAS4, for example, a developer could use the city’s Transit Oriented Communities incentives to build at least 27 units, including three reserved for extremely low-income households.

The zone changes went into effect in December 2019. Shortly thereafter, 15 of the affected parcels — eight contiguous parcels north of Tennessee Avenue and seven contiguous parcels to the south, containing a total of 16 homes — were acquired by developer Carmel Partners.
for approximately 50% to 100% above their pre-upzoning value. That price represented a considerable windfall for the property owners who sold their homes. In December 2021, Carmel submitted a proposal to replace the 16 single-family homes with 455 apartments, including 52 for extremely low-income households. The low-income units were generated through a value capture (or public exaction) mechanism; they were the condition for building that volume of market-rate units.

We can interpret this outcome through at least three perspectives.

“A failure of value capture”
One way to interpret the Bundy Triangle case is as a failure of value capture design. Planners underestimated the value that their upzoning would unlock and they failed to capture enough of it, and as a result the property owners captured it instead. If planners had captured all or most of the value, the price of the homes sold after the upzoning would be closer to the price of those sold before. A better-designed policy might have required additional deed-restricted units, reducing the windfall to property owners and increasing the number of affordable units built on properties that are redeveloped (though this requires the government to know how much land values will change in response to a zone change). There is some merit to this perspective, for reasons discussed below it can easily be taken too far and do more harm than good. Critically, value capture policies also implicitly assume that housing prices will remain high forever: If they fell, profits earned on the sale or rental of market-rate units would no longer be sufficient to subsidize losses on deed-restricted units.

“Windfalls are a price worth paying”
Another interpretation is that the windfalls paid to the homeowners were a worthwhile trade — perhaps even a necessary one — for the increased production of housing and the benefits that new housing brings. If the value of their properties did not increase as a result of the zone changes,

10 For evidence the upzoning was responsible for the higher prices, we can compare 2318 Amherst Ave, sold in July 2018 (about 15 months before the upzoning), to the six properties immediately to the north, sold in 2020 and 2021 — shortly after the upzoning went into effect. The home at 2318 Amherst Ave sold for $2 million, while the others sold for $3.25 million. All parcels are the same size, and five of the six $3.25 million properties were sold in February 2020, less than two months after the new plan was adopted. Home prices in Los Angeles did not increase by 60% in the 17 months between these sales; the upzoning was responsible for the higher prices. Carmel Partners also purchased eight of the nine homes (seven of the eight parcels) on the block bounded by Amherst Ave, Expo Alley, Bundy Dr, and Tennessee Ave.
many of the Bundy Triangle homeowners would not have sold their homes. If the homeowners had not sold, the land would continue to be used for $1.5 million to $2 million homes rather than more affordable market-rate and income-restricted apartments.

To illustrate, consider an alternative to what actually happened. In the real world, 16 single-unit detached homes are slated to be replaced by 455 homes, of which roughly 11% are reserved for extremely low-income households — roughly three income-restricted homes for each home that’s demolished. The developer paid $3.25 million each for most of the properties, while their estimated value prior to the upzoning was $1.5 million to $2.2 million.

Figure 4.
Parcels purchased by Carmel Partners after Expo Line Transit Neighborhood Plan upzoning.

Carmel Partners purchased the parcels highlighted in blue. The owner of the parcel highlighted in red did not sell, and the development will be built around their property. Properties with circles represent recently sold properties with their sale values; properties without circles display Zillow’s estimated property values (Zestimate). Image source: Zillow.
Suppose instead that the city required more deed-restricted affordable units as a condition of development: 18% rather than 11%. This would yield five income-restricted units per demolished house. If each deed-restricted apartment costs $400,000 to build, excluding land costs, the higher requirement should reduce the developer’s bid on each property by approximately $800,000. The developer can now offer only $2.45 million per home. If all 16 homes still sell, the net result will be 455 homes, of which 82 are income-restricted — a clear win for value capture. But the lower price means that not every home will sell, and/or that some of the homes sold won’t go to developers. So what if the developer is able to buy only half of the homes? At most, the project would include only 228 units, with 41 for low-income households. If those eight homes aren’t on contiguous parcels, the project might shrink even further or not get built at all.

There’s good reason to believe the latter outcome is more likely. Aside from the hassle of moving, there are also substantial tax implications. When they sell their homes, homeowners pay capital gains on profits over $250,000 (for singles) or $500,000 (for couples), and in California, because of Proposition 13, many homeowners would see a sharp increase in their annual property tax assessment if they moved, even if it was to a similar home. An offer of $1 million or $1.5 million above the property’s pre-upzoning value might justify these costs — it did for most of the Bundy Triangle homeowners, with the exception of the homeowner at the corner of Tennessee Avenue and Bundy Drive. An offer of only $300,000 or $500,000 over the previous value would not be enough for many homeowners. If they didn’t already plan to move, they would very likely — and very rationally — choose to stay. A sale at that price could leave them in a worse financial position than where they started. Over time, many of the properties would eventually sell or be redeveloped, but the city might have to wait another five, 15, or 30 years for it to happen. Given this alternative, one interpretation of what happened at Bundy Triangle is that windfalls for incumbent landowners, while not ideal, nevertheless represent a better outcome than pushing value capture to the limit, and risking no value being captured at all.

This interpretation has more merit, but like the first scenario, it implicitly concedes that potential development sites will remain in short supply. Because of that scarcity, every parcel that goes undeveloped is a blow to the city’s housing supply and affordability. But what if potential development sites weren’t scarce?

“With broad upzones, there are no windfalls to capture”

The third interpretation is to reject the assumption of persistent scarcity inherent to the previous positions — to recognize that land values for the Bundy Triangle properties increased not only because more homes can be built there, but because so few homes can be built elsewhere. I argue that this is the interpretation that will lead to the best long-term outcomes for housing affordability.
Value capture is unnecessary in the context of broad upzoning: Lower land prices will automatically be “captured” in the form of lower rents and sale prices. Windfalls aren’t needed to spur redevelopment, meanwhile, because eligible sites are abundant and readily available.

Imagine, for the sake of argument, that every parcel in Los Angeles currently zoned for single-unit detached homes, duplexes, and triplexes was rezoned to allow up to 10 units in modest three- and four-story buildings. With more than 400,000 such parcels in Los Angeles\(^\text{11}\), this would increase the city’s zoning capacity by at least 3.6 million units, 2 ½ times the city’s existing stock of 1.4 million homes and more than its estimated capacity in 1960. There are approximately 25,000 single-family homes sold on these parcels each year\(^\text{12}\); if just 5,000 of these were sold and redeveloped to their maximum capacity, the city would add 45,000 units to its housing stock annually.

Recalling our hypothetical town and the scenario in which 50% of parcels are rezoned to allow for triplexes, homeowners in this 10-unit scenario cannot sell their parcels for a premium — there are too many just like them. The capacity for housing has increased, but the land price has not. Value capture is not necessary (nor is it feasible\(^\text{13}\)) because lower land prices will automatically be “captured” by renters and homebuyers in the form of lower rents and sale prices. At the same time.

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\(^{11}\) Calculation using 2019 Los Angeles County Assessor parcel roll.
\(^{12}\) Calculation using 2018 and 2019 Los Angeles County Assessor sales list data.
\(^{13}\) Planners could technically implement value capture requirements in this scenario, but every dollar used to subsidize the income-restricted units would have to come directly from the pockets of market-rate tenants (or buyers) in the form of higher rents (or sale prices). When zoning capacity is abundant, value capture results in higher market-rate prices needed to turn a profit on new housing, shrinking the pool of potential customers and reducing housing production. In contrast, when zoning capacity is scarce, value capture transfers value from landowners to income-restricted tenants, though market-rate tenants and buyers still end up paying higher prices with the same negative impact on housing supply.
time, windfalls are not required to spur redevelopment because the number of eligible parcels sold each year far exceeds the number needed to provide enough new housing.

A large zoning buffer allows properties with redevelopment potential to transact at lower prices, ultimately delivering lower-cost housing to residents. And because homes can be built at lower cost, they can also be produced in greater quantities: More people can afford a $450,000 home than a $600,000 home. In the long run, windfall- and value capture-based approaches both fail to improve affordability, but for slightly different reasons. Windfalls fail because potential savings on land costs are fully captured by landowners. Value capture fails because potential savings are transformed into small quantities of income-restricted units, with any excess value devolving to landowners.

Value capture is especially poorly suited to creating long-term, marketwide affordability. First, as discussed above, capturing savings in the form of income-restricted units constrains the ability to build lower-cost market-rate units, reducing competition with existing houses and further propping up housing prices. In this way, value capture, like windfalls, also helps current property owners, though in a more diffuse manner. Second, value capture contains the seeds of its own destruction: if rents and sales prices ever did fall, developers would no longer earn enough from market-rate units to cross-subsidize losses on income-restricted units, and housing production would grind to a halt until prices returned to earlier levels. When prices rise, on the other hand, there is often pressure to increase inclusionary requirements — from 15% to 25%, for example — which puts a new, higher floor on the price of housing at which development is feasible. This ratcheting up of inclusionary requirements therefore coincides with a ratcheting down of overall housing production.

**Implementing Broad Upzoning**

When it comes to broad upzones and large “zoning buffers,” there are few modern examples from which to draw best practices. Those we have may shed some light, however, and general observations about housing policy and development feasibility may also be helpful.

To start with, upzones should be widespread but needn’t be all-encompassing. The case above assumes that all R1-, R2-, and RD-zoned parcels in Los Angeles are rezoned to allow 10-unit buildings, but 50% of these parcels is probably more than enough; ideally they would be the parcels located most proximate to jobs, transit, and other amenities and resources. If 25% of parcels were rezoned, then roughly 6,000 eligible parcels would sell each year, which is nearly enough to meet the city’s projected housing needs (close to 60,000 additional homes per year over the next eight years) without developing any other parcels in the city. In cities that represent
a smaller share of their metro area population, rezoning even 100% of parcels might not be sufficient, though it would still be a positive step. The more municipally fragmented a region, the greater the importance of regional cooperation — or state mandates.

The upzones must also include at least moderate density — triplexes or fourplexes won’t cut it in most urban areas. The UC Berkeley Terner Center for Housing Innovation has estimated that Senate Bill 9, which allows for up to four units on single-family-zoned lots across the state, **would produce approximately 400,000 new units statewide** in the coming years (some estimates peg state housing needs at 500,000 new homes per year). Minneapolis changed its zoning to allow triplexes citywide in 2018, but thus far **only about 70 units have been produced**. These underwhelming figures can be blamed partly on barriers to redevelopment such as owner-occupancy requirements, but density is key. Redevelopment is costly: It requires design, entitlement, and permitting; demolition of the existing home; construction, including financing; and the loss of rental revenue or use of the property during construction. On top of all that, it’s also a big hassle; not everyone wants to be a developer. Enduring all this to replace a functional single-family home with a triplex or fourplex will rarely be worth the trouble. Going through it to build eight units very often will be, and all the more so for 10 or 12 homes.14

Cities that try to “cheat” by creating a large zoning buffer using a small amount of land — by zoning 5% of their land for 50-story towers, for example — will probably fail to improve affordability. In the U.S., buildings above eight stories must be constructed from steel or concrete15 and are much more expensive, per square foot, than shorter buildings; this alone would eliminate most of the savings from lower land costs. Also, developers will often build to less than maximum capacity in cases where zoning is extremely permissive. Permissive floor-area ratios (FAR) and no height restrictions in much of downtown Los Angeles allow for buildings to easily reach 15 to 20 stories, yet many downtown developments of the past decade have been eight stories or less.

Finally, I must acknowledge the political challenge of broad upzones. This approach may be more effective at promoting affordability than the alternatives of windfall- and value capture-based zoning reforms, but its effectiveness is also its greatest political vulnerability. The alternative approaches distribute benefits to existing residents: property owners in the case of windfalls, and the winners of income-restricted housing lotteries (and their political allies) in the case of value capture. New market-rate homes — even those that are relatively affordable — are also coded

14 Senate Bill 10, approved by the California legislature in 2021, allows cities to quickly rezone parcels for up to 10 units each, making it ideally suited to this task.
15 The 2021 edition of the International Building Code now allows for mass timber construction up to 18 stories, but the cost is similar to concrete and steel, at least for now.
as serving outsiders rather than local residents (despite considerable evidence to the contrary), and don’t enjoy the same political support as income-restricted units in many communities and advocacy spaces. Moreover, if new housing can be built less expensively, it’s likely to drive down the price of existing housing, and this has the potential to trigger a political backlash from homeowners and landlords.

Conclusion

Planners in jurisdictions with limited vacant land can use one of three approaches to encourage housing production through zoning reform. The first relies on upzoning to create windfalls for property owners, which in turn may induce the sale and redevelopment of upzoned properties. The second also creates windfalls through upzoning, but uses value capture to redirect these windfalls toward purposes considered more beneficial to the public, such as income-restricted housing. Both strategies require modest or moderate upzoning such that the city’s “zoning buffer” remains small. As a result, both strategies increase the cost of development (either through higher land prices or larger exactions), ensuring that new housing continues to be expensive to build and therefore limited in quantity. Value capture places even greater limits on housing production because it reduces the incentive for homeowners to sell to those who would redevelop their properties. In practice, most cities’ zoning changes are a hybrid of these two approaches: imposing exactions to recapture some — but not all — of the increase to land values.

The third approach, rarely discussed but once commonplace, is to allow housing development that is substantially denser than existing land uses, and to allow it on many parcels, throughout the city. Rather than using financial inducements to promote the sale and redevelopment of land, these broad upzonings — and the large zoning buffers that characterize them — rely on an abundance of development opportunities to produce adequate housing. This abundance limits the market power of property owners, reducing or eliminating the land value increase that accompanies more concentrated upzones, and allowing for the development of lower-priced housing.

While ambitious, broad upzoning does have important selling points that could ease its adoption. For one, it benefits both market-rate and income-restricted housing developers, reducing costs and eliminating the perceived competition over available land between the two groups. Broad upzoning favors small-scale developers — the builders of “missing middle housing” who are more popular with the public than their larger, wealthier, more politically connected peers. Missing middle housing itself, such as courtyard apartments and three- and four-story apartment buildings, is also more welcome in many places than taller, denser developments. Renters and homebuyers across the housing market also benefit from broad upzoning, far outnumbering the
windfall recipients and housing lottery winners who benefit from our current approach. With lower housing prices, rent assistance and low-income housing construction subsidies could also benefit far more households.

Most importantly, broad upzoning represents a realistic strategy for improving housing affordability over time. At best, the other approaches can only promise that prices may not rise and a lucky few will win subsidized homes. In practice, even that promise has been only partially fulfilled, with prices continuing to rise year after year. Many of our favorite neighborhoods were built at a time when zoning buffers were large, capacity was widespread, and — not coincidentally — housing was affordable. We should learn from that history and adapt its lessons to the modern city.