

Supply Stagnation:

The Root Cause of Greater Boston's Housing Crisis and How to Fix It

By Andrew Mikula







MISSION

Pioneer Institute develops and communicates dynamic ideas that advance prosperity and a vibrant civic life in Massachusetts and beyond.

Vision

Success for Pioneer is when the citizens of our state and nation prosper and our society thrives because we enjoy world-class options in education, healthcare, transportation, and economic opportunity, and when our government is limited, accountable, and transparent.

Values

Pioneer believes that America is at its best when our citizenry is well-educated, committed to liberty, personal responsibility, and free enterprise, and both willing and able to test their beliefs based on facts and the free exchange of ideas.

This paper is a publication of Pioneer Opportunity, which seeks to keep Massachusetts competitive by promoting a healthy business climate, transparent regulation, small business creation in urban areas, and sound environmental and development policy. Current initiatives promote market reforms to increase the supply of affordable housing, reduce the cost of doing business, and revitalize urban areas.

Pioneer Education seeks to increase the education options available to parents and students, drive system-wide reform, and ensure accountability in public education. The Center's work builds on Pioneer's legacy as a recognized leader in the charter public school movement, and as a champion of greater academic rigor in Massachusetts' elementary and secondary schools. Current initiatives promote choice and competition, school-based management, and enhanced academic performance in public schools.



Pioneer Health seeks to refocus the Massachusetts conversation about healthcare costs away from government-imposed interventions, toward marketbased reforms. Current initiatives include driving public discourse on Medicaid, presenting a strong consumer perspective as the state considers a dramatic overhaul of the healthcare payment process, and supporting thoughtful tort reforms.



Pioneer Transportation seeks reforms that allow commuters to take full advantage of the coming mobility revolution — with access to a range of affordable and on-demand public and private transportation options, as well as transit-friendly real estate development.

Table of Contents

Introduction	_ 4
An Insidious Problem	4
A Paltry Rate of Production	4
Demographic and Demand Shifts	— 5
The COVID Question: A Temporary Blip	6
The "Why"	- 7
The Exorbitant Rise of Construction and Financing Costs	- 8
Land Use Regulation and Zoning	— 10
Political Opposition to Housing	— 11
Too Many "Solutions" That Don't Address the Underlying Issue —	— 13
Recommendations and Conclusion	— 14



Introduction

Over the past several decades, and especially since the beginning of the COVID-19 pandemic, Greater Boston¹ home buyers and renters have faced the combination of rising prices and fewer homes on the market. The median down payment for a house in Greater Boston was \$105,300 in November 2023, more than the region's annual median household income.² In June 2023, the average monthly rent in the City of Boston surpassed \$3,000,³ and in 2024 Apartment Advisor named Massachusetts "the most expensive state to rent a one-bedroom apartment," with a median price of \$2,500.⁴ Homes in Greater Boston are not only unaffordable, but increasingly unavailable. In the five years between January 2019 and January 2024, the number of active home listings in Greater Boston declined by 55 percent.⁵

For families and individuals, there are multiple consequences of a vice-tight housing market. Young people are often forced to remain renters or live with relatives well into adulthood, and retirees often cannot afford to downsize within their communities. Rates of homelessness are on the rise, and many families are struggling to afford the homes they currently live in. Young professionals especially are leaving Greater Boston in droves, lured by more affordable housing in other regions of the country, and many talented professionals and students are dissuaded from moving here in the first place for the same reasons.

This paper will argue that the root of this regional housing crisis, which no longer only affects low-income and renter populations, is a decades-long trend of underbuilding that has subjected the remaining housing stock to increased competition amid a booming economy and notable demand shifts. It first describes the broad-scale demographic facts behind this supply-demand imbalance and how that imbalance shows up in the data. It then details the various causes of this persistent decline in housing production, from recent trends in construction costs and interest rates to long-standing patterns of over-regulation and political backlash. Lastly, it discusses how many of the "solutions" conceived to respond to the crisis have fallen short by fundamentally failing to address the supply/demand dynamics at the root of the problem. It concludes with an overview of current housing production goals at the state and regional levels and outlines policies that would likely be more helpful in achieving them.

An Insidious Problem: Documenting Greater Boston's Housing Supply and Demand Imbalance

Because it is so difficult to measure housing demand, and also because the decline in Greater Boston housing production has occurred over such a long period, some observers continue to deny that a lack of supply is the underlying problem behind soaring housing prices. The reality is that, especially in the past decade, housing production has lagged behind household growth and vacancy rates have fallen well below the national average, creating enormous competitive pressure that ultimately raises home prices.

A Paltry Rate of Production

On the supply side of the equation, there has been a precipitous drop in the number of units that have been permitted to be built. Figure 1 shows the number of units for which building permits were issued in all of Massachusetts and in Greater Boston since 1980. While the data tracks closely with the business cycle, the trend appears as a bifurcation between permitting activity before and after 1990. Since 1990, the rate of home construction has generally increased in the region, but remains well below the levels seen in the 1980s. And the 1980s were not an exception to the pre-existing norm. Data sources using a narrower definition of Greater Boston have found that building permits issued in the 1960s and early 1970s exceeded those issued in the 1980s.⁶

In the five years between January 2019 and January 2024, the number of active home listings in Greater Boston declined by 55 percent.

Housing production has lagged behind household growth and vacancy rates have fallen well below the national average, creating enormous competitive pressure that ultimately raises home prices.

Figure 1: Number of Building Permits Issued in the Five-County Greater Boston Region and Massachusetts, 1980–2022⁷



This trend is particularly concerning in light of the region's growing reputation as an economic powerhouse. Between 2002 and 2022, Greater Boston added 822,000 jobs,⁸ but only issued permits for 246,000 housing units,⁹ a ratio exceeding 3.3, compared to the EPA's recommended range of 0.75 to 1.5.¹⁰ Indeed, in the country as a whole, housing production has been relatively low since the 2008 financial crisis. But in Greater Boston, it never recovered from the 1991 recession (see Figure 2).



Figure 2: Building Permits Issued per 1,000 Residents in the Five-County Greater Boston Region and the United States, 1980–2022¹¹

Still, charts using permitting data alone obscure the large number of homes that are permitted to be built but never actually constructed, a gap largely explained by growing construction costs.¹² This gap is a nationwide problem. In 2022, the United States hit a 39-year high in the number of homes that were authorized, but had not started construction,¹³ matched only during an era of double-digit inflation in the early 1970s.¹⁴

Demographic and Demand Shifts

Hypothetically, a declining rate of housing production in Greater Boston would not be nearly as concerning if the region were also demographically stagnant. Needless to say, this is not the case.

In 2021, the demographic most likely to move out of Massachusetts was ages 26–35—those in the peak family formation years.

Massachusetts

Greater Boston

Between 2010 and 2020, the number of households in Greater Boston increased by 10.7 percent, the fastest clip since the 1970s, while the number of housing units in the region increased by 7.9 percent, a rate similar to the previous decade (see Figure 3).¹⁵ By definition, the number of households growing faster than the number of housing units has lowered vacancy rates, giving more leverage to landlords to raise rents and making it harder for families to find housing that suits their needs.¹⁶ Eventually, newly formed households will simply leave the region (or not come here in the first place) if housing is unavailable to them. In 2021, the demographic most likely to move out of Massachusetts was ages 26–35 — those in the peak family formation years.¹⁷







Household Growth Housing Unit Growth

The growing rate of household formation is largely explained by two factors: a booming economy that has attracted newcomers to the region,¹⁹ and a rash of Millennials leaving living arrangements with roommates or relatives.²⁰ Looking forward, the economic factors driving household formation will likely continue into the 2020s, as Boston maintains an enormous competitive advantage in life sciences, education, financial services, and other sectors.²¹ While most Millennials are now homeowners,²² and almost half are married,²³ there will likely continue to be some household growth driven by shifting living arrangements among younger Millennials and Gen Z throughout the 2020s.

However, the biggest demographic factor driving elevated household growth rates will likely occur on the other end of the age pyramid. Baby Boomers' long-standing desire to "age in place," as opposed to living in a group home or with family as they age, should accelerate the household growth rate in the 65+ age bracket throughout the 2020s and 2030s.²⁴ Consider that, in 2011, the share of the population heading a household tended to decline sharply after the 75–84 age bracket. But by 2021, the share of people who are household heads rose continuously with age.²⁵ And the Urban Institute projects that, between 2020 and 2040, 86 percent of net new households added nationwide will be headed by someone over the age of 65.²⁶ So whether among the young or the old, demographic and economic trends will likely keep housing demand elevated in Greater Boston and beyond for the foreseeable future.

The COVID Question: A Temporary Blip

The immediate economic fallout from the COVID-19 pandemic—a falling population and an uncertain economy in Greater Boston—may cause some to approach the housing shortage with less urgency. In 2020, some observers expected that the pandemic would fully reverse the trends towards urban living and economic concentration around major cities that characterized the previous decade. In hindsight, however, this reversal was only temporary.

Baby Boomers' longstanding desire to "age in place," as opposed to living in a group home or with family as they age, should accelerate the household growth rate in the 65+ age bracket throughout the 2020s and 2030s. In fact, the COVID-19 economic fallout has had the opposite effect on the housing market as most recessions, shifting demand in ways that have exacerbated affordability challenges and encouraged families to consume more real estate. And after initially fleeing large cities during the pandemic, young renters and people of means have poured back in, such that, by 2022, residential vacancy rates in the City of Boston were the lowest they have been since 2016 (see Figure 4).²⁷ Meanwhile, in 2022 the Greater Boston vacancy rate was the lowest it has been since the Great Recession,²⁸ and has also been consistently lower than in the United States as a whole over that timespan,²⁹ indicating tight supply relative to demand. Empirically, low housing vacancy rates with an excess of demand over supply are associated with rising home prices.³⁰



Figure 4: Estimate of Residential Vacancy Rate in the City of Boston, Greater Boston, and the United States, 2010–2022*³¹

* 2020 American Community Survey 1-year estimates were never published due to the COVID-19 pandemic. The 2020 figures in the figure above are from the U.S. Census Bureau's Housing Vacancy Survey for Greater Boston and the United States and from ApartmentList.com's July 2020 estimate for the City of Boston.

As long as job and household growth persist, there will be a steady demand for new housing in Greater Boston. Between July 2022 to July 2023, the Boston area added more than 16,000 residents and 12,000 jobs,³² before adding an additional 12,000 jobs in the following six months.³³ The Boston-Cambridge-Nashua NECTA, a town-by-town classification of the region, is on pace to surpass its pre-pandemic high in total jobs by the summer of 2024.³⁴ In fact, the most significant area in which Greater Boston seems not to be economically competitive is cost of living, and the ballooning cost of housing both before and during the pandemic is a major contributor to that problem.

In sum, the number of homes built in Greater Boston declined precipitously starting in the early 1990s, both in absolute terms, relative to regional housing demand, and relative to the country as a whole. Meanwhile, demographic and economic trends have and will create substantial demand for building at a faster clip in the near future, and the temporary effects of COVID-19 on the region's population and economy do not obviate this fact. The next section examines why this supply-demand imbalance got so dire in the first place.

The "Why": Factors Explaining The Decline in Home Production (and the Rise in Home Prices) in Greater Boston

Ultimately, home buyers and renters are most concerned by prohibitively high market prices. Empirically, a paltry supply tends to lead to bidding wars that drive up prices for the few existing homes that are available.³⁵ But often the underlying issue is that higher costs and supply chain issues for builders constrain supply by making building less financially feasible, while simultaneously ensuring that the homes that are built are more expensive than they otherwise would be. These higher costs show up in several channels - construction materials, interest rates, land use regulation, and political backlash.

The Exorbitant Rise of Construction and Financing Costs

250

As alluded to above, persistent construction cost inflation is a major reason why housing production has fallen behind demand in recent years, and all indicators are that these costs will remain elevated for the foreseeable future. According to the producer price index published by the U.S. Bureau of Labor Statistics, in the two years between January 2020 and January 2022, the cost of construction materials rose by an average of 48 percent in the United States.³⁶ As of January 2024, these costs have declined slightly, but are still 43 percent higher than those of January 2020 and 132 percent higher than they were in 2000, far outpacing the Consumer Price Index over both periods (see Figure 5). While the supply chain issues induced by COVID-19 and its fallout were temporary, there's little indication that construction costs will return to pre-pandemic figures.

In the two years between January 2020 and January 2022, the cost of construction materials rose by an average of 48 percent in the United States.



Construction Materials Price Index



^{*} The indices have been normalized to a score of 100 in January 2000 to facilitate easy comparison between the two trajectories

Perhaps even more important than rising construction costs is the persistent construction worker shortage, which was greatly exacerbated by the pandemic-era dip in immigration rates³⁸ and the "Great Resignation" trend of 2021-2023.39 The wages and salaries of construction workers accelerated during the pandemic,40 but still failed to keep pace with those of the general private sector labor force.⁴¹ While this may seem like good news for builders at first blush, it also means that many construction workers will continue to struggle to afford the cost of living in housing- starved areas like Greater Boston.42 If builders and contractors cannot find workers for their projects, a vicious cycle could result that makes it difficult for the region to keep up with housing demand, further raising the cost of living for workers, which in turn deepens the worker shortage.

Compounding the problem of construction cost inflation and labor shortages, Massachusetts also generally has higher building costs than other states. An analysis by Today's Homeowner Media found that the per-square-foot cost of building a 2,100-square-foot "starter home" in Massachusetts would be 22 percent higher than the national average, second only to Hawaii, whose delicate topography makes it inherently hard to build.43

If builders and contractors cannot find workers for their projects, a vicious cycle could result that makes it difficult for the region to keep up with housing demand.

Permitting and land costs are also more expensive in Massachusetts than in most places in the country. In 2023, the average price of an acre of land in Massachusetts was \$333,200,⁴⁴ the second-highest in the nation after Rhode Island and more than the "hard costs" (i.e., labor, materials, and utilities) of building a home in most other states (see Figure 6).⁴⁵ Building permit fees vary enormously by locality and by the typology of the building, but are often in part calculated as a percentage of the hard costs, adding further barriers to new construction in areas with expensive materials and labor.



Figure 6: Average Price of an Acre of Land By State, 2023*46

* Data visualization template courtesy of MapChart.net.

More substantial costs can arise from discretionary review processes, such as rezoning, that can force builders to hire lawyers and pay additional fees to have architects redesign projects to conform to parochial demands.⁴⁷ Empirically, in large, coastal metropolitan areas like Greater Boston, securing entitlements for new construction projects is more difficult than in much of the South and Midwest.⁴⁸ In Greater Boston and elsewhere, local opposition often leads to projects being "downsized" or rejected entirely,⁴⁹ clear-cut instances of housing proposals going unbuilt in areas for which there is strong demand. And even if a project is eventually approved, the developer-owner will have to pay property taxes, insurance, debt service, and other "holding costs" for the duration of the entitlements process.

While some municipalities have tried to streamline permitting processes in recent years, such reforms cannot overcome the steep materials costs and labor shortages that continue to plague the construction industry. Even with COVID-era supply chain issues subsiding, strong demand for construction and tariffs on foreign lumber (which, as of this writing, the U.S. Department of Commerce is planning to raise from 8.05 percent to 13.86 percent) will likely keep materials costs elevated.⁵⁰ Ironically, the one big factor that could stifle construction demand and thus hold material costs in check is itself making construction expensive: financing costs.

Starting in 2022, the Federal Reserve gradually raised the interest rate on overnight loans for commercial banks, known as the Federal Funds Rate, to 5.33 percent, the highest it has been since 2001.⁵¹ This policy, meant to combat stubborn COVID-era inflation, has sent ripple effects throughout financial markets, making it more difficult to finance mortgages, construction loans, and other real estate transactions.

One direct effect of this Federal Reserve action is that it is harder to finance new housing construction. After hovering between 7 and 9 percent for most of the pandemic, the average effective construction loan interest rate for a pre-sold single-family home jumped to 15.65 percent by Q4 of 2023 (see Figure 7).⁵² Thus, builders need to secure much more capital up front to make their projects financially viable than they did even a couple of years ago.

Figure 7: Average Effective Interest Rate for Land Acquisition, Speculative Single-Family Home Construction, and Pre-Sold Single-Family Home Construction in the United States, 2018–2023⁵³



Because high interest rates also translate to larger mortgage loan payments, Federal Reserve efforts to fight inflation have also dampened demand for home buying. At its post-pandemic peak in October 2023, the average 30-year fixed rate mortgage in the United States had an interest rate of 7.83 percent, the highest since 2000.⁵⁴ While buyers in the 1980s and 1990s often faced much higher rates, decades of home price inflation outpacing income growth still leaves housing much less affordable today than it was in the 1990s, on average.⁵⁵

While these construction cost and financing challenges are both fairly recent and national in scale, Greater Boston in particular suffers from a more parochial and long-standing barrier to ramping up housing production. Local rules like zoning laws are discussed in the next section.

Land Use Regulation and Zoning

In 2022, Massachusetts had the third-highest population density in the country, but also the 15th-highest median lot size.⁵⁶ The typical residential property in Massachusetts takes up just under 19,200 square feet, compared to 13,500 in Pennsylvania, 9,500 in Texas, and 7,400 in Nevada. Even in leafy Boston suburbs, it's not uncommon for local newspapers and town officials to describe their communities as "built-out" or "nearly built-out,"⁵⁷ as most of the individual land parcels have already been developed at relatively low densities. Using this land more efficiently could be a crucial aspect of alleviating both the shortage and the ballooning prices of housing in the commonwealth.

But land use experts, like Brookings Metro Senior Fellow Jenny Schuetz, warn that, in many cases, "there is no legal capacity to create additional housing" in such communities.⁵⁸ And local zoning laws—rules mandating minimum lot sizes, capping the number of housing units per acre, or otherwise restricting the density of new development—play a big role in limiting this legal capacity. Consider that many Boston suburbs—including parts of Weston,⁵⁹ Acton,⁶⁰ Marsh-field,⁶¹ and others—require a property owner to have an acre or more of contiguous land before legally being able to build a house.

In 2022, Massachusetts had the third-highest population density in the country, but also the 15th-highest median lot size. It is well-documented that restrictive zoning laws both raise home prices and limit the supply of new housing. In 2009, a study by two Harvard economists that examined land use patterns in Greater Boston found that "minimum lot size and other land use controls are associated with reductions in new construction activity."⁶² And a more recent study focusing on San Francisco found that "local land use regulations are closely linked to the value of houses sold," and these regulations play an especially large role in raising home prices in areas where land values are "a large fraction of house values."⁶³

It may not be surprising that minimum lot size requirements both raise home prices and reduce home production—after all, buying additional land costs money, and minimum lot sizes also directly reduce density in areas with finite amounts of land. However, other forms of land use regulation, such as minimum parking requirements, can be more insidious. In the words of land use regulation researcher M. Nolan Gray, rules ensuring that each housing unit has access to a certain amount of off-street parking "effectively mandate that each resident consume more land," similar to minimum lot sizes.⁶⁴ And these rules are often wildly out of step with the amount of parking that residents actually need. For example, the Town of Brookline requires at least two off-street parking spaces per residential unit in the vast majority of its zoning districts,⁶⁵ despite the fact that, according to the 2022 American Community Survey, only 24 percent of Brookline households have access to two or more vehicles.⁶⁶

Especially in already built-up areas of Greater Boston, these parking requirements will likely force developers to build parking underground, rather than on a surface-level lot. Underground parking typically costs up to \$50,000 per space to build.⁶⁷ In areas with strong housing demand, developers may be able to pass this cost onto tenants in the form of higher rents. In other places, it may prove prohibitive for getting the project off the ground.

In summary, land use regulations contribute to the housing shortage both directly (by making dense housing developments illegal) and indirectly (by making dense housing developments financially unviable to build). There have been some notable zoning reforms in the Boston region in recent years, with the City of Boston ending parking minimums for affordable housing projects and state-level legislation requiring cities and towns with MBTA access to allow more multi-family housing near transit stations.⁶⁸ But there are also incredible barriers to enacting the kind of broad-based rezoning that will meet the scale of the current housing shortage.

Some of those barriers are geographical. Future development should be conscious of the need for mitigating flood risks, protecting wetlands, and anticipating the effects of coastal erosion in certain areas. Also, any home construction in areas with steep grades or rocky outcrops will certainly be both expensive and sparse.

But the larger barriers to lasting change around increasing home construction in Greater Boston are political. Implicit in the above discussion of how zoning laws raise home prices is that existing suburban homeowners receive an immense financial benefit from these regulations, and thus are often ready to actively oppose new construction in their neighborhoods. However, there are also renters and urbanites who are concerned that new construction will attract wealthier people to their communities, eventually displacing low-income tenants from their homes. The next section addresses both of these concerns.

Political Opposition to Housing

A 2017 study out of Boston University meticulously documents what local officials already knew: people who show up to speak at public meetings regarding housing policy in Greater Boston are, on the whole, overwhelmingly opposed to new development.⁶⁹ News outlets and local government websites are rife with articles regarding housing projects that were denied after years of political opposition, including developments proposed under programs like Chapter 40B that would have created dozens of income-restricted units.⁷⁰

Land use regulations contribute to the housing shortage both directly (by making dense housing developments illegal) and indirectly (by making dense housing developments financially unviable to build). By way of explanation, the study's authors conclude that "the concentrated costs and diffuse benefits of housing development spur a group of highly affected individuals to both participate and oppose new housing."⁷¹ The nature of those costs, as cited by the meeting participants, are incredibly diverse, from increased traffic to impacts on schools and infrastructure to loss of open space to declining property values. And these meeting participants (and the points they raise) are not necessarily representative of how the community at large feels about new housing, with the Boston University study identifying them as disproportionately older, male, and long-time homeowners.

In some cases, these political concerns can be tempered with education. For example, several studies on the topic of financial impacts of development have concluded that, despite popular belief, new home construction does not measurably impact surrounding property values,⁷² and multi-family home construction in particular is usually fiscally positive.⁷³ And many public school districts in Boston's suburbs have seen declining enrollment since well before the COVID-19 pandemic,⁷⁴ neutralizing concerns of school overcrowding.

But other, more abstract points of opposition, such as changes to the "neighborhood character," will likely never be fully mitigated. Instead, at some point those who will most benefit from these changes need to mobilize other beneficiaries, who are often renters and the young. However, in expensive cities where many of these potential beneficiaries worry about gentrification (i.e., neighborhood change via an influx of wealthy newcomers), new, mostly market-rate housing projects are also often politically difficult.

National survey data has even led some researchers to postulate that "rising housing prices can create a vicious circle, where prices feed opposition to urban change, and this opposition further increases prices."⁷⁵ This link between expensive housing and anti-development attitudes seems to be particularly robust among otherwise pro-development renters. For example, political scientist Michael Hankinson has documented how "in high-rent cities, renters demonstrate NIMBYism on par with homeowners, despite continuing to support large increases in the housing supply citywide."⁷⁶ NIMBY, an acronym for "not in my backyard," refers to an aversion to allowing new development in one's own neighborhood, and is often associated with homeowners because of their perceived financial benefit from limiting new development. Such terms as "NIMBY" and "gentrification" have entered the popular lexicon in recent years as local jostling over the location and details of new development has been associated with regional and national housing affordability challenges (see Figure 8).⁷⁷

"The concentrated costs and diffuse benefits of housing development spur a group of highly affected individuals to both participate and oppose new housing." – Katherine Levine Einstein and coauthors

"Rising housing prices can create a vicious circle, where prices feed opposition to urban change, and this opposition further increases prices."

 Martin Larsen and Jacob Nyrup

Figure 8: Google Trends Monthly Index of Search Interest in "NIMBY" and "Gentrification" in the United States, January 2012–March 2024⁷⁸



To be clear, aggregate reviews of academic research have concluded that "increases in housing supply slow the growth in rents in the region."⁷⁹ And while urban redevelopment sometimes does displace tenants directly, many other proposals to replace abandoned warehouses,⁸⁰ build on parking lots,⁸¹ or even deck over public rail infrastructure⁸² have also drawn the ire of anti-gentrification activists. At the very least, such activists may support building more housing in the suburbs and in urban projects that directly meet the needs of the community's existing residents,⁸³ much like how multi-family housing often garners more support in the suburbs when it's only for seniors.⁸⁴ However, until there is a major realignment of political priorities for neighborhood groups with outspoken opinions on housing policy, most battles to ramp up housing production will be hard-won.

Too Many "Solutions" That Don't Address the Underlying Issue

When economists and others advocate for new, market-rate housing construction as part of the solution to the affordable housing crisis, they rely on a phenomenon called "filtering." Filtering refers to the process by which, as housing ages, it often becomes less desirable relative to other options on the market, and thus may go from housing wealthier families to middle-class or even low-income households over time. Academic research suggests that filtering can work, such that market-rate housing construction eventually also serves people of lesser means.⁸⁵

However, an important caveat is that filtering takes a long time. A 2014 study out of Syracuse University found that, on average, the real family income in a rental housing unit only declines to half of the income of the original occupant after more than 20 years.⁸⁶ Thus, there will be many low-income residents who have urgent housing needs going unfulfilled even if supply keeps up with demand in the near future. This urgency necessitates a broader set of solutions to the housing shortage beyond a long-term increase in production. However, it's worth exploring whether some of these additional solutions also place more constraints on housing supply, thus undermining a crucial aspect of efforts to solve the housing crisis in the first place.

Perhaps the most pertinent example of this is rent control. Often intended to stabilize long-time tenants and protect them from drastic rent increases, policies limiting year-to-year rent increases also encourage landlords to take rental units off the market, converting them into condos, renovating them to target a higher-end market segment, or even moving into them themselves. One study of San Francisco's enactment of rent control found that landlords subject to the policy reduced their rental housing stock by 15 percent.⁸⁷ Stanford Professor Rebecca Diamond has argued that this reduction in supply helps ensure that only the wealthy can afford to move to San Francisco in the first place, ultimately both fueling gentrification and worsening income inequality.⁸⁸

Other policies may shift the cost burden of expensive housing among tenants without affecting supply. For example, there is substantial evidence that requirements for developers to include below-market-rate units in otherwise market-rate projects, a policy known as inclusionary zoning, raises market-rate housing prices.⁸⁹

Many other policies attack a symptom of the housing crisis without addressing the supply-demand imbalance at its root cause. A notable example of this is the recent efforts in states like California, Nebraska, and Minnesota to place heavy restrictions on large investment firms buying up single-family homes to rent out.⁹⁰ In fact, the viability of such large-scale investments is contingent on a pre-existing pattern of rapid rent growth, strong housing demand, and substantial barriers to increasing supply. Invitation Homes, Inc., the largest owner of single-family rentals in the United States,⁹¹ says directly in their February 2024 Form 10-K S.E.C. filing that their investment strategy involves "targeting submarkets and neighborhoods in undersupplied high-growth markets."⁹² And a 2023 analysis by the Urban Institute found that institutional investments in the housing stock tend to "lag, not lead, rent increases."⁹³

Still other policies constitute vastly disproportionate responses to minor contributions to supply constraints and growing rents. The best example of this is the rash of regulation targeting As housing ages, it often becomes less desirable relative to other options on the market, and thus may go from housing wealthier families to middle-class or even low-income households over time. short-term rentals. A 2024 study of short-term rentals in New York City found that Airbnb was responsible for about 1 percent of aggregate rent growth in the decade ending in 2021, before the city banned short-term rentals entirely.⁹⁴ Further, these modest rent increases disproportionately affected wealthy renters in touristy areas, not the more vulnerable low-income renters in outlying boroughs.

There are also national policies that may help increase the supply of homes, but are not the most efficient solution in the long-term. The IRS's Low-Income Housing Tax Credit program, or LIHTC, allows state finance agencies to reduce federal income taxes for entities that buy or build affordable rental housing.⁹⁵ These tax credits are then sold to investors in order to pay for the up-front costs of the development project. LIHTC is typically responsible for about 10 percent of the multi-family home construction in Massachusetts in a given year.⁹⁶ It's also a big reason why, as of 2022, 22 of the top 25 producers of income-restricted housing units in the United States are for-profit companies.⁹⁷

However, LIHTC almost never covers the costs of building affordable housing by itself, necessitating an alphabet soup of other grants and low-interest loan programs that make actually building this housing extremely complicated and expensive. In fact, a recent proposal in Boston to build affordable housing on top of a city-owned library is projected to cost up to \$835,000 per unit, compared to the private sector's typical cost of building new housing in the city of \$500,000 to \$600,000 per unit.⁹⁸ Buying and preserving existing "naturally occurring affordable housing" is usually a more cost-effective strategy, although to stabilize the underlying market it must be coupled with broader efforts to expand supply beyond the current level of production. Until such a momentous expansion of supply is achieved, LIHTC can add to the housing stock at a price point below what market-driven builders could otherwise provide.

Recommendations and Conclusion

The best housing policies that respond to urgent housing needs of the vulnerable will involve demand-side investments in individual families that have the most potential to improve people's lives. The most common example of this is the federal government's Housing Choice Voucher program, formerly known as Section 8. Meta-analyses of academic literature have found that the ratio of market value to public costs of demand-side programs like awarding housing vouchers to individual families averages 92 percent, far more efficient than building public housing (64 percent) or other supply-side interventions (74 percent).⁹⁹ And while many of these voucher holders don't have sufficient income to meet traditional mortgage lending standards, targeted down payment assistance may help stabilize renters who are closer to meeting those standards.¹⁰⁰ Some supply-side interventions could also be helpful, such as non-profits buying up older homes for the purpose of preserving them as affordable.¹⁰¹

Ultimately, however, even if every existing housing unit in Greater Boston was preserved as affordable, it would do nothing to keep up with household growth that is driven by expanding job opportunities and changing family circumstances. For that, we need an expansion of supply—but the typology and location of that supply matters a lot if we truly want to meet demand.

For example, there has been a remarkable increase in demand for urban living in the past couple of decades. Consider that the three Massachusetts communities with the fastest real estate appreciation rates between 2000 and 2023 were Somerville, Chelsea, and Boston.¹⁰² Over the same time frame, Suffolk County, which includes Boston, Chelsea, Revere, and Winthrop, is in a league of its own compared to the rest of Greater Boston in terms of real estate appreciation (see Figure 9).¹⁰³ Urban theorist Richard Florida has written that young people "favor living in central urban neighborhoods significantly more than previous generations did at the same stages in life,"¹⁰⁴ and other academics have observed that, when young people do move to the suburbs, the biggest factors seem to be "housing affordability and demand for larger homes."¹⁰⁵ And even As of 2022, 22 of the top 25 producers of income-restricted housing units in the United States are for-profit companies.

Even if every existing housing unit in Greater Boston was preserved as affordable, it would do nothing to keep up with household growth that is driven by expanding job opportunities and changing family circumstances. after COVID-19 shifted these trends in favor of the suburbs for Millennials, Generation Z has flocked to large cities at an incredible pace.¹⁰⁶ Thus, once demand for larger homes inevitably surfaces in Generation Z, building more family-oriented housing in inner-city neighborhoods may be a prudent way of accommodating their needs.





* The indices have been normalized to a score of 100 in January 2000 to facilitate easy comparison between the three trajectories

Just as important a demographic trend for location and home typology decisions is the aging of Baby Boomers. The five-year period with the most children born in U.S. history was 1956–1960.¹⁰⁸ As they age, this cohort will require smaller homes that are easy to maintain, single-level living arrangements to improve mobility (whether in ranch-like cottages or condo buildings with elevators), and assisted living facilities with dedicated cooks, custodians, and personal care services. Because most buildings that fit these characteristics are located in urban areas and older, closer-in suburbs, allowing Baby Boomers to downsize within their current communities will require building more compact or cottage-style housing in suburban areas. Instead, the status quo has left seniors "trapped" in larger, suburban homes that no longer suit their needs¹⁰⁹ and forced family members who remain in the workforce to act as caregivers for aging relatives.¹¹⁰

To its credit, the Metro Mayors Coalition in the immediate Boston area has made ambitious housing production goals aimed at alleviating the housing shortage that currently plagues much of Massachusetts. The Coalition, which consists of 15 cities and towns within Route 128, has collectively aimed to create 185,000 new housing units between 2015 and 2030. According to building permit data compiled by The Boston Foundation, as of 2022 they are on pace to build about 53 percent of that (see Figure 10).¹¹¹

And a bill dubbed the "Yes In My Backyard Act," currently making its way through the state legislative process as of April 2024,¹¹² would set a statewide production target of about 20,000 housing units per year,¹¹³ a number the state has only achieved once since 1990, in 2005.¹¹⁴

Ramping up housing production to match these regional goals, which in turn is only a step towards addressing Greater Boston's broader cost of living concerns, will require targeted efforts to alleviate the factors identified above. Some of these factors, such as prohibitively high construction and financing costs, are nationwide phenomena that depend largely on macroeconomic conditions out of the control of the state legislature or individual municipalities. Others, such as land use regulations and "NIMBY" concerns, have tangible local and regional solutions in zoning reform and political capacity-building. In the long-term, the state should do more to tie public service provision (including funding for roads and schools) to local-level housing policy and incentivize bottom-up collaborations among municipalities to align their zoning with contemporary housing needs. In the long-term, the state should do more to tie public service provision (including funding for roads and schools) to local-level housing policy.



Figure 10: Metro Mayors Coalition Housing Production Goal and Actual Building Permits Issued, 2015–2022

Table 1: Summary of Recommendations

- Prioritize the construction of family-oriented housing in urban areas, for example with regulatory incentives like density bonuses or expedited permitting processes.
- Accommodate diverse housing typologies in traditionally suburban communities, such as rezoning for cottage courts, townhouses, and multi-family buildings in some areas.
- In the long-term, rely more on demand-side programs like Housing Choice Vouchers and down payment assistance to serve urgent low-income housing needs, rather than supply-side programs like LIHTC and public housing.
- Foster regional collaborations on housing production and zoning reform among municipalities that can hold each other accountable for achieving desired outcomes.
- Build local-level political support for housing policy reform, especially among renters, young people, and faith-based organizations.
- At the state level, use both carrots and sticks to tie funding for roads and schools to local-level housing policy and production, expanding on existing laws like Chapter 40R and the MBTA Communities Act.
- At the federal level, work to reduce construction costs by eliminating tariffs on imported lumber and re-examining building code standards that, if reformed, could lower costs without compromising safety.

In summary, Greater Boston's current housing crisis is a multi-pronged problem characterized by both a severe lack of housing affordability and a mismatch between housing typologies needed and those that are available. But the root of the problem is an immense imbalance of supply and demand. As long as Boston is a hotbed for healthcare and innovation sector jobs, a magnet for university students and young professionals, and a home for many retirees who want to age in place, the demand side of the equation will remain substantially large.

Thus, the answers to the housing crisis, while also multi-pronged and complex, necessarily involve increasing the pace of housing production in a wide variety of locales for the foreseeable future, often in ways that diversify the housing stock in a given area. Suburban areas will need both more rental housing for young families, students, and professionals and smaller, single-level housing units suitable for downsizing seniors. Urban areas will need more 3- and 4-bedroom units suitable

Both short-term efforts to stabilize people in precarious housing arrangements and long-term increases in the rate of housing production are necessary to solve the region's housing crisis. for growing families who, but for high prices and lack of availability, would prefer to take advantage of city amenities.

More broadly, both short-term efforts to stabilize people in precarious housing arrangements and long-term increases in the rate of housing production are necessary to solve the region's housing crisis. The former will alleviate the effects of past policy mistakes that have contributed to rising housing costs and low availability. But only the latter will ensure that the results of those mistakes are not repeated.

Endnotes

- 1 Throughout the paper, unless otherwise specified, Greater Boston is defined as the Counties of Essex, Middlesex, Norfolk, Plymouth, and Suffolk in Massachusetts and the Counties of Rockingham and Strafford in New Hampshire. Occasionally, the definition consists only of the 5 counties in Massachusetts due to a lack of available data.
- 2 Stefanescu, Victor. 2024. "Median down payment tops \$105k for metro Boston home buyers." <u>https://www.boston.com/real-estate/ home-buying/2024/02/07/metro-boston-down-payments-7th-innation/</u>
- 3 Smilgius, Vivi. 2023. "Report: Average rent in Boston surpasses \$3,000." <u>https://www.boston.com/real-estate/renting/2023/06/20/</u> report-average-rent-in-boston-surpasses-3000/
- 4 ApartmentAdvisor. 2024. "ApartmentAdvisor National Rent Report." <u>https://www.apartmentadvisor.com/national-rent-</u> report#trends-by-state
- 5 Federal Reserve Economic Database. 2024. "Housing Inventory: Active Listing Count in Boston-Cambridge-Newton, MA-NH (CBSA)." <u>https://fred.stlouisfed.org/series/ACTLISCOU14460</u>
- Glaeser, Edward, Jenny Schuetz, and Bryce Ward. 2006.
 "Regulation and the Rise of Housing Prices in Greater Boston." <u>https://www.hks.harvard.edu/sites/default/files/centers/rappaport/</u> files/regulation_housingprices_1.pdf
- 7 MAPC DataCommon. n.d. "Building Permits by Type and Year (Municipal)." https://datacommon.mapc.org/browser/datasets/384
- 8 U.S. Bureau of Economic Analysis. 2023. "Regional Data: GDP and Personal Income." <u>https://apps.bea.</u> gov/itable/?ReqID=70&step=1&_gl=1*1isj6ox*_ ga*MTA1ODMwMjIxMS4xNzEwMzQ1NTkx*_ga_ J4698JNNFT*MTcxMDM0NTU5MS4xLjEuMTcxM DM0NTYxMS40MC4wLjA.#eyJhcHBpZCI6NzAsIn N0ZXBzIjpbMSwyOSwyNSwzMSwyNiwyNywzMF0s ImRhdGEiOltbIIRhYmxlSWQiLCIzMyJdLFsiTWFqb 3JfQXJIYSIsIjUiXSxbIIN0YXRIIixbIjUiXV0sWyJBcm VhIixbIjE0NDYwII1dLFsiU3RhdGIzdGljIixbIjEwI11d LFsiVW5pdF9vZl9tZWFzdXJIIiwiTGV2ZWxzII0sW yJZZWFyIixbIi0xII1dLFsiWWVhckJIZ2luIiwiLTEiX SxbIIIIYXJfRW5kIiwiLTEiXV19
- 9 Federal Reserve Economic Database. 2024. "New Private Housing Structures Authorized by Building Permits for Boston-Cambridge-Newton, MA-NH (MSA)." <u>https://fred.stlouisfed.org/series/</u> BOST625BPPRIV
- 10 U.S. Environmental Protection Agency EnviroAtlas. 2014. "Employment to Housing Ratio." <u>https://enviroatlas.</u> <u>epa.gov/enviroatlas/DataFactSheets/pdf/Supplemental/</u> <u>Employmenthousingratio.pdf</u>
- 11 MAPC DataCommon. n.d. "Building Permits by Type and Year (Municipal)." <u>https://datacommon.mapc.org/browser/datasets/384</u>; and

U.S. Census Bureau. n.d. "County Population Totals and Components of Change: 2020-2023." <u>https://www.census.gov/data/</u> tables/time-series/demo/popest/2020s-counties-total.html; and

U.S. Census Bureau. n.d. "County Population Totals: 2010-2019." <u>https://www.census.gov/data/datasets/time-series/demo/</u>popest/2010s-counties-total.html; and

U.S. Census Bureau. n.d. "County Intercensal Tables: 2000-2010." https://www.census.gov/data/tables/time-series/demo/popest/ intercensal-2000-2010-counties.html; and

U.S. Census Bureau. n.d. "State and County Intercensal Tables: 1990–2000." <u>https://www.census.gov/data/tables/time-series/demo/</u>popest/intercensal-1990-2000-state-and-county-totals.html; and

U.S. Census Bureau. n.d. "County Intercensal Tables 1980– 1990." <u>https://www.census.gov/data/tables/time-series/demo/</u> popest/1980s-county.html; and

Federal Reserve Economic Database. 2024. "Population." <u>https://</u>fred.stlouisfed.org/series/POPTHM; and

Federal Reserve Economic Database. 2024. "New Privately-Owned Housing Units Authorized in Permit-Issuing Places: Total Units." https://fred.stlouisfed.org/series/PERMIT

- 12 Carlock, Catherine. 2023. "A cloud hanging over everybody's head': New construction in Greater Boston faces a slowdown." <u>https://</u> www.boston.com/news/the-boston-globe/2023/11/10/a-cloudhanging-over-everybodys-head-new-construction-in-greaterboston-faces-a-slowdown/
- 13 U.S. Census Bureau. 2024. "New Residential Construction -Historical Time Series." <u>https://www.census.gov/construction/nrc/</u> <u>data/series.html</u>
- 14 Srinivasan, Hiranmayi. 2024. "U.S. Inflation Rate by Year: 1929 to 2024." <u>https://www.investopedia.com/inflation-rate-by-year-7253832</u>
- 15 University of Minnesota Integrated Public Use Microdata Series. n.d. "Time Series Tables: Total Households; Total Housing Units." <u>https://data2.nhgis.org/main</u>
- 16 Herriges, Daniel. 2022. "Herriges Rezoned: Why Are Developers Only Building Luxury Housing?" <u>https://www.strongtowns.org/journal/2022/4/27/herriges-rezoned-why-are-developers-only-building-luxury-housing</u>
- Pioneer Institute. 2024. "Emigrating Taxpayers by Age Group:
 2021." X post, March 29, 2024. <u>https://twitter.com/PioneerBoston/</u> status/1773809964168945796
- 18 University of Minnesota Integrated Public Use Microdata Series. n.d. "Time Series Tables: Total Households; Total Housing Units." https://data2.nhgis.org/main; and

U.S. Census Bureau. n.d. "1960 Census of Housing Vol. I: States and Small Areas." <u>https://www.census.gov/library/</u> publications/1963/dec/housing-volume-01.html; and

U.S. Census Bureau. n.d. "1950 Census of Housing: Volume 1: General Characteristics." <u>https://www.census.gov/library/</u> publications/1953/dec/housing-vol-01.html; and

U.S. Census Bureau. n.d. "1940 Census of Housing: Volume 2: General Characteristics." <u>https://www.census.gov/library/</u> publications/1943/dec/housing-vol02.html

- 19 Woods, Eileen. 2023. "Boston is more likely to attract job seekers, report suggests."<u>https://www.boston.com/real-estate/real-estate-news/2023/11/20/boston-more-likely-attract-job-seekers/</u>
- 20 McCue, Daniel. 2023. "The Surge In Household Growth And What It Suggests About The Future Of Housing Demand." <u>https://</u> <u>www.jchs.harvard.edu/blog/surge-household-growth-and-what-it-</u> <u>suggests-about-future-housing-demand</u>

- 21 Harvard Business School and U.S. Economic Development Administration. n.d. "Boston-Worcester-Manchester MA-NH Employment By Traded Cluster, 2016." <u>https://clustermapping.us/</u> region/economic/boston_worcester_manchester_ma_nh/clusterportfolio
- 22 Caporal, Jack. 2024. "Millennial Home-Buying and Homeownership Statistics." <u>https://www.fool.com/the-ascent/</u> research/millennial-homebuying/
- 23 Statista. 2020. "Share of Americans who were married between the ages of 23 and 38 in 2020, by generation." <u>https://www.statista.</u> <u>com/statistics/318927/percentage-of-americans-whe-were-marriedbetween-age-18-32-by-generation/</u>
- 24 Federal Home Loan Mortgage Corporation. 2022. "Majority of Aging Adults Likely To Age In Place." <u>https://www.freddiemac.</u> <u>com/research/consumer-research/20220523-majority-aging-adultslikely-age-place</u>
- 25 McCue, Daniel. 2023. "The Surge In Household Growth And What It Suggests About The Future Of Housing Demand." <u>https://</u> <u>www.jchs.harvard.edu/blog/surge-household-growth-and-what-it-</u> <u>suggests-about-future-housing-demand</u>
- 26 Goodman, Laurie and Jun Zhu. 2021. "The Future of Headship and Homeownership." <u>https://www.urban.org/sites/ default/files/publication/103501/the-future-of-headship-andhomeownership_0.pdf</u>
- 27 U.S. Census Bureau. n.d. "Occupancy Status: Boston city, Massachusetts." <u>https://data.census.gov/table/ACSDT1Y2019.</u> B25002?q=Vacancy%20Rates&g=160XX00US2507000
- 28 U.S. Census Bureau. n.d. "Occupancy Status: Boston-Cambridge-Newton, MA-NH Metro Area." <u>https://data.</u> <u>census.gov/table/ACSDT1Y2022.B25002?q=Vacancy%20</u> <u>Rates&cg=310XX00US14460</u>
- 29 U.S. Census Bureau. n.d. "Occupancy Status: United States." https://data.census.gov/table/ACSDT1Y2022. B25002?q=Vacancy%20Rates&g=010XX00US
- 30 Zabel, Jeffrey. 2014. "A Dynamic Model of the Housing Market: The Role of Vacancies." *Journal of Real Estate Finance and Economics* 53 (May): pp. 368–391. https://doi.org/10.1007/s11146-014-9466-z
- 31 U.S. Census Bureau. n.d. "Occupancy Status: Boston city, Massachusetts." <u>https://data.census.gov/table/ACSDT1Y2019.</u> B25002?q=Vacancy%20Rates&g=160XX00US2507000; and

U.S. Census Bureau. n.d. "Occupancy Status: Boston-Cambridge-Newton, MA-NH Metro Area." <u>https://data.</u> <u>census.gov/table/ACSDT1Y2022.B25002?q=Vacancy%20</u> <u>Rates&g=310XX00US14460;</u> and

U.S. Census Bureau. n.d. "Occupancy Status: United States." <u>https://data.census.gov/table/ACSDT1Y2022</u>. B25002?q=Vacancy%20Rates&g=010XX00US; and

U.S. Census Bureau. n.d. "Housing Vacancies and Homeownership (CPS/HVS)." <u>https://www.census.gov/housing/hvs/data/prevann.</u> <u>html</u>

- 32 Federal Reserve Economic Database. 2024. "Resident Population in Boston-Cambridge-Newton, MA-NH (MSA)." <u>https://fred.</u> stlouisfed.org/series/BOSPOP
- 33 Federal Reserve Economic Database. 2024. "All Employees: Total Nonfarm in Boston-Cambridge-Nashua, MA-NH (NECTA)." https://fred.stlouisfed.org/series/BOST625NA

34 Ibid.

- 35 Ullrich, Jess and Michele Petry. 2023. "Why is housing inventory so low? Understanding the U.S. housing shortage." <u>https://www.</u> bankrate.com/real-estate/low-inventory-housing-shortage/
- 36 Federal Reserve Economic Database. 2024. "Producer Price Index by Commodity: Special Indexes: Construction Materials." <u>https://</u> fred.stlouisfed.org/series/WPUSI012011
- 37 Federal Reserve Economic Database. 2024. "Producer Price Index by Commodity: Special Indexes: Construction Materials." <u>https://</u> fred.stlouisfed.org/series/WPUSI012011; and

Federal Reserve Economic Database. 2024. "Consumer Price Index for All Urban Consumers: All Items in U.S. City Average." <u>https://</u> fred.stlouisfed.org/series/CPIAUCSL

- 38 Cui, Jasmine. 2023. "Dwindling immigration puts squeeze on homebuilding." <u>https://www.nbcnews.com/data-graphics/tough-</u> immigration-laws-construction-workers-home-builders-rcna82540
- 39 RK Industries. n.d. "Construction Worker Shortage & Impact." <u>https://rkindustries.com/construction-worker-shortage-impact/</u>
- 40 Federal Reserve Economic Database. 2024. "Employment Cost Index: Wages and Salaries: Private Industry Workers: Construction." <u>https://fred.stlouisfed.org/series/ECICONWAG</u>
- 41 Federal Reserve Economic Database. 2024. "Employment Cost Index: Wages and Salaries: Private Industry Workers." <u>https://fred.</u> stlouisfed.org/series/ECIWAG
- 42 Jones, Jonathan. 2022. "15 Metros Where Construction Workers Can't Afford Homes." <u>https://www.moneytalksnews.com/</u> <u>slideshows/15-metros-where-construction-workers-cant-afford-homes/</u>
- 43 Zagame, Kristina and Stephanie Horan. 2024. "How Much Does It Cost to Build a Home in Each State?" <u>https://todayshomeowner.</u> <u>com/home-finances/guides/cost-of-building-a-home-by-state/</u>
- 44 Morris, Kathy. 2023. "How Much An Acre Of Land Costs In Each State." <u>https://www.zippia.com/advice/acre-land-costs-each-state/</u>
- 45 Zagame, Kristina and Stephanie Horan. 2024. "How Much Does It Cost to Build a Home in Each State?" <u>https://todayshomeowner.</u> <u>com/home-finances/guides/cost-of-building-a-home-by-state/</u>
- 46 Morris, Kathy. 2023. "How Much An Acre Of Land Costs In Each State." <u>https://www.zippia.com/advice/acre-land-costs-each-state/</u>
- 47 Berliner, Dana et al. 2020. "The Land Use Labyrinth: Problems of Land Use Regulation and the Permitting Process." <u>https://rtp. fedsoc.org/paper/the-land-use-labyrinth-problems-of-land-useregulation-and-the-permitting-process/</u>
- 48 Badger, Emily. 2016. "It takes way too long to build new housing in expensive cities." <u>https://www.washingtonpost.com/news/wonk/</u> wp/2016/07/21/it-takes-way-too-long-to-build-new-housing-inexpensive-cities/
- 49 Dumcius, Gintautus. 2023. "More downsizing is in place at the Shawmut development." <u>https://www.dotnews.com/2023/moredownsizing-place-shawmut-development;</u> and

Brinker, Andrew. 2023. "A developer proposed nearly 500 apartments on South Shore Plaza. Then residents killed it." <u>https://www.bostonglobe.com/2023/10/04/business/housing-</u> <u>development-braintree-death/</u> 50 Hill, Andrew. 2023. "Will Home Construction Costs Go Down In 2024?" <u>https://scharconstruction.com/will-home-constructioncosts-go-down-in-2024/;</u> and

The Canadian Press. 2024. "Hike to U.S. softwood lumber duties 'entirely unwarranted,' trade minister says." <u>https://www.cbc.ca/</u> news/canada/british-columbia/bc-us-softwood-lumber-1.7102915

- 51 Federal Reserve Economic Database. 2024. "Federal Funds Effective Rate." https://fred.stlouisfed.org/series/FEDFUNDS
- 52 National Association of Home Builders. 2024. "Survey on Acquisition, Development, & Construction Financing." https://www.nahb.org/-/media/NAHB/news-and-economics/ docs/housing-economics/adc-survey/adc-survey-report. pdf?rev=486798d4049748c481822ccfbbe34c6b&hash=6 8E4A8055EC8C6807DB91A0F7EEE8CF7
- 53 Ibid.
- 54 Federal Reserve Economic Database. 2024. "30-Year Fixed Rate Mortgage Average in the United States." <u>https://fred.stlouisfed.org/</u> series/MORTGAGE30US
- 55 LBM Journal. 2023. "Home prices are rising 2x faster than income." https://lbmjournal.com/home-prices-are-rising-2x-faster-thanincome/; and

Hermann, Alexander and Peyton Whitney. 2024. "Home Price-To-Income Ratio Reaches Record High." <u>https://www.jchs.harvard.</u> edu/blog/home-price-income-ratio-reaches-record-high-0

- 56 Ang, Carmen. 2022. "The Median Lot Size in Every U.S. State in 2022." <u>https://www.visualcapitalist.com/cp/the-median-lot-size-inevery-american-state-2022/</u>
- 57 Adams, Steve. 2024. "Some Suburbs Roll Out YIMBY Welcome Mats." <u>https://bankerandtradesman.com/some-suburbs-roll-out-yimby-welcome-mats/</u>
- 58 Crump, Sarah et al. 2020. "Fixing Greater Boston's housing crisis starts with legalizing apartments near transit." <u>https://www. brookings.edu/articles/fixing-greater-bostons-housing-crisis-startswith-legalizing-apartments-near-transit/</u>
- 59 Town of Weston. n.d. "Zoning Requirements." <u>https://www.weston.org/1319/Zoning-Requirements</u>
- 60 Town of Acton. 2022. "Zoning Bylaw." https://www.acton-ma.gov/ DocumentCenter/View/659/2022-Zoning-Bylaws?bidId=
- 61 Town of Marshfield. n.d. "Zoning Bylaw Article VI: Dimensional and Density Requirements." <u>https://ecode360.com/30026576</u>
- 62 Glaeser, Edward and Bryce Ward. 2009. "The causes and consequences of land use regulation: Evidence from Greater Boston." *Journal of Urban Economics* 65, no. 3 (May). <u>https://doi.org/10.1016/j.jue.2008.06.003</u>
- 63 Kok, Nils, Paavo Monkkonan, and John Quigley. 2014. "Land use regulations and the value of land and housing: An intrametropolitan analysis." *Journal of Urban Economics* 81 (May). <u>https://</u> doi.org/10.1016/j.jue.2014.03.004
- 64 Gray, M. Nolan. 2022. Arbitrary Lines: How Zoning Broke The American City And How To Fix It. Island Press: Washington.
- 65 Town of Brookline. n.d. "Article VI: Vehicular And Bicycle Service Uses Requirements." <u>https://ecode360.com/36312336#36312336</u>

- 66 U.S. Census Bureau. n.d. "Household Size by Vehicles Available: Brookline town, Norfolk County, Massachusetts." <u>https://data.census.gov/table/ACSDT5Y2022.</u> <u>B08201?q=Brookline%20town,%20Norfolk%20County,%20</u> <u>Massachusetts&t=Transportation</u>
- 67 DBS Group. n.d. "This Vs. That: Underground Parking Versus At-Grade Parking." <u>https://www.dbsg.com/blog/surface-parking-</u> vs-underground-parking/
- 68 Boston Planning & Development Agency. 2021. "Mayor Wu eliminates parking minimums for affordable housing developments." <u>https://www.bostonplans.org/news-calendar/news-updates/2021/12/22/mayor-wu-eliminates-parking-minimums-for-affordabl</u>; and

Executive Office of Housing and Livable Communities. n.d. "Multi-Family Zoning Requirements for MBTA Communities." <u>https://www.mass.gov/info-details/multi-family-zoning-</u> requirement-for-mbta-communities

- 69 Einstein, Katherine, Maxwell Palmer, and David Glick. 2017. "Who Participates in Local Government? Evidence from Meeting Minutes." *Perspectives on Politics* 17, no. 1 (October): pp. 1-17. https://doi.org/10.1017/s153759271800213x
- 70 Town of Weston. n.d. "518 South Avenue." <u>https://www.weston.</u> org/1366/518-South-Avenue; and

Brinker, Andrew. 2023. "A developer proposed nearly 500 apartments on South Shore Plaza. Then residents killed it." <u>https://www.bostonglobe.com/2023/10/04/business/housing-</u> <u>development-braintree-death/</u>

- 71 Einstein, Katherine, Maxwell Palmer, and David Glick. 2017.
 "Who Participates in Local Government? Evidence from Meeting Minutes." *Perspectives on Politics* 17, no. 1 (October): pp. 1–17. <u>https://doi.org/10.1017/s153759271800213x</u>
- 72 Craw, Michael. 2023. "Effects of Proximity to Multifamily Housing on Property Values in Little Rock, Arkansas, 2000– 2016." *Housing Policy Debate* 33, no. 4 (January). <u>https://doi.org/10.1080/10511482.2020.1821747</u>
- 73 Gallagher, Ryan. 2016. "The fiscal externality of multifamily housing and its impact on the property tax: Evidence from cities and schools, 1980–2010." *Regional Science and Urban Economics* 60 (September). <u>https://doi.org/10.1016/j.regsciurbeco.2016.07.012</u>; and

Ives-Dewy, Dorothy. 2007. "The Multi-Family Myth: Exploring the Fiscal Impacts of Apartments in the Suburbs." *Middle States Geographer* 40: pp. 39–47. <u>https://digitalcommons.wcupa.edu/cgi/</u> viewcontent.cgi?article=1013&context=geog_facpub

- 74 Massachusetts Department of Elementary and Secondary Education. n.d. "Enrollment Data." <u>https://www.doe.mass.edu/</u> infoservices/reports/enroll/default.html?yr=1314
- 75 Larsen, Martin and Jacob Nyrup. 2022. "City Limits: Why Citizen Opposition to Urban Development Become Concentrated in Expensive Housing Markets." <u>https://scholar.harvard.edu/files/</u> jdbk/files/larsen_and_nyrup.pdf
- Hankinson, Michael. 2018. "When Do Renters Behave Like Homeowners? High Rent, Price Anxiety, and NIMBYism," American Political Science Review 112, no. 3 (March). <u>https://doi.org/10.1017/S0003055418000035</u>

77 Google Trends. n.d. "Explore: Gentrification." <u>https://trends.google.com/trends/</u> <u>explore?date=all&geo=US&q=gentrification&hl=en;</u> and

Google Trends. n.d. "Explore: NIMBY." <u>https://trends.google.com/</u> trends/explore?date=all&geo=US&q=nimby&hl=en

- 78 Ibid.
- 79 Been, Vicki, Ingrid Ellen, and Katherine O'Regan. 2023. "Supply Skepticism Revisited." <u>https://papers.ssrn.com/sol3/papers.</u> cfm?abstract_id=4629628
- 80 McMorrow, Paul. 2013. "Opportunity lost along the Fairmount Line." <u>https://www.bostonglobe.com/</u> <u>opinion/2013/09/09/opportunity-lost-along-fairmount-line/</u> C6BQS3CjI24MQ gmBlYrsgI/story.html
- 81 Cutler, Sonel. 2024. "Northeastern receives go-ahead to build 1,370-bed residence hall on Columbus Avenue." <u>https:/// huntnewsnu.com/76391/campus/administration/northeasternreceives-go-ahead-to-build-1370-bed-residence-hall-on-columbusavenue/</u>
- 82 Britschgi, Christian. 2019. "Alexandria Ocasio-Cortez Is Right to Oppose This NYC Mega-Development." <u>https://reason.</u> <u>com/2019/12/03/alexandria-ocasio-cortez-is-right-to-oppose-thisnyc-mega-development/</u>
- 83 Mallach, Alan. 2020. "More Housing Could Increase Affordability - But Only If You Build It In The Right Places." <u>https://shelterforce.org/2020/06/19/more-housing-could-increase-affordability-but-only-if-you-build-it-in-the-right-places-urban_housing/</u>
- 84 Boston Globe Editorial Board. 2023. "The Boston suburbs' cynical ploy to keep poor families out: Use seniors as a shield." <u>https://</u> www.bostonglobe.com/2023/10/01/opinion/affordable-housingsuburbs-senior-housing-zoning/
- 85 Rosenthal, Stuart. 2014. "Are Private Markets and Filtering a Viable Source of Low-Income Housing? Estimates from a "Repeat Income" Model." *American Economic Review* 104, no. 2 (February): pp. 687–706. <u>https://www.aeaweb.org/articles?id=10.1257/</u> aer.104.2.687
- 86 Hertz, Daniel. 2015. "What filtering can and can't do." <u>https://</u> cityobservatory.org/what-filtering-can-and-cant-do/
- 87 Diamond, Rebecca, Timothy McQuade, and Franklin Qian. "The Effects Of Rent Control Expansion On Tenants, Landlords, And Inequality: Evidence From San Francisco." National Bureau of Economic Research, January 2018, <u>https://www.nber.org/system/</u> files/working_papers/w24181/w24181.pdf
- 88 Diamond, Rebecca. 2018. "What does economic evidence tell us about the effects of rent control?" <u>https://www.brookings.edu/</u> <u>articles/what-does-economic-evidence-tell-us-about-the-effects-ofrent-control/</u>
- 89 Hamilton, Emily. 2021. "Inclusionary Zoning and Housing Market Outcomes." *Regulatory Reform and Affordable Housing* 23, no. 1: pp. 161–194. https://www.jstor.org/stable/26999944
- 90 Herriges, Daniel. 2024. "Going After Corporate Homebuyers is Good Politics but Ineffective Policy." <u>https://www.strongtowns.org/journal/2024/2/21-going-after-corporate-homebuyers-good-politics-ineffective-policy</u>
- 91 Curry, Kenny. 2018. "Invitation to a Housing Revolution." <u>https://</u> www.dmagazine.com/publications/d-ceo/2018/april/invitationhomes-rental-dallas/

- 92 United States Securities and Exchange Commission. 2024. "Invitation Homes Inc.: Form 10-K for the fiscal year ended December 31, 2023." <u>https://www.sec.gov/ixviewer/ix.html?doc=/</u> <u>Archives/edgar/data/0001687229/000168722924000013/invh-</u> 20231231.htm
- 93 Goodman, Laurie et al. 2023. "A Profile of Investor-Owned Single-Family Rental Properties." <u>https://www.urban.org/sites/</u> <u>default/files/2023-08/A%20Profile%20of%20Institutional%20</u> <u>Investor%E2%80%93Owned%20Single-Family%20Rental%20</u> <u>Properties.pdf</u>
- 94 Calder-Wang, Sophie, Chiara Farronato, and Andrey Fradkin. 2024. "What Does Banning Short-Term Rentals Really Accomplish?" <u>https://hbr.org/2024/02/what-does-banning-short-term-rentals-really-accomplish</u>
- 95 Freemark, Yonah and Corianne Scally. 2023. "LIHTC Provides Much-Needed Affordable Housing, But Not Enough to Address Today's Market Demands." <u>https://www.urban.org/urban-wire/</u> <u>lihtc-provides-much-needed-affordable-housing-not-enough-</u> address-todays-market-demands
- 96 Ibid.
- 97 Affordable Housing Finance. 2023. "Top 50 Affordable Housing Developers of 2022." <u>https://www.housingfinance.com/</u> <u>management-operations/top-50-affordable-housing-developers-of-</u> <u>2022_o</u>
- 98 Rios, Simón. 2024. "Boston is using public buildings—like libraries—to build affordable housing. It's still pricey." <u>https://www. wbur.org/news/2024/01/09/housing-library-public-boston-highcost</u>
- 99 Melpezzi, Stephen. 2018. "Affordable Housing: Are Vouchers The Answer?" <u>https://realestate.business.rutgers.edu/news/affordablehousing-are-vouchers-answer</u>
- 100 Herbert, Christopher. 2005. "The Potential of Downpayment Assistance for Increasing Homeownership Among Minority and Low-Income Households." <u>https://www.huduser.gov/publications/</u> pdf/potentialdownpaymentassistance.pdf
- 101 Criswell, Ben and Alice Guin. 2017. "Why Preserving Affordable Housing Can Be More Important than Building It." <u>https://</u> <u>www.icastusa.org/why-preserving-affordable-housing-is-more-</u> <u>important-than-building-it/</u>
- 102 Neighborhood Scout. n.d. "Massachusetts Real Estate Appreciation & Housing Market Trends." <u>https://www.neighborhoodscout.com/ma/real-estate</u>
- 103 Zillow Research. n.d. "Housing Data." <u>https://www.zillow.com/</u> research/data/
- 104 Florida, Richard. 2019. "Young People's Love of Cities Isn't a Passing Fad." <u>https://www.bloomberg.com/news/articles/2019-05-28/u-s-millennials-really-do-prefer-cities?embedded-checkout=true</u>
- 105 Lee, Hyojung et al. 2024. "Back to the suburbs? Millennial residential locations from the Great Recession to the pandemic." Urban Studies (January). <u>https://doi.org/10.1177/00420980231221048</u>
- 106 Ramaswamy, Swapna. 2023. "Big cities are a big draw for Gen Z: These are the areas that Gen Z is rapidly migrating to." <u>https://www.usatoday.com/story/money/</u> <u>personalfinance/real-estate/2023/02/24/genz-moving-big-cities-</u> migration/11337814002/

- 107 Zillow Research. n.d. "Housing Data." <u>https://www.zillow.com/</u> research/data/
- 108 National Center for Health Statistics. n.d. "Live Births, Birth Rates, and Fertility Rates, by Race of Child: United States, 1909-80." https://www.cdc.gov/nchs/data/statab/t1x0197.pdf
- 109 Weisman, Robert. 2022. "In a market badly out of kilter, many older residents are stuck in their homes." <u>https://www.bostonglobe.</u> <u>com/2022/07/29/metro/market-badly-out-kilter-many-older-</u> <u>residents-are-stuck-their-homes/</u>
- 110 Johnston, Katie. 2022. "For unpaid family caregivers in the workforce, the burden grows." <u>https://www.bostonglobe.</u> <u>com/2022/04/09/business/unpaid-family-caregivers-workforceburden-grows/</u>
- 111 Kennedy, Aja et al. 2023. "The Greater Boston Housing Report Card 2023." <u>https://www.tbf.org/-/media/tbf/reports-and-</u> covers/2023/gbhrc2023-full-report.pdf
- 112 General Court of the Commonwealth of Massachusetts. n.d. "Bill H.1379: An Act To Promote Yes In My Backyard." <u>https://</u> malegislature.gov/Bills/193/HD3252
- 113 Shupin, Eric. 2019. "Statewide Housing Production Goal (HD.3784)." <u>https://www.chapa.org/sites/default/files/chapa-</u> priorities-items-2019/Housing%20Production%20Goal.pdf
- 114 MAPC DataCommon. n.d. "Building Permits by Type and Year (Municipal)." <u>https://datacommon.mapc.org/browser/datasets/384</u>

About the Author

Andrew Mikula is a Housing Fellow at Pioneer Institute. Beyond housing, Andrew's research areas of interest include urban planning, economic development, and regulatory reform. He holds a Master's Degree in Urban Planning from the Harvard Graduate School of Design.

Mission

Pioneer Institute develops and communicates dynamic ideas that advance prosperity and a vibrant civic life in Massachusetts and beyond.

Vision

Success for Pioneer is when the citizens of our state and nation prosper and our society thrives because we enjoy world-class options in education, healthcare, transportation, and economic opportunity, and when our government is limited, accountable, and transparent.

Values

Pioneer believes that America is at its best when our citizenry is well-educated, committed to liberty, personal responsibility, and free enterprise, and both willing and able to test their beliefs based on facts and the free exchange of ideas.

