

A Development Perspective on Creating Workforce Rental Housing
Proximal to Major Employment Centers

by

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B.S., Business Administration, 2013

Northeastern University

Submitted to the Program in Real Estate Development in Conjunction with the Center for Real Estate in Partial Fulfillment of the Requirements for the Degree of Master of Science in Real Estate Development

at the

Massachusetts Institute of Technology

September, 2019

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ABSTRACT

Middle-income renters in major cities across the United States are facing an affordability crisis. Many of them earn too much money to qualify for rental assistance programs, but don't earn enough to comfortably afford market rents.

Developers recognize the need for quality workforce housing close to major employment centers but have been unable to deliver enough projects to satisfy demand. Population growth, urbanization, and low homeownership rates are just a few of the macroeconomic trends that are driving up the demand for rental housing and causing market rents to rapidly appreciate beyond reach for the middle class. Rising construction costs as a result of government regulation, a shortage of skilled construction labor, and foreign trade policy make the production of workforce housing even more challenging. With a shortage of middle-income subsidy programs at every level of government, developers must exhibit creativity if they wish to build or preserve workforce housing.

This Thesis explores the confluence of forces and factors that make it challenging to build new workforce housing and to preserve the existing stock. It then assesses subsidy programs at different levels of government and market-based solutions that developers can add to their toolkit. Three case studies from different parts of the country are used as examples to show how developers can overcome the obstacles and use the tools at their disposal to create workforce housing. Drawing upon the preceding analyses and discussions, the Thesis concludes with a series of recommendations that developers can employ to make workforce projects more economically feasible.

Thesis Supervisor: Jen Cookke

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ACKNOWLEDGMENTS

This Thesis would not have been possible without the generous support of many individuals along the way. Thank you to all the seasoned professionals who took time out of their day to provide me with valuable insight into this topic. I'm grateful for the candor with which so many individuals shared their knowledge.

Thank you to the faculty, staff, and my colleagues at the MIT Center for Real Estate for a rich educational experience and a great year. It has been an honor to work with such a knowledgeable, motivated, and diverse group of individuals who share a passion for real estate.

Thank you to Professor Jen Cookke for all the support and guidance throughout the year, especially with regards to this Thesis. You've been a great sound board and resource for this final product and my professional development, and for that I'm truly grateful. It has been a pleasure working with you throughout this process.

Thank you to the team at Round Hill Capital in New York for planting the workforce housing seed in my mind back in January. Without your influence, I may not have chosen to pursue this fascinating topic.

Thank you to the team at WinnDevelopment for providing me with practical insight into the business of mixed-income housing development. Many of the topics covered herein were discovered through candid conversations and engaging projects with you this summer.

Lastly, thank you to my family, especially my wife Catherine, for the endless support you've given me every day throughout this whole graduate school process. This Thesis and degree truly would not have been possible without you.

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INTRODUCTION

Financially and geographically accessible rental housing is imperative for America’s workforce, but developers often have difficulty rehabilitating or constructing quality new homes for this demographic. Responsible for most local goods and services, the middle-income population drives the American economic engine and is what makes the United States so prosperous on a global scale. Despite modest income levels, middle-income households still face many of the housing affordability challenges associated with living in or close to cities with rising housing costs. They often make too much money to qualify for government subsidy programs, yet don’t earn enough to be able to comfortably afford market rents. Their incomes have failed to keep pace with rent growth, leading to a growing cost-burden in almost every major city in the United States. To compensate for the high cost of housing, many households reluctantly retreat outward in search of better quality and extend the length of their commutes. Extended commutes decrease productivity levels, increase traffic congestion, lead to environmental issues as a result of additional air pollution, and cause added stress. Workforce renters who opt to take on those high housing costs in exchange for shorter commutes often end up sacrificing quality, as most of the workforce housing on the market is an aging product.

The affordable housing crisis in the United States has been well-documented through countless editorials, research reports, and academic papers. Our nation’s most vulnerable households, those with income well below the area median, struggle to keep up with rent payments and can seldom entertain the thought of owning a home one day. They have been the primary focus of government subsidy programs through project funding and rental assistance for good reason. While it’s important to direct considerable attention to low-income households, middle-income households have often been neglected when it comes to new housing production. In order to provide quality workforce housing close to employment centers, the “missing middle” needs additional attention from both the public and private sectors.

Broken into four parts, this Thesis aims to articulate the difficulties plaguing workforce housing production in urban areas from a development perspective and offer insight to how projects can improve economic feasibility in ways that the private sector can currently control.

Part One is divided into three chapters that define workforce housing and highlight the macroeconomic and microeconomic challenges that developers face. Chapter One introduces workforce housing and discusses how it fits into the broader conversation about affordable housing. Chapter Two dives into the macroeconomic trends affecting workforce housing including declining home ownership, supply shortage, the growing divide between rent growth and income growth, rent burdens, transportation challenges, and urban migration. Chapter Three focuses on the impediments that are driving up costs and making workforce housing production so challenging including rising materials costs, a shortage of construction labor, government regulations, and a general lack of middle-income subsidy programs.

Part Two consists of four chapters that explore tools available to developers in their endeavors to create workforce housing. Chapters Four, Five, and Six focus on solutions at the federal, state, and local level, respectively. These include public subsidy programs, tax incentives, financing, and others. Some of the contributing solutions discussed in these three chapters aim to provide affordable housing to all income groups, but they can still be utilized to serve middle-income households to a certain extent. Chapter Seven transitions to market-based solutions that require creativity on behalf of the

developer. These solutions aim to reduce construction and operating costs, ultimately reducing the need for public subsidy.

Part Three uses case study examples to show how developers are using various tools in their respective markets to create workforce housing in different locations around the country. The locations where these projects take place are all among our nation's most cost-burdened metros. Despite the challenges, some developers manage to find creative solutions and deliver workforce housing where it's needed most.

Part Four is a conclusion that provides a broad analysis of the challenges facing workforce housing production, the tools available to bring projects to market, whether the tools are being used to their full potential, and whether these solutions are sufficient to meet demand. Drawing upon the analyses and case studies, Part Four will also make recommendations for development strategies that make workforce housing projects more economically feasible.

Disclosure: The scope of this Thesis is intended to be national in nature so that an accurate picture of workforce housing in major metros across the United States is portrayed. Due to the author's familiarity with the housing market in Boston and the relative progressiveness with regards to affordable housing in the state of Massachusetts, there may be an inherent bias towards this locale. This was not the original intention of the author, but was merely a result of the research process and the public programs available in the state. Nonetheless, a thorough discussion of workforce housing across the country is provided herein.

PART ONE

Housing affordability has been an issue for families across the United States for decades, and the problem is getting worse in many cities. Middle-income families that live and work in major employment centers are increasingly at a unique disadvantage, and developers are finding it difficult to provide quality, convenient rental housing at an affordable price for this population. To truly understand this phenomenon and its implications for workforce housing development, we must take a step back and assess the macroeconomic forces at play and why the cost of development is so high. By gaining a solid understanding of the problem, we can begin to devise a solution.

Chapter One: Introduction to Workforce Housing

Workforce housing is housing for middle-income individuals and families that is affordable and close to employment centers and major transportation nodes. The Urban Land Institute (ULI) refers to it as housing that's affordable to those that earn between 60% and 120% of AMI. Some communities use 80% as the lower bound and high cost areas may use up to 140% for the upper limit. For the purposes of this Thesis, we will use the spectrum provided by ULI as our range for workforce housing and interchangeably refer to it as middle-income housing. While there are some programs that provide development subsidy and/or rental assistance for these families, most workforce housing is not government sponsored. Recent research from CBRE shows that roughly 13.5 million households, or 32% of the renter population in the United States, fall within the target population for workforce housing (CBRE 2018). Many of them are also renters by necessity who are unable to adequately save up for a down payment and afford the rising costs to purchase a home. Typical tenants of workforce housing include public employees such as teachers, firefighters, police officers, nurses, and other service workers that are integral to their communities. These households often make too much money to qualify for many rental subsidy programs and don't make enough to be able to comfortably afford market rate housing.

Because workforce housing often gets intertwined in the broader discussion of affordable housing, it's difficult to talk about the workforce piece without considering affordable housing as a whole. The definition of affordable housing can vary depending upon location or municipality and is typically answered by federal, state, and local governments with innumerable volumes of laws and regulations. When most people hear the term, they invoke thoughts of low-income housing and public housing projects. While those are examples of affordable housing, they fall short of its true definition. The US Department of Housing and Urban Development (HUD) defines it as "housing for which the occupant is paying no more than 30 percent of his or her income for gross housing costs, including utilities" (2019). Within this definition is no mention of the occupant's level of income; affordable housing applies to everyone.

Households that exceed the 30% threshold are considered cost-burdened and often have difficulty affording other basic life necessities such as food, transportation, and healthcare. Furthermore, households that pay over 50% of their annual income on housing are considered severely cost-burdened. Beyond being able to afford basic necessities, a high cost of housing can create a snowball effect whereby families at the margin face additional challenges such as saving for retirement and paying for higher education, which has increasingly become a prerequisite to getting ahead in today's society. Unfortunately this is the reality for millions of Americans across the country, from rural areas to large urban metropolises. A family with one full-time worker earning minimum wage cannot

reasonably afford the local fair-market rent for a two-bedroom apartment anywhere in the United States (HUD 2019). According to the National Low-Income Housing Coalition, a minimum wage worker must put in 122 hours of work per week for all 52 weeks of the year to meet the national average fair market rent for such a home (NLIHC 2018).

Access to safe, quality, affordable housing within a reasonable distance of one's employment should be an unencumbered right for all Americans, but the reality is that not everyone can handle the costs of housing on their own. A myriad of government subsidy programs exist that help households meet their monthly expense needs, and within these different programs exist different income brackets. The requirements to qualify for these subsidies are often tied to how a household's earnings compare to the Area Median Income (AMI). On an annual basis, HUD publishes income limits based on household size and the income distribution midpoint for every metropolitan region in the country. These income limits are then benchmarked against certain percentages of AMI to determine eligibility for various rental assistance programs. Low-Income, Very Low-Income, and Extremely Low-Income households are defined as those with income from 50% to 80% of AMI, 30% to 50% of AMI, and below 30% of AMI, respectively (Zahalak 2019). Such income bands often receive the most attention from a public policy standpoint as these renters are at the greatest absolute disadvantage when trying to afford market rents. Households that earn between 80% and 120% of AMI are considered Moderate-Income, while those that earn above 120% are deemed High-Income. Middle-income households fall within a portion of these bands and are a segment of the population that's the backbone of our economy.

One of the biggest challenges about creating workforce housing is ensuring quality properties are located where they're needed most. People ideally should be able to comfortably afford homes that are near their places of employment with convenient access to transportation. The reality is that many families must make the difficult choice between paying an excessive amount on housing to live close to employment centers or enduring long commutes so that they can save on housing costs. This is not only a problem for the households that must decide between this tradeoff, but also for employers who have difficulty retaining employees in areas with rising housing costs. When people make the decision to save on housing by moving further away, the city sprawl expands thereby straining an aging transportation infrastructure and increasing traffic congestion and air pollution. Commute times get longer and people have less time to devote to their jobs and families. Such effects have unintended negative consequences for all within the community. Because most federal and state subsidy programs cater towards residents that are at the lower end of the income spectrum, local planning departments must incentivize development to meet the growing need for workforce housing near employment centers and reliable transportation infrastructure. Ease of access must be prioritized when it comes to workforce housing.

Chapter Two: Macroeconomic Trends Affecting Workforce Housing

As previously mentioned, much of the focus surrounding this housing crisis has been on our nation's most vulnerable population: those who would be homeless without government subsidy programs. Policy makers and developers know that the need for workforce housing is there, but it's difficult to quantify when many advocates push for public money to go towards supporting low-income populations. These critics argue that diverting resources from those with little or no income to middle-income families, some of which command six-figure incomes, makes no sense when we haven't solved the issue for those at the bottom. On the other hand, middle-income households include typical blue-collar workers that ultimately determine the health of the economy. It would be foolish to continue to neglect the part of the population that drives the economic engine. Continuing to ignore the "missing middle" could potentially result in a dystopian future with urban communities populated by households on extreme ends of the income spectrum.

Before devising a way to create more options for middle-income renters, we must understand the state of the housing market as it relates to workforce housing. Workforce housing can come in a variety of forms but are typically Class B and C multifamily products that are more affordable to middle-income families due to their age, location, or condition. Many of them come without income restriction requirements, causing rents to vary based on supply and demand within the marketplace. The high demand for workforce housing has kept vacancy rates low in recent years; after hitting a trough in 2015 at 5.1%, vacancies for Class B and C properties have remained at a stable level. On the other hand, Class A vacancies have remained elevated at 8.5% as of the end of 2018 and are projected to rise (Zahalak 2019). These vacancy rates provide valuable insight to the state of workforce housing, yet little data exists that focuses exclusively on this market segment. Furthermore, it's difficult to ascertain the problems facing workforce housing without discussing the broader trends affecting all of affordable housing.

Declining Homeownership

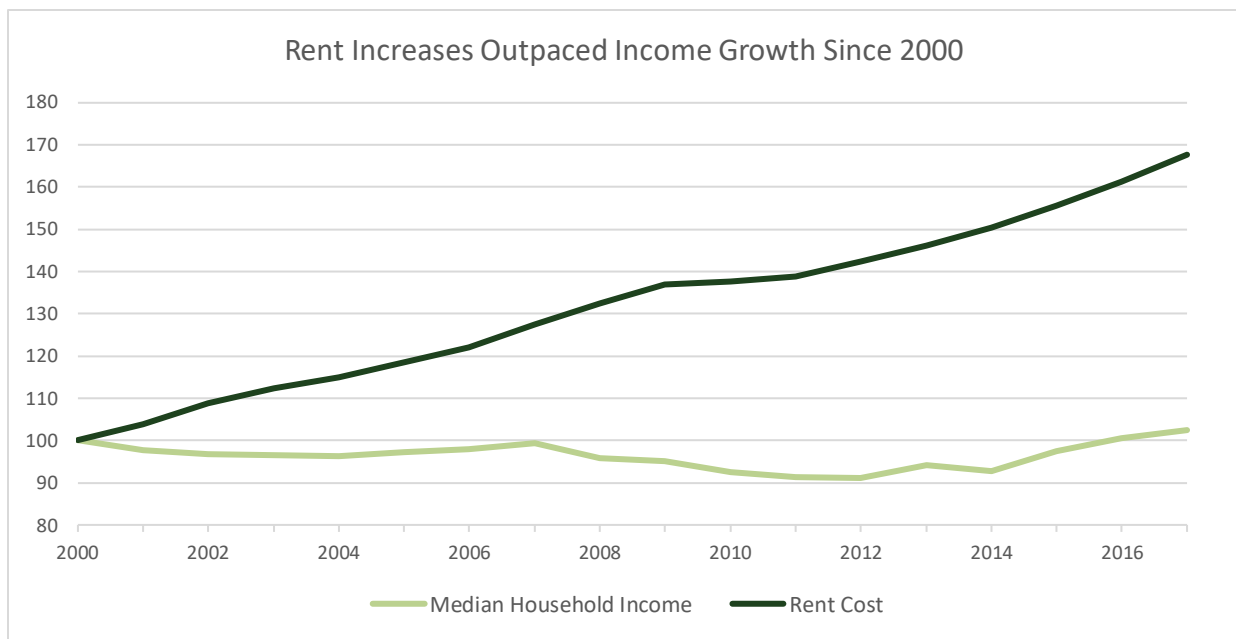
Since the end of the Great Recession, the affordability of multifamily housing has seen significant erosion across the United States. A major driver of this trend has been the decline in homeownership rates. During the housing crisis, between 8 and 10 million homes were foreclosed upon. This loss of homes has had a lasting impact on the housing market as many of those families have had difficulty recovering and have been relegated to renting. In the years leading up to the recession, homeownership peaked at 69.2% in Q4 2004. The rate bottomed out at 62.9% in Q2 2016 and has made a modest recovery to 64.2% as of Q1 2019, still well below the pre-recession peak (U.S. Census Bureau 2019b).

A significant portion of the depressed homeownership rate can be attributed to millennials, or those aged 34 and below. Such occupants historically have had the lowest homeownership rate of any age group due to a lack of financial maturity, but this cycle has seen the rate fall to its lowest level in over 30 years. Those under 35 own only 35.4% of their residences as of Q1 2019 compared to 43.6% in Q2 2004 (Sparshott 2019). With national student debt reaching unprecedented levels, making it increasingly difficult to save up for a down payment and qualify for a loan, we may be facing a permanent paradigm shift in the way people live. These lower homeownership rates naturally create greater demand for rentals and drive rents upward, absent any appreciable uptick in supply.

Income Growth Trails Rent Growth

Between 2000 and 2017, real median household income grew from \$59,938 to \$61,372, an annualized rate of 0.3% (U.S. Census Bureau 2019c). Over that same time period, rents accelerated at 3.0% per year. This widening gap between rents and incomes has left Americans with less money for other basic necessities than they've had in previous decades. The shortage in supply and consistently low levels of vacancy have allowed landlords to steadily raise rents year after year. The number of homes renting for at least \$2,000 per month grew by 97% between 2005 and 2015 (NLIHC 2018). According to CoStar, rents for Class B and C units grew at an estimated 3.4% and 2.9% in 2018, respectively. These middle-market properties outpaced both inflation (2.4%) and Class A rents (2.6%) (Zahalak 2019). Overall rent growth is projected to soften over the next few years, but the delta with incomes will continue to expand.

Figure 1: Rent Growth vs. Income Growth



Source: U.S. Census Bureau, Federal Reserve Bank of St. Louis, 2019; values indexed to 100 for FY2000

This disparity is especially prevalent with low- and moderate-income households and those without a college education. Inflation adjusted income for the bottom quartile of households only grew by 3% between 1988 and 2016, while young adults aged 25 to 34 – those that have historically been a barometer for the homebuying market – saw their incomes rise by only 5%. Over that same time period, GDP per capita, a key measure of overall economic gains, grew by 52% (JCHS 2018). This signifies that income inequality has been a major contributor to current housing affordability challenges. With regards to education, from 1980 to 2010 the inflation-adjusted average hourly wage of men aged 25 to 60 that only had a high school degree or dropped out of high school altogether decreased by 8% and 14%, respectively. On the other hand, those with a college degree or an advanced degree saw their incomes rise over the same time period by 20% and 32%, respectively (Moretti 2012). This means that the burden of rising rents is being disproportionately felt by the less educated, less skilled portion of the workforce.

Rent Burden

Approximately 44 million households rented in 2016 according to the Joint Center for Housing Studies of Harvard University. In major cities across the country, 47% of these renters routinely pay more than 30% of their income towards housing costs (JCHS 2018). Cities such as New York, Boston, Miami, San Francisco, and Los Angeles are among the least affordable in the country. This cost burden only seems to be growing as rents are growing faster than wages, on average. Furthermore, HUD estimates that over 12 million households pay more than 50% of their annual income towards rent (HUD 2019). Actual rent burden figures may even be understated, as most estimates are based on pre-tax income, which is often considerably higher than the post-tax dollars that are used to pay rent. Rent-burdened households have a greater eviction incidence, increased financial instability, and a higher propensity to utilize social safety net programs. They also have greater difficulty accumulating savings over time, making the transition to homeownership especially challenging and causing undue hardship during periods of income and expense volatility.

Rent-burdened households aren't limited to a specific age group, income level, or demographic, but some feel the brunt of elevated rents more than others. Unsurprisingly, households with the lowest levels of income have the highest incidence of rent burden as government rental assistance services struggle to meet demand. About 80% of households with less than \$30,000 in annual income were rent-burdened in 2016, including 55% that were severely rent-burdened (JCHS 2018). Single-parent households are also more likely to be rent-burdened than those with dual incomes. While the rent-burdened spread between African American and white households has remained relatively stable over the past 15 years, both groups have seen an absolute increase in financial strain. In 2001, 26% of white and 39% of African American households were burdened, respectively. By 2015, those figures had risen to 33% and 46% (Pew 2018). Within income groups, minority households are also more likely to be rent-burdened than white households.

Freddie Mac recently compiled data from four different studies to assess rent burdens across different metro areas. The studies were conducted by The National Low Income Housing Coalition, New York University's Furman Center, and Harvard University's Joint Center for Housing Studies and include varying methodologies; some look at percentage of households with severe cost burdens while others look at the number of units affordable to households at differing percentages of AMI. Miami, San Diego, Los Angeles, and New York consistently placed in the top 15 most-rent burdened markets across all four studies and are considered the least affordable rental markets in the country (Freddie Mac 2019b). The share of income spent on rent has unilaterally grown in every major metro in the United States. From 1985 to 2000, the average household dedicated 25.8% of their income to rent. As of Q2 2018, that figure had grown to 28.4% (Zillow 2018). While the national increase may seem modest, some markets have placed disproportionate financial strain on their residents over the past few decades. The chart below shows cities in which residents' rent-to-income ratio is greater than the national average. The burden in these cities is even more strenuous for lower-income renters, or those in the bottom tercile of incomes. Lower-income figures are inclusive of government rental assistance provided.

Figure 2: Share of Income Spent on Rent

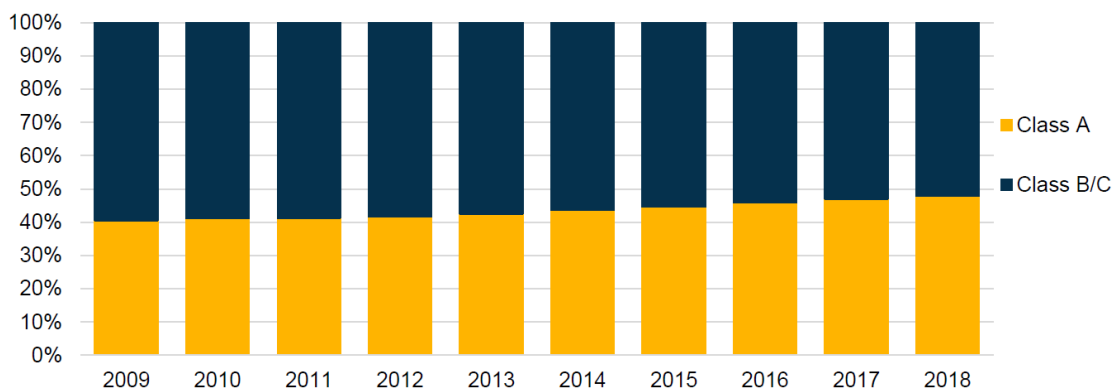
Share of Income Spent on Rent			
Metro Area	Historic (1985-2000)	Current (Q2 2018)	Lower-Income (Q2 2017)
United States	25.8%	28.4%	62.7%
Dallas-Fort Worth	21.8%	28.4%	57.8%
Houston	24.4%	28.8%	66.1%
Portland	23.5%	29.9%	68.8%
Seattle	23.8%	30.9%	64.0%
Tampa	27.6%	31.0%	66.2%
Orlando	22.7%	31.5%	63.7%
Denver	23.6%	32.0%	66.1%
Sacramento	31.8%	32.4%	76.1%
Boston	26.4%	32.7%	83.0%
San Jose	26.1%	35.6%	99.8%
Riverside	32.7%	36.8%	74.4%
New York	26.3%	37.7%	102.9%
San Francisco	30.6%	39.2%	95.9%
San Diego	34.7%	40.3%	94.9%
Miami-Fort Lauderdale	28.6%	41.5%	90.7%
Los Angeles	36.3%	46.9%	121.2%

Source: Zillow, Business Insider, 2018

Supply Shortage

As the cost of new multifamily residential construction continues to rise, it becomes increasingly difficult to deliver new workforce housing product. The rental income commanded by Class B and C products is hard-pressed to cover the expense of building from the ground up or to incentivize landlords to rehabilitate deteriorating properties. When such redevelopment of aging properties in today’s landscape does occur, rents are often pushed towards the top of the market. Consequently, value-add and opportunistic rehab projects turn Class B & C units to Class A and the supply of workforce housing has remained stagnant. Between 2013 and 2017, nearly 1 million Class A units were delivered, while less than 20,000 new construction Class B and C units opened their doors (Gonzalez 2018). Additionally, land use policies and political approval processes have constrained developers’ ability to maximize density.

Figure 3: Class A Stock vs. Class B/C Stock



Source: Fannie Mae, Reis, 2019

Attractive value-add opportunities are especially true in the case of urban in-fill development, where properties are moved out of the price range of workforce renters in places that they're needed most. This has caused a shift in the relative availability of Class B and C product, as its share of the overall rental stock has declined from 59% in 2009 to 52% at the end of 2018. By some estimates, 120,000 Class B and C units are lost annually to obsolescence and gentrification and new additions have struggled to cover these losses (Zahalak 2019). It's not enough to simply build new workforce housing – we must also take measures to preserve the existing stock.

Most of the new supply of workforce housing occurs through a process known as “naturally occurring affordable housing” (NOAH), whereby Class A units age and no longer command rents at the top of the market. Where this occurs depends on the economics of the local market. In strong housing markets, landlords without affordability restrictions are incentivized to redevelop their units with considerable capital expenditures so that they can command higher rents. In weak housing markets, landlords find difficulty justifying the extensive cost of upkeep when rents can't cover the cost of remodeling. Some of the new product has been created through local inclusionary housing policies that require developers to make a percentage of their units affordable, but these units represent only a small fraction of the overall supply.

Figure 4: Most Housing Supply-Constrained Cities in the US

Top 20 Supply-Constrained Metros in the US		
Metro Market	New Units Needed 2017 - 2030	Rank
Atlanta, GA	170,095	5
Austin, TX	114,076	10
Boston, MA	66,109	19
Charlotte, NC	71,523	17
Dallas-Ft. Worth, TX	266,296	2
Denver, CO	55,801	20
Houston, TX	214,176	3
Las Vegas, NV	87,280	12
Los Angeles, CA	164,201	6
Miami-Ft. Lauderdale, FL	185,414	4
Minneapolis, MN	70,783	18
New York, NY	278,634	1
Orlando, FL	130,177	8
Phoenix, AZ	150,302	7
Raleigh, NC	74,323	13
San Diego, CA	72,775	15
San Francisco, CA	71,668	16
Seattle, WA	98,228	11
Tampa, FL	72,933	14
Washington, DC	127,962	9

Source: Hoyt Advisory Services, Dinn Focused Marketing, Inc. and Whitegate Real Estate Advisors, LLC, 2017

The rate of natural migration of older properties to more affordable levels has decreased in many parts of the country. Between 2006 and 2016, the lowest-cost rental stock shrank by over 10% in 153 of the nation's 381 metros and by more than 20% in 89 metros (JCHS 2018). With a population growing by 2.2 million people per year, inclusive of both domestic births and net immigration, the United States will need to add approximately 328,000 rental units annually to meet overall housing demands

(Miller et al. 2017). This is a level that has only been reached once in the past 30 years. The above table shows how many units are needed by city as of a 2017 report prepared for the National Multifamily Housing Council and the National Apartment Association. Many of these metros are the typical supply-constrained coastal markets, while others represent the fastest growing cities in the nation.

Urban Migration

Since the beginning of civilization, human populations have become increasingly condensed. Prior to the Agricultural Revolution about 10,000 years ago, people operated in small tribal bands of up to 150 that were nomadic in nature and followed food sources wherever they were available. When early humans developed the technology to harness water, grow their own crops, and breed livestock for consumption, permanent villages began to form and expand in size. Similar trends have continued in contemporary society, albeit for different reasons. Today's urbanization is driven by demand for access to education, competition for talent in the job market, the expanding role of technology, and overall convenience, among others. Cities must attract businesses that will bolster local GDP by creating vibrant communities that draw creative, educated workers.

According to the United Nations, 55% of the global population currently lives in cities. This figure is expected to grow to 68% by 2050. In the United States alone, 82% of people live in an urban environment (Frem, Rajadhyaksha, and Woetzel 2018). The percentage of the American population that lives in cities may be approaching a plateau, but many metro areas are still expected to see population expansion over the next 10 to 15 years (Miller et al. 2017). While cities like Cleveland, Detroit, and Pittsburgh are expected to have little to no population growth over the next couple decades, places like Miami-Ft. Lauderdale, Phoenix, and Atlanta are expected to have substantial growth. Cities losing residents are former manufacturing capitals that have failed to adapt and attract the new wave of technological talent. Many of the fastest growing cities represent technological hubs that attract innovative companies and workers with a college education or above.

The wave of innovation, whether it be technological, financial, or scientific, has a profound effect on the growth of cities through a phenomenon known as the “multiplier effect” (Moretti 2012). The multiplier effect essentially says that for every job created in a local economy, some number of other jobs follow depending on factors such as wage and productivity. As a rule of thumb, a job that commands a higher salary has a larger multiplier effect because the worker has more disposable income to spend on local goods and services. Such local services cannot exist if people have no money to spend on them. One new job in traditional manufacturing, for example, creates an additional 1.6 jobs in local services, such as baristas, yoga instructors, and mechanics. On the other hand, jobs in innovation, such as software engineers at Apple, create 5 additional service jobs in the local economy because these workers consume more. Furthermore, these additional jobs support a diverse set of workers including doctors, lawyers, waitresses, and store clerks. Not only do innovation jobs create demand for such services, they also raise the incomes of all workers in the local economy. Companies that attract skilled workers have the effect of attracting other productive companies within the same sector, as cross collaboration and a deep talent pool are highly desired. The economic explosion of Silicon Valley over the past few decades is a prime example. It's evident why cities across the country fawned over Amazon's recent announcement to open a second headquarters; the influx of talented workers would increase demand for additional local services, thereby creating even more jobs and expanding the winning city's economic footprint.

When a city attracts companies whose workers have plenty of disposable income, this is a strong indicator of positive population trends and an additional need for workforce housing. Population growth is inclusive of a natural increase, or births minus deaths, and net immigration. Texas is projected to grow especially rapidly, as Austin, Dallas, Houston, and San Antonio are all among the 20 fastest growing cities in the country. Together, those four cities are expected to add nearly 400,000 residents by 2030 (Miller et al. 2017). As people continue to move to cities, additional strains will be placed on urban housing markets. With a finite supply of land, movement into urban centers will increase demand for city living, thereby increasing land values, raising rents, and displacing residents that can't afford to keep up with rising housing costs.

Figure 5: Fastest Growing Cities in the US

Changes in Metro Market Population 2016 - 2030 (000's)				
Metro Market	Natural Increase	Net Migration	Total	Rank
Atlanta, GA	34.0	90.9	124.9	3
Austin, TX	19.7	45.6	65.3	10
Charlotte, NC	9.9	56.6	66.5	9
Dallas-Ft. Worth, TX	60.7	91.0	151.7	1
Denver, CO	15.6	20.2	35.8	19
Houston, TX	63.8	72.8	136.6	2
Las Vegas, NV	11.3	49.1	60.4	11
Los Angeles, CA	84.4	-3.2	81.2	7
Miami-Ft. Lauderdale, FL	12.0	102.0	114.0	5
Minneapolis, MN	20.8	18.5	39.3	18
New York, NY	98.9	-31.7	67.2	8
Orlando, FL	11.4	71.8	83.2	6
Phoenix, AZ	28.0	91.1	119.1	4
Raleigh, NC	8.9	46.7	55.6	13
Riverside, CA	32.7	2.6	35.3	20
San Antonio, TX	17.2	25.0	42.2	17
San Francisco, CA	22.4	20.8	43.2	16
Seattle, WA	20.5	33.5	54.0	14
Tampa, FL	-3.3	56.1	52.8	15
Washington, DC	44.6	12.2	56.8	12

Source: Hoyt Advisory Services, Dinn Focused Marketing, Inc. and Whitegate Real Estate Advisors, LLC, 2017

The Time and Cost of Commuting

According to the US Census Bureau, approximately 130 million people across the country commute to work, the majority by car. Average commute times have grown by 20% since 1980, and the trend is only going up. The fastest growing commuter class is those that spend at least 90 minutes getting to work every day. This is a trend that isn't restricted to the most expensive cities in the country; 75% of metropolitan areas have seen a spike in commutes longer than 90 minutes. For example, the percentage of workers in Rhode Island that spend more than 90 minutes commuting daily has risen 40% in recent years. Additionally, a University of Minnesota study found that the number of schoolteachers who devote that much time to commuting has gone up 26% from 2002 to 2015 (Borrelli 2019). Moving further away to save on housing isn't always an option as many communities have expressed NIMBY attitudes and passed zoning laws that restrict the type of mixed-income housing that service workers can afford.

The United States Census Bureau annually conducts their American Community Survey in which they collect data on a variety of social, economic, housing, and demographic topics by metro area. One of the data points covered is mean one-way travel time to work for workers 16 years and over. In 2009 the United States mean was 25.2 minutes, compared to 26.4 minutes in 2017 (U.S. Census Bureau 2019a). This may seem like a relatively inconsequential increase over an 8-year period, but it's clear that commute times are getting longer. When drilling down to populous urban areas, the growth starts to become a bit more noticeable. Between 2013 and 2017, one-way commute times in Seattle, San Jose, Portland, and Miami-Ft. Lauderdale grew by 2.2, 3.1, 1.5, and 1.5 minutes, respectively.

Figure 6: Average One-Way Commute Times in Minutes by Metro

Geographic Area	2013	2014	2015	2016	2017	2030 est	2040 est	2050 est
United States	25.5	25.7	25.9	26.1	26.4	29.6	32.2	35.1
Atlanta-Sandy Springs-Roswell, GA Metro Area	30.3	30.4	30.7	31.0	31.4	35.3	38.5	42.1
Austin-Round Rock, TX Metro Area	25.5	25.9	26.2	26.4	26.8	31.5	35.7	40.4
Baltimore-Columbia-Towson, MD Metro Area	30.2	30.3	30.4	30.5	30.8	32.8	34.5	36.2
Boston-Cambridge-Newton, MA-NH Metro Area	29.3	29.7	30.2	30.6	31.0	37.2	42.9	49.4
Charlotte-Concord-Gastonia, NC-SC Metro Area	25.5	25.7	26.0	26.3	26.5	30.0	33.1	36.4
Chicago-Naperville-Elgin, IL-IN-WI Metro Area	30.8	30.9	31.2	31.3	31.6	34.3	36.6	39.0
Cincinnati, OH-KY-IN Metro Area	24.2	24.3	24.5	24.6	24.7	26.4	27.8	29.2
Cleveland-Elyria, OH Metro Area	24.5	24.5	24.6	24.6	24.6	24.9	25.2	25.4
Columbus, OH Metro Area	23.2	23.4	23.4	23.5	23.7	25.4	26.8	28.3
Dallas-Fort Worth-Arlington, TX Metro Area	26.8	27.1	27.4	27.8	28.1	32.8	36.9	41.5
Denver-Aurora-Lakewood, CO Metro Area	26.8	26.9	27.2	27.3	27.5	29.9	31.9	34.0
Detroit-Warren-Dearborn, MI Metro Area	26.3	26.5	26.6	26.7	26.8	28.5	29.9	31.3
Houston-The Woodlands-Sugar Land, TX Metro Area	28.2	28.5	29.0	29.5	29.7	35.1	40.0	45.5
Indianapolis-Carmel-Anderson, IN Metro Area	24.6	24.7	24.8	24.8	24.8	25.5	26.0	26.5
Jacksonville, FL Metro Area	25.4	25.5	25.7	26.3	26.5	30.4	33.8	37.6
Kansas City, MO-KS Metro Area	22.7	22.8	22.8	22.9	23.0	24.0	24.8	25.6
Las Vegas-Henderson-Paradise, NV Metro Area	24.1	24.2	24.4	24.4	24.5	25.8	26.9	28.1
Los Angeles-Long Beach-Anaheim, CA Metro Area	28.5	28.9	29.2	29.6	30.0	35.4	40.3	45.8
Memphis, TN-MS-AR Metro Area	23.8	23.9	23.9	24.0	24.1	25.1	25.9	26.7
Miami-Fort Lauderdale-West Palm Beach, FL Metro Area	27.4	27.7	28.1	28.5	28.9	34.4	39.3	44.9
Minneapolis-St. Paul-Bloomington, MN-WI Metro Area	24.8	25.0	25.1	25.2	25.3	27.0	28.4	29.8
Nashville-Davidson--Murfreesboro--Franklin, TN Metro Area	26.3	26.5	26.8	27.0	27.3	30.8	33.8	37.1
New York-Newark-Jersey City, NY-NJ-PA Metro Area	34.9	35.2	35.6	35.9	36.3	41.2	45.5	50.2
Orlando-Kissimmee-Sanford, FL Metro Area	27.0	27.1	27.4	27.8	28.2	32.5	36.2	40.4
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metro Area	28.5	28.8	29.0	29.2	29.5	33.0	36.0	39.2
Phoenix-Mesa-Scottsdale, AZ Metro Area	25.8	25.8	25.9	26.0	26.2	27.5	28.6	29.7
Pittsburgh, PA Metro Area	26.0	26.3	26.4	26.5	26.7	29.1	31.1	33.2
Portland-Vancouver-Hillsboro, OR-WA Metro Area	25.1	25.3	25.7	26.2	26.6	32.1	37.1	42.9
Raleigh, NC Metro Area	24.7	24.9	25.1	25.4	25.9	30.2	34.0	38.3
Richmond, VA Metro Area	24.5	24.6	24.7	25.0	25.2	27.6	29.6	31.8
Sacramento-Roseville--Arden-Arcade, CA Metro Area	25.8	26.0	26.1	26.4	26.8	30.3	33.4	36.7
St. Louis, MO-IL Metro Area	25.0	25.1	25.3	25.5	25.6	27.7	29.3	31.1
Salt Lake City, UT Metro Area	22.5	22.6	22.6	22.5	22.4	22.1	21.8	21.6
San Antonio-New Braunfels, TX Metro Area	25.0	25.0	25.4	25.7	26.0	29.5	32.6	35.9
San Diego-Carlsbad, CA Metro Area	24.4	24.6	25.0	25.3	25.7	30.4	34.6	39.4
San Francisco-Oakland-Hayward, CA Metro Area	29.6	30.3	31.2	32.1	32.8	45.8	59.2	76.5
San Jose-Sunnyvale-Santa Clara, CA Metro Area	25.1	25.7	26.5	27.3	28.2	41.2	55.1	73.7
Seattle-Tacoma-Bellevue, WA Metro Area	27.9	28.3	29.0	29.6	30.1	38.5	46.6	56.3
Tampa-St. Petersburg-Clearwater, FL Metro Area	25.7	26.0	26.3	26.7	27.1	32.2	36.8	42.0
Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area	34.0	34.3	34.3	34.4	34.6	36.6	38.3	40.0

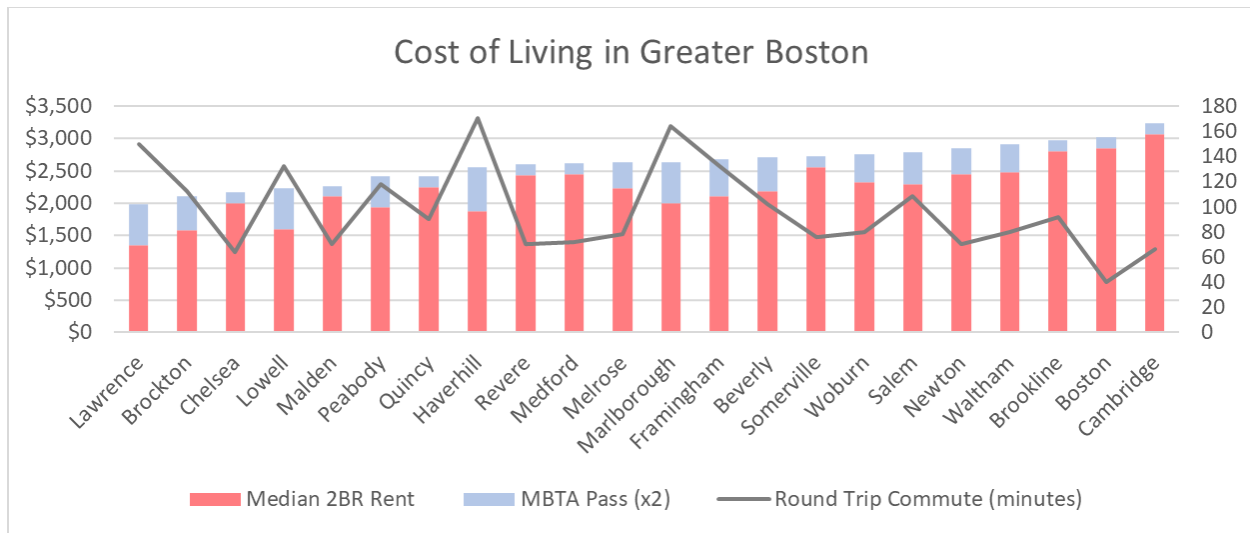
Source: U.S. Census Bureau, 2019

To truly appreciate the gravity of this trend, we can estimate how long commutes will be 10, 20, and 30 years from now. The above chart uses a simple annualized growth rate calculated using the change in commute times from 2013 to 2017 to estimate what one-way commutes in major cities throughout the country will look like in 2030, 2040, and 2050. Whether this trend will be linear depends on several factors, some more predictable than others, but this is a reasonable projection given population growth trends and existing infrastructure. The results show that by 2050 Bay Area (CA) commutes will more than double and New York City workers will spend an additional 120 hours in round trip transit per year.

Greater Boston Case Study

Basic economic theory states that housing costs decline as you move further away from the central business district of a city. With this added distance, however, workers must pay more in transportation costs and consider the opportunity cost of their time spent commuting. Moving further away to save on housing costs doesn't necessarily create a net savings at the end of the day. The cost of housing and transportation in the Greater Boston area can provide some valuable insight to this tradeoff. The graph below shows the additive cost of rent and transportation to downtown Boston for several popular commuter suburbs. Places such as Haverhill, Marlborough, and Lawrence yield a clear dollar savings on the cost of housing and transportation, but the daily commutes are around four times longer.

Figure 7: Average Rental Housing Cost and Commute Times in Greater Boston



Source: Zumper, Massachusetts Bay Transit Authority, 2019

The median 2-bedroom apartment in Boston rented for \$2,850 per month as of June 2019 (Zumper 2019). The same apartment rented for an average of \$2,100 in Framingham, a prominent commuter town located about 20 miles west of Boston. For a household of four with two full-time working adults with jobs in Boston, each adult must pay \$291.50 a month for a Massachusetts Bay Transportation Authority (MBTA) pass to take the commuter rail into the city. Isolating the rent and transportation variables, this family's total monthly outlay is \$2,683. Living in Boston would cost them \$3,019 a month, including two monthly LinkPasses priced at \$84.50 each. By living in Framingham, this working-class household would save \$336 per month, or \$4,032 per year.

To truly assess any savings that this family would experience, we need to consider the extra time that the parents spend getting to and from their jobs, or the opportunity cost of the extended commute. The MBTA trip planner estimates that it takes about 46 minutes on the train during rush hour to get from Framingham Station to Back Bay, a central commuter hub in Boston. We can safely assume that an additional 20 minutes should be added to the commute to account for time getting from their home to the train, and from the train to their office. Each adult therefore spends 2 hours and 12 minutes commuting round trip each day from Framingham, compared to an assumed 40 minutes living in Boston. Using 261 workdays per year and 20 vacation days, this couple spends an extra 739 hours per year commuting.

The \$4,032 in savings per year equates to \$5.46 per extra hour of commute time – but what does this mean? Consider that the 2019 4-person AMI is \$113,300 in the Boston-Cambridge-Quincy, MA-NH HUD Metro FMR Area. With 2,087 working hours per year per adult, the average adult in a dual-income, 4-person household in the Boston area makes \$27.14 per hour (US OPM 2019). It would be inaccurate to assume that there could be a one-for-one tradeoff in time spent commuting versus time spent working, but the financial benefit clearly sides with additional time spent on the job. While a useful exercise, this analysis only considers the cost of housing, train passes, and the opportunity cost of lost wages. When you add in the cost of owning a car, a necessity for most families living in the suburbs, any dollar savings are instantaneously wiped away. At that point it essentially becomes cheaper to live in the city.

Chapter Three: Biggest Impediments

Developers seeking to bring new construction workforce housing to market face a myriad of challenges in today's environment. Among the challenges affecting multifamily housing developers are rising materials costs, a shortage of skilled labor, and government regulations such as zoning restrictions that vary across and within municipalities. Such challenges have increased the cost of delivering new supply and resulted in development concentration in higher rent markets such as New York, Washington DC, and Seattle. As the rate of urbanization increases, developable land in cities has become increasingly scarce. This shortage of land is especially prevalent in cities like San Francisco, Boston, Seattle, Los Angeles, and New York. In rapidly growing cities, developers are finding it difficult to deliver housing at a price point affordable to middle-income renters due to increased competition for attractive parcels. The cost of land, labor, and materials is about the same whether a developer builds housing that's workforce or market rate. Developers enter a bidding war in which the winner must cover the elevated cost of acquisition by either obtaining subsidies or charging higher rents. Absent sufficient subsidies, the only way to proceed is to raise the rent, thereby pricing out middle-income households.

Rising Cost of Materials

Generally speaking, rising construction costs for multifamily development result in higher rents. When developers must compensate for increased costs to achieve financial feasibility, tenant affordability suffers. As a result, most new deliveries have been Class A properties that offer limited housing opportunities for low- and middle-income renters even when considering inclusionary development mandates. The aggregate prices of raw and manufactured materials used for residential construction in the United States increased by 4% in 2017. While global demand increases for materials such as copper, aluminum, and diesel fuel are partly to blame, international trade wars and tariff policies on imports have had a particularly adverse effect on the price of building materials in the United States. Trade wars and tariff policies have raised costs outright and led to construction delays, ultimately impacting the end users.

The Associated General Contractors of America (AGC) releases statistics monthly that show percentage changes in costs for many processed and unprocessed goods used in construction, and the recent data is forthtelling about the issues facing the industry. Diesel fuel costs increased by 21%, 41%, and 5% in 2016, 2017, and 2018 respectively. Costs for asphalt felts and coatings, a key component in tar roofing and siding products, grew by 11% in 2018. Precast concrete, insulation materials, and architectural coatings costs grew by 6%, 5%, and 7%, respectively, in 2018. Many metals showed double-digit cost increases in 2018, with steel component costs rising by nearly 20%. The chart below shows many of these line items in detail (ACG 2019a). While some material costs decreased in 2018, most have been on a steady upward trajectory for the past five calendar years.

Figure 8: Annual Percentage Cost Changes for Construction Materials

Percentage Change in Producer Price Indexes (PPIs) for Construction					
	2014	2015	2016	2017	2018
Changes in PPIs for processed goods important to construction					
#2 diesel fuel	-26.9	-43.1	21.4	40.9	5.0
Paving mixtures and blocks (asphalt)	2.5	-6.5	-5.6	-0.4	10.2
Asphalt felts and coatings	2.4	-4.7	-1.9	2.2	10.6
Prepared asphalt & tar roofing & siding products	2.5	-2.1	-1.0	1.6	10.9
Cement	5.7	6.5	5.0	4.3	2.8
Concrete products	5.1	2.9	3.1	2.9	3.5
Concrete block and brick	3.2	1.9	2.0	2.9	3.4
Concrete pipe	3.2	2.8	2.2	0.5	-0.6
Ready-mixed concrete	5.5	3.7	3.7	3.1	3.1
Precast concrete products	6.5	1.7	0.5	3.5	6.0
Prestressed concrete products	2.3	-0.9	11.1	1.9	4.3
Brick and structural clay tile	1.4	1.3	1.0	1.7	1.2
Plastic construction products	1.6	0.8	-0.1	4.7	2.7
Flat glass	2.4	5.3	3.1	1.1	1.3
Gypsum products	5.1	0.1	7.9	5.8	2.9
Insulation materials	2.5	0.5	3.1	1.2	5.1
Lumber and plywood	3.3	-7.9	3.6	11.2	-4.4
Architectural coatings	0.9	-2.8	0.9	2.6	7.2
Steel mill products	0.7	-19.4	8.6	7.5	18.5
Steel pipe and tube	0.0	-16.1	5.4	10.2	21.3
Copper and brass mill shapes	-4.5	-19.3	21.1	9.0	-5.6
Aluminum mill shapes	10.9	-14.0	5.5	10.1	6.3
Sheet metal products	2.5	-1.5	2.2	2.2	6.7
Fabricated structural metal	1.4	-3.3	2.3	3.5	12.0
Fabricated structural metal bar joists & rebar	2.5	0.1	4.9	-0.5	12.2
Fabricated structural metal for non-industrial buildings	2.2	0.5	4.0	-1.3	13.1
Fabricated structural metal for bridges	5.8	-7.5	-7.0	-0.4	15.0
Ornamental and architectural metal work	3.1	0.1	2.2	3.5	12.4
Fabricated steel plate	1.4	-1.3	0.2	1.4	2.1
Prefabricated metal buildings	3.6	-2.0	4.8	3.1	11.7
Construction machinery and equipment	1.6	1.2	0.9	0.9	3.4
Truck & bus (incl. off-the-highway) pneumatic tires	-4.3	-4.2	2.7	1.8	2.5
Changes in PPIs for unprocessed goods important to construction					
Asphalt (at refinery)	5.2	-45.5	-9.8	28.3	23.2
Construction sand/gravel/crushed stone	3.3	4.6	2.3	4.2	4.1
Iron and steel scrap	-16.9	-50.8	63.7	18.5	13.8
Stainless and alloy steel scrap	-4.5	-35.7	30.3	3.9	-13.0
Copper base scrap	-11.9	-28.4	11.0	17.5	-9.0

Source: The Associated General Contractors of America, 2019

In July 2018, the Department of Commerce, as directed by President Trump, announced that it would levy tariffs on \$200 billion worth of imports from China. The list of imports included material inputs that are vital to the construction of residential properties; 463 of them are commonplace in both new construction and remodeling. Data from the International Trade Commission and Bureau of Economic Analysis shows that \$10 billion worth of goods used in residential construction are subject to these tariffs. Of particular interest, the new trade policy imposed tariffs on steel and aluminum imports of 25% and 10%, respectively. A study conducted by the NAHB Economics and Housing Policy Group estimated that the homebuilding industry could expect a \$2.5 billion cost increase over

the year following the announcement (Logan 2018). As a result, of these actions, imports of building materials declined by more than 20% year over year as of January 2019, a stark contrast to the typical 15% increase seen at that time each year. Trade talks with China have been going back and forth, but even speculation on what may happen next has continued to strain the cost of materials affected.

Shortage of Construction Labor

Construction unemployment in the United States is at an all-time low since AGC began tracking the statistic in 2000, indicating the lack of skilled laborers available to fill the growing number of job openings. Other sources even indicate that the unemployment rate in construction is near a 50-year low. The 3.2% unemployment rate as of May 2019 represents 294,000 jobseekers compared to a May 2018 unemployment rate of 4.4%, or 415,000 people. The total number employed is a 12 month increase of 246,000, but still represents 3.6% less than when the sector peaked in April 2006. Contractors in most states increased their workforce in the past year, but economists point out that the number of job openings indicates that they would expand their payrolls even more if they could. As of April 2019, the number of job openings in construction was 360,000, a record setting high for the sector. Although the average pay for such workers is 10% higher than the private sector average, firms have continued to raise their pay and expand their array of benefits to attract a dwindling pool of workers. Despite these concessions, 78% of firms reported difficulty finding salaried and hourly craft workers that possess the necessary skills (ACG 2019b).

Factors driving the labor shortage include a significant loss of workers during the most recent recession, an aging population, and a lack of appeal to millennials. By some estimates, 600,000 workers left the industry for other sectors, including healthcare and social work, and never returned. When there's a shortage of labor, projects take longer to build and bid contracts become more expensive. While a city may have a strong demand for additional housing, a finite supply of skilled workers means that developers must either get in line or outbid for quality labor. An investment on behalf of the public sector in technical education programs would go a long way in exposing young workers to the benefits of working in construction and ultimately decrease the cost of housing production.

Government Regulation

Developers are well aware of the laundry list of regulatory and permitting costs incurred when creating or preserving multifamily housing, but until recently it was difficult to quantify how prohibitive government regulation is with regards to getting projects to pencil out. A recent joint study by the National Association of Home Builders (NAHB) and the National Multifamily Housing Council (NMHC) undertook efforts to determine the incremental cost that government regulations can have on a project. To do this, they surveyed their developer members about recent projects that had been undertaken. Over 90% of multifamily developers incur hard costs related to paying fees to local jurisdictions when applying for zoning relief and obtaining building permits. Applicable fees may also include wetlands permits, stormwater permits, endangered species or critical habitat permits, impact fees, utility hook-ups, and others. Construction delays as a result of lengthy approvals, stringent development standards, changes to building codes, and OSHA requirements also add to a developer's costs. They must navigate a complex regulatory framework and occasionally deal with overlapping jurisdictions that may have conflicting agendas. The study concluded that regulations across all levels of government account for 32% of the cost of new multifamily development, and that in a quarter of cases this figure can be as high as 43% (NAHB and NMHC 2018).

Zoning is regulated at the local level and stipulates what kind of building can be constructed on a piece of land, including multifamily, industrial, office, hotel, retail, lab, or mixed-use. Zoning ordinances

regulate details such as building height, density, lot coverage, setbacks, landscaping, and architectural design. Development design standards of a municipality that go beyond what a developer would typically produce account for an average of 6.3% of total development cost. Developers prefer to find land that has already been permitted and is zoned for the intended use so that they can build as-of-right, but this is rarely the case. Most multifamily developments must go through a rezoning process or obtain some type of variance in order to proceed. The costs associated with zoning approval account for 4.1% of total development costs on average and can include studies such as environmental, traffic, archeological, and geotechnical, in addition to the fees paid directly to the local government. Additionally, prohibitive zoning can hamper a developer's desire to maximize density, thereby limiting the number of new units built.

Sustainability and energy efficiency are worthwhile objectives, but the upfront cost of meeting changing building codes needs to be kept within reason. Energy efficiency measures have the potential to reduce a property's operating costs, but the installation costs may be too prohibitive to get the project off the ground in some cases. Rodger Brown, Managing Director for Real Estate Development at Preservation of Affordable Housing (POAH), notes that developers can expect a 5% to 7% increase in initial costs when going from LEED to net zero, although it will ultimately drive operating costs down (Brown 2019). Federal agencies such as the Environmental Protection Agency, the Federal Emergency Management Agency, and the Department of Energy all contribute to the development of new building codes. While their intentions are benevolent and seek to solve long-term problems like climate change, the changes to building codes have unintended consequences that limit developers' flexibility and occasionally fail to improve energy efficiency. When changing building codes exist, they account for an average of 7.2% of total development costs.

Altogether, the costs associated with adhering to government regulation are so prohibitive that they deter many projects in initial underwriting. The ones that do make it to market will have higher rents in order to cover the costs of construction and will be less affordable for all. The lengthy approval process had a particularly adverse effect on one of POAH's projects in Detroit. Over the 3 years since initial approval, project costs increased by nearly a third and the developer had to go back to the city to reduce the scope, resulting in fewer units (Brown 2019). This isn't an isolated incident, but one that is unfortunately increasingly common.

Lack of Middle-Income Rental Subsidy Programs

Given the economic challenges of building new construction affordable housing and preserving the existing stock, obtaining funding through federal, state, and local subsidy programs is a highly competitive process. Many of these programs have rounds of funding that occur only a couple times per year, and all of them have a finite amount of resources. When a developer applies for funding and doesn't make the cut, they either must delay a portion or all of their project until alternative funding can be sourced, wait for the next round of funding, or abandon the project altogether if the carrying costs are too high. By some estimates, public subsidy programs are 5 to 6 times oversubscribed, meaning countless projects that could create valuable affordable units may not be able to proceed. When considering that developers may not even apply for funding if they feel their project won't be competitive in the scoring process, the shortage of funding becomes even more pronounced.

Additional housing stock, no matter the target tenant, generally relieves demand pressure and makes housing more affordable for all. In that regard, it's important to consider the state of funding for low-income households to gauge availability of potential funding for workforce housing. Increases in funding through federal programs have trailed the growth in the nation's lowest income renters.

Between 1987 and 2015, the number of very low-income renters assisted rose by 950,000 while the total pool rose by 6 million (JCHS 2018). The primary rental assistance programs that developers rely upon are the Low-Income Housing Tax Credit (LIHTC) and Housing Choice Vouchers. While these two programs have been very successful with funding housing production and increasing affordability, it's evident that they can't solve the problem alone as evidenced by long waitlists at many properties, especially in urban areas. It's estimated that only one in four households that needs federal housing assistance receive it. HUD's Worst Case Housing Need report indicated that low-income households with severe income burdens rose from 6 million in 2005 to 8.3 million in 2015, but the number of assisted households rose by only 150,000 over that same time period. State and local governments have attempted to supplement federal funding through bond issuances, real estate transfer taxes, and linkage fees from commercial developments. The National Low Income Housing Coalition estimates that there are about 100 such programs nationally, yet the need for more remains.

When considering the general lack of funding available for affordable housing across the country, the fact that most of the available public subsidy programs target renters with incomes at the lower end of the spectrum, and that most of these programs fail to meet the demand of target renters, the challenge of constructing workforce rental housing becomes readily apparent. Many critics point to this layer of complications as a reason to continue focusing on low-income households before shifting the focus to the middle-income population. In the same vein, additional workforce housing would relieve overall pressure on the housing market and ensure middle-income households don't take away units designated for those most vulnerable. Asked what the biggest challenge is that developers face when trying to deliver new construction workforce housing, WinnCompanies CEO Gilbert Winn said "the lack of middle-income subsidy programs" without hesitation (2019).

PART TWO

The following government programs, financing options, and creative cost saving measures provide a representation of the ways that developers can create workforce housing through new construction, rehabilitation, or adaptive reuse. Careful consideration was given to discuss the most well-known instruments available, especially at the federal and state levels, but this list is not meant to be fully exhaustive. It is rather a sample that covers the types of tools available including financing, tax abatements, direct subsidies, tax credits, density bonuses, and industry ingenuity. Together they are pieces that can help solve the workforce housing puzzle. Other ideas are being circulated around the development community and throughout the government, so it's worth noting some of these as well.

Chapter Four: Solutions at the Federal Level

The United States does not currently have a subsidy program that is solely designed to support the production of middle-income rental housing. Many of the programs discussed herein are tax credit programs administered by the federal government. Others include targeted financing and the newly created Opportunity Zones. All the tax credit programs have different economic goals but can be utilized to aid in the production of workforce housing. While a workforce housing tax credit does not currently exist, the idea has been discussed.

Low-Income Housing Tax Credit & Income Averaging

Created as part of the Tax Reform Act of 1986, the Low-Income Housing Tax Credit (LIHTC) has been the country's most successful tool at the federal level for creating affordable rental housing. Between 1987 and 2017, the program has been responsible for the creation and preservation of 47,511 projects and 3.13 million affordable housing units across the United States (HUD User 2019). The program has historically subsidized the creation of housing for renters with incomes at or below 60% AMI, which falls outside our definition of workforce housing. Under the Consolidated Appropriations Act, 2018, however, Congress created a new occupancy set aside known as "Income Averaging". Before diving into Income Averaging, a bit of background on the LIHTC is necessary to understand how this program can aid in the production of workforce housing.

The tax credits act as an indirect subsidy as they are awarded to developers through state housing agencies based on a percentage of eligible development costs, which must be directly related to the production of the affordable units. Projects are awarded either 4% credits or 9% credits, which equate to the present value of 30% or 70% of eligible costs, respectfully. The 9% credits are typically reserved for the creation of new affordable housing units, while 4% credits are tailored for the rehabilitation of existing units and are generally paired with tax-exempt bond financing. Credits are allocated on a dollar-for-dollar basis based on the eligible costs, after which they're packaged and sold to investors in exchange for cash. The credits are claimed by investors over a 10-year period but are earned over 15 years. Compliance with the credit allocation regulations requires that projects remain affordable for the full 15-year period, and many projects have extended use requirements in association with other layers of public funding. Credits are allocated to each state on a per capita basis; more populous states receive a greater amount of credits. It's also worth noting that there are currently 14 states that administer their own LIHTC at the state level in addition to federal allocations.

Projects historically had been able to qualify for the LIHTC in one of two ways. They could either set aside 20% of units for households with income at or below 50% of AMI or set aside 40% of units for households with income at or below 60% of AMI. Under Income Averaging, projects can now

earn tax credits on units that are designed for households up to 80% AMI provided that the average of the imputed income limitations doesn't exceed 60% AMI (Shelburne and Stagg 2018). This new limitation is on the lower end of the workforce housing spectrum, but it's important to consider that these units improve economic feasibility in underwriting, can be combined with other sources of subsidy, and can ultimately lead to workforce housing production that otherwise may not have been possible.

Historic Tax Credit

The Federal Historic Preservation Tax Incentives program, more commonly known as the Historic Tax Credit (HTC), encourages the private sector to invest in the rehabilitation and adaptive reuse of historic buildings. The program is administered by the National Park Service (NPS) of the US Department of the Interior and has leveraged over \$96.87 billion in private capital for the preservation of 44,341 properties since 1976 (OCC 2017). For a rehab to be eligible for the HTC, the subject property must be listed as a certified historic building on the National Register of Historic Places or be of architectural quality that contributes to a National Register district. Placement on the National Register is evaluated by considering the property's age, significance, and integrity. As a rule of thumb, a property must be at least 50 years old to qualify.

Qualified rehabilitation expenses are eligible for a 20% tax credit claimed over five years after the building has been placed in service. The credits are awarded to developers who can either claim them against their own tax liability or sell them for direct equity. The IRS makes final determination on what constitutes a qualified rehabilitation expense, but some examples include replacement of doors, heating systems, windows, architect's fees, and construction loan interest. State Historic Preservation Offices and the NPS review the scope of work to ensure that it complies with their standards. Many limitations are placed on the rehab work to ensure that the fundamental characteristics that make the structure historic remain after the work has been completed. External facades, interior spaces, and other defining characteristics require careful navigation on behalf of the developer if they wish to claim the HTC. Many states mirror the federal program and provide additional historic credits for the rehabilitation or adaptive reuse of qualifying structures.

Historic Tax Credits are useful for the production of workforce housing for a key reason: unlike the LIHTC, the HTC doesn't come with income restrictions for eligible households because the credit can be granted for any property type that satisfies the historic rehabilitation standards. The HTC has traditionally been one of developers' most useful tools for providing workforce housing. Old mill buildings, schools, and hospitals are just a few of the examples of types of properties that have the structural characteristics that make the transition to multifamily residential feasible. With that being said, historic preservation projects are complex endeavors that require plenty of due diligence to understand the requirements and potential costs associated with the work. It's also worth noting that the HTC doesn't command the same buyer demand as the LIHTC; the HTC is typically sold for \$0.75 to \$0.80 cents per credit, while the LIHTC may be sold for upwards of \$1.00 per credit.

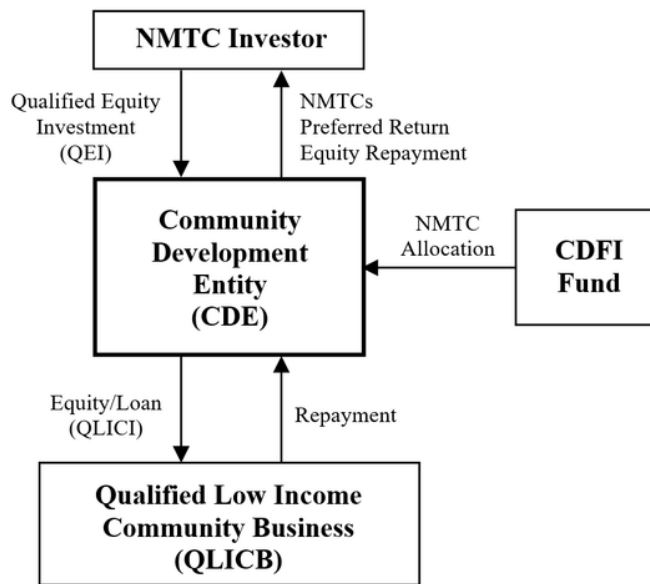
New Markets Tax Credit

Administered by the U.S. Department of the Treasury's Community Development Financial Institution's Fund (CDFI Fund), the New Markets Tax Credit (NMTC) is principally a credit against income tax for investment in businesses in low-income communities. The credits are sold to investors who can claim a 39% credit for every dollar invested. The credits are claimed over a 7-year period. Under the program requirements, a low-income community is defined as a census tract with a poverty rate of at least 20% or median family income less than or equal to 80% of the statewide or metropolitan

area median income (Kleban and Swartzendruber 2014). The detailed regulatory framework and investment structure involved with the NMTC are beyond the scope of this Thesis, but a high-level overview of the process will help to understand how this program can benefit workforce housing.

In order to claim the NMTC against federal income tax, the investor must make a Qualified Equity Investment (QEI) in a Community Development Entity (CDE). A CDE is basically a corporation or partnership whose primary mission is to serve low-income communities or individuals. For our purposes, the CDE can be set up by the developer as a special purpose entity whose qualifying mission is stated through its operating agreement or other governing documents. The CDE then makes an investment (also known as a Qualified Low-Income Community Investment or QLICI) in a business in a low-income community (also known as a Qualified Active Low-Income Community Business or QALICB/QLICB). The QALICB cannot be a residential rental property as defined by the IRS; at least 20% of gross revenues must come from commercial sources. As long as 85% of the capital provided by the investor to the CDE will support a QALICB, the CDFI Fund will issue NMTC to the CDE pending a competitive allocation process (Kleban and Swartzendruber 2014).

Figure 9: Sample NMTC Transactional Structure



Source: CityScope Capital Group, LLC, 2018

Even at a high level this is admittedly a complex process to understand, but the key takeaway is that NMTCs can be particularly useful for workforce housing in mixed-use developments. The QALICB can have a substantial residential component (up to 80% of gross revenue) without being considered a residential rental property. As mixed-use projects in urban settings become increasingly common, the NMTC could be a creative way to raise equity for workforce housing in applicable settings.

Freddie Mac

As a government-sponsored enterprise chartered to support homeownership and rental housing for middle-income Americans, Freddie Mac has several loan programs that support the preservation and production of workforce housing.

The Workforce Housing Mezzanine Loan (WHML) focuses on the preservation of affordable housing and allows borrowers to secure senior debt and a mezzanine loan through a streamlined process. Properties must reserve at least 50% of their units for households whose income is less than or equal to 100% of AMI. Leverage on the 10-year, interest-only loan can be up to 90% as measured by LTV and DSCR can be as low as 1.05x. Freddie offers favorable pricing in exchange for limiting rent growth on 80% of the units through their Preservation of Affordable Rents Covenant (PARC), which restricts rent escalation to the greater of 2% or the annual growth in CPI plus 1%. Borrowers must certify compliance with these requirements on an annual basis to ensure rents remain affordable (Freddie Mac 2019d).

The Targeted Affordable Mezzanine Loan (TAML) has many of the same loan terms and conditions as the WHML, but is tailored towards borrowers that are acquiring Section 8 properties or LIHTC properties that are in year 11 or later of their 15-year compliance period. Properties in line for tax credit resyndication are also viable candidates for this type of product. Regarding tax credit partnerships, this product is only available for existing entities as its primary emphasis is on refinances and resyndications. Freddie notes that preexisting regulatory agreements pertaining to affordability restrictions will supersede any requirements specific to this product (Freddie Mac 2019c).

The Non-LIHTC Forwards program offers flexible transaction structuring and certainty of execution for both non-profit and for-profit borrowers alike for both new construction and substantial rehabilitation projects. Tailored specifically for broader income bands than the LIHTC to incorporate workforce housing, this product enables borrowers to hedge interest rate risk by securing a rate on permanent financing at the time of closing on the construction loan. Freddie provides an unfunded forward commitment for properties that restrict rents for at least 80% of the units. Rent restriction levels can vary from 100% to 150% of AMI, depending on cost of living in the market (Freddie Mac 2019a).

Opportunity Zones

Added to the tax code on December 22, 2017, Opportunity Zones are designated census tracts in economically distressed urban, suburban, and rural locations around the country where new investments are eligible for preferential tax treatment. Nominated for designation by state governments and certified by the Secretary of the US Treasury, Opportunity Zones were created with the intention of driving economic development and creating jobs in needy communities by attracting private capital. By investing in new businesses and properties within designated areas, investors can defer capital gains while making a positive social impact in communities. Additional housing production for low- to middle-income tenants has been one of the major goals of the program, but reviews have been mixed and the true economic impact nationwide is yet to be determined in these early stages. Some developers have found it easier to attract capital for workforce housing projects, while others have seen adverse effects from Opportunity Zone designations in certain areas.

Investors who would like to benefit from Opportunity Zone tax breaks can do so by reinvesting capital gains into a Qualified Opportunity Fund (QOF) within 180 days of realizing a sale. The tax on these gains is then deferred until the earlier of December 31, 2026 or when the QOF investment is sold. If the QOF investment is held for longer than 5 years, the tax on the deferred gains from the original sale is reduced by 10%. If it's held for longer than 7 years, the tax is reduced by 15%. Lastly, investors will receive a step-up in basis equal to the investment's fair market value if the QOF investment is held for 10 years or longer. This essentially means that investors don't have to pay any capital gains taxes on QOF investments held for at least 10 years (IRS 2019).

In order to realize the benefits of the 15% reduction, gains must be invested in a QOF by December 31, 2019. The short timeline to find qualifying investments has caused Opportunity Zones to be the latest buzzword in real estate investing, as people are scrambling to deploy capital. There are two scenarios that dictate the success of Opportunity Zones as they were originally intended and can have opposite effects on workforce housing production. Under the first scenario, investors may be attracted to a designated census tract that otherwise may not have received any attention were it not in an Opportunity Zone. Workforce housing projects here are now feasible because the returns on an after-tax basis are suddenly attractive. Under the second scenario, the Opportunity Zone designation could cause an area to overheat if it were already attracting a healthy level of private investment. Suddenly land becomes more expensive due to increased competition and developers must build market rate projects in order to justify the higher land basis. Low- and middle-income housing may no longer be feasible and workforce households may be priced out.

The types of investors that are attracted to Opportunity Zones are generally not the same as those who seek to use government subsidy to produce affordable housing. LIHTC investors typically don't use capital gains as their source of funding, while Opportunity Zone investors must use them in order to take advantage of the benefits. While workforce housing production itself may be a challenge in certain Opportunity Zones, the program still provides amenities necessary to create vibrant neighborhoods that are attractive to workforce households.

Workforce Housing Tax Credit

The idea of workforce housing tax credits has been discussed in the private development community and public sector for the past few years but hasn't gained much traction. Senate Finance Committee Ranking Member Ron Wyden (D-OR) first introduced a proposal for a Middle Income Housing Tax Credit (MIHTC) back in 2016 and reintroduced it again in 2018. Senator Wyden's plan proposed to build off the success of the LIHTC and utilize a similar framework to help middle-income Americans. Under the proposed bill, the federal government would allocate credits to each state based on population. Administered by state housing authorities, credits would be awarded to developers that restrict at least 60% of their units for residents with incomes up to 100% AMI. Like the LIHTC, the MIHTC would cover qualifying development costs and be provided over a 15-year compliance period (Wyden 2018). The MIHTC hasn't been approved as of this writing. As is the case with many programs that seek to provide additional subsidy for workforce housing, opponents argue that our nation's resources should be directed towards more vulnerable households.

Chapter Five: Solutions at the State Level

Short by design, this chapter covers funding administered at the state level to aid in the production of middle-income rental housing. There is a general lack of subsidy programs for workforce rental housing at this level of government. Massachusetts is the only state that has a true allocation exclusively for this market segment. New York has an allocation as well, but it must be combined with a significant low-income component according to program regulations. New York's program is representative of those seen in other states: low-income housing with middle-income as an afterthought.

MassHousing Workforce Housing Program (MA)

In March 2016, the Massachusetts Housing Finance Agency (MassHousing) adopted an Opportunity Fund dedicated to mission-oriented workforce housing. The first of its kind in any state across the country, the fund originally set aside \$100 million for the provision of soft debt that would help create new workforce housing units for households with income between 60% and 120% of AMI (MassHousing 2019).

Eligible projects can receive up to \$100,000 per unit and \$3 million per project, although certain transformative developments can exceed the project limit. Developers can apply for funds on a rolling basis. Loan terms include deferred repayment, 0% to 3% interest, and up to 40-year amortization. Developers must exhibit a need for workforce housing in target communities by underwriting rents at a maximum of a 10% discount to market, provided that the rents remain affordable to those within the program's AMI range. For example, developers can set rents at a maximum of 80% of AMI in a community in which the market rents are equivalent to 90% of AMI. As with all subsidy programs for affordable housing, affordability restrictions are placed on units that receive funding. The units must remain affordable to households with incomes between 60% and 120% of AMI for at least 30 years. Projects must also ensure that at least 20% of the units are affordable to households with incomes up to 80% AMI.

Since the program's inception in 2016, it has successfully created over 900 units of workforce housing across 18 cities in Massachusetts as of early 2019. The funds have also led to the creation of over 4,000 market-rate and LIHTC units, as workforce housing in Massachusetts is typically delivered in mixed-income communities (Morse 2019). Deborah Morse, Relationship Manager at MassHousing, notes that the program has been so popular with developers that the original \$100 million fund had been fully deployed by early 2019. She notes that the Agency was deliberate in its decision of which projects to fund, and that "the affordable housing community could have sucked [the fund] up in twelve months" (Morse 2019). MassHousing introduced a \$20 million second round of funding in May 2019 with slightly more beneficial terms for the Agency and lower limits per project; original terms included 0% interest and a \$5 million cap per project. The lower cap per project coupled with the high demand for the funds contributes to the creation of more units affordable to a wide range of income levels.

Supportive Housing Opportunity Program (NY)

Primarily geared towards low-income households, New York's Supportive Housing Opportunity Program (SHOP) provides subordinate financing for the new construction of multifamily rental housing or adaptive reuse of non-residential properties. Projects must provide affordable supportive housing with on-site services and obtain financing through tax-exempt or taxable bonds issued by the New York State Housing Finance Agency (HFA). To qualify for SHOP, the property must make

50% of its units affordable to households earning no more than 60% AMI. Up to \$150,000 in funding is provided for each supportive housing unit and up to \$95,000 may be granted for each deed-restricted unit up to 60% AMI. Funding in high-cost areas such as New York City, Westchester County, Nassau County, and Suffolk County can be up to \$200,000 for each supportive housing unit. The funding is structured as a 30-year interest-only loan at 0.5% (New York HCR 2018).

To encourage greater inclusiveness within multifamily properties and communities, New York State Homes and Community Renewal (HCR) provides a supplemental funding option for developers who wish to include a middle-income component. The Middle Income Housing Program (MIHP) provides up to \$95,000 per unit in gap financing for units occupied by households with incomes between 60% and 130% AMI. Like the baseline gap financing under SHOP, developments in the aforementioned high-cost areas are eligible for up to \$140,000 per middle-income unit. At least 10% of the units, but no more than 30%, must be allocated to households within this income range (New York HCR 2018). While SHOP's primary focus is on supportive housing for underserved populations including the homeless, it should still be acknowledged that it incorporates a workforce housing component.

Chapter Six: Solutions at the Local Level

One of the most effective ways to increase economic feasibility for workforce housing at the local level is to reduce the real estate property tax liability. This can be done through participation in several different programs, most of which differ by municipality. Municipalities also try to increase their share of low- and middle-income housing through inclusionary policies. Most inclusionary policies are mandatory, but some include incentives that developers can use to increase density. While not all inclusionary policies are a true “bottom-up” tool for developers, they still demonstrate how communities are addressing workforce housing.

Inclusionary Development

Inclusionary Housing policies implemented at the local level are a powerful way for municipalities to either encourage or require developers to make a portion of their units affordable for low- and middle-income households. These policies have become more prevalent in recent years and are often seen where rents are rising the most. Policies differ between the 886 jurisdictions that have adopted them, but all help create greater economic diversity within housing developments (JCHS 2018). The majority of households that benefit from these policies typically have incomes at or below 60% AMI, but some municipalities have policies that incorporate household incomes up to 80% of AMI and beyond, helping to create additional workforce housing. Programs like these are vital given the high cost of living in dense urban areas. They ensure that housing production and rehabilitation isn't limited to the top end of the market. The cities below are just a few examples of how major metro areas are attempting to expand housing options for low- and middle-income renters.

New York City

New York City has two voluntary programs that offer an optional floor area bonus in exchange for the creation or preservation of affordable housing for families earning up to 80% AMI. Created in 1987, the Manhattan-focused R10 program is eligible in select districts and allows new developments to increase maximum FAR from 10 to 12. Depending upon whether the housing is provided on-site or off-site, is new construction, rehab, or preservation, and receives public funding, projects can receive between 1.25 and 3.5 square feet of bonus floor area for each square foot of affordable housing. Under the other voluntary program, Designated Areas, developments can increase FAR by 33% if 20% of the building's floor area is dedicated to affordable housing. Under this program, units must remain affordable in perpetuity. The Designated Areas program is applicable in the Bronx, Queens, Brooklyn, and Manhattan. As of February 2017, the R10 and Designated Areas programs had been responsible for the creation or preservation of 11,000 units.

The City also created a Mandatory Inclusionary Housing (MIH) program in 2016 that requires developments above 10 units or 12,500 square feet to set aside a percentage of floor area for permanently affordable housing. Developers have a choice between four options, all of which allow income averaging, although some are not available in certain areas of the City. Two of the options specifically provide a provision for workforce housing. Option 2 requires a 30% set aside at an average AMI of 80%. The Workforce Option requires a 30% set aside at an average AMI of 115%, with 5% minimums at both 70% and 90% AMI (NYC DCP 2019).

San Francisco

Enforced by the Mayor's Office of Housing and Community Development (MOHCD), San Francisco's Inclusionary Housing Program, also known as the “Below-Market-Rate Program”, requires developers of 10 residential units or more to participate. Participation can come in the form

of paying a fee, dedicating land, or reserving several units to be sold or rented below market rate to low- or middle-income households. Specific requirements are governed by Planning Code Section 415 and vary between ownership projects, rental projects, and the number of units in such projects. Inclusionary requirements for developments with 10 to 25 units are generally more relaxed than they are for developments with more than 25 units. For developers who opt to include their rental units on-site and will build more than 25 units, 18% of such units shall be dedicated affordable for at least 30 years. This 18% includes 4% for moderate-income tenants (rent set at 80% AMI for households with income between 65% and 90% AMI) and 4% for middle-income tenants (rent set at 110% for households with income between 90% and 130% AMI). The program has created approximately 5,000 inclusionary units for both ownership and rental (San Francisco 2019).

Miami

Miami has an inclusionary development policy that specifically targets workforce housing. The city established a taskforce back in 2007 to study the population and demographic trends and respond accordingly. They cited increasing population, cost burdens, inadequate housing supply for the workforce target group, overcrowding, concentration of housing based on economic status, and the need for involvement of the private development community as reasons to establish this policy. The Miami-Dade County Workforce Housing Development Program is a voluntary program that awards density bonuses and other incentives to developers who include units in their projects that are affordable to households with incomes between 60% and 140% AMI. Restrictions on dedicated units run with the land for perpetuity. While all multifamily residential developments across the county larger than triplexes are eligible for this program, properties with less than 20 dwelling units require special review. All developments that provide at least 5% workforce units will receive a density bonus between 5% and 25%; for each additional 1% of workforce units, an additional 4% density bonus will be awarded. No less than 25% of the workforce units shall target incomes from 60% to 79% AMI, while no less than 50% of the units shall target incomes from 80% to 110% AMI (Miami 2019).

Boston

Created in 2000, Boston's Inclusionary Development Policy (IDP) has widely been reported as one of the most successful in the country. Developers must comply with IDP when they seek to build a residential property with 10 or more units. Compliance with the policy can come in the form of units built on-site, off-site, or a contribution to the IDP fund. Developers who opt to provide affordable units on-site must designate 13% of their units as income restricted. In most cases rental units shall be income-restricted to households earning up to 70% AMI, but the Boston Planning and Development Agency (BPDA) can permit unit restrictions up to 100% AMI in certain instances. To encourage developers to build their inclusionary units on-site, the IDP has higher percentages for contributing to the fund and for building units off-site. Off-site allocations and IDP fund contributions differ by zone, as defined by the BPDA, and range from 15% to 18%. Off-site units must be constructed within a half mile of the proposed projects. Contributions to the fund are formulaic and are based on city estimates of what it would cost to build units in each designated zone (BPDA 2019). As of the end of 2018, the IDP had been responsible for the creation of 2,599 units of housing affordable for middle-income households. Developers had also contributed \$137.1 million to the IDP fund, which had been responsible for the completion or preservation of 1,414 additional units for households in need (BPDA 2018).

Tax Increment Financing

Tax Increment Financing (TIF) is a tool authorized at the state level and administered by local governments to spur economic development and increase the local tax base through infrastructure

improvements, land acquisition, real estate development, environmental remediation, and job funding programs. Developers wishing to take advantage of TIF must prove that their proposed project is in an area that is blighted or at risk of becoming blighted, will benefit the entire community, and would not be feasible without the TIF. The last stipulation is often referred to as the “but for” test, in which the municipality estimates the project’s financing gap and how much subsidy would be required in order to entice private developers to invest. Tax Increment Financing represents an additional source of funding for workforce housing development and is one of the more prevalent sources given its utilization by municipalities around the country.

Determining the amount of the TIF is a two-step process. The annual property taxes for the eligible project are first frozen at the current level. Second, the local government performs an analysis to determine how much additional tax revenue the project will create in the local community as a result of increased property values and additional business activity. This incremental revenue above the base amount is then used to issue bonds, which are used by the developer to pay for the present-day improvements on the new project. An alternative, less common TIF strategy is for the municipality to pay for the improvements as additional tax revenues are generated, rather than paying for them up front. This shifts the risk from the municipality to the developer (The World Bank 2015).

Washington, DC Workforce Housing Tax Abatements

As part of her 2020 budget, Washington, D.C. Mayor Muriel Bowser proposed a Workforce Housing Fund that would provide \$20 million in production support for new homes targeted at households with incomes between 60% and 120% AMI, which equates to \$70,000 to \$141,000 for a family of four in DC. Mayor Bowser’s administration points to the shrinking middle class as the reason behind this initiative. According to a city analysis, over 90% of the city’s population growth between 2006 and 2016 was from households that earn less than 30% of AMI or more than 120% of AMI. Over that same period, DC lost more than 13,500 middle-income households as families sought greater affordability and more space (Bowser 2019). Aimed at providing housing for teachers, firefighters, police officers, and nurses, the Fund sought to act as a source of gap financing for private developers in exchange for restrictive covenants placed on the workforce units. The city lacks housing options for its middle class, and its population is slowly becoming one dominated by households at opposite ends of the economic spectrum.

After weeks of debate, on May 28, 2019 the D.C Council eliminated Mayor Bowser’s proposed Workforce Housing Fund in favor of \$16.8 million in tax abatements for workforce housing developments spread over four years (Koma 2019). By providing a reduction in annual property taxes, the Council believes that the abatement would provide more leverage than direct funding and ultimately result in more workforce housing units. Mayor Bowser’s cabinet fired back saying that many housing developments need upfront investment via a dedicated fund. The exact mechanics and qualifications to receive the abatement have yet to be released as of this writing.

Payment In Lieu Of Taxes

Payment in lieu of taxes, also known as PILOTs, are voluntary payments made by a property owner to the local government to compensate for a portion of lost property tax revenues. These payments are generally made by non-profit entities that enjoy property tax exemptions due to their legal status as charitable organizations and are significantly less than what would be paid if the ownership entity were taxable. Land owned by local municipalities also does not generate any property taxes. Some municipalities have expanded PILOTs to include private real estate development with the hope of aiding in community growth and eradicating blight. A 2010 study performed by the Lincoln Institute

of Land Policy reported that PILOTs have been used by 117 municipalities across 18 states, although this number has almost certainly increased since then (Kenyon and Langley 2010). While the municipality offering the PILOT may be sacrificing current property tax revenue, they're inviting private investment that may lead to additional jobs and a larger tax base in the future. The specific guidelines vary by municipality but generally reduce taxes paid on the property above its pre-development value. The term of the PILOT can also vary significantly. For example, Nashville has a maximum allowable term of 10 years, while Jersey City provides terms of up to 30 years. Furthermore, most municipalities will require that a certain percentage of the units be dedicated to low- to moderate-income households with incomes up to 80% AMI, or that the project receive Low Income Housing Tax Credits.

Housing Development Incentive Program

Massachusetts' Housing Development Incentive Program (HDIP) provides Gateway Cities with a tool to develop market rate housing by providing tax incentives for developers to undertake new construction or substantial rehabilitation. Gateway Cities are defined as those with a "population greater than 35,000 and less than 250,000, median household income below the state average, and rate of educational attainment of a bachelor's degree or above that is below the state average". In exchange for dedicating 80% of the units to market rate, projects can qualify for a Tax Increment Exemption (TIE), whereby 10% to 100% of the annual real estate taxes on the market rate units are abated. Eligible projects can also receive an award of up to \$2 million for Housing Development Tax Credits, which are allocated based on qualified project expenditures.

On the surface this may sound like a subsidy for market rate housing, but consider that rents in these Gateway Cities are typically below what one would consider market rate. For the purposes of this program, the Department of Housing and Community Development (DHCD) considers a market rate unit to be one priced consistently with prevailing rents in the municipality. HDIP market rents can encompass a range of income levels, even some that may be deed restricted. Recall that income and rent levels are set by HUD on a regional level that often incorporates municipalities with a range of market rents. The market rents in many of these Gateway Cities fall within the 60% to 120% AMI range of the greater region, making this a viable source of subsidy for constructing and operating workforce housing. As long as 110% of the median household income for the HDIP pricing area is greater than 60% of the HUD median household income for the region, the benefits will apply (Commonwealth of Massachusetts 2017).

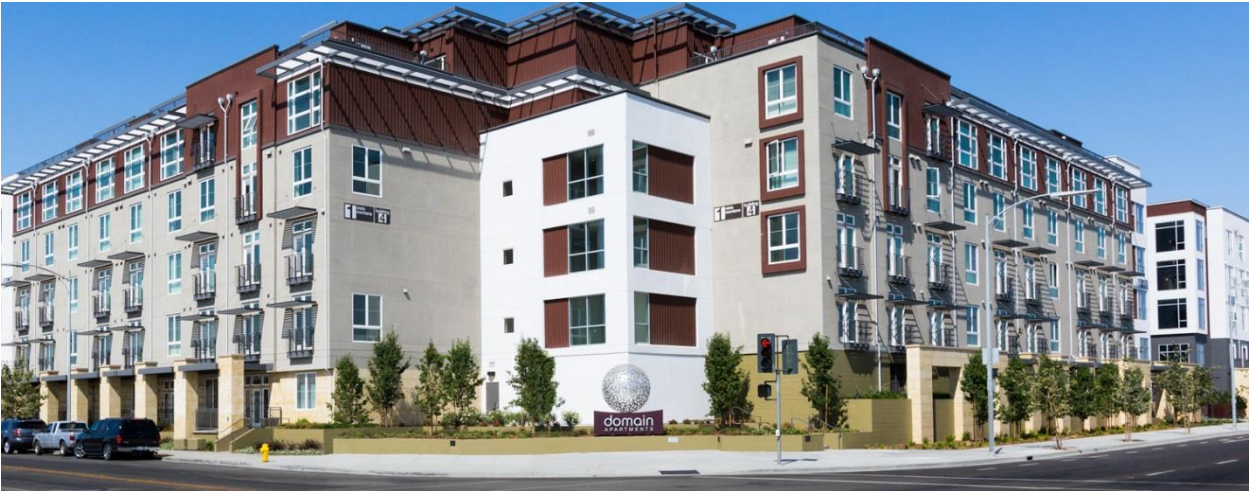
Chapter Seven: Market-Based Solutions

Moving beyond sources of government funding, tax abatements, and private financing, this chapter address a few of the ways that developers can bring creativity into the design process to keep costs down and make projects run more efficiently. With lower construction and operating costs, a project’s need for public subsidy is reduced. While increased affordability is the byproduct of innovative market-based solutions in which we’re most interested, some contribute to solving issues beyond lower rents.

Prefabrication

Up until recently, the construction industry had changed very little over the past 50 years. It had traditionally been a field lacking significant innovation, but that has begun to change with the advent of prefabrication techniques such as modular and panelized construction. In modular construction, whole furnished portions of the building are constructed off-site and shipped to the building site. Walls, floors, and ceiling panels are assembled into single units or “boxes” that are shipped to the site for stacking. In panelized construction, the exterior shell of the building is constructed in a factory, deconstructed into a series of panels, and shipped to the project site where they’re reassembled. Panelized construction allows teams to increase labor productivity and quality control through off-site assembly while working simultaneously with on-site teams to save time (Cohen and Stattman 2018).

Figure 10: Domain Apartments – Modular Construction in San Jose, CA



Source: Guerdon Modular Buildings, 2019

Such techniques are being used throughout the real estate development industry, but the projects that can realize the most significant cost savings are the ones that are the most labor intensive and have replicable design features. Workforce housing fits this description and can benefit from removing the need for subcontractors and high margins that they charge. Prefabrication can also save on labor costs, especially in markets with unionized labor. The greatest benefit of prefabrication is the time savings, though. McKinsey & Company estimates that modular construction can accelerate construction timelines by 20% to 50% and cut costs by up to 20% (Bertram et al. 2019).

Douglas Koch, Principal of Advisory Affiliates, LLC, notes that panelized construction can lower the cost of new construction without sacrificing quality. He estimates that this key piece to the workforce housing puzzle can save between 7% and 15% of costs. Koch and his partners at Tartan Residential

recently completed a side-by-side demonstration of stick-built versus panelized construction on Davidson’s Landing, a proposed 115-unit workforce housing development in Kansas City, KS. They documented approximately \$7,000 per unit in cost savings as a result of superior energy efficiency by using panelized construction instead of the traditional stick-built method. Koch’s team is working with Eco-Panels, LLC to provide a superior building envelope that reduces maintenance costs at the property and utility bills for their tenants (Koch 2019). Efficient construction methodologies like this can shrink the funding gap that developers typically look to fill with public sources and ultimately make projects more realistic.

Smaller Units

Developing a multifamily project requires a balancing act between total development costs and expected income to achieve a yield on cost that is acceptable to investors. In theory a developer could shrink the size of the units, increase the unit count, and offer more affordable rents without sacrificing their rate of return. Certain variable hard costs associated with the construction may increase the total development cost, but most of the soft costs are independent of the number of units. By keeping the net rentable square feet stable and shrinking unit size, the total development cost per unit will decrease as the costs are spread over a higher unit count. The following underwriting exercise demonstrates how a developer could put this theory into practice to create workforce housing in a Boston suburb without sacrificing their yield on cost.

Project A is a 120-unit market rate multifamily development that rents at an average of \$3.11 per square foot. Average unit sizes for the studios, one beds, two beds, and three beds are 650, 880, 1,160, and 1,360 square feet, respectively. Baselined against HUD’s 2019 published rent levels for the Boston-Cambridge-Quincy, MA-NH HUD Metro FMR Area, the project rents equate to 129% of AMI – a level that falls outside of our definition of workforce housing. With a total development cost of \$59 million and stabilized net operating income of \$3.1 million, the developer can expect a yield on cost of 5.22%. The tables below show additional high-level details about the unit mix, development budget, and stabilized property operations for Project A.

Figure 11.1: Select Project Underwriting Metrics – Baseline Unit Size

Unit Mix - Project A					
	0 Bed	1 Bed	2 Bed	3 Bed	Total
Units	20	50	40	10	120
Average Size (SF)	650	880	1160	1360	117,000
Project Rents	\$2,457	\$2,868	\$3,319	\$3,907	\$4,372,440
Rents/SF	\$3.78	\$3.26	\$2.86	\$2.87	\$3.11
100% AMI Rents	\$1,962	\$2,265	\$2,550	\$2,832	
Project AMI	125%	127%	130%	138%	129%

Development Budget - Project A			
	Total	\$/unit	% of TDC
Acquisition	\$ 19,250,000	\$ 160,417	32.6%
Design	1,155,400	9,628	2.0%
Construction	21,600,000	180,000	36.6%
Construction Contingency	2,160,000	18,000	3.7%
Administration	605,000	5,042	1.0%
Financing	3,568,826	29,740	6.0%
Taxes/Insurance	1,144,355	9,536	1.9%
Capitalized Reserves	1,982,001	16,517	3.4%
Miscellaneous/Other Costs	363,000	3,025	0.6%
Soft Cost Contingency	440,929	3,674	0.7%
Developer Fee	6,821,189	56,843	11.5%
Total Development Budget	\$59,090,700	\$492,423	100.0%

Property Operations - Project A		
Income	Budget	Total / Unit
Gross Potential Rent	\$ 4,372,440	\$ 36,437
Vacancy 5.00%	(218,622)	(1,822)
Other Income	96,000	800
Effective Rental Income	\$ 4,249,818	\$ 35,415
Real Estate Taxes	(361,235)	(3,010)
Management Fee	(166,153)	(1,385)
Other Operating Expenses	(600,000)	(5,000)
Reserve Funding	(36,000)	(300)
Net Operating Income	\$ 3,086,431	\$ 25,720

Yield on Cost	5.22%
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Project B takes the 117,000 of net rentable square feet and shrinks unit sizes by 20%, thereby increasing the unit count by 20% to 150. Unit sizes are now 520, 704, 928, and 1,088 square feet for the studios, one beds, two beds, and three beds, respectfully. By charging a higher rent per square foot, the developer could ultimately lower rents for each unit to make them more affordable for the local workforce and still build to the same yield on cost. With project rents at an average of 115% of AMI, the same project with smaller units now naturally falls within the income target for workforce housing.

Figure 11.2: Select Project Underwriting Metrics – Reduced Unit Size

Unit Mix - Project B					
	0 Bed	1 Bed	2 Bed	3 Bed	Total
Units	25	63	50	12	150
Average Size (SF)	520	704	928	1088	116,808
Project Rents	\$2,243	\$2,575	\$2,935	\$3,405	\$4,870,920
Rents/SF	\$4.31	\$3.66	\$3.16	\$3.13	\$3.48
100% AMI Rents	\$1,962	\$2,265	\$2,550	\$2,832	
Project AMI	114%	114%	115%	120%	115%

Property Operations - Project B		
Income	Budget	Total / Unit
Gross Potential Rent	\$ 4,870,920	\$ 32,473
Vacancy 5.00%	(243,546)	(1,624)
Other Income	120,000	800
Effective Rental Income	\$ 4,747,374	\$ 31,649
Real Estate Taxes	(403,527)	(2,690)
Management Fee	(185,095)	(1,234)
Other Operating Expenses	(750,000)	(5,000)
Reserve Funding	(45,000)	(300)
Net Operating Income	\$ 3,363,752	\$ 22,425

Development Budget - Project B			
	Total	\$/unit	% of TDC
Acquisition	\$ 17,500,000	\$ 116,667	27.2%
Design	1,393,000	9,287	2.2%
Construction	27,000,000	180,000	41.9%
Construction Contingency	2,700,000	18,000	4.2%
Administration	605,000	4,033	0.9%
Financing	3,624,076	24,161	5.6%
Taxes/Insurance	1,138,675	7,591	1.8%
Capitalized Reserves	2,237,114	14,914	3.5%
Miscellaneous/Other Costs	438,000	2,920	0.7%
Soft Cost Contingency	471,793	3,145	0.7%
Developer Fee	7,338,457	48,923	11.4%
Total Development Budget	\$64,446,116	\$429,641	100.0%

Yield on Cost 5.22%

Although this is attractive from an affordability standpoint and still meets the developer’s yield requirements, there are a few tradeoffs that need to be considered. Adding additional units will increase the total development cost even while keeping net rentable square feet stable. This may mean that the developer may not be able to pay as much for the land (to maintain yield on cost) and will need to come up with additional equity. If the additional equity were to come from public sources, it may come with certain restrictive covenants or requirements for unit design. For example, the Massachusetts Department of Housing and Community Development (DHCD) has specific unit size guidelines for projects that receive LIHTC funding. On the positive side, the more affordable design may receive better support within the community and potentially save time and money in permitting. Shrinking unit sizes is a simple way to increase affordability, but developers must weigh the pros and cons as they relate to their project.

Green Building

Amid the overwhelming research documenting climate change, the real estate development industry has a responsibility to create more environmentally friendly and sustainable buildings. Green building ultimately improves the way that homes use water, energy, and materials with the intent of reducing negative impacts on human health and the environment. Implementation can come in many forms including a tighter building envelope, more efficient HVAC systems, or high-quality appliances.

States and local municipalities have adopted energy codes that enforce certain standards of development to encourage developers to build more efficient, higher performing properties. Some

energy codes have strict requirements, while others provide incentives for meeting certain standards such as Energy Star, LEED, The National Green Building Standard, or EarthCraft. These incentives are especially prevalent in the case of affordable housing as many states include sustainability as a scoring category in their Qualified Allocation Plans (QAP), which ultimately determine whether a project receives funding. Many developers strive to meet green building standards even if it means slightly higher hard construction costs. On the topic of sustainability with regards to multifamily housing, Andy Waxman, Regional VP of Development, New England at The Community Builders, says “we can’t only focus on driving costs and maximizing the number of units; we need to focus on healthy housing and the interests of other stakeholders” (Waxman 2019).

Up until recently, there had been a common misconception that the operational cost savings associated with green building were insufficient to cover the upfront incremental costs of construction. A joint study by Southface Energy Institute and the Virginia Center for Housing Research showed that developers who employ green building techniques construct higher quality housing at a lower cost to both themselves and their tenants. They found that green developments are nearly 5% less expensive on total construction costs per square foot and 13% cheaper on soft costs than non-green developments. The study also showed that green developments spend 12% less on energy in common areas and that residents use 14% less energy in their units (Trachtenberg et al. 2016). Reduced energy consumption can lead to lower utility bills for both the building owner and the residents.

Energy efficiency is critical for low- and middle-income households, because they are more likely to spend a greater percentage of their income on housing costs. The U.S Department of Energy (DOE) estimates that households spend about 8% to 14% of their income on energy costs. Increases in energy costs can make housing affordability even more challenging and force families on the margin to sacrifice other necessities. These are the populations that are already experiencing a high rent burden and can benefit the most from green building.

Co-Living

The base concept of co-living is nothing new. In many Latin American and Asian communities, co-living is the norm as these populations tend to live in multigenerational households to not only split the cost of housing, but also to share in the care of children and the elderly. People have been living with roommates in other formats to reduce their personal housing costs for quite some time. By combining the incomes of several individuals, a group of people can afford a larger, higher quality apartment than they would have been able to afford on their own. This is a convenient solution for a group of friends, coworkers, and even strangers, but it takes away from rental housing stock that could have otherwise been used by families. By restricting the stock of units with multiple bedrooms, increased competition for fewer units ensues and rents are driven upwards.

Institutional-quality co-living is a trend of the sharing economy that follows the likes of Airbnb, WeWork, and Uber, allowing people and businesses to share expenses and to maximize the use of their space or assets. Co-living has recently picked up steam as a more formal product type in cities as a way to provide more affordable housing in a high-quality product. It enables people to live in locations close to their jobs that they wouldn’t be able to afford alone. In addition to reducing an individual’s cost of housing, it leads to shorter commute times, better access to local amenities, and ultimately reduced stress. Many co-living communities operate in a similar manner to hotels, by providing cleaning services, linen changes, and restocking toiletries. They also eliminate the hassle of splitting utility bills with roommates by including these costs in tenants’ flat monthly fees. Lastly, units

come with furniture that efficiently fits the space, some of which is fully adjustable to maximize usability of rooms (Drobnis 2018).

By allowing individuals to find accommodations without having to worry about finding roommates, co-living eliminates many of the stressors associated with the underground housing market. People can live with the personal space they need, the shared space they wouldn't be able to afford alone, and be part of a larger community. This innovative concept can decrease pressure on the housing market for families and is a creative alternative to the traditional housing model.

Flexible Unit Design

Building on the trends of smaller units and co-living in major cities, developers can maximize efficiency by designing units in a way that facilitates flexibility. Co-living is a viable solution for people that don't mind living with roommates and micro units are acceptable for people that aren't looking to spend a significant amount of time at home or entertaining guests. Sharing or reducing private space may work for some, but there's still demand for units that are designed efficiently and don't sacrifice privacy. Beds that fold into the wall, also known as Murphy beds, have been around for quite some time, but creative startups are beginning to take flexible unit designs one step further.

Figure 12: Rognan Furniture System



Source: Dezeen, 2019

Born out of the MIT Media Lab, Ori is a company that has introduced robotic interiors into modern living. They see static floor plans as a constraint on modern lifestyles and have used technological advances in robotics to design furniture that's more versatile and responsive to our daily needs. Products such as the Ori Pocket Closet, Ori Studio Suite, and Ori Cloud Bed allow tenants to create a living room, bedroom, or walk-in closet with the push of a button (Rhodes 2016). They've also recently partnered with IKEA to create Rognan, a flexible furniture system that uses machine learning to develop a map of the unit floor plan. Ori's technology makes the reconfiguration of space effortless and can rapidly make a small studio apartment feel much bigger. These products are currently add-ins to existing units, but may become built-in features for the urban developments of the future. Developers should not only design unit layouts in a way that are compatible with mobile furniture, they should also consider incorporating such features into their project so that they can make space more efficient.

PART THREE

Chapter Eight: Case Studies

The following case studies illustrate how developers are building quality workforce housing by responding to market needs and utilizing available tools in different locales. The projects selected highlight strategies that utilize a mix of public and private sources of financing, tax abatements, opportunity zones, strategic land acquisition, and development creativity. Final outcomes differ by market and housing typologies are reflective of the local landscape. These case studies also represent the ways that private developers must work with public officials to achieve a common goal.

Urban Town Homes – Southern California – Urban Pacific

Based out of Long Beach, CA, Urban Pacific has found a creative solution that they call Urban Town Homes (UTH). This innovative concept not only helps tackle the issue of new construction workforce housing in western urban markets, it also provides residences for seniors through its multigenerational design. Arguably the best thing about it is that the product is delivered naturally to middle-income, working class tenants without any public subsidy. The bulk of Urban Pacific's products are in Southern California, including Los Angeles and San Diego, and they also have ongoing projects in Portland, Seattle, and Denver. Founder Scott Choppin believes this model has the potential for national scale (2019).

Designed to live as single-family homes, UTH projects are delivered in a uniform manner through 3-story buildings that consist of 4 to 5 bedrooms and 4 bathrooms. The first floor provides access to a private attached 2-car garage, entry foyer, one bedroom, and one bathroom; the second floor provides the kitchen, living room, and an additional bedroom and bathroom; all remaining bedrooms and bathrooms are located on the third floor (Urban Pacific 2019). The idea is that grandparents will have easy access to living quarters on the first floor, while children will occupy the top floor. Choppin says that the 3-story design is at the intersection between density, cost, and revenue; this allows them to maximize density and revenue, while minimizing cost (2019).

Figure 13: UTH Rendering – Montebello, CA



Source: Urban Pacific, 2019

The simple design contributes to manageable construction costs and timely delivery; most properties commence construction and reach stabilization within 18 to 24 months. Urban Pacific's project sizes range from 30 to 100 units. They typically seek out urban infill land in the form of vacant lots or poor-quality housing, allowing them to build as-of-right and avoid a lengthy and costly entitlement process. Chosen locations are often avoided by market rate developers but welcomed by municipalities that seek to rid their communities of blight.

Multigenerational housing isn't a new concept – it's essentially the norm for many family units in places like Latin America and Asia. In such cultures, it's expected that the younger generations will personally care for the elderly. The markets in Southern California in which Urban Pacific operates have prominent Hispanic populations that are on the lower end of the income spectrum. Target tenants include family groups, many of them of Hispanic descent, that already operate as a cohesive economic unit but don't live under a single roof. They may rent adjacent units or live within close proximity to one another and share things such as childcare, vehicles, and income. These cross-generational families don't want to own a home, can't qualify for a loan, or are currently paying in excess of 30% of their aggregate income towards housing costs. UTH projects allow these family units to operate more efficiently by providing a place where they can all live together affordably.

Projects serve tenants from 80% to 120% of AMI and can be delivered as middle-income housing with or without long-term affordable covenants. For projects without restrictions, rents are set using local market comparable properties, which are often single-family homes. Most rents are also in line with fair market rents, which are the basis for Section 8 rents. In the event of a downturn, the product has a limited downside because it can be rented to Section 8 tenants and the government will essentially guarantee that rents remain stable (Choppin 2019). Furthermore, turnover costs are minimized as this tenant base is less likely to move. There are few, if any, comparable opportunities in the marketplace at this price point where tenants can be close to their jobs for an easy commute, have the opportunity to care for their elders, have access to a private garage, be able to facilitate childcare, and be close to their social networks.

Projects are generally financed with private sources of equity and standard forms of construction and permanent debt. Urban Pacific has also recently begun exploring other sources of cash such as crowdsourcing and social impact funds (Shanesy 2018). Historical returns for Urban Pacific's UTH concept have been highly competitive for investors, generally yielding an IRR of at least 25% (Urban Pacific 2019). Beyond financial returns, these projects also create social benefits for their communities.

The UTH model has been successful largely because they recognized a need for this type of product in the market and decided to fill it. With the growing delta between incomes and rents, this is an economic model that naturally counteracts the ever-expanding gap. The replicable design and simplicity of construction makes UTH a scalable product. Because Urban Pacific seeks land that is already permitted, they're able to get their product to market faster at a lower cost. This housing typology has implications beyond the need for multigenerational workforce housing, as baby boomers downsize, immigration to the US accelerates, millennials live at home further into adulthood than any previous generation, and young families wish to be closer to the urban core.

The Watson – Quincy, MA – WinnDevelopment

Over the past four decades, WinnDevelopment, based out of Boston, MA, has acquired and developed properties of all types across 10 states with a value in excess of \$2.5 billion. Their portfolio spans

affordable housing, market rate housing, mixed-use and mixed-income developments, urban and suburban garden-style and high-rise apartment communities, and a variety of commercial properties. Winn's specialty is mixed-income and mixed-use developments, and much of their recent work has focused on the acquisition and repositioning of troubled multifamily properties, in addition to adaptive reuse of historic structures. With MassHousing's introduction of their Workforce Housing Program, Winn was able to take advantage of state subsidy money and deliver a new construction project in June 2019 called The Watson.

Figure 14: The Watson



Source: The Patriot Ledger, 2019

Located 10 miles south of downtown Boston in Quincy, MA, The Watson is a 140-unit mixed-income community that represents the first significant new construction middle-income housing project in the state of Massachusetts. The 3-acre site was previously occupied by a two-story office building and paved parking areas that had been vacant for over a decade. A transit-oriented development in close proximity to the MBTA Red Line and I-93, the project features 28 affordable units at 50% AMI, 86 workforce units at 110% AMI, and 26 unrestricted market units. A microcosm of the greater Boston workforce, the unit distribution between different income groups represents the perfect bell curve that one would want to see in an urban-infill new construction housing project. The project consists of 8 studios, 85 one-bedroom units, and 47 two-bedroom units, all of which have market-rate finishes irrespective of which tenant type will occupy them. Property amenities include a community room, gym, and a meticulously landscaped courtyard. With the site permitted for multifamily residential in advance of the closing, Winn was able to sidestep a costly and lengthy permitting process. Initial closing to construction completion was only 2 years, when many projects of similar scope in the area have taken 3 to 5 years.

The Watson was successful in delivering new construction workforce housing in an area of desperate need for this product type for a variety of reasons, and many of them point to the state's dedication to the working class. At the ribbon cutting ceremony, MA Governor Charlie Baker credited the common goals, objectives, and teamwork between the public and private sectors. Winn was able to secure a number of subsidies, without which the project would not have been feasible. Many of the

subsidies were local and state funds dedicated to low-income housing, but the MassHousing Workforce Housing Program and the Housing Development Incentive Program (HDIP) provided additional money to support both the workforce and market rate units. MassHousing found this project so significant for the middle-income population that they exceeded their project allocation cap and provided \$7 million in Workforce funding. This is the largest project financed under MassHousing's Workforce initiative to date. To complement funding for the workforce units, The Watson utilized Low Income Housing Tax Credits to help defray the costs associated with the 50% AMI units. Quincy's status as a Gateway City also enabled Winn to secure HDIP tax credits up to the \$2 million project cap and execute a Tax Increment Exemption Agreement for a reduction in property taxes.

When asked what made this project special, Chief Executive Officer Gilbert Winn emphasized the great public private partnerships in Massachusetts (2019). He noted that Massachusetts is the only state in which a project like this could take place because of the creativity and willingness of both the public and private sectors. Without a federal middle-income program like the LIHTC, only states that have set aside their own pots of money can make a project like this happen. WinnDevelopment's non-profit partner, Neighborworks, also helped them obtain additional soft money and create lasting political connections. The development team took a piece of land that otherwise would have gone to yet another market-rate developer and gave Boston the workforce housing that it sorely needed. Most importantly, they were able to provide a framework for new construction workforce housing that they hope to replicate in other locations throughout the region.

The SIX13 – Fort Lauderdale, FL – Affiliated Development & Round Hill Capital

Based out of Fort Lauderdale, FL, Affiliated Development is a national real estate development and investment company that creates and preserves affordable housing for low-, moderate-, and middle-income families in cost-burdened communities. Together with government agencies, community groups, non-profits, and private partners, they have injected over \$750 million worth of investment into underserved communities nationwide.

Round Hill Capital is a London-based real estate investment, development, and asset management firm that has acquired and repositioned over 110,000 residential units and student housing beds since inception in 2002. In 2017 the firm opened offices in Boston and New York in an effort to build a significant multifamily housing portfolio in the United States with a focus on stable, attractive, income-producing assets. They've also committed to targeting opportunities that bring about a positive social impact. In partnership with Affiliated Development, they've recently formed a JV that will pursue a multifamily housing portfolio in underserved areas within South Florida and workforce housing projects in Qualified Opportunity Zones (Round Hill Capital 2019). As part of this JV, Round Hill will represent a portion of the developer entity in future projects rather than just a passive equity investor.

Located in the Progresso Village district of Fort Lauderdale and in a Qualified Opportunity Zone, The SIX13 is the first planned development between the two partners. The city is one of the fastest growing metros in the country, and its residents are among the most cost-burdened; the average renter spends over 40% of their income on housing costs. With rents underwritten at an average AMI of 115%, the project is a 6-story 142-unit new construction that will exclusively target workforce renters who have been priced out of the downtown Fort Lauderdale market. The project broke ground in April 2019 and is expected to receive its certificate of occupancy by August 2020. The partnership is building the project as-of-right, allowing them to sidestep a lengthy and costly permitting process.

Figure 15: SIX13 Rendering



Source: Round Hill Capital, 2019

The SIX13 offers a reprieve from the high housing costs endemic to the area by providing high quality, transit-oriented housing at an affordable cost. The community will feature an elevated pool deck, fitness facilities with a yoga room and cycling studio, co-working space, a community room, rooftop observation deck, free bike usage, a dog park, high speed wi-fi, and full-time concierge. South Florida's Brightline rail system, which runs from Miami through Fort Lauderdale to West Palm Beach, has a station a quarter mile from the project. The project also includes 197 garage parking spaces and 5,900 square feet of ground floor retail, and is located adjacent to Flagler Village, Fort Lauderdale's fastest growing neighborhood. The SIX13 represents the first institutional-quality residential development on the west side of the Florida Eastcoast Railway tracks, an area of town that has historically been neglected by private investment.

The project's location in an Opportunity Zone facilitated the \$14 million equity raise by allowing investors to take advantage of tax benefits including deferral of capital gains tax. The SIX13 is precisely the type of project that Opportunity Zones are intended to produce: projects that spur economic growth in locations that have historically been underserved and devoid of institutional investment.

According to Ryan Pierce, Senior Vice President at Round Hill Capital, The SIX13 would not be feasible without \$7 million of gap financing from the City of Fort Lauderdale Community Redevelopment Agency (CRA) (Pierce 2019). The CRA was so confident in the success of this project that it committed nearly half of the \$15 million it had reserved for projects of this nature. In exchange for the funding, the SIX13 will deed-restrict units for households up to 150% AMI for 7 years. While the restrictive covenants will expire in year 8, both the developers and the City are confident that rent levels at the property will naturally remain attainable for workforce families for the foreseeable future. The funding was structured as a grant, so there will be no immediate repayment or interest accruing to the City; however, the City expects The SIX13 to spur economic development that will ultimately lead to a larger tax base and additional revenue. The SIX13 is a prime example of how the private and public sectors can work together to create positive economic change and deliver quality workforce housing in desirable locations.

PART FOUR

Chapter Nine: Recommendations and Conclusion

Many of the problems facing workforce housing are systemic in nature and beyond the control of private developers. With homeownership rates below their pre-recession peak and a generation saddled with growing student debt, rental properties are poised to be in high demand for the foreseeable future. The cost of new construction is so high, however, that most of the new product being built commands rents that are unattainable for middle-income households. This trend is prevalent in major cities across the country, as incomes have failed to keep pace with rising rents and households are more cost-burdened than ever. Urban populations continue to grow and place additional stress on an aging transportation infrastructure. The premium to live close to employment centers and save time on commuting has never been higher, yet the housing options for America's workforce are limited and lacking in quality.

Quality housing options close to major employment centers should be accessible to all households across the country no matter their position on the income spectrum. Unfortunately, the middle-income population is often neglected when it comes to new housing production due to rising costs in the marketplace and a lack of public subsidy programs. Rising construction costs as a result of government regulation, international trade policies, and a shortage of talented labor make initial underwriting challenging. In most cases, developers will look to close their funding gaps with a combination of private and public funding. In high cost environments, private equity typically won't fill the entire funding gap because investors will require a level of return that can't be met. Public funding would be the answer, but there are almost no programs that provide direct funding for workforce housing.

The Low Income Housing Tax Credit program has been highly successful with aiding the production and preservation of housing for households earning up to 60% AMI, but there's nothing of this scale at the national level to support workforce housing. Massachusetts has been successful with their Workforce Housing Program at the state level, but Washington, DC's attempt to create a similar program has been more of the norm. Communities are having a difficult time getting behind a subsidy program that helps provide housing for people with six-figure incomes when homelessness is still a major issue. While successful, Massachusetts' program has been unable to keep up with the demand for funding requests and developers still need to piece together other sources of funding. Inclusionary development policies have been moderately successful in creating more affordable units, but they're not doing enough to keep up with market demand. The options to move inclusionary units off-site or contribute to a central fund has been detrimental. Off-site production does little to improve community inclusiveness and the financial contributions to central funds are often less than it would cost to build units either on- or off-site. Ultimately, many of the subsidy programs that do exist are often disguised as a way to create more low-income housing and tend to include middle-income units as an afterthought.

Recommendations

While a true remedy for the challenges facing workforce housing production across the United States will need to come from the top down, there are still many bottom-up strategies that developers can employ to create workforce housing in their respective markets or add additional middle-income units

to their projects. Interviews with industry professionals and the research performed for this Thesis have led to the following recommendations for the development community.

- Identify communities that have a sufficient spread between the market rate rents and the affordable rents based on the income limits published by HUD. These are the communities that need workforce housing the most.
- Search for land that will minimize pre-development site work through remediation, razing, and permitting. Land that's already permitted for multifamily residential will reduce the time and cost of obtaining a variance. Characteristics such as even topography and proximity to existing utility lines will help save on construction and offer greater potential for feasible workforce housing. The downside is that these are the types of parcels that will be highly sought for market rate development, so competition will be high.
- When land for new construction isn't available, seek adaptive reuse opportunities. Projects that aren't currently used for residential purposes may be converted with relative ease depending on the existing layout. Such properties may also be eligible for Historic Tax Credits and may be converted at a lower cost than new construction projects. Many communities would prefer to have their historic structures redeveloped for modern use rather than left vacant or demolished.
- Try to anticipate growth along transportation corridors. What may currently be a fringe destination for market-rate housing, may be highly coveted in the future. Workforce housing doesn't necessarily need to be within walking distance of major employment centers. As long as there's reliable transportation conveniently nearby, it can be an attractive destination for workforce housing.
- Whenever possible, utilize prefabrication techniques such as modular construction and panelized building systems. Prefabrication is proven to expedite project delivery and can result in significant construction cost savings. Cost savings are especially within reach in markets dominated by union labor. In an industry so reliant upon managing costs, construction efficiency is paramount when it comes to delivering workforce housing.
- To get out in front of the competition, try to anticipate housing needs across different cities based on demographic trends. Projected population increases, high education attainment rates, and the presence of reputable medical facilities are all potential indicators that land prices will increase and make housing more expensive. By identifying these communities in advance, developers can build workforce housing that doesn't require as much public subsidy. This strategy will require a flexible development mandate with regards to location, because some cities may already be oversaturated.
- Identify a market need and fill it. Urban Pacific's UTH model is a great example of this. The developer recognized how a large portion of the population in Southern California prefers to live because of their cultural traditions, and they delivered a product that allowed residents to live with their extended families at an affordable price. Developers should think outside the box and deliver housing typologies that fit their market.

- Design units with efficiency in mind. Much of the space in larger homes is seldom utilized to maximum efficiency, so units can often be made smaller for the sake of affordability. By reducing the square footage per unit, more units could be added to the project and rents can be reduced without sacrificing return. The smaller spaces can also incorporate emerging concepts that make space within the unit more flexible depending on the desired use and time of day.
- Employ green building techniques to the extent that it makes economic sense. In addition to the positive environmental impacts, energy efficiency measures have been shown to reduce upfront construction costs, save on operating costs, and pass savings along to tenants in the form of reduced monthly utility bills.
- Understand fully the tax breaks that are available in the municipality in which you plan to build. Tax abatements are a direct boost to net operating income and result in greater leverage on permanent financing. The additional leverage reduces the need to find alternative sources of funding. Properties owned by non-profits and government entities generate no property tax revenue and are good candidates for future PILOTs.
- Develop strong relationships with politicians in the local community. Most deals in the affordable housing world don't get done without the support of local public officials. The success of a developer's project can potentially lead to re-election, so they will want to see you succeed as badly as you do. Public-private partnerships are a great way to align the interests of private developers with economic development. Such relationships can lead to additional soft money, discounts on publicly owned land sales, and support for future projects.

Conclusion

The multifamily residential development industry is facing an array of challenges that are driving up the cost of housing. Many of the problems are systemic in nature and can only be rectified from the top down. Market-rate developers have the flexibility to raise rents in response to rising costs. Low-income housing developers may find it a bit more difficult to get their projects done, but they have a plethora of federal, state, and local subsidy programs to help them deliver. Absent a significant middle-income subsidy program or the ability to raise rents without displacing or placing undue burden upon their tenants, developers who wish to create workforce housing have the most difficult job of all.

Workforce housing production requires creativity on behalf of developers in order to create products that the missing middle sorely needs. Financing, subsidy sources, building design, and construction methodologies all play an important role and must be combined to ensure projects are economically feasible. Developers need to be resourceful and assemble a team of knowledgeable professionals to ensure that the highest-quality product is delivered at the lowest possible cost. Beyond controlling costs, patching together different sources of funding, and using the best partners, they must also team up with the public sector. When the workforce housing goals of private developers align with those of the community, deals have a better chance of actuation.

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Figure 2: Share of Income Spent on Rent

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Figure 3: Class A Stock vs. Class B/C Stock

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Figure 5: Fastest Growing Cities in the US

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Figure 9: Sample NMTC Transactional Structure

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