July 2017

Multifamily Market and Fiscal Impact Analysis
City of Marlborough, Massachusetts



Prepared by:

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Prepared for

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1 INTRODUCTION

The City of Marlborough has become a very attractive place for people to live, and for people to work. The city's unique location provides easy access to multiple regional roadways including I-495, I-290, the Mass Pike, Route 20, and Route 9. Marlborough is also home a bourgeoning downtown with new housing, commercial development, and restaurants. Substantial increases in employment and wages, and access to a skilled labor pool have attracted businesses of all sizes to Marlborough over the last three decades. Economic success has also created a substantial supply pipeline for multifamily housing development across the city.

Faced with these individual multifamily housing development proposals, the City Council and Mayor Vigeant worked to place a six-month stay on the consideration of new housing developments. This provided an opportunity for the city to take a proactive approach to gain insight into the current and future market for housing, as well as assess the potential fiscal impact multifamily housing may have on city finances. This effort will also provide the city with an opportunity to better understand the housing proposals that are before them, assess their effectiveness in addressing housing needs, and determine appropriate locations for housing in Marlborough.

The city retained RKG Associates, Inc. of Boston to perform the market and fiscal impact analyses for multifamily development. RKG Associates analyzed current and future multifamily housing demand within the city, corroborating those findings with local employers and real estate professionals to ensure the findings accurately reflected current and potential supply and demand levels. RKG worked closely with the Marlborough Economic Development Corporation (MEDC), an appointed Steering Committee and two focus groups to vet those findings and present recommendations based on the results. RKG also held a public session to ensure residents and business leaders had the opportunity to hear the results first-hand and provide their vision/feedback on the analysis. The following report summarizes the analysis and its conclusions.

The report includes the following components:

Chapter 1 – Introduction
Chapter 2 – Recommendations
Chapter 3 – Multifamily Market Analysis
Chapter 4 – Fiscal Impact Analysis

2 *RECOMMENDATIONS*

RKG Associates was charged with providing the city with recommendations and best practices regarding the need and impact of new multifamily development within Marlborough. The following narrative provides that feedback, organized into two separate discussions. First, this chapter focuses on the 'lessons learned' from the empirical analysis, feedback from key stakeholders and the general public, and guidance from the designated working group. This section provides guiding principles for decision making. Second, this chapter assesses various locations within the city on their appropriateness for multifamily development. This effort includes recommended approaches and potential tools the city can use to implement the proposed concepts.

A. GUIDING PRINCIPLES

This section provides the City leadership guiding principles to consider when establishing policies that affect multifamily development. These principles synthesize the market analysis and fiscal impact assessment findings with feedback for key industry and leadership stakeholders and the observations of the consultant team. These guiding principles are intended to help the city's decision makers to enact policies and make decisions that benefit current and future residents as well as the existing and potential employment base of Marlborough.

- ***Future residential development should balance all market opportunities.*** The market analysis indicates there are opportunities for new development across all residential development types. Currently, multifamily residential offers the most profitable and least risky opportunity for the development community. In contrast, age-restricted housing would provide the most lucrative fiscal impact to the City (greater discussion on this finding is in the Implications section of the Fiscal Impact Analysis chapter). Anecdotal data from local real estate professionals indicate demand for single family detached housing is substantially greater than available supply. All that said, there is substantial research that indicates communities with a diverse housing supply (both in terms of type and price) tend to have greater economic sustainability and resilience over time. To this point, the analysis indicates that the city leadership should continue to encourage a mixture of residential housing development over concentrating growth in one market niche.

- ***Allow vision to guide decisions.*** The City already has experienced substantial interest from residential developers to build a variety of housing projects throughout the City. This is not surprising, given the City leaders' reputation for supporting new development and the documented unmet demand. However, the proposed development interest is based on market opportunity, and not necessarily guided by a long-term strategic plan that best meets the community's needs. Rather, it is driven by opportunity and availability. Simply put, there are few developable parcels of any size left in Marlborough. Developers who can acquire these properties are trying to maximize their return by targeting the most lucrative development programs that can be accommodated.

  While understandable, allowing development to occur unchecked has the potential to adversely affect the long-term sustainability for both the site in question as well as the surrounding neighborhood. Thus,

the city leaders should codify a vision for the various development areas and use this vision to consider current/future development programs. The following recommendations provide one perspective on defining the vision for certain areas of the city. Additional efforts should be made to refine this proposed vision for areas where other perspectives differ from the prescribed recommendations.

- ***Certain development types are more appropriate than others in certain areas.*** RKG Associates' experience in housing market analysis indicates that multifamily housing development has the longest sustainability when it is integrated with employment, entertainment, and service amenities. Households that seek rental housing typically prefer having work, shopping, and support services within a convenient distance to their homes. Areas that offer this proximity oftentimes are—and typically remain—the most desired locations to live (i.e. Cambridge). Conversely, multifamily rental developments built away from convenient employment, shopping, transportation, and services tend to become less competitive as they age and newer product is built in the marketplace.

  In contrast, owner-occupants tend to be more sensitive to the neighborhood context and make location decisions based on a myriad of factors including proximity and convenience. This is not to say there is not overlap of preference in the rental and ownership markets, rather it is a recognition that the city leadership should review its limited land resources strategically to maximize the benefit to the consumers and enhance the city's livability.

- ***Focus should be on quantity AND quality.*** The market analysis revealed that demand for new multifamily housing is strong, and will remain strong into the foreseeable future. Data provided to RKG Associates indicates there are several multifamily projects proposed or under consideration by the city. This amount is consistent with market demand, and likely will be produced at a pace consistent with local absorption patterns. It is not likely this development will 'overburden' the local market, given the projected employment growth locally and regionally. While controlling the amount of development on a year over year basis is prudent to maintaining healthy pricing and absorption levels, the development community shares this concern and wants to preserve the profitability of their investments.

  However, location (discussed in the previous bullet) and pace of development should not be the only concerns for the city. The issue of quality also should be a priority when determining the suitability of a proposed residential development. Simply put, a well-located, scale-appropriate development will not maximize the benefit to Marlborough if the looks and quality of the project are not meeting the vision of the community.

- ***New development should support price diversity.*** The employment analysis revealed that the jobs being created within Marlborough range in average wages. The strongest growth areas in the service industries range in average wages from $31,350 (support services) to $137,186 (professional services). In comparison, new multifamily development is being built at the highest end of Marlborough's housing market with new rental and ownership product capturing a premium ranging from 25% to 40% above costs for older stock. As with the principle regarding balance of housing type, it is in the city's long-term interest to monitor and promote diversity of cost as well. Considering strategies to encourage a mix of housing prices within larger multifamily developments (similar to the Talia development) will serve a broader range of Marlborough workers while supporting efforts to enhance housing conditions citywide.

B. LOCATION OPPORTUNITIES AND RECOMMENDATIONS

As noted, some of the existing proposed projects do not follow a defined growth vision for the City of Marlborough. The 'scatter shot' pattern of these projects reflects the overall strength of the multifamily market combined with the dearth of suitable developable properties within Marlborough. From RKG Associates' perspective, the city would be best served by establishing and following an overarching vision for the development of new multifamily development. The following section details RKG Associates recommendations for establishing that vision for the city by looking at the various development areas. It is important to note these recommendations reflect a market/economic perspective for the city to consider. There are other perspectives—such as transportation, urban design, and infrastructure, not incorporated into this assessment that could help refine and expand these recommendations. To this point, RKG Associates recommends the city leadership consider these other perspectives when finalizing the residential development vision for the community.

1. Downtown Marlborough

Downtown Marlborough is a unique mix of historic buildings, established residential enclaves, and a highly charismatic commercial core bounded by Main Street and Granger Boulevard. Residential investment already is underway in downtown as a result of the city's planning and rezoning efforts in 2014, with a few current and proposed projects to intensify underutilized parcels with multi-story mixed-use development buildings. Given the area's civic and cultural importance to the City, accommodating investments that will secure and enhance downtown's economic health is encouraged. Specific opportunities include:

- ***Encourage infill development that is consistent with the existing scale of downtown.*** As stated in the recommendations by MAPC in 2014, there are several underutilized parcels—both vacant parcels and currently built parcels—within the downtown that could accommodate additional residential development. The city subsequently underwent a rezoning effort to realize this opportunity. RKG Associates encourages the city's leadership to continue to support and encourage the (re)development of these properties to increase the live-recreate market in the downtown and enhance the aesthetics of the downtown core. Creating mixed-use buildings with commercial space on the ground floor and residential above—as defined in the previous planning efforts—should remain the preferred approach. RKG Associates recommends the city maximize the development intensity within the downtown, requiring buildings be no less than three stories in the downtown core. Residential uses could either be rental or ownership, depending on market conditions.

Buildings could be 4-stories on both sides of Main Street.

- ***Capitalize on underutilized commercial sites away from Main Street.*** The commercial core is not the only opportunity to encourage and accommodate additional residential development in the downtown area. A windshield survey of the adjacent neighborhoods witnessed corner parcels where the existing commercial use does not maximize the market potential. These were properties where the building did not maximize the potential for the site and/or the building condition could be a concern. Encouraging these property owners to consider a multi-story, mixed-use redevelopment opportunity could enhance the aesthetics of the surrounding neighborhood while offering new downtown housing opportunities.

- ***Consider a housing revitalization program for downtown neighborhoods.*** Anecdotal information from local residential brokers indicate there has been substantial conversion of the single-family homes adjacent to downtown that have been converted for multifamily rental use. The city leadership could create a revitalization program for potential owner occupants to acquire converted properties in the downtown area and convert them back into homeownership. These programs oftentimes offer low or no-interest loans, offer matching grants based on the level of investment, and/or provide tax breaks for the incremental increase in value and/or the rehabilitation investment.

- ***Continue to encourage the design guidelines for reinvestment.*** The existing interest in downtown residential development proves there is market demand for this area. However, accommodating this new development does not serve the city's long-term vision if the building is constructed in a substandard manner. To this point, the city leadership should create design guidelines for new development in the downtown area that ensures any construction is done to a scale, quality, and aesthetic that enhances the existing built environment. There are many tools available to the city including the use of form based codes, planned unit development regulations, overlay districts with design guidelines.

- ***Actively support the reactivation of historic properties in the downtown.*** There are a few historic and culturally significant buildings in the downtown that currently are underutilized or vacant. These properties, while not necessarily residential opportunities, could help catalyze additional residential development within the downtown area. Increasing commercial activity while strengthening building conditions and perceptions of downtown will only enhance future residential interest. RKG understands the City already is actively engaged in bringing these building assets online. However, RKG also recommends the City be more creative and flexible in [1] potential uses and [2] partnership strategies to accelerate the process. One opportunity is to engage in a design charrette with the community and potential investors to brainstorm possible uses.

A catalytic project waiting to happen

2. Commercial Corridors

There are three primary commercial corridors through Marlborough, Route 20, Donald Lynch Boulevard, and Route 85. These corridors have varying development patterns, with clusters of commercial activity interspersed with civic and residential uses. Donald Lynch Boulevard has the mall and larger retail centers on the west side and commerce-based development on the east side adjacent to Interstate 495. The residential market analysis indicates these corridors could support redevelopment and/or infill development to accommodate multifamily uses. Specific recommendations include:

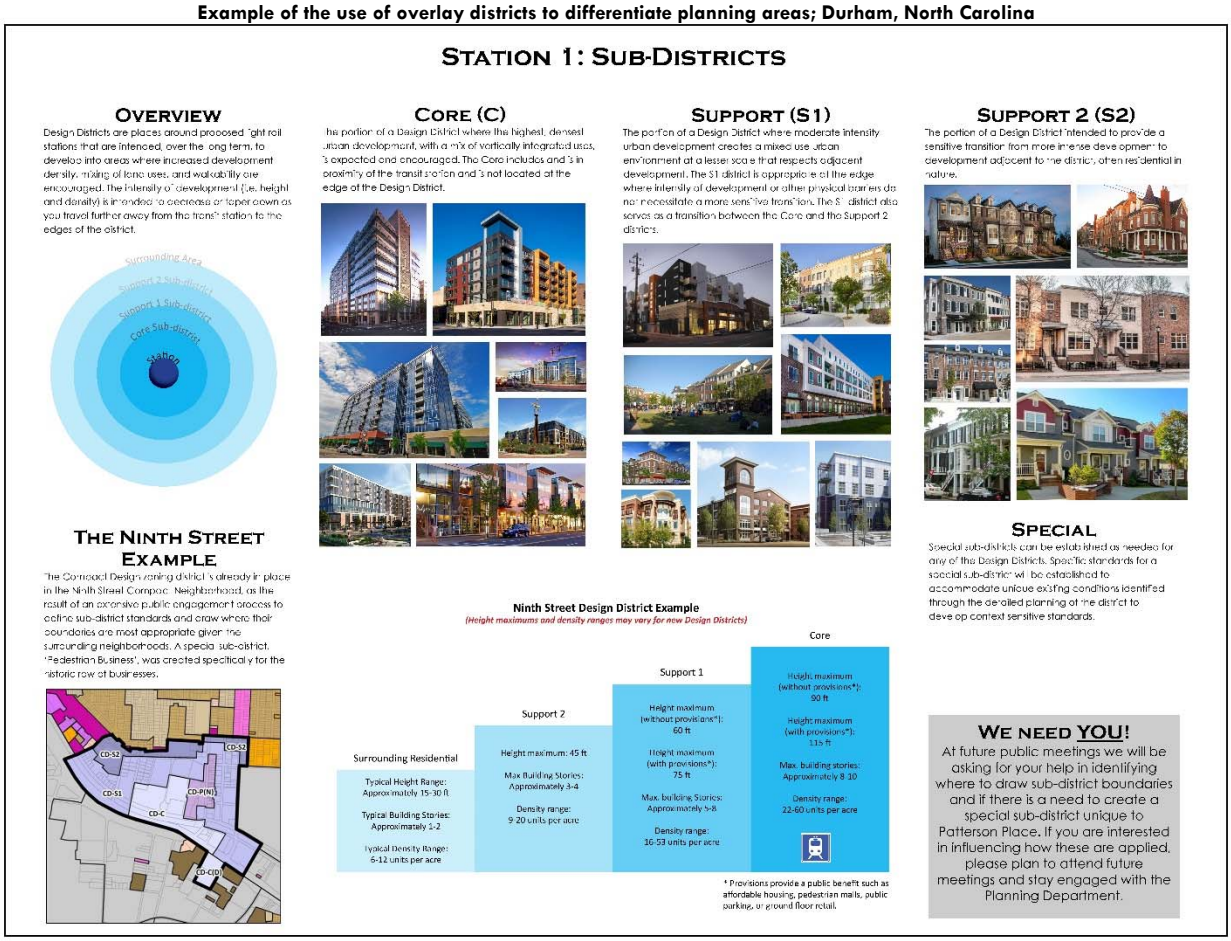
- ***Identify potential reinvestment sites along the corridors.*** One of the first steps the city can undertake is to identify those commercial and vacant parcels that are prime candidates for reinvestment. This would require analytical research to define the criteria to determine suitability, identification of sites that meet the criteria, and substantial outreach to gauge the interest of property owners to consider reinvestment. Ultimately, this effort would assist the city leadership in making informed decisions while determining whether the community wants to proactively pursue potential opportunities.

- ***Encourage mixed-use development.*** For properties that front these commercial corridors, RKG Associates recommends the city encourage the use of mixed-use development. Integrating a commercial component with residential investment will preserve the commercial presence in areas not well served (i.e. Route 20 west of downtown) while strengthening the commercial market in those locations. For larger sites, the uses can cohabitate the site without integrating uses in the buildings (i.e. a commercial frontage development with multifamily development behind). For smaller parcels, a vertically integrated mix of uses will be necessary. Mixed-use development adjacent to the corridors could be either rental or ownership, to be determined by the marketplace. Assets without visual connectivity to the roads and/or do not have convenient access to the surrounding services should be encouraged to focus on multifamily owner occupants.

- ***Employ design guidelines like those for downtown.*** Similar to the discussion for downtown, development without a focus on the quality and aesthetics of the product does not serve the long-term sustainability of the city's efforts. To this point, the city should consider establishing fixed design guidelines for commercial corridor reinvestment.

- ***Consider a corridor overlay district.*** One method currently used by the city to deliver design guidelines is through an overlay district. RKG Associates envisions the corridor overlay district addressing two needs. First, it establishes the target area for the commercial corridor reinvestment efforts. This is important when considering the potential for encroachment into stable neighborhood areas. Defining the boundaries also helps clarify any differences between areas considered commercial corridors and areas considered downtown. Second, the overlay will be easier than rezoning, by allowing owners to maintain their land rights while offering an alternative for them to consider that allows a greater intensity of use in exchange for aesthetic and design input from the community.

Example of the use of overlay districts to differentiate planning areas; Durham, North Carolina



Source: City of Durham, NC

Any efforts to create a commercial corridor overlay district should be done to coordinate with the existing overlay district within the downtown area. RKG envisions the commercial corridor overlay district will complement effort already underway in the downtown. The example provided in this section details how other communities have created coordinated overlay districts. Furthermore, any area incorporated into this new overlay district should not be included in other planning overlay districts. Creating multiple overlays can be confusing to the development community and harm the city's attempts to encourage (re)investment.

3. Southwest Quadrant/Commerce Parks

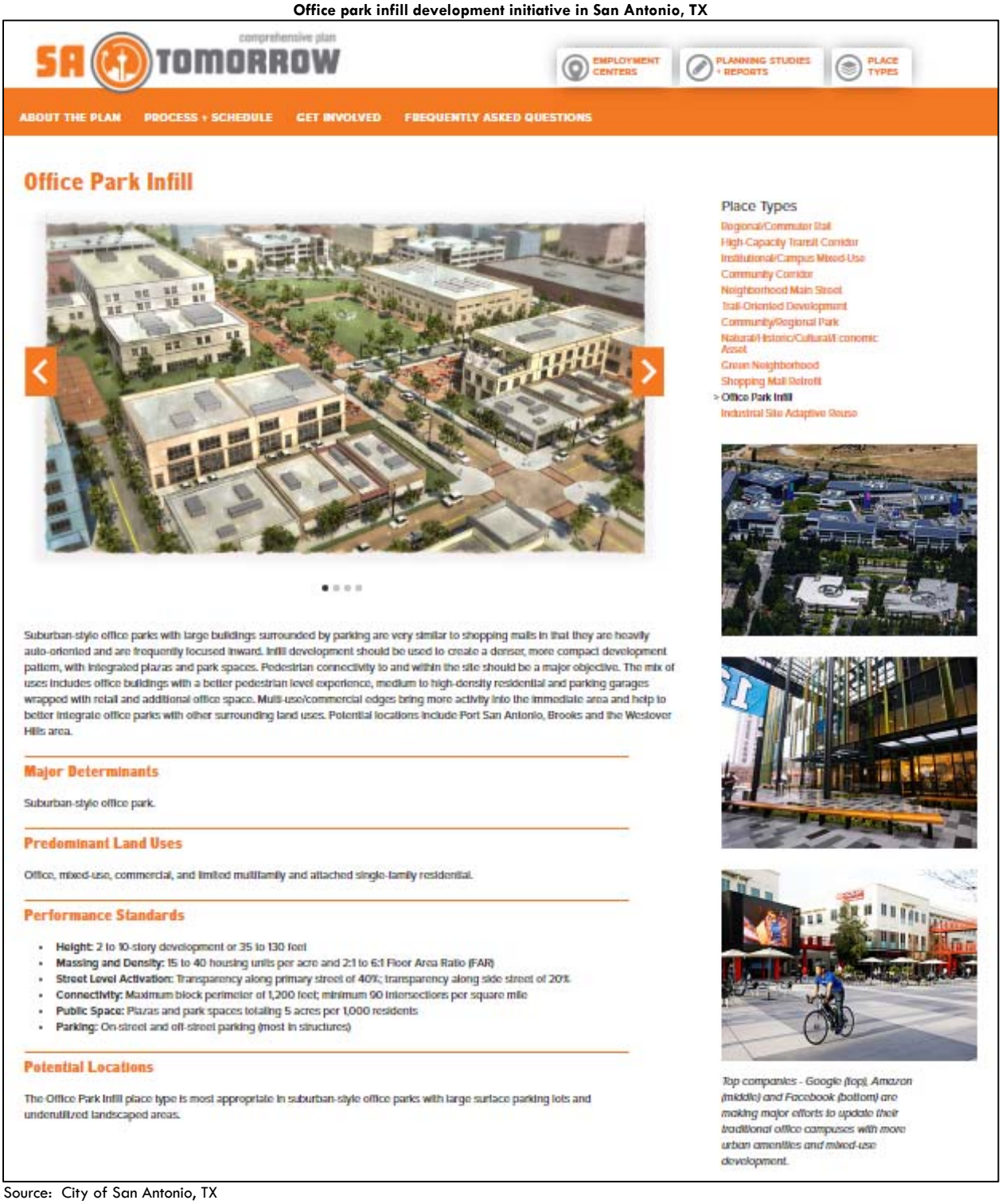
The City of Marlborough is a regional employment center for Metro West. Most of the city's employment concentration is west of Interstate 495 along Donald Lynch Boulevard and in the Southwest Quadrant area of the city. Community assets ranging from Solomon Pond Mall and the New England Sports Center to The Campus at Marlborough, Marlborough Hills, and the Marlborough Technology Park are all located in western Marlborough. Each of these assets is critical to the economic health of the community and helps define Marlborough as an economic engine for the region. However, the development intensity of the area offers the city an opportunity to develop a live-work-play environment that would be unique to Metro West. Specific opportunities include:

- ***Create a town center environment in the Southwest Quadrant.*** The various commerce parks located south of Route 20 and west of Interstate 495 were developed in a suburban scale. The buildings were built on large lots with substantial surface parking and open space. While this development pattern was popular in the 1980s and 1990s, it is an inefficient use of land. Given the growth and development pressures facing Metro West and the entire Boston Metropolitan area combined with the increasing popularity of new urbanist development patterns, employment center communities such as Marlborough are increasingly seeking to maximize the potential of these inefficient development patterns. To this point, the city leadership can encourage infill development within the commerce parks to introduce more living, dining, and support services. This development program will benefit the employees of these parks by providing convenient living opportunities as well as services within walking distance of their jobs. It also will benefit the businesses by providing greater housing choice close to their locations. While the market will dictate ownership/rental patterns, the consultant recommends the city focus on multifamily development for this infill development to maximize the market potential.

Example of town center development; Robbinsville, NJ

- ***Consider public-private partnerships to create structured parking.*** As mentioned, one of the common characteristics in this area is large parking fields to support the individual buildings. While financial feasibility makes creating structured parking at this scale more challenging, a higher intensity development (i.e. FAR levels at or above 1.0) would make structured parking more feasible. Opening the parking fields for redevelopment creates two primary benefits. First, it helps meet the vision for creating greater activity in this area. Second, it reduces the amount of current greenspace that would need to be consumed to accommodate the infill development. The city leadership would need to review each proposed partnership on a case-by-case basis to ensure the respective project would not be feasible without public involvement. The consultant recommends the city require a pro forma analysis for any applicant seeking public investments.

Office park infill development initiative in San Antonio, TX



Source: City of San Antonio, TX

- ***Require that infill development enhance multimodal connectivity.*** Much of the existing development in the Southwest Quadrant is automobile oriented. Most of the buildings are oriented internally to the parcel (rather than to the road network), and pedestrian and bicycle access between buildings/adjacent developments is not consistent. Any new infill development should be encouraged to orient to the road, and be required to create better intra-connectivity with other buildings on the parcel as well as inter-

connectivity within adjacent developments. Enabling residents, visitors, and workers the means to access these new amenities without their car will enhance the attractiveness of the living and employment centers.

4. Established Neighborhoods/Infill

While this analysis focuses on multifamily (both rental and owner) development, the data indicate there is unmet demand across all housing types. Both empirical and anecdotal data reveal that the demand for owner-occupant housing is greater than the available supply within the City of Marlborough. As noted in the guiding principles, RKG Associates recommends the city strive to retain a balance of residential development across all product types. The current inventory of proposed projects includes some that are located within established neighborhood areas and/or are convenient to the city's commercial, employment, transportation, services, and public amenities. The analysis indicates these land assets are better suited to accommodate new owner-occupant residential development. This could be in the form of garden condominiums, townhomes, or any of the potential single-family detached housing forms available.

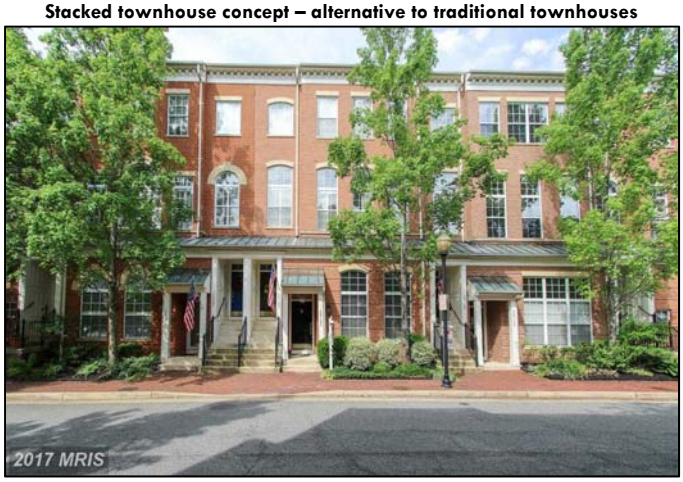
- ***Consider the use of cottage-scale single family development.*** Feedback from residential brokers indicates that the demand for owner-occupant housing ranges in both housing type and cost. This reportedly creates a challenge to lower density homeownership development, as land costs make it financially challenging to build to the market with a low yield of units per acre. Using a development method, such as cottage-scale development, that enables a greater number of units per acre effectively reduces per-unit land costs. Employing this non-traditional approach could encourage greater interest in building more single-family, owner-occupant housing.

Cottage scale houses increase homeownership opportunities

- ***Promote owner-occupancy in waterfront areas.*** The city has a handful of larger waterbodies, generally located away from the commercial and employment centers of the city. Given this, the city leadership should encourage homeownership for any development or redevelopment projects proposed to be near these water bodies. More strategically, any residential investment in these areas should be encouraged to maximize the unit yield, as access and visibility to water amenities typically have a premium over the rest of the market. Maximizing these assets to promote greater homeownership will help in maintaining development balance within the city.

- ***Encourage a mixture of ownership units for larger development projects.*** Whether located near a water body or in an established neighborhood area, larger projects should be encouraged to incorporate a mixture of ownership units. Providing a mix of garden condominium, townhome, cottage units, or traditional single-family detached housing has several benefits. First, encouraging higher intensity ownership types will maximize the yield of the project. Creating a variety of choice will appeal to a broader demand base. To this point, incorporating an age-restricted component to a larger project should be allowed. Second, varying the product also will vary the range of pricing. Creating a price-diverse program also expands access for the marketplace. As noted, the diversity of housing cost is as important as the diversity of housing supply.

Stacked townhouse concept – alternative to traditional townhouses



3 *MULTIFAMILY MARKET ANALYSIS*

The multifamily market analysis focuses on understanding the local and regional supply and demand trends, conditions, and projections as they relate to the City of Marlborough. The city leadership currently is considering several proposed multifamily (both rental and ownership) development projects throughout Marlborough. This analysis will shape the recommendations on whether the scale of proposed development is consistent with existing and future market demand. This chapter concludes with an assessment of the proposed development pipeline.

While the analysis focuses on trends and projections in Marlborough, RKG Associates also analyzed three other geographic areas. The first is a collection of the immediate surrounding towns of Hudson, Sudbury, Northborough, Westborough, Southborough, Framingham, and Berlin. For the purposes of this analysis, these communities are referred herein as the "Surrounding Communities." RKG Associates also analyzed trends for Middlesex and Worcester counties. This regional assessment was completed to identify potential opportunities and challenges for the Marlborough multifamily market resulting from supply and demand changes in neighboring areas.

C. DEMAND ANALYSIS

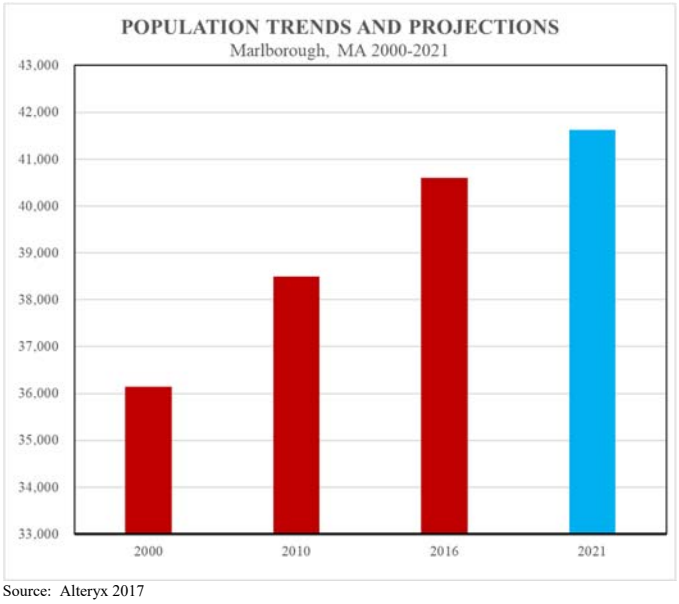
The following section presents an overview of selected socioeconomic trends and projections for the City of Marlborough, Massachusetts and the surrounding market. Understanding socioeconomic changes frames current and projected demand for housing.

1. Population

The population of Marlborough increased by 2, 350 persons during the last census decade, from 36,150 to 38,500 persons representing a growth rate of 6.5 percent (Figure 3-1). Population growth continued through 2016, increasing to more than 40,600 residents. Projections provided by Alteryx[1] indicate the city's population will increase by more than 1,000 new people by 2021. This projection is slightly higher, but still consistent with, MAPC's population projections (41,140 for the 'strong' scenario).

From a regional context, the city's population has increased faster than each of the other study areas since 2000. Marlborough's population growth rate has exceeded the

Figure 3-1

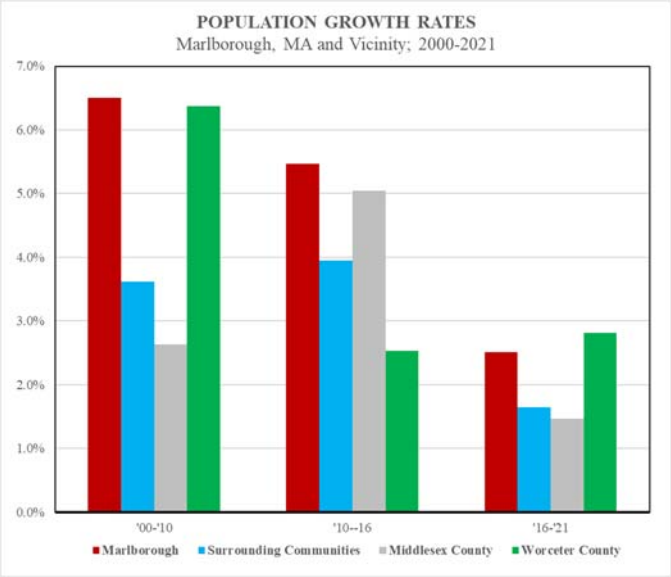


Source: Alteryx 2017

[1] Alteryx is an internationally renowned third-party socioeconomic data vendor. Alteryx uses a proprietary algorithm to forecast demographic and economic changes.

Surrounding Communities, Worcester County and Middlesex County since 2000 (Figure 3-2). Projection data indicate Marlborough likely will continue to grow faster than the Surrounding Communities and Middlesex County, while Worcester County is projected to grow at a slightly faster rate (2.8% compared to 2.5%). This strong pace of growth is consistent with the city's development trends. Marlborough has been progressive in supporting new residential growth—particularly multifamily growth—enabling the healthy population increase. The projection data reflects the city leadership maintaining that progressive approach to development. Regardless, the data indicate that demand to locate in Marlborough is substantial.

Figure 3-2



Source: Alteryx 2017

2. Population by Age

Since 2010, Marlborough has experienced a net increase in each studied age cohort (Table 3-1). The greatest observed is among the pre-retirement age population (55 to 64-years cohort), followed by the retirement aged population at 65 and older. However, the city experienced net gains in each age cohort. In contrast, each of the other study areas experienced a net decline in persons aged 35 to 54. This disparity reflects the city's strong employment recovery following the Great Recession in 2006-07. The City experienced substantial employment loss prior to 2011, but has recovered to higher than pre-recession levels (detailed in later in this section). Attracting so many jobs back into the community positively impacted the city's growth of working-aged persons.

Table 3-1
Net Change in Population by Age Trends and Projections
Marlborough, MA and Vicinity

	Marlborough	Surrounding Communities	Middlesex County	Worceter County
2010-2016				
Under 20	316	733	9,246	(7,133)
20 to 34	68	1,303	26,083	12,616
35 to 54	225	(1,148)	(4,124)	(12,635)
55 to 64	1,263	1,797	20,282	13,979
Over 65	638	2,203	24,320	13,353
Total	2,510	4,888	75,807	20,180
2016-2021				
Under 20	(22)	(825)	(7,324)	(4,096)
20 to 34	(16)	715	(291)	7,769
35 to 54	(57)	(1,625)	(12,862)	(8,651)
55 to 64	379	1,153	9,160	8,183
Over 65	734	2,698	34,403	19,828
Total	1,018	2,116	23,086	23,033

Source: U.S. Census, Alteryx, and RKG, 2017

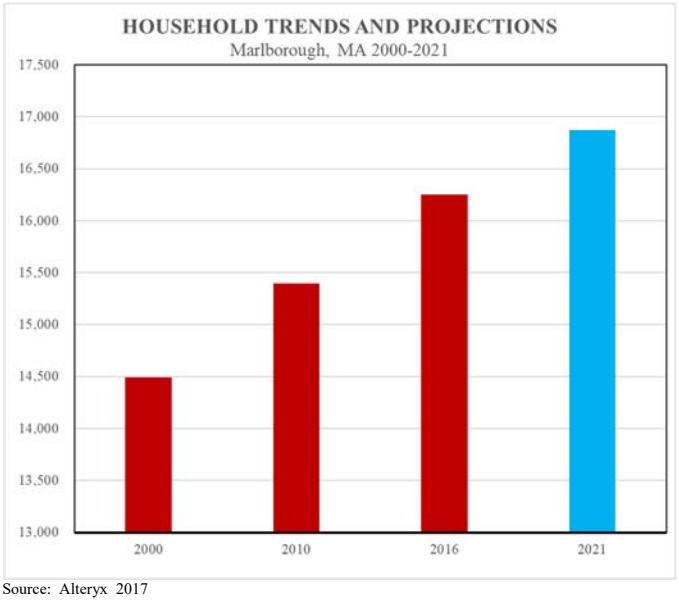
Projection data indicate that future population changes likely will favor the older (55 and up) cohorts. Each of the four study areas are projected to lose population levels for persons under the age of 55, while experiencing substantial gains in the 55 and older cohorts. This data is not surprising, as the Baby Boomer generation continues to age. These individuals constitute the largest portion of the population, and increasingly surpass the 55-year old threshold. Along these lines, the Millennial cohort—the second largest cohort—is responsible for the projected increase in persons between 20 and 34-years old for the Surrounding Communities and Worcester County.

The growth of the Baby Boomer and Millennial generations likely will increase demand for multifamily housing over the next five to ten years. Most Millennials will still not have begun families by 2021, making multifamily housing (both ownership and rental) an attractive, cost-effective housing alternative. For Baby Boomers, the need for larger single-family homes will continue to decline as they age and their dependents form new households.

3. Household Formation

Household formation trends closely reflect those for population changes. The City of Marlborough has experienced steady household formation growth since 2000, and it is projected to continue through 2021. The number of households in the city grew by more than 1,760 between 2000 and 2016, for an increase of 12.2% (Figure 3-3). Alteryx projections indicate there will be approximately 620 new households in Marlborough by 2021. While household formations ultimately will depend upon new residential development (given the low housing vacancy rate), the data indicate there is sufficient demand to support new residential housing.

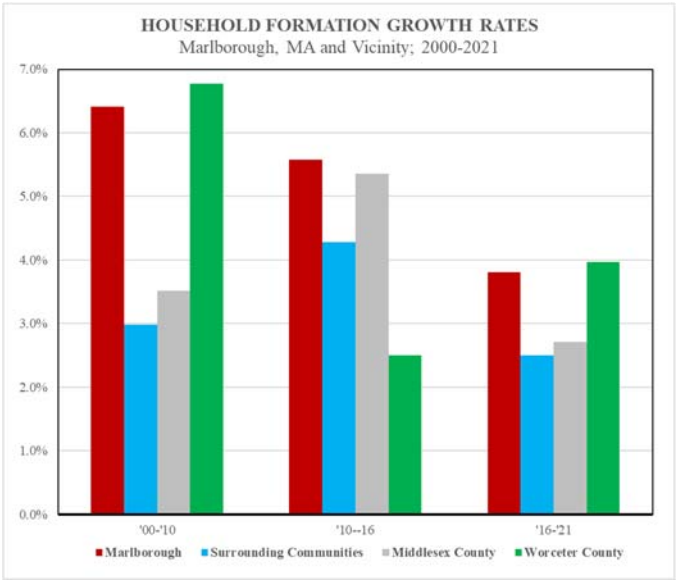
Figure 3-3



Source: Alteryx 2017

The regional comparison for household formation is almost identical to the population graphic. Marlborough has experienced faster household formations than the surrounding market since 2000, apart from Worcester County from 2000 to 2010. Worcester County had a slightly higher household formation rate (6.8% compared to 6.4%). However, household formations in Worcester County have slowed substantially since 2010 (Figure 3-4) compared to Marlborough. Projections indicate that Marlborough likely will to continue to outpace the Surrounding Communities and Middlesex County in household formations through 2021 (Figure 3-4). As noted, the data indicate Marlborough's more progressive policy toward residential development has influenced the marketplace.

Figure 3-4



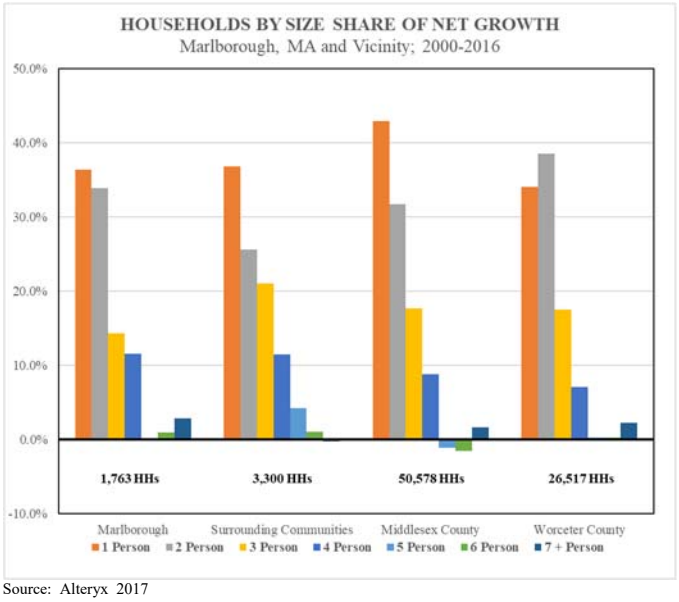
Source: Alteryx 2017

4. Households by Size

The growth in households has not been uniform across all household sizes. Marlborough historically maintained a smaller average household size than the surrounding area. The average household size for the city has steadily declined from 2.47 in 2000 to 2.44 in 2016. In comparison, the three other study areas have maintained average household sizes between 2.56 persons and 2.48 persons during the study period. That said, almost all new households formed in Marlborough and the immediate market area have been 1-person and 2-person households. More than 1,200 of the approximately 1,800 new households formed in Marlborough between 2000 and 2016 are 1-person or 2-person households (Figure 3-5).

Regional household formation trends are similar, with households with less than two people accounting for at least 62% of all new household formations since 2000. Projection data for Marlborough indicate this growth pattern likely will continue through 2021. Strong growth of households with one or two people means demand most likely will be for smaller housing units. Simply put, most small households do not seek large (3+ bedroom) units. Thus, the interest to build multifamily units is consistent with demand.

Figure 3-5

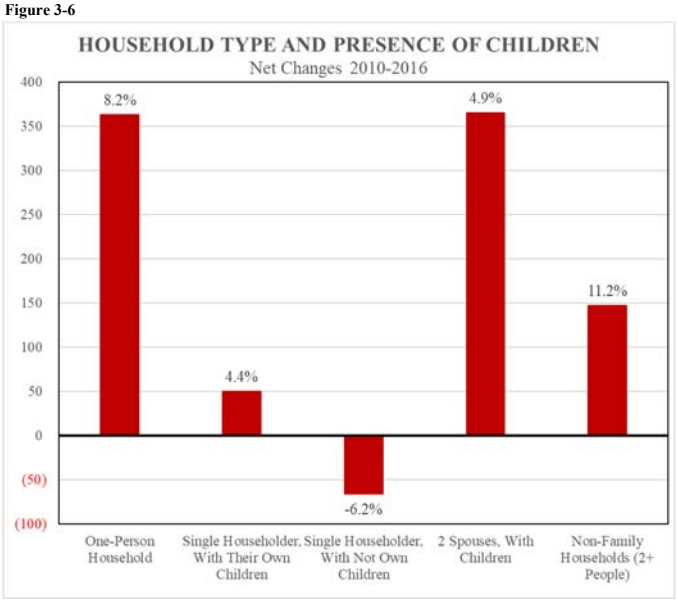


Source: Alteryx 2017

5. Family Households

RKG Associates also assessed the formation of family households to better understand the trends and projections on changes in the number of school-age children. The analysis indicates that Marlborough is experiencing growth in both non-children households and those with children. Approximately 60% of newly formed households since 2010 did not have any children. Of those that did, the predominance were two-spouse households. The data reflect the desirability of Marlborough across all household types. However, very few of the households with children were occupying newly constructed multifamily developments (discussed in more detail in the Fiscal Impact chapter). Only 13 school-aged children in public schools live in the apartments built since 2010 despite a net increase of approximately 350 households with children (Figure 3-6). Projection data provided by Alteryx suggests that the growth in non-children household likely will continue to outpace households with children, continuing to account for approximately 60% of the projected new households.

Figure 3-6



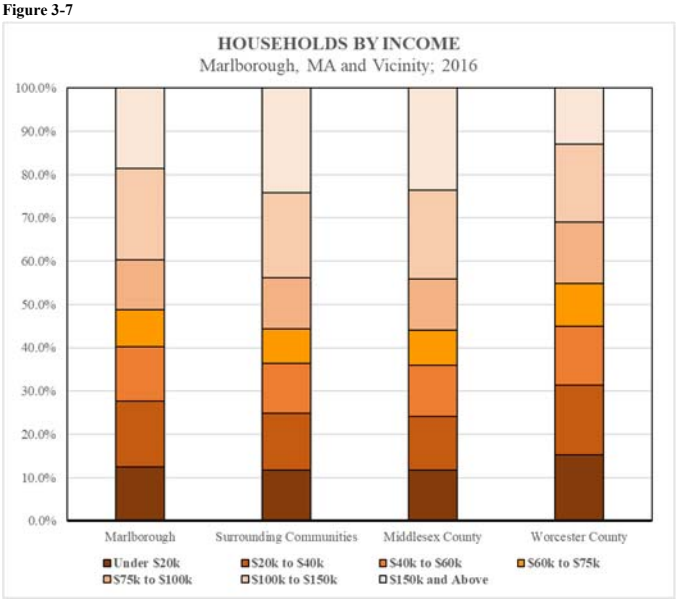
Source: Alteryx 2017

6. Households by Income

Household income in Marlborough is diverse, and is consistent with the regional marketplace. Approximately 40% of the city's households earn over $100,000, compared with 44% for the Surrounding Communities and Middlesex County as a whole (Figure 3-7). Only 30% of households in Worcester County earn over $100,000. Conversely, less than 28% of households in Marlborough earn less than $40,000, slightly more than the Surrounding Communities (25%) and Middlesex County (24%). More than 30% of Worcester County households earn less than $40,000.

That said, changes in households by income since 2010 have been disproportionate. Within Marlborough, the number of households earning over $100,000 increased by almost 950 between 2010 and 2016. In contrast, the number of households earning less than $100,000 declined by 65 households (Table 3-2). While some of this change is due to increasing salaries, local and regional income increase metrics suggest most of this change is due to migration. The city is experiencing substantial increases in more affluent households. This trend is consistent with the region as well. Each of the three other study areas had similar changes, with the net number of households earning over $100,000 increasing and the net number earning less than $100,000 decreasing.

Figure 3-7



Source: Alteryx 2017

It is important to note that Marlborough did experience a net increase in households earning less than $40,000 during this period (approximately 102 households). However, most of that growth was in households headed by people over 45-years old. This likely is due to relative availability of more modest-valued housing as well as natural aging-in-place of households already located in the city. The Surrounding Communities study area experienced a similar trend, gaining households earning below $20,000. In fact, most of the gains in households earning below $100,000 regionally were from households headed by people over 45-years old. Anecdotal data from local real estate professionals indicate these households may have greater resources (i.e. equity from the sale of a house elsewhere), enabling them to enter the Marlborough/Metro West market more easily than younger households that have not accrued that wealth. Regardless, the disparity indicates there remains a barrier to entry for the regional housing market that most modest-income households cannot overcome.

Despite this last finding, Alteryx's projections for households by age and income suggest the disproportionate growth for the wealthiest households will accelerate in the near future. The net change for each income group earning less than $100,000 is projected to decline in each of the four study areas, including Marlborough (Table 3-3). The limited increase in new housing combined with the projected growth in jobs (detailed later in this chapter) and locational advantages of Metro West will provide more affluent households an advantage in acquiring housing regionally.

Table 3-2
Households by Age of Householder and Income
2010-2016 Net Change

	Under 25	25-34	35-44	45-54	55-64	Over 64	Total	% Change
CITY OF MARLBOROUGH								
Under $20,000	(50)	(4)	6	20	63	7	42	2.1%
$20,000 to $39,999	23	(22)	(26)	16	26	45	62	2.6%
$40,000 to $59,999	4	12	(62)	(34)	52	12	(16)	-0.8%
$60,000 to $74,999	(9)	1	(44)	(49)	24	31	(46)	-3.2%
$75,000 to $99,999	6	5	(82)	(71)	(29)	64	(107)	-5.5%
$100,000 to $149,999	9	64	(42)	(42)	48	125	162	4.9%
$150,000 and Above	3	133	204	177	153	116	786	35.2%
TOTAL	(14)	189	(46)	17	337	400	883	5.7%
SURROUNDING COMMUNITIES								
Under $20,000	(50)	(3)	(67)	70	116	(35)	31	0.6%
$20,000 to $39,999	(2)	(7)	(26)	(59)	81	(9)	(21)	-0.3%
$40,000 to $59,999	(9)	141	(129)	(150)	(93)	27	(214)	-3.5%
$60,000 to $74,999	(16)	(16)	(157)	(145)	(13)	164	(184)	-4.5%
$75,000 to $99,999	(13)	(70)	(329)	(213)	(56)	233	(448)	-7.2%
$100,000 to $149,999	15	43	(209)	(328)	195	396	112	1.2%
$150,000 and Above	13	277	459	781	847	620	2,996	34.3%
TOTAL	(62)	364	(458)	(44)	1,078	1,395	2,273	4.9%
MIDDLESEX COUNTY								
Under $20,000	(932)	78	(514)	325	1,258	(1,784)	(1,569)	-2.1%
$20,000 to $39,999	20	(503)	(713)	(445)	390	(598)	(1,849)	-2.4%
$40,000 to $59,999	(365)	956	(1,435)	(1,797)	(666)	1,091	(2,216)	-2.9%
$60,000 to $74,999	(158)	(1,126)	(1,657)	(2,299)	(919)	1,478	(4,681)	-8.7%
$75,000 to $99,999	(84)	(177)	(2,797)	(3,223)	(461)	2,591	(4,151)	-5.1%
$100,000 to $149,999	95	1,869	(609)	(2,085)	2,525	5,021	6,816	5.8%
$150,000 and Above	197	6,050	7,117	9,238	9,852	8,217	40,671	39.7%
TOTAL	(1,227)	7,147	(608)	(286)	11,979	16,016	33,021	5.7%
WORCESTER COUNTY								
Under $20,000	(745)	175	(705)	130	1,026	(1,492)	(1,611)	-3.3%
$20,000 to $39,999	23	244	(989)	(397)	848	216	(55)	-0.1%
$40,000 to $59,999	(137)	832	(1,596)	(1,569)	(560)	958	(2,072)	-4.5%
$60,000 to $74,999	(47)	(44)	(1,032)	(788)	642	1,429	160	0.5%
$75,000 to $99,999	64	300	(1,699)	(1,035)	1,175	1,809	614	1.4%
$100,000 to $149,999	100	370	(1,329)	(1,465)	1,713	2,229	1,618	3.0%
$150,000 and Above	53	928	1,501	2,917	2,647	2,556	10,602	35.6%
TOTAL	(689)	2,805	(5,849)	(2,207)	7,491	7,705	9,256	3.1%

Source: Alteryx 2017

Table 3-3
Households by Age of Householder and Income
2016-2021 Projected Net Change

	Under 25	25-34	35-44	45-54	55-64	Over 64	Total	% Change
CITY OF MARLBOROUGH								
Under $20,000	(10)	(35)	(48)	(95)	(29)	(61)	(278)	-13.7%
$20,000 to $39,999	(25)	(79)	(65)	(60)	(24)	34	(219)	-8.9%
$40,000 to $59,999	(14)	(77)	(50)	(74)	(31)	43	(203)	-10.0%
$60,000 to $74,999	(11)	(65)	(46)	(85)	(26)	38	(195)	-13.9%
$75,000 to $99,999	(4)	(42)	(64)	(108)	(52)	52	(218)	-11.8%
$100,000 to $149,999	13	162	167	55	144	201	742	21.6%
$150,000 and Above	13	174	269	159	242	141	998	33.0%
TOTAL	(38)	38	163	(208)	224	448	627	3.9%
SURROUNDING COMMUNITIES								
Under $20,000	(53)	(87)	(107)	(216)	(168)	(168)	(799)	-14.1%
$20,000 to $39,999	(40)	(124)	(82)	(178)	(104)	7	(521)	-8.2%
$40,000 to $59,999	(27)	(174)	(96)	(226)	(177)	(1)	(700)	-12.5%
$60,000 to $74,999	(26)	(110)	(138)	(180)	(133)	8	(580)	-15.0%
$75,000 to $99,999	(13)	(81)	(248)	(319)	(179)	189	(651)	-11.4%
$100,000 to $149,999	23	352	199	(70)	385	819	1,709	18.0%
$150,000 and Above	27	261	328	415	992	748	2,770	23.6%
TOTAL	(109)	37	(144)	(774)	615	1,602	1,228	2.5%
MIDDLESEX COUNTY								
Under $20,000	(963)	(1,310)	(967)	(2,920)	(2,066)	(1,490)	(9,716)	-13.6%
$20,000 to $39,999	(535)	(1,748)	(1,055)	(2,102)	(1,206)	327	(6,319)	-8.5%
$40,000 to $59,999	(663)	(2,257)	(1,345)	(3,204)	(2,047)	307	(9,209)	-12.9%
$60,000 to $74,999	(312)	(1,955)	(1,183)	(2,429)	(1,397)	459	(6,817)	-13.9%
$75,000 to $99,999	(499)	(2,219)	(2,565)	(4,762)	(2,992)	1,308	(11,729)	-15.1%
$100,000 to $149,999	620	4,785	4,485	207	4,409	9,591	24,097	19.4%
$150,000 and Above	98	5,098	6,620	4,630	10,153	10,272	36,871	25.7%
TOTAL	(2,254)	394	3,990	(10,580)	4,854	20,774	17,178	2.8%
WORCESTER COUNTY								
Under $20,000	(500)	(676)	(903)	(2,214)	(1,371)	(791)	(6,455)	-13.7%
$20,000 to $39,999	(183)	(702)	(1,077)	(1,527)	(882)	376	(3,995)	-8.0%
$40,000 to $59,999	(199)	(774)	(1,228)	(2,275)	(1,261)	676	(5,061)	-12.0%
$60,000 to $74,999	(27)	(733)	(1,147)	(1,889)	(860)	683	(3,973)	-13.0%
$75,000 to $99,999	63	467	(312)	(1,290)	1,166	2,690	2,784	6.3%
$100,000 to $149,999	247	2,980	2,518	1,822	4,056	4,384	16,007	28.6%
$150,000 and Above	112	1,264	2,038	2,365	3,606	3,758	13,143	32.5%
TOTAL	(487)	1,826	(111)	(5,008)	4,454	11,776	12,450	4.0%

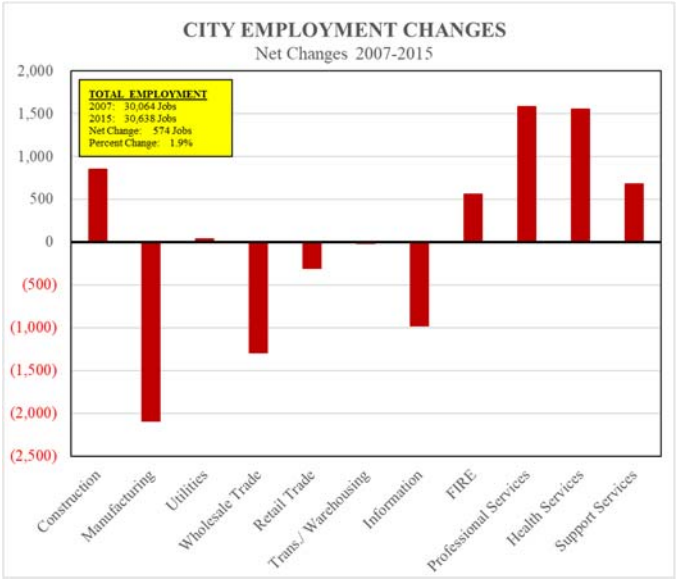
Source: Alteryx 2017

7. Employment Trends and Projections

Employment within Marlborough was influenced by the Great Recession. Prior to 2007, the city's total private sector employment levels were 30,064. During the Recession, employment fell to as low as 27,572 (in 2013). However, the city has experienced substantial recovery since then, with a total employment level of 30,638 in 2015, or 574 jobs more than the city had prior to the recession. Anecdotal data indicate current levels are even higher.

Despite the general recovery within the city, employment changes were not uniform across all market sectors. The city experienced substantial shifts from production-based markets to service-based markets. Most notably, the city experienced a net decline of almost 2,100 manufacturing jobs and 1,300 wholesale trade jobs between 2007 and 2015 (Figure 3-8). In contrast, the city experienced a net increase of nearly 3,600 in office-based employment, led by health care & social assistance (1,553 jobs). This transition is consistent with regional and national trends.

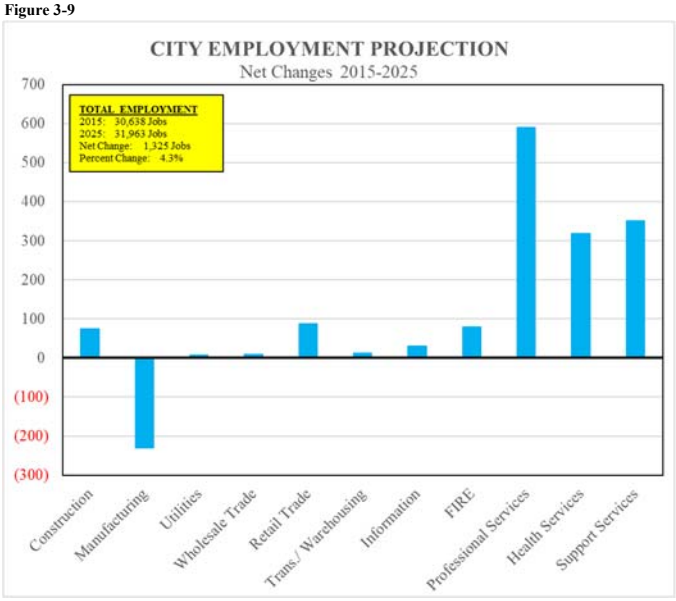
Figure 3-8



Source: ES-202; 2017

Projection data indicate the city's positive employment growth and the transition to service-based jobs likely will continue into the near future. Marlborough is projected to experience a net increase of 1.325 jobs by 2025, or a 4.3% increase. However, production-based (except manufacturing) and trade-based sectors are projected to remain stable through 2025, experiencing modest employment growth. Manufacturing is projected to continue to decline by approximately 320 jobs (Figure 3-9). In comparison, service-based sectors, particularly professional services and health services, are projected to continue to experience substantial growth. It is important to note that these figures do not consider the Apex development, which has announced there could be as many as 1,600 service-based and trade-based jobs on site when construction is complete.

Figure 3-9



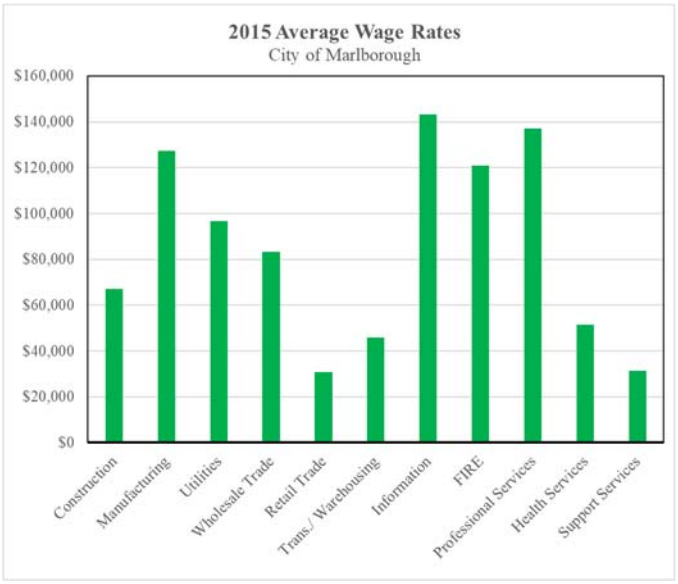
Source: RKG Associates; 2017

The net growth in employment since 2007 has had a positive impact on housing demand, increasing the number of people working in Marlborough. The projected increase in jobs through 2025 suggest demand will continue to rise. Thus, the development interest expressed in Marlborough is consistent with the changing market demand dynamics.

8. Employment by Wages

The transition of employment from production-based markets to service-based markets likely is influencing multifamily demand levels. The average annual wage rates for the growth sectors vary from those that are experiencing net declines. The professional services sector, which experienced the strongest growth since 2007 and is projected to have the strongest growth through 2025, has an average annual wage rate of $137,186. This is higher than the manufacturing sector's average rate of $127,400. However, the city's second (health services) and third (support services) strongest growth sectors have average wage rates of $51,324 and $31,350 respectively (Figure 3-10). While average wage rates are not a complete picture of what new households will ear collectively, the data indicate that demand for housing in Marlborough from local workers will be across a broad spectrum of income levels.

Figure 3-10



Source: ES-202; 2017

9. Commuting Patterns

The City of Marlborough is a regional employment center. In 2014, the city had more than 7,500 more in-commuters (people who commuted to Marlborough for work) than it had out-commuters (people who lived in Marlborough and worked elsewhere). Most in-commuters live in Middlesex and Worcester counties, including close to 2,000 from the City of Worcester alone (Table 3-4). Approximately 4,000 more people from Middlesex and Worcester counties commute into Marlborough than Marlborough residents who work elsewhere in either of the two counties. Another 6,350 commuted from other parts of Massachusetts (Table 3-4). Only 1,348 Marlborough residents, or 7% of the city's working residents, commute into Boston for work. These findings indicate that people who work in Marlborough tend to locate close by. As the city's employment base continues to grow, it is likely that those workers will want to live in or around the city. Providing greater housing type and housing cost choices most likely will draw these households into the city.

Table 3-4
City of Marlborough Commuting Patterns
2014 Census Data

Location	In Commuters	Out Commuters	Difference	% of City Workforce
Marlborough	2,592	2,592	0	9.7%
Worcester	1,963	900	1,063	7.4%
Rest of Middlesex/Worcester Counties	13,786	10,739	3,047	51.7%
Boston	785	1,348	(563)	2.9%
Rest of Massachusetts	5,565	2,728	2,837	20.9%
Out of State	1,971	812	1,159	7.4%
TOTAL	26,662	19,119	7,543	100.0%

Source: U.S. Census 2017

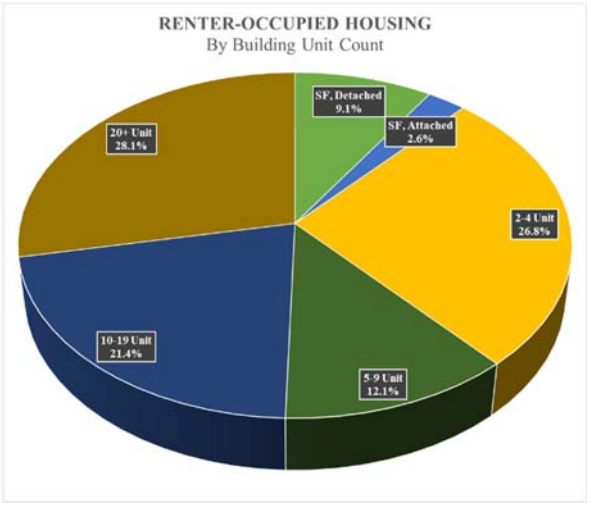
D. SUPPLY ANALYSIS

The supply-side analysis provides the market perspective on whether additional multifamily development (both ownership and rental) is appropriate for Marlborough; and how much can be absorbed if it is appropriate.

1. Housing by Tenure

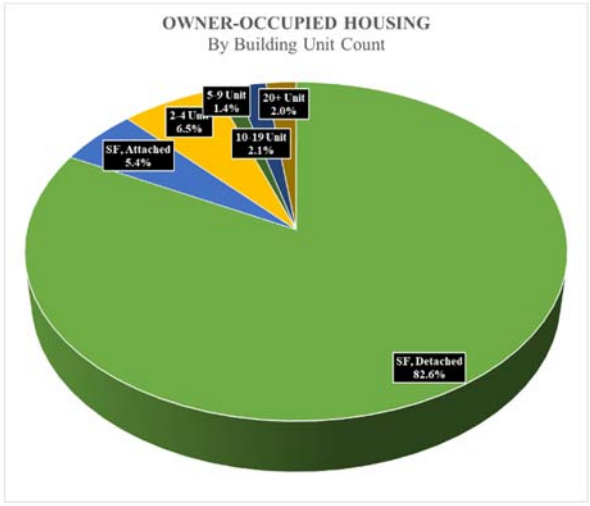
The City of Marlborough has a diverse housing supply. Based on U.S. Census data, approximately 55%, or 8,842 units, of the city's housing is owner-occupied. The remaining 7,291 units are renter-occupied. Slightly less than half of the city's housing is single-family detached units. Multifamily structures with at least five units constitute approximately 4,750 units, or roughly 28% of the supply. However, housing diversity varies for renter-occupied housing and owner-occupied housing. Rental housing is very diverse, with much of rental housing units within larger buildings. This is typical for rental housing, as apartment complexes oftentimes constitute most rental units. That said, more than 11% of the rental housing supply is traditional single-family ownership units converted for rental use (Figure 3-11). Duplexes, triplexes, and quadraplexes constitute more than 25% of the rental housing supply. In contrast, owner-occupied housing is almost exclusively single-family detached and single-family attached housing units (Figure 3-12). Condominium-style units account for 2,392 units of the total housing supply, and less than 10% of the owner-occupied housing supply.

Figure 3-11



Source: U.S. Census 2017

Figure 3-12

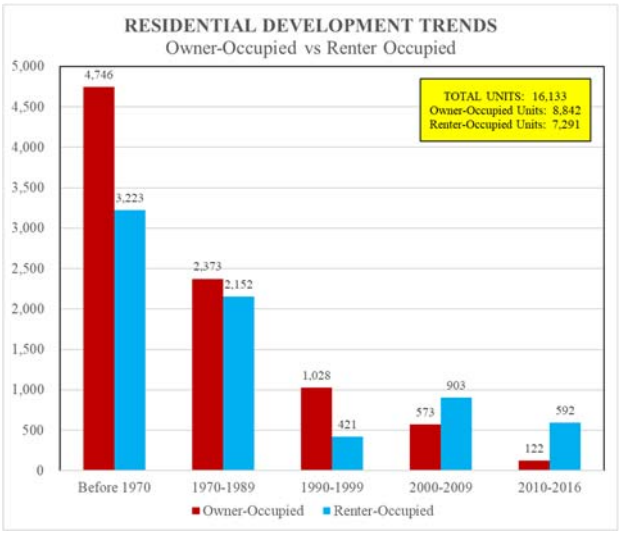


Source: U.S. Census 2017

2. Development Trends

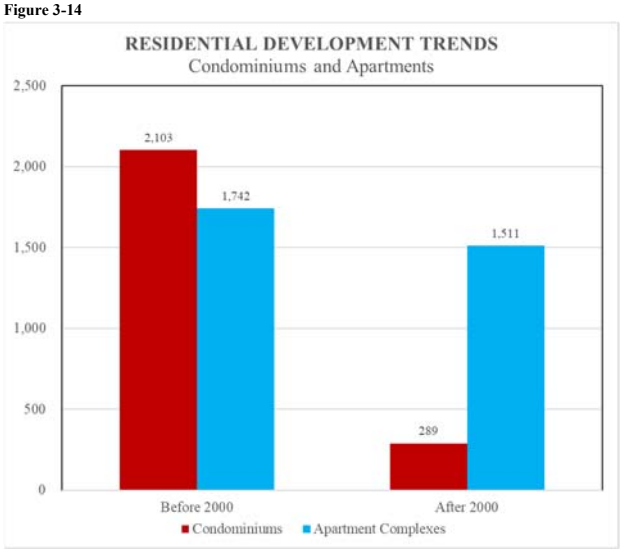
Residential development has been consistent in Marlborough since 1990. Approximately 12,500 of the 16,133 housing units in Marlborough were built prior to 1990. Since then, approximately 145 housing units have been delivered annually. The development pace since 2010 has been slightly behind that of the 1990s and 2000s, but only slightly so. However, the type of development has changed over the years. Prior to 2000, the development of owner-occupied housing outpaced the development of renter-occupied housing (Figure 3-13). Since 2000, rental housing development outpaced ownership housing by a ratio of more than 2 units to 1 unit. Even within the multifamily development activity, Marlborough recently experienced substantially more rental unit development than owner-occupied projects. Multifamily development prior to 2000 was balanced, with condominium units (2,103 units) being more numerous than apartments (1,742 units). In contrast, development of apartments has outpaced condominiums by more than 5 units to 1 unit since 2000 (Figure 3-14).

Figure 3-13



Source: U.S. Census 2017

Figure 3-14



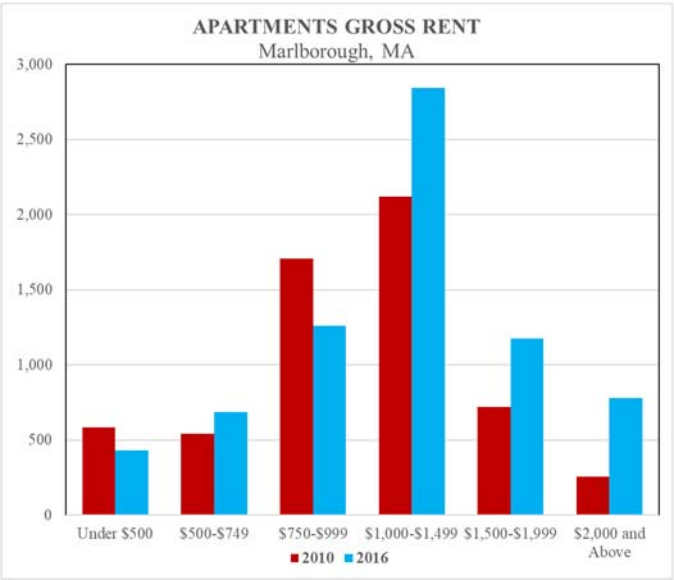
Source: U.S. Census 2017

This shift reflects the changing market dynamics locally, regionally, and nationally. From a broad perspective, the two largest demand markets (Baby Boomers and Millennials) have a higher propensity to rent than other segments. The Baby Boomers are seeking to downsize and become more mobile as they move into retirement. Millennials continue to exhibit typical housing consumption patterns for young adults, with preference towards smaller rental units to accommodate their financial situations and mobile professional life. On a more local level, Metro West has continued to build out and has fewer large-scale greenfield development areas. As growth continues to happen in the area, supply and demand equilibriums for land has continued to push costs higher. As land costs increase, developers need to increase unit yield to make investments financially feasible. This natural market pressure is pushing these traditionally suburban communities towards higher intensity developments, like townhomes, condominiums, and apartment complexes. The focus on apartment development also reflects the recent changes in real estate financing, as banks have become more conservative in condominium financing and federal regulators have tightened lending practices for home purchase.

3. Rental Pricing

The increased development of multifamily rental housing has not kept pace with demand. Despite the increase in the production of multifamily development, rent rates for apartments have continued to increase faster than the pace of inflation. In 2010, there were 2,834 rental units with monthly gross rents below $1,000. These units constituted approximately 53% of all rental units in Marlborough. By 2016, the number of units with monthly gross rents below $1,000 had declined by more than 450 and only accounted for 35% of all rental units. While rents continue to range within the City, the pressure from demand has shifted rents higher (Figure 3-15).

Figure 3-15



Source: U.S. Census 2017

Part of this shift is due to the impact of new apartment development and major renovations. Since 2000, four apartment complexes have been built and one has been substantially renovated (Bell Marlborough). None of these complexes offer market-rate rents below $1,500. Two-bedroom unit rents range from $2,070 per month to $2,970 per month (Table 3-5). Rents on a per square foot basis for these complexes range from $1.57 to $3.00, with a median value of $2.10. In contrast, the median rent for the rest of the apartment stock is approximately $1.60. The average size of unit also has increased over older developments further separating prices between existing and new constructions.

Table 3-5
Renter-Occupied Housing
Pricing of Recent Projects

Bedroom Count	Minimum Rent	Maximum Rent	Minimum Rent PSF	Maximum Rent PSF
Talia				
1-Bedroom	$1,845	$2,785	$2.24	$3.01
2-Bedrooms	$2,380	$3,300	$1.92	$2.68
Avalon Marlborough				
1-Bedroom	$1,720	$2,105	$1.68	$2.43
2-Bedrooms	$2,070	$2,835	$1.54	$2.00
Avalon Orchards				
1-Bedroom	$1,810	$2,275	$1.49	$2.19
2-Bedrooms	$2,160	$2,285	$1.51	$2.35
Bell Marlborough				
1-Bedroom	$1,810	$2,190	$2.21	$2.43
2-Bedrooms	$2,280	$2,330	$1.58	$1.61
Stone Gate				
1-Bedroom	$1,595	$2,435	$2.00	$3.16
2-Bedrooms	$2,050	$2,970	$1.66	$2.41
3-Bedrooms	$2,300	$3,060	$1.72	$2.28

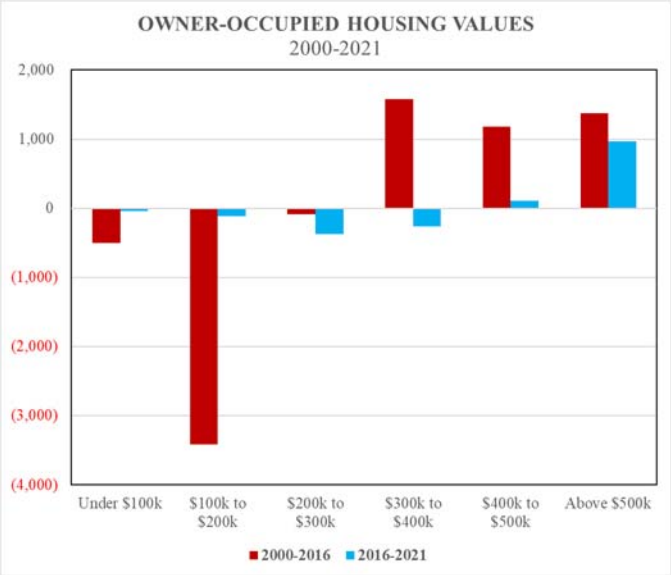
Source: Apartments.com 2017

The data indicate that demand for new rental housing continues to outpace the delivery of rental housing. Since 2000, the city has absorbed approximately 100 rental units per year, and new development continues to push price points higher. While the market is not limitless, the projected growth in employment combined with the conveniences of being centrally located to Metro West's economic and employment activity will continue to drive demand to Marlborough.

4. Condominium Pricing

Like the apartment analysis, ownership housing values have continued to appreciate faster than inflation. Since 2000, the median home value has increase from $181,119 to $328,430, or an 81% increase. The number of ownership housing units priced below $200,000 declined by more than 3,900 units. IN contrast, the number of units valued over $300,000 increased by over 4,100 units (Figure 3-16). The disparity reflects recent development trends, where almost all new ownership units constructed in Marlborough are valued over $300,000.

Figure 3-16



Source: U.S. Census 2017

Within the condominium market, there is a substantial disparity between newly constructed condominium units and older stock. Condominiums built since 2010 are larger, higher valued, and higher cost than the rest of the supply. The average size for a newly built unit is 41% bigger; the average market value is 76% higher, and the average sale price is 81% higher (Table 3-6). This substantial disparity reflects the disparity between market demand and the availability of supply. Like the rental rate analysis, new condominium units command a sale price more

than 25% higher than existing units on a per square foot basis. That said, the sales data indicate that older units also sell above their market value (104.3%), indicating that demand for smaller, more modest priced units remains greater than the local supply.

Table 3-6
Condominium Sales To Value Comparison
Sales From 2013-2015

	Year Built		Net	Percent
	Prior to 2010	2011-2016	Difference	Difference
Total Arms Length Sales	330	84		
Median Sales Price	$209,422	$379,089	$169,667	81.0%
Average Sales Price	$195,255	$348,522	$153,267	78.5%
Average Market Value	$187,264	$328,911	$141,647	75.6%
Sales to Value Ratio	104.3%	106.0%	1.7%	1.6%
Average Size (Living Area)	1,254	1,772	518	41.3%
Average Sales PSF	$156	$197	$40.98	26.3%

Source: City of Marlborough 2017

E. IMPLICATIONS

The data indicate that the demand for multifamily housing has been, and remains, strong within Marlborough. Production of multifamily housing has been consistent for almost 30 years, and pricing for new multifamily housing continues to achieve top-of-the-market values. Continued interest in multifamily development is consistent with existing demand, and will be supported by imminent and projected employment growth in Marlborough.

The pace of multifamily development has been constant at approximately 145 units annually. Pricing, absorption, and vacancy (for rental housing) trends indicate this pace is healthy and has not disrupted (or even stabilized) price and cost escalations. While demand for new multifamily is not limitless, continuing this pace of development most likely will not adversely impact the local market. That said, the push to develop rental housing likely will continue to exceed ownership multifamily development into the near future. As mentioned, the debt financing and mortgage lending markets have adversely impacted profitability for condominium development. While this finding is not absolute across all condominium development types and locations, it is likely that condominium development interest will occur in very select locations (i.e. waterfront property).

Ultimately, the issue for Marlborough is not whether there is sufficient demand for new rental and ownership multifamily housing. From a market perspective, the local and regional market demand for multifamily housing is sufficient to support new development into the foreseeable future. Rather, the issue the city leadership must address is whether a particular multifamily proposal is the most desired development for a specific area or parcel within the city. Multifamily development, particularly rental housing, typically can sustain pricing levels longer when built in areas convenient to employment centers, transportation systems, retail and support services, and entertainment/recreation venues. Creating a pathway to accommodate both ownership and rental multifamily housing in a manner that maximizes their respective sustainability should be the focus for Marlborough's leaders. The Recommendations chapter details RKG Associates proposed approach to making those determinations.

4 *FISCAL IMPACT ANALYSIS*

As part of this assessment, RKG Associates was tasked with understanding the potential fiscal impacts that new multifamily housing could have on the city's finances.

A. METHODOLOGY

To complete this analysis, RKG Associates used an incremental impact methodology to assess the potential revenues and expenditures related to ownership and rental multifamily development. The incremental impact methodology assumes that a portion of the cost to administer a governmental body is inherent in the structure, and is 'fixed.' The best example is having a City Clerk. The City Clerk position is fixed whether Marlborough has 1,000 residents or 100,000 residents. Thus, adding new housing units or households (from a residential perspective) and new businesses or employees (from a commercial and industrial perspective) will not change these 'fixed' costs. That said, adding more residents to Marlborough may require the hiring of an additional assistant city clerk to delegate some responsibilities that build with a larger city. This cost would be an incremental cost that is born by each new housing unit/household or business/employee. For the purposes of this analysis, the incremental revenues and expenditures were calculated on a per household basis.

Furthermore, the incremental impact methodology only considers expenditures and revenues are spent/received directly by the city. External or indirect costs, such as intergovernmental transfers and state appropriations for pupils, that are tied to new development activity are excluded from this analysis since the inflow (income) and outflow (expenditure) of that money will balance out.

Finally, the analysis relies on existing rate rates, and current market valuations to determine impact. Using locally-relevant data ensures the results are relevant to Marlborough. That said, building a model that reflects the unique characteristics of each potential development program is not realistic given this is a theoretical analysis and not based on a specific project.

B. REVENUES

The primary revenues generated by a multifamily development come from real property taxes, automobile excise fees, and the city's fines and fees collected for various conveniences and infractions. The fiscal impact model used fiscal year 2017 tax rates for real property and automobile excise. The fee and fine calculation allocates the total collected by the city and assigning the proportional share to residential development (which totals 72% of the city's assessed value), and then allocating that value to each household. Table 4-1 details the inputs used.

Table 4-1
Revenue Sources for Residential Development
Marlborough, MA

Real Property Tax Rate (per $1,000)	$15.32
Auto Excise Tax Rate (per $1,000)	$25.69
Fees and Fines per Household	$38.06
2017 Revenue	$852,892
Residential Share (72%)	$614,082
Number of Households	16,133

Source: City of Marlborough and RKG Associates 2017

1. Valuation

For the real property and excise tax, RKG Associates had to calculate an average value per unit as well as an average value for cars per household. For the real property values, RKG Associates used the average market value for new construction apartments and condominiums as reported in the city's property assessment database. The average value for condominium units built since 2011 is $328,911 (detailed in Table 3-6 in the previous chapter). For the rental multifamily valuation, RKG averaged the total market value ($180,919,900) for the five complexes that were built/substantially renovated since 2000 (this does not include Talia, since the assessment database did not have a competed value for the project). This came to an average value of $140,684.

Table 4-2
Apartment Complex Market Valuation
Properties Built/Renovated since 2002 [1]

	Total Value	Units	Average Value
Avalon Orchards	$21,047,300	156	$134,919
Heights at Wheeler Hill	$35,952,900	274	$131,215
Bell Marlborough	$19,792,200	164	$120,684
Stone Gate	$43,473,000	332	$130,943
204-206 West Main Street	$2,049,200	10	$204,920
Avalon Marlborough	$58,605,300	350	$167,444
TOTAL	$180,919,900	1,286	$140,684

Source: City of Marlborough and RKG Associates 2017
[1] Talia is not included since it did not have a market value in the assessment database

To determine the average automobile value, RKG used the total passenger vehicle assessment for 2016 and divided it by the total number of registered cars. RKG then applied a 30% income premium to account for the difference in housing value between new construction and existing development (detailed in the Market Analysis chapter). The average car value for new construction multifamily development is $10,221.

Table 4-3
Calculation of Auto Excise Tax (2017 Dollars)
Marlborough, MA

Number of Passenger Vehicles in 2016	30,675
Total Passenger Vehicle Assessment in 2016	$241,180,640
New Construction Income Premium	30%
Avg. Assessment per Passenger Vehicle	$10,221

Source: City of Marlborough and RKG Associates; 2017

2. Calculations

Utilizing the methodology detailed above, RKG Associates could calculate the potential local-sourced revenues for the City of Marlborough. Auto excise tax revenue ($496 per household) and fees/fines revenue ($38 per household) were consistent for rental and ownership multifamily units. The disparity resulted from the differential in market value per unit. Rental multifamily is projected to generate $2,155 per unit in real property tax revenue, while condominiums are projected to generate $5,039 per unit (Table 4-4). In total, each apartment unit is projected to generate $2,689, while each condominium generates $5,573.

Table 4-4
Fiscal Impact Revenue Generation
Apartments and Condominiums

Category	New Construction Apartments	New Construction Condominiums
Real Property	*$2,155*	*$5,039*
Average Assessed Value	$140,684	$328,911
2017 Tax Rate (Per $1,000)	$15.32	$15.32
Auto Excise	*$496*	*$496*
Average Value Per Vehicle	$10,221	$10,221
Vehicles Per Household	1.89	1.89
2017 Excise Tax Rate (per $1,000)	$25.69	$25.69
Fines and Fees (Per Household)	*$38*	*$38*
Total Revenues	*$2,689*	*$5,573*

Source: RKG Associates; 2017

C. EXPENDITURES

RKG Associates went through the city's FY2017 budget to determine the proportional share and incremental costs associated with new residential development.

1. Non-School Costs

The base proportional share allocation is 72%, reflecting the pro rata share of residential uses in the city's total taxable Grand List valuation. That said, several adjustments were made based on the primary beneficiary of various categories. For examples, 100% of the expenditures for human services, library services, celebrations, and parks and recreation were allocated to residents, since residents benefit disproportionately from these services. Similarly, the efficiency adjustment varies by expense category due to RKG Associates' calculation of fixed cost. Efficiency adjustments range from 20% to 75% for these fiscal cost categories (Table 4-5).

Table 4-5
Calculation of Unit Costs for Residential Land Uses
Marlborough, MA

Expense Category	FY 2017	Residential Proportional Share @ 72%	Efficiency Adjustment	Adjusted Expenses
General Government	$19,456,704	$14,051,854	20%	$2,810,371
Inspection Services [1]	$703,485	$0	30%	$0
All Other Protective & Emergency Services	$14,723,069	$10,633,169	75%	$7,974,876
Public Works	$6,170,220	$4,456,203	20%	$891,241
Health and Licensing [2]	$359,350	$107,805	30%	$32,342
Human Services [3]	$550,995	$550,995	30%	$165,299
Library Services [3]	$949,485	$949,485	50%	$474,743
Celebrations [3]	$57,800	$57,800	0%	$0
Parks & Recreation [3]	$280,655	$280,655	20%	$56,131
Capital Outlays	$124,500	$89,915	0%	$0
Total	$43,376,263	$31,177,881		$12,405,001
Total Housing Units (2015 Estimate)			16,133	
Incremental Fiscal Costs Per Household				**$769**

Source: RKG Associates; 2017
[1] 0% of the costs are allocated to residential uses since inspection services are for businesses
[2] 30% of the costs are allocated to residential uses due to the commercial focus of licensing
[3] 100% of the costs are allocated to residential uses due to residents receive 100% of the benefit

Of the $43,376,263 that Marlborough spends in these departments and cost centers, approximately $31.2 million has been proportioned to residential uses. The incremental cost related to increases in new households totals approximately $12.4 million. Based on the 2015 estimate of 16,133 households, this translates into a per household incremental cost of $769.

2. School Costs

School costs were calculated separately from non-school costs due to the unique nature of education funding for Marlborough pupils. The school cost analysis was brought together through data and feedback from the City of Marlborough, Marlborough Public Schools (MPS), Assabet Valley Regional Technical High School, and the Advanced Math and Science Academy (AMSA) Charter School.

The first step in analyzing the impact of new pupils was to understand the local-share per pupil cost. Based on budget data provided by the City and MPS, the total local cost per pupil is approximately $15,000. Nearly all education costs are incremental since almost all school expenditures are based on pupil counts, particularly personnel and materials costs. The primary difference is for fixed costs, including administrative staff, that remain fairly constant despite changes in enrollment. RKG Associates estimates that $13,480 of the $14,965 per pupil expenditure is incremental (Table 4-6).

The second step in understanding the fiscal impact of new multifamily development was to understand the pupil generation rate for new construction multifamily development. MPS worked with Assabet and AMSA to gather enrollment data by residential community earlier in 2017. The data is confidential, but revealed that the six apartment complexes built/rehabbed since 2002 generated an average of 0.06 pupil per unit, or approximately one pupil per 16.1 units. In comparison, condominium development built since 1990 (excluding age-restricted communities) generated 0.27 pupils per unit, or one pupil per 3.7 units. The higher generation rate for condominiums translates into a higher per household pupil cost. New construction apartments have an estimated local school cost of $835 per household, while new construction condominiums have a local school cost of $3,608 per household (Table 4-7).

Table 4-6
Calculation of Local Costs for Public School Students
Marlborough, MA

Expense Category	2016-2017	Efficiency Adjustment	Adjusted Costs
Personnel	$6,135	100%	$6,135
Operating Budget	$3,867	100%	$3,867
Fixed Costs	$1,856	20%	$371
Outside Expenses	$1,950	100%	$1,950
Assabet	$1,054	100%	$1,054
Materials	$103	100%	$103
Cost per Pupil	$14,965		$13,480
Total 2016-17 Enrollment			5,401

Source: MPS, AMSA, Assabet, and RKG; 2017

Table 4-7
Fiscal Impact Expenditure Impacts
Apartments and Condominiums

Category	New Construction Apartments	New Construction Condominiums
General Governement Services	*$769*	*$769*
Schools Impact	*$835*	*$3,608*
Local Expenditure Per Student	$14,965	$14,965
Incremental Cost for New Puils	$13,480	$13,480
Pupil Generation (per Unit)	0.06	0.27
Total Expenditures	*$1,604*	*$4,377*

Source: RKG Associates; 2017

3. Calculations

Combining the non-school and school costs results in per household costs of $1,604 for rental multifamily development and $4,377 for ownership multifamily development.

D. IMPLICATIONS

The data indicate that both condominium and apartment development generate positive fiscal impacts for Marlborough. The higher market value (and therefore real property tax revenue) effectively is offset by the higher pupil generation in the condominium development. The net fiscal impacts are $1,085 for apartments and $1,195 for condominiums (Table 4-8). The data table includes the fiscal impact of age-restricted condominiums as well ($4,804), which is substantially higher than either of the other housing types due to the lack of pupil generation.

Table 4-8
Fiscal Impact Expenditure Impacts
Apartments and Condominiums

Category	New Construction Apartments	New Construction Condominiums	New Construction Condominiums Age Restricted
Incremental Revenues	$2,689	$5,573	$5,573
Incremental Expenditures	$1,604	$4,377	$769
NET IMPACT (Per Unit)	$1,085	$1,195	$4,804

Source: RKG Associates; 2017

At face value, this finding suggests age-restricted housing is the most lucrative fiscal strategy, and encouraging age-restricted housing will yield better fiscal benefits. The current market demand for age-restricted housing is substantially stronger because Baby Boomer households (disproportionately numerous compared to the following generations) continue to reach and exceed the typical age threshold (55-years old). Thus, the supply of age-restricted housing is increasing rapidly as communities continue to encourage this development type to capture the fiscal value.

However, the subsequent generations are not as numerous as Baby Boomers, thus these age-restricted communities must capture a greater percentage of the next generation of active adults as Baby Boomers transition to higher-needs facilities and eventually pass away. This means demand for age-restricted housing—particularly for the earlier communities that will have older units—will need to increase on a percent of eligible households for these communities to remain market viable. If demand diminishes compared to the supply of age-restricted housing, communities may experience loss of value and/or need to have the age restriction requirement removed.

While there is no guarantee the disruption of the age-restricted housing market will happen, or even happen in Marlborough, focusing solely on this housing type may not be in the city's best long-term interest. Rather, RKG Associates recommends that Marlborough should focus on encouraging a variety of multifamily housing product including age-restricted housing. Implementing a strategy of diversity enables the city to capture the fiscal benefits of having some additional age-restricted development while minimizing the risk of having to develop a strategy of how to repurpose less competitive projects in the future.