

MARKET STUDY AND FISCAL IMPACT ANALYSIS

**AYER ROAD COMMERCIAL DISTRICT**

TOWN OF HARVARD, MASSACHUSETTS

for

**THE TOWN OF HARVARD**

as of

Data Draft: September 26, 2022

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File No. 66-22



January 5, 2023

Ms. Marie Sobalvarro  
Assistant Town Administrator and Chief Procurement Officer  
Town of Harvard  
13 Ayer Road  
Harvard, MA 01451

Cc: Frank O'Connor, Jr. Director of Planning

Re: Market Study and Fiscal Impact Analysis - Harvard, MA

Dear Ms. Sobalvarro:

At your request, Weitzman Associates, LLC is pleased to submit the attached fully documented report presenting the findings of a residential and commercial market study along with our development recommendations for Harvard's Commercial District on Ayer Road and a fiscal impact analysis associated with the proposed developments. Previous submissions which are integral to this report include a Kick-Off Meeting/SWOT Analysis Summary Memorandum submitted on June 17, 2022, a Revised Preliminary Draft of our findings as of August 18, 2022 per the Client's comments and questions on the Preliminary Draft submitted on August 15, 2022, as well as a consolidated fully-documented report presenting the findings of our market study submitted on September 26, 2022. Please note that our projections are valid as of the submission date of our consolidated market study report on September 26, 2022.

We completed a study on your behalf in order to assess the market potential of residential and commercial real estate programming, and to inform Harvard's future planning efforts and policy positions regarding its Commercial District along Ayer Road. The enclosed study contains an economic and demographic analysis, an analysis of relevant for-sale and rental residential markets, residential demand analyses, a review of residential case studies, a hotel market analysis, an office market analysis, a retail market analysis, a retail demand analysis, and ultimately our recommendations for the development of prototypical small-scale mixed-use projects as well as a fiscal impact analysis for these developments. This study is based upon research we conducted primarily in July, August, and September of 2022 for the market study and in October, November and December of 2022 for the fiscal impact analysis. The research and analysis were principally completed by Dr. Marie-Danielle Faucher and Brandon Nolasco.



*Town of Harvard, MA  
January 5, 2023*

*Page ii*

Our analysis is subject to the Basic Assumptions and Limiting Conditions contained in the Addenda. We have enjoyed working with you on this challenging assignment. Please call us if you have any questions or comments regarding this study.

Very truly yours,  
Weitzman Associates, LLC

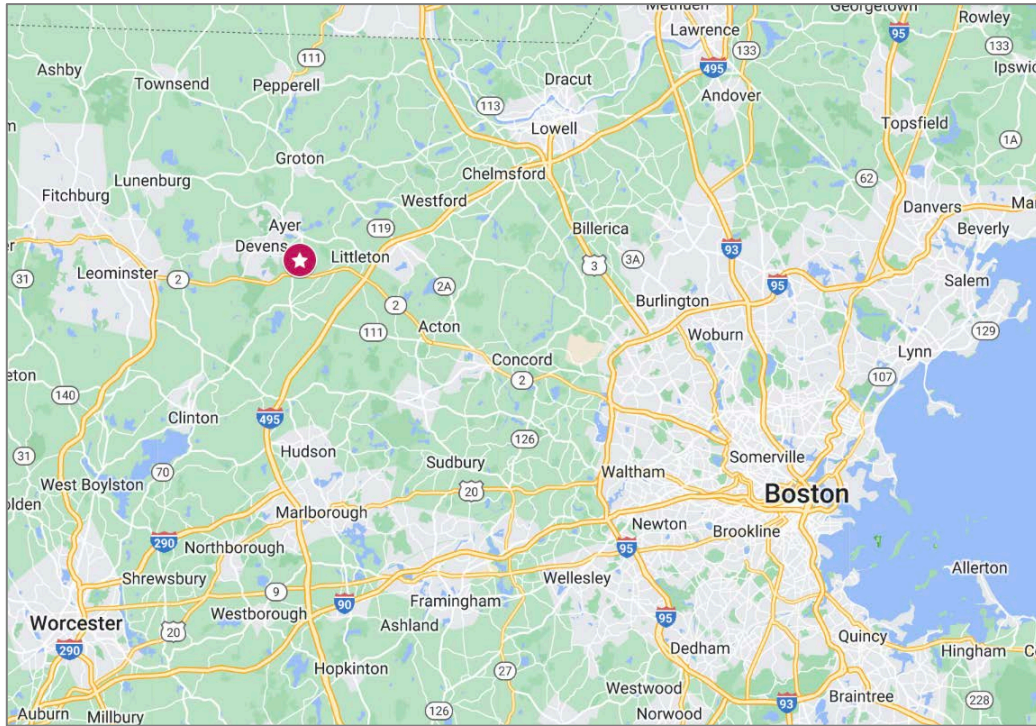
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Dr. Marie-Danielle Faucher  
MAI, MRICS, Assoc. AIA, OAQ  
Senior Vice President

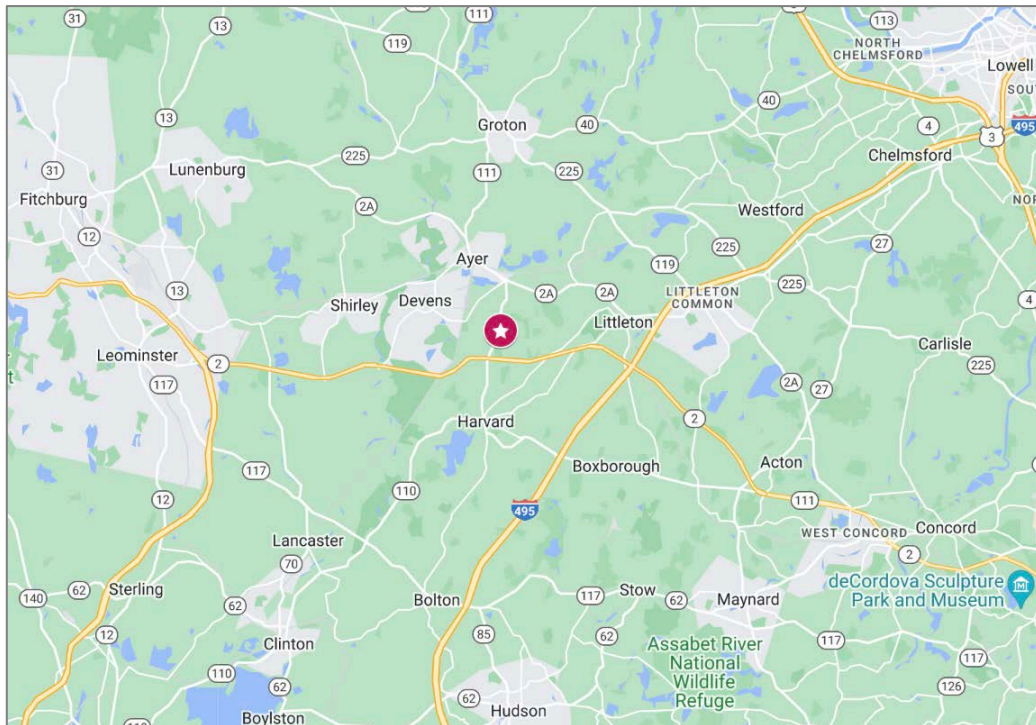
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Brandon Nolasco  
Associate Consultant

REGIONAL LOCATION

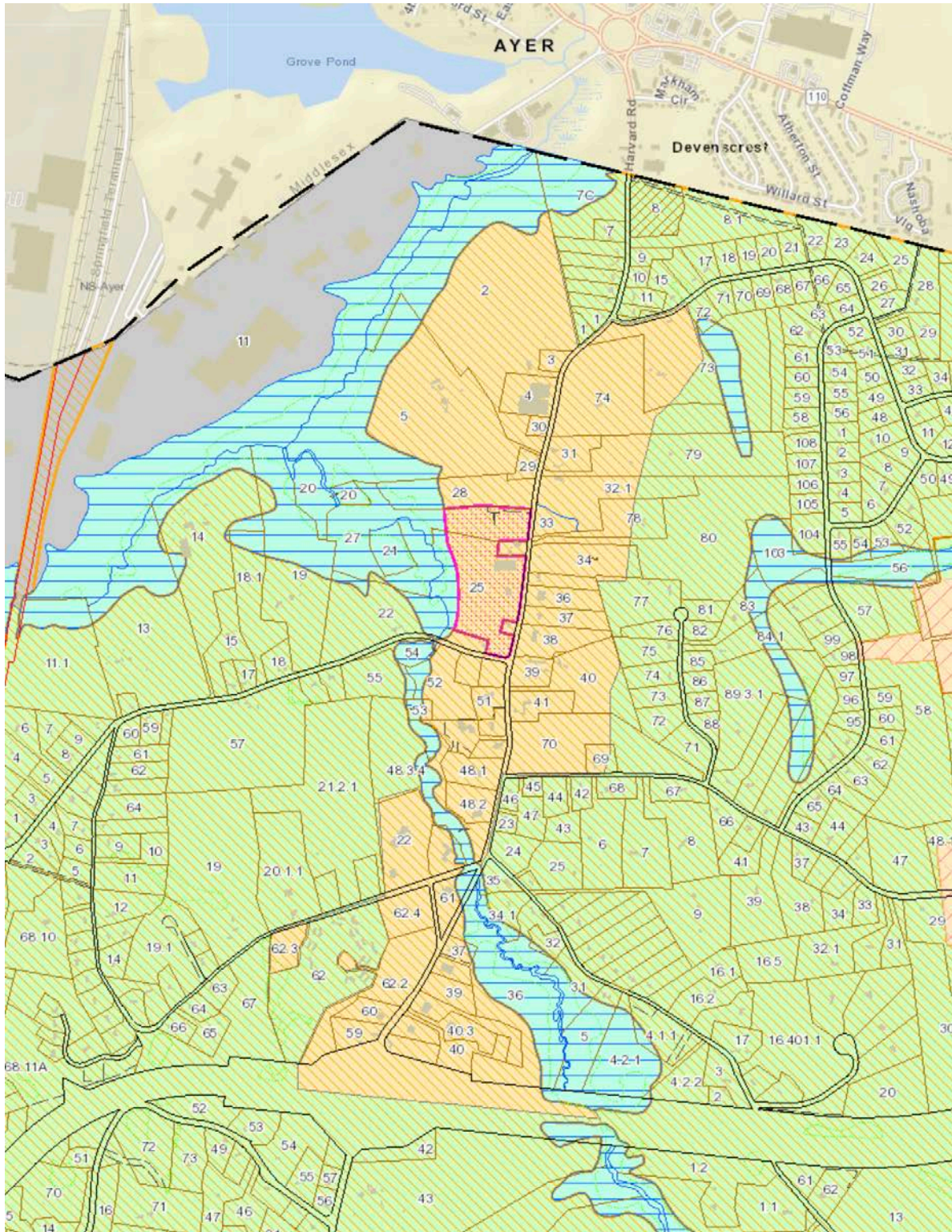


NEIGHBORHOOD LOCATION





MAP OF STUDY AREA



(Ayer Road Commercial District depicted in Orange)



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## EXECUTIVE SUMMARY

## EXECUTIVE SUMMARY

Weitzman Associates, LLC is pleased to submit our findings for our market study and fiscal impact analysis for the Ayer Road Commercial District ("C District") on behalf of the Town of Harvard. The purpose of this study is to inform future planning efforts and policy positions regarding the Commercial District.

## COMMERCIAL DISTRICT AND AREA ASSESSMENT

### POSITIVE AND CHALLENGING FEATURES OF PROSPECTIVE DEVELOPMENT OPPORTUNITIES

Based on our primary research, conversations with local market participants and stakeholders, and experience visiting the town of Harvard, we have established a list of challenges and opportunities that should be considered when conceptualizing the marketability of development opportunities in the Commercial District:

#### *Positive Features of the Commercial District:*

- Opportunity for Well-Guided Sustainable Growth through many small-scale walkable and "village-like" mixed-use commercial and residential developments on vacant land and on many other underdeveloped properties: There is also the possibility for these mixed-use developments to be further supported by existing and new community uses (such as the post office and Council for Aging Center, among others).
- Opportunities for More Street-Oriented Retail, Entertainment and Service Uses for local residents, and visitors given the almost 100% current leak of the town's disposable income and the town's untapped potential for agro-tourism.
- Opportunity to Promote Commercial Development in Support of Harvard's Agricultural Economy targeted to both locals and visitors with commercial establishments such as artisan shops, lodging and food and beverage venues, as well as new flex uses such as food incubators or accelerators.
- Opportunities for Broadening Residential Options and for developing a range of small-scale for-sale and rental multi-family residential developments as an alternative to the current town supply of predominantly single-family homes.
- Good Location within Harvard in close proximity to Route 2 and I-495, with good visibility and excellent access to Harvard's outlying region as a location in the heart of the Nashoba Valley and within a relatively short distance from the metropolitan Boston area.
- Possibility of Providing Commercial Tax Revenues currently lacking in the Town's portfolio including "outside money" from visitors as the only land zoned for commercial uses in Harvard.
- Picturesque Character: Possibility to draw from the town's overall unique picturesque character which includes a rare pristine environment with a distinctive strong New England rural character with exceptional natural and architectural heritage features.
- Exceptional Preservation Efforts of Open Space through conservation land purchases, with over 2,000 acres of conservation land throughout the town, much of it interconnected by walking trails, in



addition to important historic preservation efforts with many buildings and in two distinctive historic districts,

- Top Schools: Access to a top-performing elementary and high-school school system and to many high-quality outdoor and indoor amenities.
- Synergies with Adjacent Towns. Complementarity and potential synergy with many adjacent communities including the adjacent area of Devens. Synergies with Devens includes the presence of an industrial and manufacturing economic base as well as the possibility to connect to its water and sewer infrastructure.
- Potentially Good Post-Pandemic Location and possibility to capitalize on post-COVID-19 shifting work/life patterns which favor demand for living and conducting business in high-quality and well-integrated small-town settings.

#### *Challenging Features of the Commercial District:*

- Lack of Access to Public Water and Sewer Infrastructures and their costly alternatives have been identified has the biggest impediment to commercial development in Harvard's Commercial District.
- Lack of Overall Character. Lack of continuity, design theme or pattern of development in the C District other than its very low density.
- Almost Exclusively Car-Oriented Environment. No local direct access to public transit, lack of sidewalks for pedestrians, and lack of bicycle lanes.
- Older Commercial Buildings Supply. Older buildings with much obsolescence and many reported vacancies.
- Limited Residential Options other than single-family homes.
- Deficient Zoning conducive to extremely low density—0.1 Floor-to-Area Ratio (FAR)—and scattered suburban-type development also conducive to unintended uses such as recent development inquiries for self-storage facilities, auto repair uses, warehousing and multi-family apartment complexed in excess of 200 units and with no commercial component.
- Relative Distance from "Center of Town" and the resources of its historic district.

## **ECONOMIC AND DEMOGRAPHIC ANALYSIS FINDINGS**

The following summarizes the findings and conclusion of our economic and demographic analyses:

- Excellent Potential for Growth and Improvement. The economies of Harvard and the broader Worcester and Boston MSAs are in excellent condition from an economic standpoint, despite the ongoing COVID-19 pandemic. The fundamentals that have been driving the region's growth are resilient, though the economy must be closely monitored over the next several years. While population and household growth in Harvard have remained stable over the past decade—trends projected to persist similarly through 2027—income growth continues forcibly and is one of the region's strengths. Residential and retail developments could be well-positioned in Harvard's



Commercial District once the necessary, catalytic improvements are introduced along Ayer Road north of Route 2. Additionally, considering its regional proximity, Harvard housing developments could also stand to benefit from the mature and rich markets of Boston and the suburban submarkets in between.

- Excellent Affluent Population. Median and average household income in Harvard has grown moderately since 2010 and is projected to continue well through 2027. As of 2022, median and average household income in Harvard reached \$167,509 and \$251,589, respectively. Compared to the broader Metropolitan Statistical Areas (MSA), average household income in Harvard sits about \$136,000 higher than Worcester and \$104,000 higher than Boston-Cambridge-Newton. By 2027, Harvard's lead in average income is expected to increase to being \$150,000 above Metro Worcester and \$115,000 above Metro Boston. By reactivating Ayer Road and introducing diverse retail and residential offerings, the Commercial District could strengthen Harvard and the surrounding region by improving Consumer Spending Potential and facilitating agency among residents to secure housing.
- Highly Educated Population. In comparison with many nearby towns, the Town of Harvard holds a significantly large percentage of highly educated individuals. Of those older than 25, roughly 67.6% of its population is comprised of those with a Bachelor's Degree or higher, compared to the 32.0% of Devens, 37.7% of Greater Worcester, and 51.1% of Greater Boston. Of those with a Master's Degree or higher, Harvard holds 20.5% more of these individuals than Devens, 19.0% more than Greater Worcester, and 10.3% more than Greater Boston. Considering Harvard's substantial affluence and impressive educational attainment levels, the Ayer Road Commercial District is well positioned to serve a community already primed with need, capacity, and demand.
- Growing Senior and Young Adult Populations. Harvard's senior (ages over 64) and young adult (ages 25 to 34) populations are growing fast. Compared to the Worcester and Boston MSAs, Harvard's growth projections in both categories average about 2% faster, compounded annually, between 2022 and 2027. Additionally, seniors are expected to compose 23% of Harvard's population by 2027, higher than Devens, Greater Worcester, and Greater Boston. Considering Harvard's shifting demographics, it's important to provide housing offerings that cater to the needs of these age groups—especially senior residents as there currently are no alternative residential options available other than larger, single-family homes.
- Strong Connection to Greater Boston. Although Harvard is located properly in Worcester, the town has more significant economic connections to Greater Boston given its stronger urban presence and larger employment base, especially considering most Harvard residents are employed outside the county within the Boston region. Approximately 53% of Harvard's population commutes outside of Worcester County for work, with 52% traveling more than 30 minutes (the average commute between Boston and Harvard). Given Boston's fiscal health and prospects for growth are brighter than most major metro areas—outpacing all but one dozen of the nation's major metro areas—Harvard's workforce is capable of returning some of this economic viability back into the town through heightened consumer spending within an activated commercial district.
- A Dominant Educational and Health Services Industry. As of 2022, the largest employment sector in both Worcester and Boston Metropolitan Statistical Areas, inclusive of Harvard, was the Educational

and Health Services sector, which accounted for 21.8% in Greater Boston and 24.1% in Greater Worcester. Similarly between both metro areas, the Professional and Business Services sector has grown fast over recent years, experiencing the largest distribution change over the last three-, five-, and ten-year periods. In Harvard as of 2022, the Educational and Health Services sector and Professional and Business Services sector held the largest and third-largest shares of total-non-farm employment, comprising 25.4% and 14.9% of total employment, respectively. The Mining and Construction sector held the second-largest share at 17.4%. Given the potential of the region as an idyllic, post-pandemic community—one that many may increasingly prefer as remote working becomes standard—there is potential to capture some of the growth from these leading industries within the Commercial District, whether through client-facing, small satellite offices or specialized service retail.

## RESIDENTIAL FOR-SALE MARKET ANALYSIS FINDINGS

Based on our research of the for-sale market, our findings are summarized as follows:

- Healthy Sale Price Appreciation. Average sale prices have appreciated healthily throughout the region. Despite the COVID-19 pandemic, housing prices have grown steadily over the past several years, speaking to Harvard's and the surrounding area's resilience and desirability. Between 2020 and 2021, average sale pricing has increased by 17% for single-family homes, 9% for townhomes, and 25% for condominiums. As of May, year-to-date average sale pricing in Harvard was about 30% to 36% higher in 2022 than in the previous year.
- Strong Homeownership. Homeownership in Harvard is very strong; of the units occupied, 93.7% are by those who own their homes. Under similar market conditions, this owner-dominated market is expected to continue through 2027. Harvard's significant owner-occupied market is a product of the town's higher median household income, large affordability gap, and minimal rental inventory. As a commercial district emerges and new jobs enter the town, the local market should expect to diversify.
- High Home Values. The number owner-occupied properties valued above \$1 million is increasingly rapidly in Greater Worcester, with growth projections of about 18.2% compounded annually between 2022 and 2027. While this category's growth is much more stable in Harvard, average and median home values are much higher. In 2022, median home value in Harvard was about \$304,000 higher than in Greater Worcester, and about \$106,000 higher than in Greater Boston, with these trends projected to continue through 2027.
- High Saturation of Single-Family Homes. Single-family homes on single-building lots compose the majority of the market and are achieving the highest sale prices. Across geographies, single-family homes command the highest price points. However, they are in excess supply, and not necessarily a strong proposition for Harvard's Commercial District. Rather, townhomes, clustered cottage development, and low-density condominium projects would be more appropriate housing products for the Study Area.
- Limited Supply of Condominiums and Townhomes. There's a very limited supply of condominiums and townhomes in and adjacent to Harvard's Commercial District, and a shortage within Harvard

overall. As of 2020, multi-family properties (accommodating two or more families) comprised just 7% of all housing stock in Harvard; single-family homes comprised the remainder at 93%. Additionally, as of 2020, over 50% of the housing stock available was built before 1970, with most of the remainder built before 2014. Since the release of this 2020 American Community Survey, no new properties have delivered, with very few projects reported in the pipeline. Of the pipeline projects, Craftsman Village is one of the newer developments, a community of 20 detached cottages set to complete in 2023.

- Achievable Sale Pricing. Assuming average unit sizes between 950 and 2,600 square feet, we believe that price points between approximately \$260 and \$300 per square foot could be achieved if condominiums and/or townhomes were built within the Ayer Road Commercial District. Our space and pricing conclusions stem from the profiled comparable properties. There is a dearth of condominiums and townhomes near the Subject Area, and a shortage in Harvard overall. Thus, developers could likely construct condominiums and townhomes in the Study Area that piggyback on the pricing trends set by proximate projects.
- Ample For-Sale Demand. The residential demand analysis confirms that there is ample for-sale demand within a 25-minute drive of the Commercial District from households earning above \$75,000 per year. There is sufficient, demographically-supported depth of demand for condominiums and townhomes within the Ayer Road Commercial District, driven primarily by the local market (Town of Harvard and within a 15-minute drive time radius from the study area), with additional support from more distant locales.
- Achievable For-Sale Absorption Pace. An absorption pace of four to six units per month could be achieved if relying only on regional demand, and notably more if also relying on demand from the Tertiary market. Considering a range of typologies inclusive of townhomes, small cottages, and condominiums, we conservatively conclude that absorption between four and six units per month could be achievable in the Study Area with homes that span between 950 and 2,600 square feet, and sell on average between \$250,000 and \$725,000.
- Affordable Component. Because they can access a comprehensive permit that bypasses current zoning per the 40B Chapter mandate of the State of Massachusetts, most developers have included an affordable component in their recently completed and under construction for-sale and rental multi-family projects in Harvard. The share of the affordable units in these projects range from 14% to 100% for developments ranging in size from 5 to 42 units.

## RESIDENTIAL RENTAL MARKET ANALYSIS FINDINGS

Based on our research of the rental housing market, including primary research of existing supply and demand, and discussions with local market participants, our findings are summarized as follows:

- Steady Inventory Growth in Submarket. Despite the nation-wide impact of COVID-19, inventory growth has maintained steady within Greater Worcester and Harvard's surrounding submarkets. Following the pandemic, new growth in Greater Worcester is expected to average 1.41% compounded annually from 2022 through 2026 based on projects already planned. Within Northeast

Worcester, projected growth over the same period averages much higher at 2.65% compounded annually.

- Lack of New Inventory and High Demand in Harvard. While new residential development in the Ayer Road Commercial District may face competition from towns to the east closer to Boston, it will likely face little local competition.
- Underserved Demand. There is a considerably underserved demand for rental properties within Harvard, exacerbated by the region's short supply and stalled pipeline. While there has been construction activity over recent years, no new properties have delivered over the past 12 months and nothing is currently underway. New rental construction in the Ayer Road Commercial District would provide much needed relief for this neglected market.
- Growing Rents in Submarket. Rents in the Northeast Worcester submarket are trending considerably above rental averages across Greater Worcester, with renters willing to pay a premium to live in the area. Compared to an average \$1,730 per month in Greater Worcester, rents in the submarket average about 17.3% higher, closer to \$2,030 per month. Over the past 12 months, rents have grown at an impressive 11.9%, one of the highest annualized rates over the past three years. Considering a longer horizon, rent growth in the submarket and overall market have skyrocketed over the past decade, rising cumulatively in the submarket by 46.6%. Given regional rental demand is largely underserved, newer product in Northeast Worcester could eventually allow the submarket to match the strong rental performance of its eastern neighbors.
- Stable Vacancy Rate. Given the smaller scale of Northeast Worcester's rental market, its vacancy rate appears more volatile, but over the past year has remained stable at 3.8% which essentially aligns with the region's long-term average. Given Harvard's limited rental inventory, we speculate vacancy in Harvard to be even less. Harvard's neighboring submarkets to the east have experienced much higher long-term averages. Over the same period, vacancy in Route 2 averaged 4.8%, while averaging 6.3% in Chelmsford/Tyngsborough/Townsend. Thus, there's greater capacity for additional rental product in Northeast Worcester that could be accommodated by Harvard's Commercial district.
- Strong Rents Among Comparables. The comparable properties profiled in our study achieve a wide range of rental rates. Within the primary market, one-bedroom units are averaging \$2,124, per month, with three-bedroom units averaging near \$3,521. There is sturdy demand for rental properties in the area and the achievable rental rates are reflective of that.
- Impressive Absorption Among Comparables. Within the Primary market, absorption pace averages 2.58 units leased per month, reaching highs of 2.66 (Avalon Acton) and 3.61 (Prescott at Concord) since opening. While there are very few rental properties within Harvard, comparable properties within a 20-minute drive of the Commercial District provide helpful guidance with respect to potential new development in Harvard and the absorption paces one may project.
- Disadvantaged Study Area. While the Study Area has its own locational advantages, it's also disadvantaged compared to these comparables for a variety of reasons (inactivated commercial core, lacking pedestrian/biking infrastructure, etc.). While new rental product may initially rent at a discount due to these disadvantages, we believe rental offerings within the Commercial District can experience

rapid lease-up and eventually match, if not exceed, the performance of competitive comparables over time.

- Achievable Rental Absorption Pace. We recommend underwriting a conservative absorption pace between five and seven units per month for a prospective rental project within Harvard's Commercial District. While our demand analysis suggests that there is more than enough demographically based demand to support rental offerings in Harvard given how underserved the region is, we must ensure this mixed-use development is small-scale to match with the town's preferred village cluster typologies.
- Optimistic Demand Forecast. Total housing demand in Harvard may seem distorted by the town's short rental supply and current ratio of renter households. Given the lack of rental options in Harvard, our demand forecasts place greater emphasis on recent successful comparables in adjacent areas. Thus, we believe new rental developments in Harvard will be much more competitive to these properties and could support high capture rates, similar to Avalon Acton and The Paddock Estates at Boxborough.
- Diverse Renter Profiles. We expect households interested in leasing an apartment in Harvard will come primarily from a range of age and income cohorts within Harvard and its close vicinity, as confirmed by our conversations with local market participants. With a competitive development, complimentary demand may also come from the secondary market area. Direct access to nature and the activated commercial core will aid in attracting households to rent in Harvard's Commercial District.
- Affordable Housing. See our comment under the for-sale market analysis findings above.
- Senior Housing. There are only a few age-restricted independent-living residential developments in Harvard and its outlying region for which supply does not meet demand. These include the older 24-unit Foxglove Apartments and 42-unit Bowers Brook Apartment complexes in Harvard's Commercial District, as well as the Harvard Trail Ridge for-sale complex at the outskirts of town in which 50% of the units are offered to senior residents.
- Senior Housing Demand. As indicated in our summary of demographic findings, we note the demand for housing for senior residents currently living in Harvard given their higher share of the general population. We also note the opportunity to provide senior housing in the Commercial District in proximity to the soon-to-be relocated Council for Aging Center at 12 Lancaster Road.

## OFFICE MARKET ANALYSIS FINDINGS

Based on our research of the office market, our findings are summarized as follows:

- Midsize Office Submarket. The town of Harvard is part of midsize submarket (the Fitchburg/Leominster submarket in the Worcester area) that includes approximately 3.6 million square feet of office space.
- Rising Vacancy Rates Correlated with Product Quality. The office vacancy rate in this market has risen significantly over the past 12 months, and at 16.5%, as of July 2022, is substantially above the long-



term average. Vacancy rate is however correlated with quality with 0% for 4- and 5-Star product (a very small share of overall supply with 15,840 square feet of space), 5.3% for 3-Star supply (1.5 million square feet or 42% of overall supply), and 24.8% for 1- and 2-Star product (2.0 million square feet, or 57% of overall supply).

- Increasing Office Average Rents. Despite rents increasing 2.0% over the past year, annual absorption in this market has been negative and has averaged -43,000 square feet over the past five years.
- Shrinking Office Supply and Office Rents Averaging \$18.12-\$23.14 Per Square Foot. Recent trends in the Fitchburg/Leominster office submarket suggest that the inventory is likely to shrink moving forward by virtue of demolition activity. Market rents as of July 2022 were \$23.14 per square foot for 4- and 5-Star space, \$19.85 per square foot for 3-Star space, and \$18.12 per square foot for 1- and 2-Star space.
- 28-Property Commercial District. Per our research, there are 28 properties currently used for commercial purposes in Harvard's Commercial District. The 24 commercial properties for which data is available comprise a total of approximately 321,457 square feet in building area.
- Mostly General and Medical Office. Commercial development in Harvard's C District consists primarily of office uses as well as of retail and service space with the exception of a few heavy commercial, warehousing and community uses.
- Old Commercial Supply. Except for a cluster of three office and retail buildings completed almost twenty years ago at the southern end of Ayer Road, all other commercial property in Harvard is older with apparent functional and physical obsolescence. We have noted office space availability in many of the commercial buildings along Ayer Road in Harvard. In addition to a lack of demand for office uses, this situation suggest the opportunity for major upgrades and or redevelopment.
- No Office Projects in the Pipeline. There is no supply-side pressures on vacancy or rent in this market over the near term, with no projects under construction.

## RETAIL MARKET ANALYSIS FINDINGS

Based on our research of the retail market, our findings are summarized as follows:

- Midsize Retail Submarket. Retail inventory in the Fitchburg/Leominster submarket where Harvard is located includes approximately 6,905,900 square feet of space.
- Rising Retail Rents. Retail rents in the Fitchburg/Leominster submarket have surged 4.0% over the past year in spite of an increase in the overall vacancy rate of 2.8%, with an average vacancy rate of 4.7% as of July 2022.
- Retail Rents Averaging \$13.09-\$20.68 Per Square Foot. The average rental rate for retail space in the Fitchburg/Leominster submarket as of July 2022 was \$14.66 per square foot, including \$13.09 per square foot for general retail (55% of total supply), \$14.52 per square foot for strip centers (5.9% of total supply), \$14.37 per square foot for neighborhood centers (30.5% of total supply), \$18.12 for

power centers (10.3% of total supply), and \$20.68 per square foot for mall space (9.6% of total supply)

- Above-Market Local Retail Leasing Activity. While retail leasing activity remains minimal in Harvard—with virtually none existing within new or mixed-use developments—regional leasing activity is achieving retail rents well above submarket averages. Within a 20-minute drive from the Commercial District, retail rental rates have averaged approximately \$16 per square foot among recent leases and closer to \$21 per square foot among available leases.
- Limited Retail Supply. While Harvard does not have a verifiable inventory of local businesses, the 2016 Master Plan indicates that retail and entertainment space constitute only approximately 9% of the Commercial District's businesses. Our survey supports this assessment where we have identified the presence of only a few fast-food restaurants (2), one coffee-donut stop, and a few services (such as fitness, bank) in properties which could further benefit from more direct street front exposure.
- Strong Demand for Retail Uses. There is strong support for retail uses in Harvard's Commercial District. Based on our demand analysis, and with all emphasis from demand in the Primary trade area, there is enough spending potential to support the development of up to approximately 55,000 square feet of retail space. With most emphasis from demand in the Primary trade area, there is enough potential from the households residing in the Primary and Secondary trade areas to support the development of up to 150,000 square feet of space.
- Virtually 100% Retail and Small-Business Revenue Leakage. At almost 100%, retail and small-business revenue leakage to nearby towns is exceptionally high in Harvard with a lack of general and service retail of the quantity and quality which is typically provided in a town of Harvard's size. Such missing retail and services include a grocery store, a fuller range of food and beverage establishments, a pharmacy, a liquor store, a dry cleaner, and an emergency care clinic, among others.
- Lack of Visitor-Oriented Businesses. The deficiency in commercial activity geared towards visitors and additional fiscal benefits from "outside money" is notable. In addition to a general weakness in food and beverage offerings, the lack of other visitor-oriented businesses manifests in the absence of small lodging facilities, local brewery, farm-to-table venues, bicycle shop, bookstore and antique shops or local artisan stores that would further support tourism amid other conventional retail offerings.
- Recommendations for Small-Scale Mixed-Use Village-Center Clusters. Our recommendations would not be to maximize the development of Harvard's retail potential. We would rather recommend the incremental development of street-oriented retail as part of small-scale mixed-use commercial and residential projects in clusters designed around sustainable and smart growth principles.

## HOTEL MARKET ANALYSIS FINDINGS

Based on our research of the hotel market, our findings are as follows:

- Strong National Hotel Market Recovery. Prior to the COVID-19 pandemic, the national hotel market had been performing relatively well. While the pandemic, particularly in its early stage, had a

devastating impact on hotel markets across the nation, markets are, to varying degrees, nearing full recovery. Recent national hotel market forecasts published by Costar—based on STR data—reflect ADR and RevPAR have both surpassed 2019 levels as of August 2022, higher than 2019 averages by 12.5% and 7.1%, respectively.

- Steady Regional Hotel Submarket Recovery. In the Woburn/Tewksbury Northwest hotel submarket, RevPAR has steadily grown each month since January 2022 compared to the corresponding pandemic months in 2020 and 2021, supported primarily by similar growth in average daily rate (ADR). Per Costar's forecast, the Woburn/Tewksbury Northwest submarket's RevPAR is projected to recover to 99.5% of the pre-pandemic 2019 level on an annual basis for this year in 2022, increasing to approximately 102.3% next year in 2023.
- Limited Independent Hotel Segment. Based on STR data from CoStar, the independent class hotel segment within the Woburn/Tewksbury Northwest submarket is comprised of 16 hotels with a total of 1,257 rooms, accounting for 18.0% of the submarket's total hotel inventory. Of these hotels, 50.0% are lower-end properties (economy or midscale) and 68.8% are properties built or renovated before 2000. However, the three most recently opened and/or renovated projects are all upper upscale hotels; these include the Chateau Merrimack Resort and Spa (renovated in 2022), Archer Hotel Burlington (opened in 2018), and The Groton Inn (opened in 2018). While these recent hotels share 237 rooms between them, we believe there is ample, still unmet demand that a potential 20-key inn within the Commercial District could easily serve.
- Lack of Visitor-Oriented Businesses. See above our comments in the Retail Market Analysis Findings about the lack of commercial activity geared towards visitors which would include the lack of small lodging facilities.
- Stalled Hotel Development Pipeline. Of the nine hotel properties under construction within the Boston metro, none are within Harvard's submarket (Woburn/Tewksbury Northwest), with no future projects planned in the pipeline. Therefore, new construction in the submarket—particularly within the Commercial District—would face little comparable competition.

## SWOT ANALYSIS, PROGRAM RECOMMENDATIONS & CONCLUSIONS

Our program recommendations and conclusions are summarized as follows:

- Three Development Scenarios. We have outlined mixed-use, mixed-income development programs along three scenarios which could be implemented at a number of locations in Harvard's Commercial District. Per request from the Client and pending projected additional Phase II and Phase III studies and recommendations in terms, among others, of infrastructure and zoning, our analysis has avoided identifying any specific sites for the development of these scenarios. Rather, these scenarios are envisioned as examples of how growth could evolve in the Commercial District over similar town-center and pedestrian-oriented characteristics at a number of potential sites including vacant land and underutilized improved properties (elaborated further in the table at the end of this section). The proposed scenarios are based on the following shared concept and features:

- Recommended growth assumes the incremental development of small-scale mixed-use projects.
  - Each scenario proposes a mix of uses based on the synergy between specific commercial and residential uses which would accelerate the revitalization of the Commercial District.
  - Each residential component assumes a portion of affordable units.
  - Each scenario proposes a low-intensity grouping of either superimposed or adjacent uses envisioned to either reinforce connections with existing properties in the Commercial District, or envisioned to create additional clusters in the spirit of a small-town center which fosters street-oriented and pedestrian interaction.
  - We envision that these scenarios to be further supported by existing or new community uses.
  - Mixed-use development is proposed at a small scale and in character compatible with Harvard's historic New England small town fabric as well as in balance with Harvard's equally pristine rural character and tradition to optimize the preservation and enjoyment of open space.
  - Proposed residential uses in all scenarios address ample demand for a wider range of residential options than the prevalent pattern of single-family homes, address the needs of downsizing households and of older residents as well as those of younger residents and of service-industry households seeking either/or smaller size, entry-level and, in many cases, more affordable housing.
- Proposed commercial uses in all scenarios would provide many basic service and entertainment retail as well as small-business uses currently lacking in Harvard and which would help retain local residents, attract newcomers and visitors, complement the town's agricultural economy, create new jobs and help diversify Harvard's fiscal base.
  - The three proposed development scenarios are designed along different levels of intensity ranging from lower (Scenario 1) to higher intensity (Scenario 3). Proposed residential uses range from six units in Scenario 1 to a total of 30 to 50 units in Scenario 3, while proposed commercial uses range from approximately 12,000 to 15,000 square feet in Scenario 1 to a total of 20,000 to 40,000 square feet in Scenario 3 which would also include the construction of a small 20-key inn.
  - While public infrastructure requirements for small-scale street-oriented commercial development need to be further validated, the residential component of Scenario 1 assumes no additional public and infrastructure improvements.
  - For-Sale Residential Sale Prices and Absorption. We recommend unit pricing average for for-sale condominium and townhome units between \$260 and \$300 per square foot among one, two and three-bedroom units, excluding pricing for a projected affordable component. We envision the unit mix within these for-sale residential developments to comprise mostly two-bedroom units with a smaller selection of one- and three-bedroom units. These prices are in September 2022 dollars. We recommend underwriting pricing increases of 2.0% annually beginning in 2023. Considering a range of typologies inclusive of townhomes, small cottages, and condominiums, we conservatively recommend underwriting an absorption pace between four and six units per month for in the Study Area which could mean that all units in the proposed developments would typically be sold-out before delivery.

- Rental Residential Rents and Absorption. For the rental apartment units, we recommend rental rents average between \$27 and \$32 annually per square foot among average one, two and three-bedroom units, also excluding pricing of a projected affordable component. As with the for-sale units, we envision the unit mix within these rental developments to comprise mostly two-bedroom units, though there may be a larger appetite among renters for smaller studio/junior one bedroom, and regular one-bedroom units. These prices are in September 2022 dollars. we recommend underwriting quarterly rent increases beginning in the first quarter of occupancy at the rate of 0.75% per quarter through stabilization and continuing at 0.75% per quarter thereafter. We believe that the Harvard Commercial District could accommodate absorption between five and seven market-rate rental units per month.
- Retail Commercial Rents. CoStar reports average retail rent in Fitchburg/Leominster (Harvard's submarket) is approximately \$14.66 per square foot, with regional leasing activity is achieving retail rents notably higher, averaging \$16.00 per square foot among recent leases and \$21.00 per square foot among available leases. Averages are notably higher among newer properties. Based on current market metrics, we expect that retail built in the context of mixed-use, village clusters along Ayer Road in the Commercial district could likely achieve rental rates between \$18.00 to \$24.00 per square foot on a triple net or modified gross basis, depending on the type of retailer, the size of the space leased, and the tenant improvement package offered.
- Residential Target Markets. We anticipate that new residential developments will primarily attract empty-nesters, and seniors as well as younger singles and couples,— most household types that would be attracted to the promise of a burgeoning, village-center styled Commercial District. We expect there will be a wide range in age among the residents of any housing development in the Commercial District, with both prospective renters and homebuyers of all backgrounds viewing the proposed development as a quality housing option at a good value. However, we believe that the vast majority of demand for the proposed development will come from households presently living in Harvard and within a 15-minute drive of the district, as those most likely to choose the housing location are homeowners who already live within the region.
- Commercial Retail Target Markets. The most likely retailers that would be interested in opening a location in future developments within the Commercial District include those servicing the existing and new residential populations, nearby employees, those that are destinations in and of themselves to attract visitors, and those that are seeking new, top-of-market space that does not currently exist within Harvard and the surrounding region. It is critical that the retail components of future projects in Harvard's Commercial District fill current gaps in the local market while creating a thriving mixed-use small town experience centered on street-oriented and pedestrian connections. Examples of needed retail in Harvard include service establishments (small grocery store, specialty food, pharmacy, dry cleaner, bicycle repair shop) as well as lifestyle and entertainment types (food and beverage venues, small artisan shops, bookstores). Complementary “flex” office and “maker space” could also accommodate co-working, food and farm incubator and accelerator businesses in support of the local agricultural economy.



- Eco and Agro-tourism and Compatibility with existing Farm Produce Offerings: We recommend that specs for food-related service retail (such as grocery stores and food-specialty shops) and food and beverage venues be designed to be complementary rather than in competition with existing local farm produce vending businesses through non-compete clauses and mutually beneficial local partnerships.

TABLE I

WEITZMAN DEVELOPMENT RECOMMENDATIONS  
REVIEW OF RESIDENTIAL AND COMMERCIAL DEVELOPMENT SCENARIOS  
Town of Harvard - Commercial District

Scenario Type	Residential Use	Commercial Use	Total
1) Low Intensity	<u>Scenario 1:</u> 6 Units x 2 Bedrooms                      Total: 7,800 - 13,200 sqft Total 12 BRs                      Average Per Unit: 1,300 - 2,200 sqft Max 24 People                      (Rental)                      (Condo) (2 People x Bedroom)	<u>Scenario 1:</u> Scenario 1 Options:                      Total Retail: 12,000 - 15,000 sqft Grocery (~15k) Pharmacy (~4.5k - 7k) Emergency Clinic	19,800 - 28,200 sqft
	<u>Conditions:</u> Per existing conditions, assumes no infrastructure improvements Based on 25 People per 1 Well Use of well/septic systems Rental or For-Sale (Condominiums/Townhomes) May include Residential above Retail	<u>Conditions:</u> Basic Retail of Highest Need Near Senior Living to Promote Walkability Infrastructure Needs to be Determined	
2) Mid Intensity	<u>Scenario 2:</u> 20-30 Units x 2 Bedrooms                      Total: 26,000 - 66,000 sqft Max 60 Bedrooms                      Average Per Unit: 1,300 - 2,200 sqft Max 120 People                      (Rental)                      (Condo) (2 People x Bedroom)	<u>Scenario 2:</u> Scenario 1 + Food & Beverage                      Total Retail: 15,000 - 30,000 sqft F & B: About 2,500 - 6,000 sqft F & B: White Cloth Preferred May also include Personal Care & General Merchandise Retail	41,000 - 96,000 sqft
	<u>Conditions:</u> Public Infrastructure Provided Costly alternative without public access Rental or For-Sale (Condominiums/Townhomes) Includes Rental above Retail	<u>Conditions:</u> Public Infrastructure Provided May Reserve 10,000 - 15,000 sqft for Local Developers May Reserve 15,000 - 30,000 sqft for Regional Developers	
3) Higher Intensity	<u>Scenario 3:</u> 30-50 Units x 2 Bedrooms                      Total: 39,000 - 110,000 sqft Max 100 Bedrooms                      Average Per Unit: 1,300 - 2,200 sqft Max 200 People                      (Rental)                      (Condo) (2 People x Bedroom)	<u>Scenario 3:</u> Scenario 2 + Small Inn                      Total Retail: 20,000 - 40,000 sqft Small Inn: About 20 Keys                      Small Inn: 20,000 sqft Small Inn: May include Farm-to-Table F&B May also include Professional Space @ Grade	79,000 - 170,000 sqft (Inclusive of Small Inn)
	<u>Conditions:</u> Public Utilities and Infrastructure Provided Mix of Rental and For-Sale (Condominiums/Townhomes) Includes Residential above Retail	<u>Conditions:</u> Public Infrastructure Provided	

(1) We do not propose specific development sites, but rather templates for development clusters that may be reproduced and repositioned per the Town's discretion

(2) Two-bedroom units are included as the average unit type. Ranges are based on average two-bedroom unit sizes.

(3) Unit mix may vary beyond two-bedrooms, though units should remain limited to three bedrooms or less.

Source: Weitzman Associates, LLC

## FISCAL IMPACT ANALYSIS

A fiscal impact analysis associated with the development of our proposed three prototypical scenarios is presented in Exhibit A of the addenda to our report. This analysis is limited to recurring direct tax benefits to the town and excludes the important multiplier effect of these developments on the local economy which would need to be assessed in a separate study.

Table 2 below indicates projected annual tax revenues for each scenario including, where applicable, real estate property taxes, personal property taxes, vehicle excise taxes, transfer station fees, meals taxes, and hospitality taxes.

TABLE 2  
SUMMARY OF FISCAL IMPACT ANALYSIS: THREE SCENARIOS

SUMMARY	SCENARIO 1- MIXED-USE RESIDENTIAL & COMMERCIAL: 6 UNITS, 12,000-15,000 SQ.FT. COMMERCIAL							
	FOR SALE RESIDENTIAL COMPONENT				FOR RENT RESIDENTIAL COMPONENT			
	LOW		HIGH		LOW		HIGH	
		% Total		% Total		% Total		% Total
1 REAL ESTATE PROPERTY TAXES	\$ 105,728	91%	\$ 135,854	92%	\$ 88,723	89%	\$ 111,631	91%
2 PERSONAL PROPERTY TAX	\$ 7,156	6%	\$ 7,156	5%	\$ 7,156	7%	\$ 7,156	6%
3 VEHICLE EXCISE TAX	\$ 3,015	3%	\$ 3,015	2%	\$ 3,015	3%	\$ 3,015	2%
4 TRANSFER STATION FEE	\$ 900	1%	\$ 900	1%	\$ 900	1%	\$ 900	1%
5 MEALS TAX	\$ -	0%	\$ -	0%	\$ -	0%	\$ -	0%
6 HOSPITALITY TAX	\$ -	0%	\$ -	0%	\$ -	0%	\$ -	0%
TOTAL	\$ 116,799	100%	\$ 146,925	100%	\$ 99,794	100%	\$ 122,702	100%

SUMMARY	SCENARIO 2- MIXED-USE RESIDENTIAL & COMMERCIAL: 30 UNITS, 15,000-30,000 SQ.FT. COMMERCIAL							
	FOR SALE RESIDENTIAL COMPONENT				FOR RENT RESIDENTIAL COMPONENT			
	LOW		HIGH		LOW		HIGH	
		% Total		% Total		% Total		% Total
1 REAL ESTATE PROPERTY TAXES	\$ 345,670	91%	\$ 473,250	89%	\$ 242,598	88%	\$ 344,916	85%
2 PERSONAL PROPERTY TAX	\$ 7,156	2%	\$ 21,468	4%	\$ 7,156	3%	\$ 21,468	5%
3 VEHICLE EXCISE TAX	\$ 15,075	4%	\$ 15,075	3%	\$ 15,075	5%	\$ 15,075	4%
4 TRANSFER STATION FEE	\$ 4,500	1%	\$ 4,500	1%	\$ 4,500	2%	\$ 4,500	1%
5 MEALS TAX	\$ 6,750	2%	\$ 18,000	3%	\$ 6,750	2%	\$ 18,000	4%
6 HOSPITALITY TAX	\$ -	0%	\$ -	0%	\$ -	0%	\$ -	0%
TOTAL	\$ 379,151	100%	\$ 532,293	100%	\$ 276,079	100%	\$ 403,959	100%

SUMMARY	SCENARIO 3- MIXED-USE RESIDENTIAL & COMMERCIAL: 50-UNITS, 20,000-40,000 SQ.FT. COMMERCIAL, 20-KEY INN							
	FOR SALE RESIDENTIAL COMPONENT				FOR RENT RESIDENTIAL COMPONENT			
	LOW		HIGH		LOW		HIGH	
		% Total		% Total		% Total		% Total
1 REAL ESTATE PROPERTY TAXES	\$ 584,737	83%	\$ 775,333	83%	\$ 414,153	78%	\$ 561,442	78%
2 PERSONAL PROPERTY TAX	\$ 23,257	3%	\$ 37,569	4%	\$ 23,257	4%	\$ 37,569	5%
3 VEHICLE EXCISE TAX	\$ 25,125	4%	\$ 25,125	3%	\$ 25,125	5%	\$ 25,125	4%
4 TRANSFER STATION FEE	\$ 7,500	1%	\$ 7,500	1%	\$ 7,500	1%	\$ 7,500	1%
5 MEALS TAX	\$ 18,600	3%	\$ 39,600	4%	\$ 18,600	3%	\$ 39,600	6%
6 HOSPITALITY TAX	\$ 44,713	6%	\$ 44,713	5%	\$ 44,713	8%	\$ 44,713	6%
TOTAL	\$ 703,931	100%	\$ 929,839	100%	\$ 533,348	100%	\$ 715,949	100%

Source: Weitzman Associates, LLC

*Scenario 1-* Depending on the for-sale or rental tenure of the proposed six residential units, the share of affordable housing in these units (ranging from 17% to 50%), and the size of the commercial component (which could range from 12,000 to 15,000 square feet), the more modest Scenario 1 could generate approximately \$100,000 to \$147,000 of annual tax revenues in 2022 dollars.

*Scenario 2-* The mixed-use Scenario 2 shows direct annual tax revenues in 2022 dollars ranging from \$276,000 to \$532,000 depending on the share of affordable housing for the 30-unit residential component (possibly ranging from 10% to 33% of the total), the for-sale or rental tenure of the residential units, the size of the commercial component envisioned at 15,000 to 30,000 square feet, and the share of food and beverage space (15% to 30% of the total commercial component).

*Scenario 3-* The mixed-use Scenario 3 shows direct annual tax revenues in 2022 dollars ranging from \$533,000 to \$930,000 depending on the share of affordable housing for the 50-unit residential component (possibly ranging from 10% to 34% of the total), the for-sale or rental tenure of the residential units, the size of the commercial component envisioned at 20,000 to 40,000 square feet, as well as the share of food and beverage space (25% to 30% of the total commercial component) in addition to the proposed 20-key inn.

In each scenario, the largest share of tax revenue is derived from real estate property taxes. Per our analysis the share of real estate property tax revenues is as follows: Within a range of 90% to 92% of the total in Scenario 1; within a range of 85% to 91% of the total in Scenario 2, and within a range of 78% to 83% of the total in Scenario 3.

The share of other taxes than real estate property taxes to the total in each scenario is relatively small. In Scenario 1 personal property taxes range from 6% to 7% of the total, vehicle excise taxes amount to 3% of the total and transfer station fees amount to approximately 1% of the total annual taxes. In Scenario 2 personal property taxes range from 2% to 3% of the total, vehicle excise taxes represent 4% to 5% of the total, transfer station fees amount to 1% to 2% of the total while meals taxes represent 2% of the total annual projected taxes. In Scenario 3 personal property taxes range from 3% to 4% of the total projected taxes, vehicle excise taxes represent approximately 4% to 5% of the total, transfer station fees amount to 1% of the total while meals taxes represent 3% of the total and the proposed hospitality tax would generate 6% to 8% of the total projected taxes under this scenario.

We have assumed that these taxes would grow at an average rate of 2.5% per year.

Assuming access to public sewer and water infrastructure—the lack of which has long been holding back commercial development in Harvard's Commercial District—additional incremental small-scale mixed-use development will contribute to the funding of the Town's expenditures and have a strong positive impact on the diversification of Harvard's fiscal base. We note that a precise cost estimate for providing public access to water and sewer services in the Commercial District has yet to be determined pending more detailed engineering studies. Financing options for providing this service would typically include developer participation.

## NEXT STEPS

Our market study and fiscal impact analysis is the first phase of a three-phase strategy to guide the future development of Harvard's Commercial District. Phase II will be a district vision plan based on the market data gathered in Phase I, as well as on analysis of infrastructure, transportation network, land use, existing zoning and environmental issues while Phase III will be the development of a set of new zoning tools to facilitate and realize the vision.



## COMMERCIAL DISTRICT AND AREA ASSESSMENT

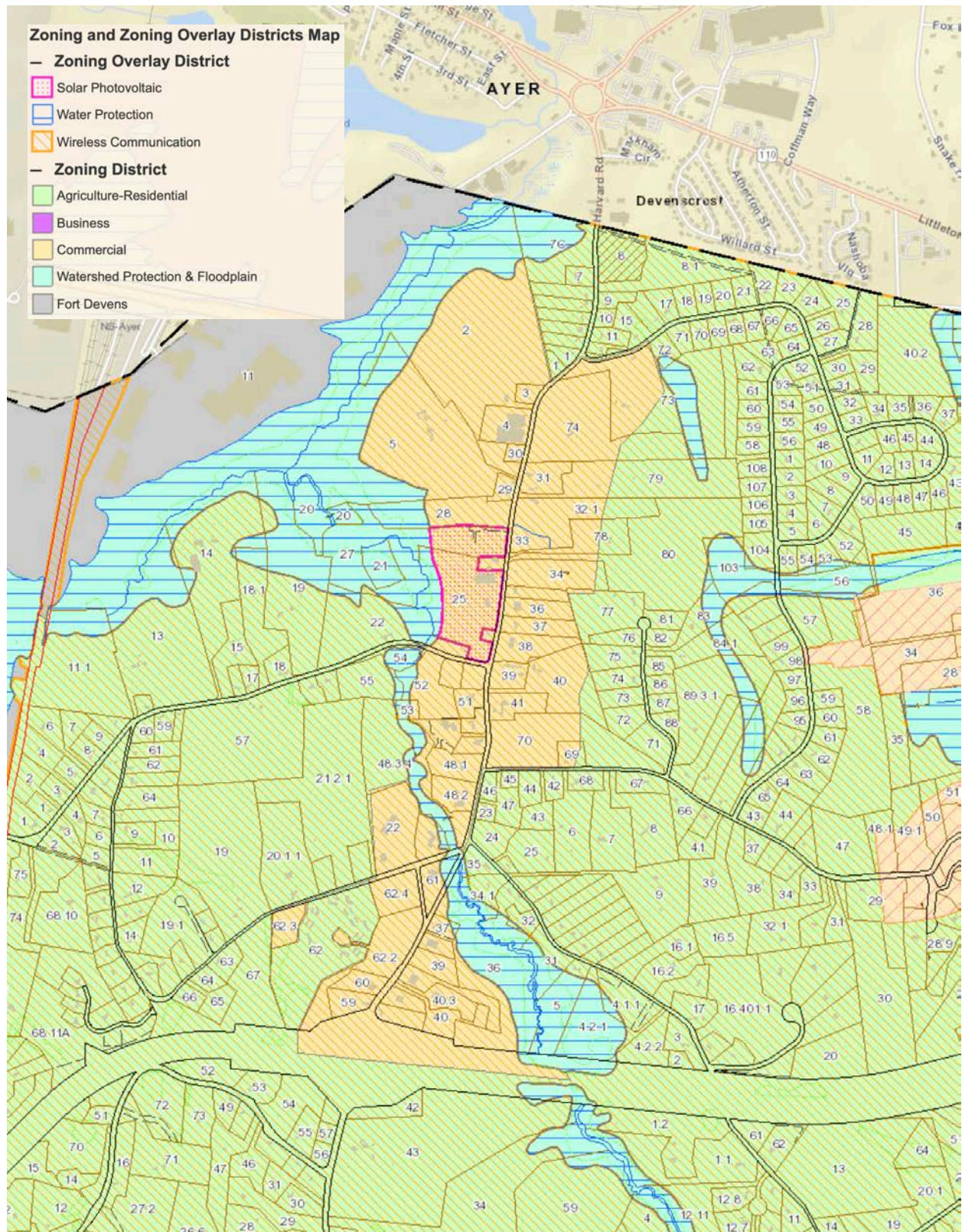
## COMMERCIAL DISTRICT AND AREA ASSESSMENT

Harvard's Commercial District ("C District") comprises 60 parcels for a total of approximately 344.5 acres of land in the northern section of town. It is well positioned in terms of access and visibility along Ayer Road (Route 110/111) extending for 1.2 miles from the Route 2 interchange to a third mile south of the Ayer Rotary at the edge of the town of Ayer. At 2.3% of the town total area, and, in comparison with the 77.9% of the town total area which is zoned for residential and agricultural uses, the Commercial District represents a very small share of the 15,088-acre town area subject to zoning.

As the only land zoned for commercial uses in Harvard, the Commercial District offers however the possibility of providing commercial tax revenues currently lacking in the Town portfolio. Given the scattered nature of current development in the commercial district and in the town of Harvard as whole, the Commercial District also offers the possibility of a small yet more consolidated mixed-use town center.

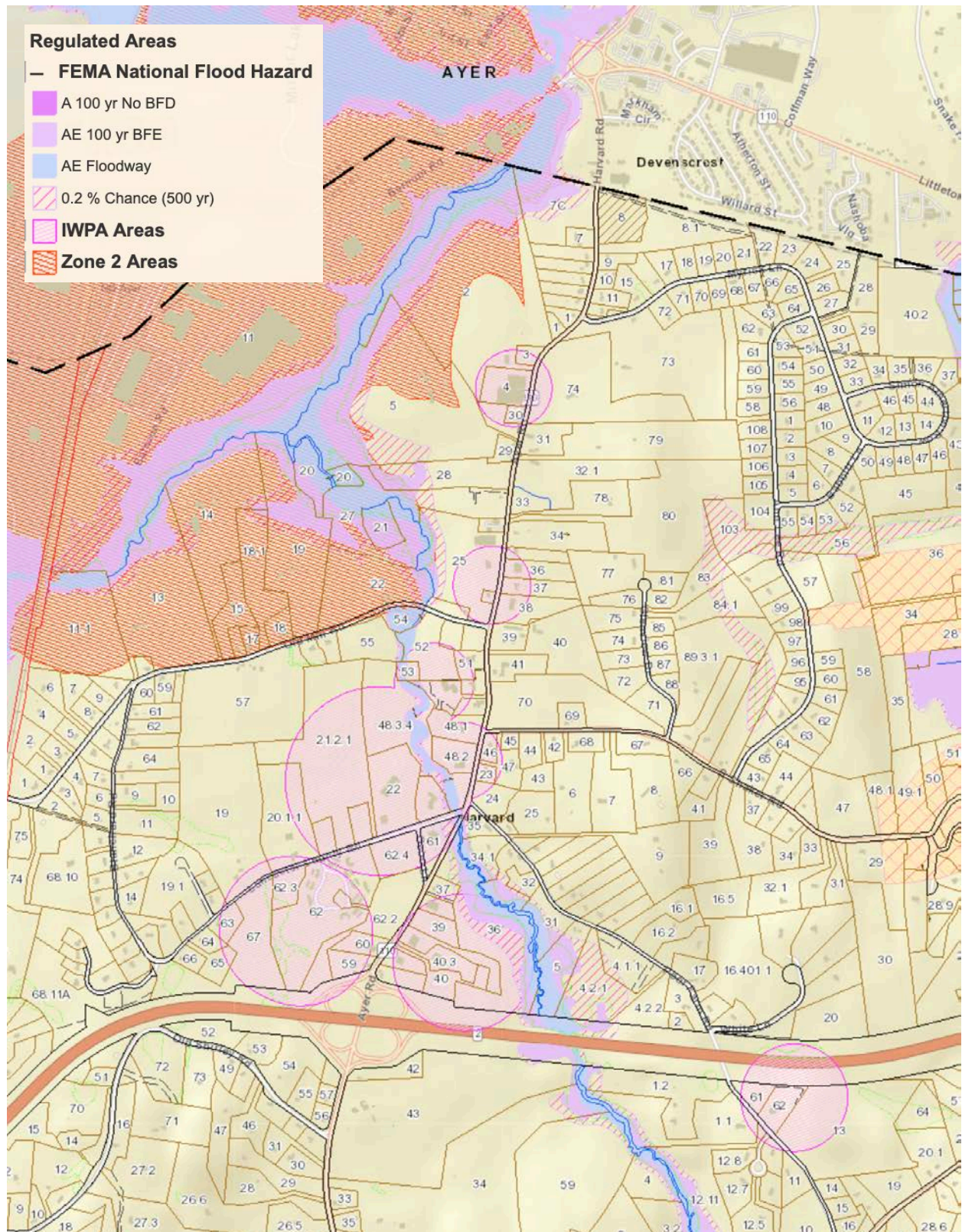
Vacant land in the Commercial District represents approximately 23.4 acres across seven parcels for 6.8% of the total area of the district. The potential for additional commercial uses and mixed-use development is however much greater given the very low density and underdeveloped characteristics of existing properties.

## ZONING AND ZONING OVERLAY DISTRICTS MAP





REGULATED AREAS MAP



## EXISTING LAND USE AND RECENT DEVELOPMENT

As indicated in Table 3 below, existing land uses in the Commercial District are mostly commercial, agricultural and residential. Each of these uses occupies 101.5 acres (or 29.5% of the total for commercial uses), 92.7 acres (or 26.9% of the total for agricultural uses), and 75.9 acres (or 22.0% of the total for residential uses) respectively. Other uses in the Commercial District include indoor recreation (for a baseball academy and bowling center on 4.8 acres of land, or 1.4% of the total), in addition to right-of-way land (33.2 acres, or 9.6% of the total), and conservation land (13.1 acres, or 3.8% of the total).

TABLE 3  
**EXISTING LAND USES**  
HARVARD C-DISTRICT

Use Category	Acres	# of Parcels	% of Total District
Commercial	101.5	28	30%
Agriculture	92.7	4	27%
Residential	75.9	16	22%
Right-of-Way	33.2	1	10%
Vacant	23.4	7	7%
Conservation	13.1	3	4%
Recreation	4.8	1	1%
<b>TOTAL</b>	<b>344.5</b>	<b>60</b>	<b>100%</b>

*Source: Harvard Master Plan 2016, RKG Associates Analysis of GIS Data, July 201*

While there are a variety of commercial, industrial, and residential buildings in the district in varying conditions and quality, and as shown in photographs of properties in the district in Exhibit A of the addenda, there is no overall character, design theme or pattern of the development other than it is very low density with most buildings scattered in a “strip fashion” along both sides of Ayer Road with minimal site cover ratios.

Commercial development in the C District consists primarily of office uses as well as of retail and service space with the exception of a few heavy commercial, warehousing and community uses. Heavy commercial and warehousing/light industrial space users include a plumbing business, an auto repair shop, and cannabis manufacturing, while community users encompass a church tenant at 285 Ayer Road and the projected relocation of the Council for Aging Center at 12 Lancaster County Road behind the post office on Ayer Road. Most existing buildings in the C district are older and have been built from 1817 to 2010.

The most recently completed set of commercial properties in the C District is a cluster of three buildings which were built over a seven-year period starting almost twenty-years ago. As explained further in the zoning analysis section of this report below, these buildings at 188, 198 and 200 Ayer Road were built under a special permit (Ayer Road Village Special Permit-ARV-SP) which enabled a cluster typology with a higher density than

otherwise permitted in the rest of the C District. These three two-story neo-traditional buildings which comprise a total of 46,442 square feet in building area are closer in scale and character with the small-town features which characterize most of Harvard than the otherwise more generic suburban commercial properties which comprise the rest of its C District. Of note is also the effort to integrate a mix of uses into a small walkable village-center setting at this location as the grouping of commercial buildings which include professional and medical offices as well as ground floor retail are complemented by a multi-family building (the 42-unit senior Bower Brooks Apartment complex at 186 Ayer Road).

We have noted office space availability in many of the commercial buildings along Ayer Road. In addition to a lack of demand for office uses, this situation suggests the opportunity for major upgrades and redevelopment also given the physical and functional obsolescence of many of these older structures.

Table 4 and map on the next pages shows our survey of size, location, age, building type and tenants for each of the 30 properties currently used for commercial purposes in the Commercial District. The 28 commercial properties for which square footage data was available comprise a total of 478,530 square feet in building area. With the exception of three larger multi-tenanted properties at 206, 249, and 325 Ayer Road (outliers of 65,340, 68,825, and 84,512 square feet respectively), these properties range in size from 2,667 square feet to 26,354 square feet in building area for an average size of 10,394 square feet. Most of these properties are either one or two stories high on parcels ranging in size from 1.0 to 26.1 acres for an average of 4.6 acres per parcel. Average floor area ratio for these parcels is only 0.09.

As will be described in greater details in the retail section overview of our report, retail and service space in Harvard is limited (with a notable lack of food and beverage establishments, pharmacy and grocery store) and not commensurate with the needs of its resident population. While Harvard does not have a verifiable inventory of local businesses, the 2016 Master Plan indicates that retail and entertainment space constitute only approximately 9% of the Commercial District's businesses.

Such low numbers are confirmed by our field survey by which we have identified the presence of only a few fast-food restaurants (pizza parlor and Thai food), a donut and a coffee shop (Dunkin Donut). This low inventory is complemented by a range of services (such as fitness, pilate clubs, and bank among others) in properties which could further benefit from more direct street-front exposure.

Given the overall picturesque character of the town as a whole and its potential for agro-tourism discussed further below, the deficiency in commercial activity geared towards visitors and in additional fiscal benefits from "outside money" is also notable. In addition to a general weakness in food and beverage offerings, the lack of other visitor-oriented businesses is manifest in the absence for instance of local artisan and antique shops, a bicycle shop, a local brewery, a bookstore, as well as a small lodging facility, among others.





TABLE 4  
SURVEY OF EXISTING RETAIL AND OFFICE BUILDINGS  
COMMERCIAL DISTRICT  
HARVARD, MA

	Address	Zoning	Year Built	Lot Size (Acres)	Building Area (Sq.Ft.)	# Stories	# Units	Building Type	Tenant Type	Tenants (1)
1	184 AYER RD	C	1890	2.3	3,486	1.75	1	Professional Offices	-	-
2	185 AYER RD	C	1817	2.7	4,912	2	4	Mixed Commercial	-	-
3	187 AYER RD	C	1957	2.2	4,800	1	1	General Office	-	-
4	188 AYER RD	C	2004	1.9	8,418	2	3	General Office / Retail	Fast Food	Dunkin Donuts
5	198 AYER RD	C	2010	3.4	20,952	2	1	General Office	Veterinarian	ProFormance Canine Surgical Center
6	200 AYER RD	C	2003	3.8	17,072	2	6	General & Medical Office	Architect, developer, medical	LD Russo; Mangel Destefano Architect; UMass Memorial Harvard Primary Care; Harvard Joyful Adult Health; Vision Solar; Nonotuck Resource Ass.
7	204 AYER RD	C	1950	1.6	20,429	1	1	Recreational	Bowling	Harvard Bowling Lanes
8	206 AYER RD	C	1987	1.5	65,340	2	5	General Office	Professional Offices	Moeser & Associates; Nikopoulos Insurance; McO & Associates Inc; Albert A. Barbieri Jr; Mco Housing Service
9	215 AYER RD	C	1999	3.1	6,414	1	1	Service	Post Office	USPS
10	231 AYER RD	C	1987	3.8	15,064	1	3	General Office	Professional Offices	Acton Medical Assoc PG; Watjus Electric, Inc
11	233 AYER RD	C	1987	3.7	16,156	2	10	Medical Office	Medical	Harvard Family Medicine et als
12	249 AYER RD	C	1990	1.6	68,825	3	14	General Office	Professional Offices	Robery Casey, Attorney; Gatehouse Media LLC; Eastern Special Risk Insurance; The Winbridge Group, Inc.; Cybertools; Bairesdev; Lindsay Renner Schwartz, Licsw LLC; Nearcoders; Charter; Robert F Casey Jr Law Office; Blanchard House Condo Associates; L R Solutions Group; Waterlily Acupuncture Incorporated; Christopher W Di Senso PC; Harvard Counseling Associates
13	256 AYER RD	C	1940	3.5	9,425	1	2	Recreation	Baseball academy	The Barn
14	257 AYER RD	C	1995	1.3	7,456	1	3	Medical Offices	Wellness, Counseling, Medical, Dentist	Terry Anelons, Harvard Chiropractic; Reddy Family Dental; Advocates Community Counseling; Wellness Massage
15	259 AYER RD	C	1994	2.0	14,368	2	4	Medical/Pet Care Center	Pet Care Center	Harvard Family Pet Clinic, LLC; Harvard Kennels; Doggie Day Care; Grooming Center
16	262 AYER RD	C	1972	11.0	3,960	2	2	Warehousing/ Home servicing	Home equipment services	Hall Pump- Heat Pump Sales & Service
17	264 AYER RD	C	1945	2.7	3,236	1	2	Retail & Services	Landscaping & Garden Store	Three Seasons (Landscape & Garden)
18	270 AYER RD	C	1965	4.7	6,308	1	3	General Office	Professional Offices	Nancy Catlini Law Office; Luzzi Gilpatrick Financial Services; North Atlantic Concrete
19	276 AYER RD	C	1991	4.0	2,667	1	1	General Office	Professional Offices	Francis Murphy Insurance Agency
20	280 AYER RD	C	1986	3.5	14,148	2	3	General & Medical Office	General & Wellness	Hatch Jennings Inc; Solar Design Associates; South Coast Development; Harvard Therapeutics
21	283 AYER RD	C	N/A	N/A	N/A	1	1	General Office/Retail	Financial Services, bank	Rollstone Bank & Trust
22	284 AYER RD	C	1952	1.9	3,496	1	1	General Office	Professional Offices	David Alexander Accountant
23	285 AYER RD	C	1974	26.1	26,354	1	7	F&B Retail, Recreation, Services	Bank, fast food, wine store, church, fitness, billiard	Sorrentos Pizza; The Grape Vine Beer & Wine; Red Dragon Billiards; Koko Fitness; Seeds of Faith Church
24	289 AYER RD	C	1950	1.0	4,056	1	1	Retail & Services	Home equipment services	Harvard Power Tools
25	294 AYER RD	C	1967	1.7	6,000	1	1	Retail & Auto Service	Auto Repair Facility	Westford Welding & Repair
26	295 AYER RD	C	N/A	13.4	N/A	1	1	Retail & Services	Landscaping & Garden Store	Kennedy Landscaping
27	325 AYER RD	C	1954	5.0	84,512	1	19	Warehousing/ Retail/ Services/ Offices	aka Appleworks Building. Fast food, fitness, wellness, services, professional office, manufacturing	Siam Pepper Thai Cuisine; Muddy Water Coffee Roasters; India Overseas Wholesalers; Smile Center; AECOM; Atech Investigation; Bodylines Pilates; Harvard Machinery; John Reedy CPA; MP Bresnan Corp.; Whole Earth Landscaping; Cannabis Oil Manufacturing; Corrections Physical Therapy; The Appleworks;
28	6 LANCASTER CNTY RD	C	1988	3.4	18,626	1	6	General Office	Professional offices, surveyor, environmental, developer	David E. Ross, Surveyor; Omni Environmental; Bower Brooks Offices
29	12 LANCASTER CNTY RD	C	1988	8.9	16,600	1	1	General Office, Community Services	aka Renaissance Office Park. General office, future senior community center	HXI; Renaissance Electronic Corp.; Future location of Council for Aging Center
30	16 LANCASTER CNTY RD	C	1995	1.5	5,450	1	1	General Office	Medical Office	Concord Hillside Medical Assoc
Min				1.0	2,667					
Avg				4.4	10,394					
Max				26.1	26,354					
Total				127.0	478,530					

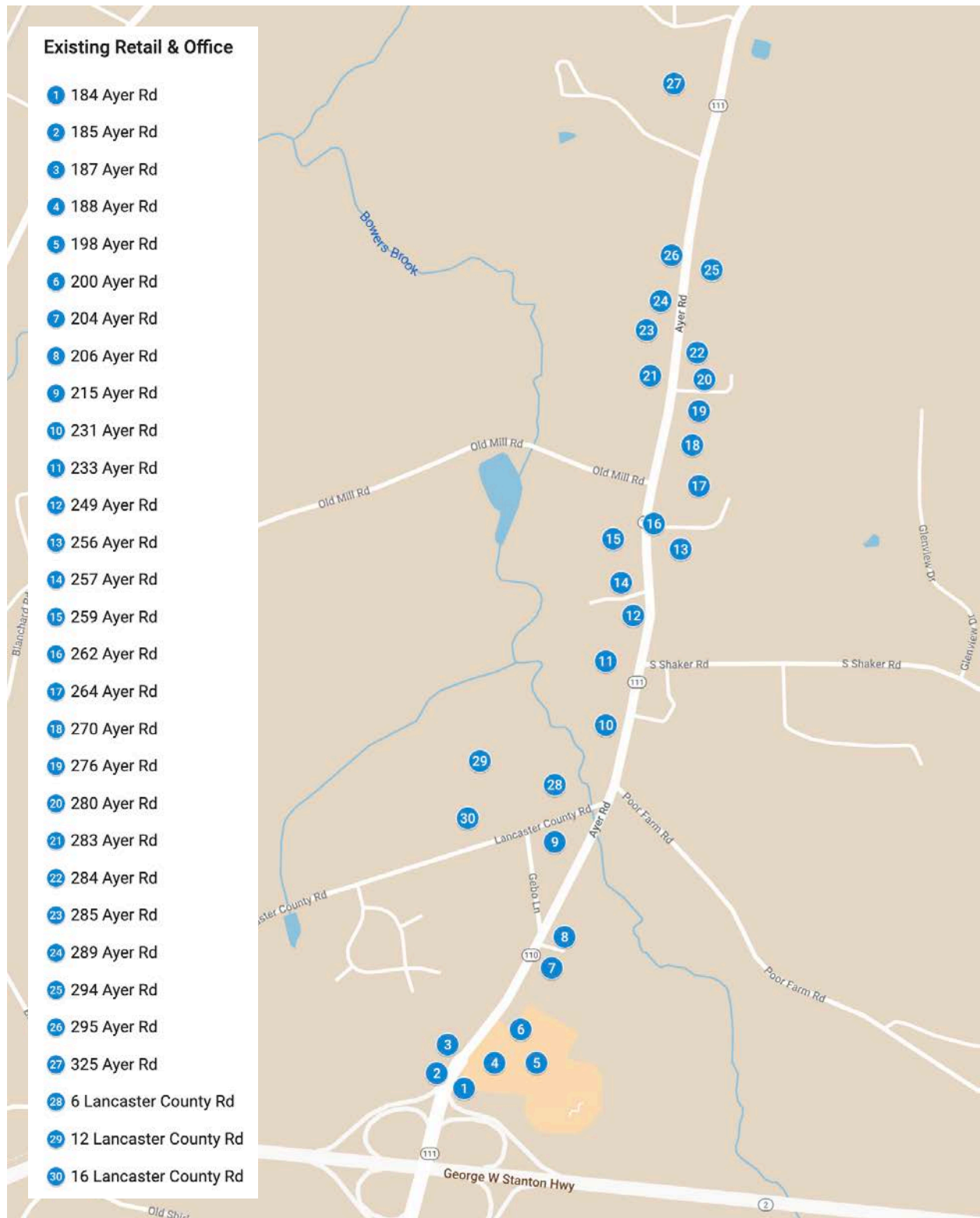
Excluding Larger Outliers - 206, 249, and 325 Ayer Road  
Excluding Larger Outliers - 206, 249, and 325 Ayer Road  
Total for 30 Properties Reporting SQFT

Note (1) Tenant list might include some expired leases

Source: Town of Harvard Assessor's Office, Field Survey; Compiled by Weitzman Associates, LLC



## EXISTING RETAIL AND OFFICE INVENTORY MAP



Harvard's Commercial District is also home to long-standing agricultural occupation and residential uses. Agricultural uses occupy 92.7 acres in four parcels for 26.9% of the total district area, and residential uses occupy 75.9 acres for approximately 22.0% of the total district area, respectively. Located on sites which range from 0.78 to 29.6 acres, residential uses are mostly single-family properties with some of them representative of Harvard's distinguished historic heritage. (See Table 5 and map on the next page).

As will be described in more details in the Residential Overview Section of our report, there are only a few multi-family developments in Harvard's Commercial District. As in the case of multi-family properties built in other areas of Harvard, the completion of these projects has been facilitated by the inclusion of affordable units through a comprehensive permit per the 40B Chapter mandate of the State of Massachusetts.

Per our research and discussions with stakeholders, no new commercial or residential properties have been reported to be in the pipeline in the Commercial District except for the proposal to build a 30,000 square foot recreation center and two 8,000 square foot commercial buildings on a vacant parcel at 203 Ayer Road, south of Gebo Lane.<sup>1</sup> The recreation center includes 16 badminton courts and tenants have yet to be identified for the two commercial buildings. The complex would also include on-site 170 parking spaces.

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<sup>1</sup> Bayside Engineering (July 29, 2022). Traffic Impact and Access Study for Proposed Mixed-Use Development at 203 Ayer Road Prepared for Yvonne Chern.

TABLE 5  
SURVEY OF EXISTING RESIDENTIAL BUILDINGS  
COMMERCIAL DISTRICT  
HARVARD, MA

	Address	Zoning	Year Built	Lot Size (Acres)	Building Area (Sq.Ft.)	# Stories	# Units	Building Type	Building Style	Tenants (1)
1	19 South Shaker Rd	RI	1954	0.8	1,850	1	1	Single Family Residential	Ranch	Stone Realty Tr
2	20 Myrick Ln	RI	1977	1.9	3,802	2	1	Single Family Residential	Garrison	Fenton, Lawrence J & Janice M
3	275 Ayer Rd	C	1936	0.4	2,368	1	1	Single Family Residential	Cape Cod	Rdj Realty Co
4	288 Ayer Rd	C	1890	8.5	3,206	2	2	Single Family Residential	Conventional	Yusuf, Jibrayil N
5	292 Ayer Rd	RI	1975	6.5	3,220	2	1	Single Family Residential	Modern/Contemp	Myer, Vic E
6	295 Ayer Rd	C	1935	13.4	2,027	1	1	Single Family Residential	Bungalow	Rdj Realty Co
7	304 Ayer Rd	RI	1892	10.6	5,819	1.5	1	Single Family Residential	Cape Cod	West, Richard W & Poitras, Sandra J
8	307 Ayer Rd	C	1850	1.5	8,740	2	1	Single Family Residential	Colonial	Brown, Lisa C & Briggs, Andrew W
9	31 Glenview Dr	RI	1968	3.6	2,880	1	1	Single Family Residential	Ranch	Raynes, Alfred H
10	310 Ayer Rd	C	1865	3.8	9,555	2	1	Single Family Residential	Colonial	Watson, Richard B Jr
11	313 Ayer Rd	C	1723	1.0	6,059	2	2	Single Family Residential	Colonial	Fairbanks, Dana
12	320 Ayer Rd	C	1948	23.0	3,097	1	1	Single Family Residential	Ranch	Lti Harvard Orchard Lp
13	327 Ayer Rd	C	1870	1.0	4,296	2	1	Single Family Residential	Conventional	Doe, Lawrence C & Lawson, Pamela C
14	39 Glenview Dr	RI	1968	8.1	7,658	2.5	1	Single Family Residential	Colonial	Ferguson Daniel A & Anne T
15	6 Old Mill Rd	RI	1964	1.2	2,333	1	1	Single Family Residential	Ranch	Johnston, Paul V & Doris A
16	6 Myrick Ln	RI	1968	29.6	4,970	2	2	Two-Family Residential	Colonial	Hannigan, James R & Sibley A
17	5 Baldwin Ct	RI	2023	12.6	43,588	2	20	Single Family Residential Community	Farmhouse Cottages	Craftsman Village
18	253 Ayer Rd	C	1993	3.2	25,436	2	24	Multi-Unit Apartments	Apartments for 55+	Foxglove Housing Assoc Ltd
19	306 Ayer Rd	RI	1967	19.9	3,136	2	1	Mixed Use (Residential / Forest)	Garrison	Mccarthy Realty Tr
20	309 Ayer Rd	RI	1750	53.7	5,952	2	1	Mixed Use (Residential / Agriculture)	Conventional	Berwind Brothers Llc
21	196 Ayer Rd	C	2011	3.5	46,356	3	42	Mixed Use (Mainly Multifamily Residential)	Senior Housing	Bower Brook Apartments
Min				0.4	1,850					
Avg				9.9	9,350					
Max				53.7	46,356					
Total				207.9	196,348			Total for 21 properties		

Note (1) Tenant list might include some expired leases

(2) Craftsman Village is currently under construction; estimated 2023 completion. Building area reflects an estimated total between the 20 single-family residences

Source: Town of Harvard Assessor's Office, Field Survey; Compiled by Weitzman Associates, LLC

**Existing Residential**

- 1 19 S Shaker Rd
- 2 20 Myrick Ln
- 3 275 Ayer Rd
- 4 288 Ayer Rd
- 5 292 Ayer Rd
- 6 295 Ayer Rd
- 7 304 Ayer Rd
- 8 307 Ayer Rd
- 9 31 Glenview Dr
- 10 310 Ayer Rd
- 11 313 Ayer Rd
- 12 320 Ayer Rd
- 13 327 Ayer Rd
- 14 39 Glenview Dr
- 15 6 Old Mill Rd
- 16 6 Myrick Ln
- 17 5 Baldwin Ct
- 18 253 Ayer Rd
- 19 306 Ayer Rd
- 20 309 Ayer Rd
- 21 196 Ayer Rd

## ZONING

Current zoning in the Commercial District allows for the following uses:

- Small-scale commercial uses
- Agricultural uses, conversion for multiple residences, earthmoving, institutional uses, and other off-site signs
- Single residence use (on lots as they existed on February 1, 1972)
- Medium-scale commercial use (with some exceptions)
- Certain uses by special permit (Ayer Road Village Special Permit) from the Planning Board including some medium-scale and large-scale commercial uses.
- Except for light industrial uses per special permit and per 30,000 square foot maximum size buildings, no industrial uses are allowed in the Central District or in Harvard as whole.

The lack of continuity in commercial development in the C district reflects current zoning. Current zoning designation in the Commercial District is C with a 0.10 FAR with the option of using the Ayer Road Village Special Permit-ARV-SP for a 0.20 FAR. As mentioned above, the Ayer Road Village Special Permit mechanism which also includes design guidelines and a design review was used once in the case of the mixed-use, mixed-income development at 186, 196, 198, and 200 Ayer Road.

Further erosion of commercial opportunity occurred in 1987 when the Town of Harvard reduced the permitted Floor Area Ratio from 0.25 to 0.10 which translated to a 60% reduction in commercial development potential. As reported in the recently proposed planning framework for Ayer Road Commercial District, this downsizing was based on the narrow vision of limiting commercial development to only support the population of Harvard rather than considering how much and what kinds of businesses were needed by the other businesses already in Harvard or what businesses could be supported locally that would bring in dollars from outside the community.<sup>2</sup>

Current zoning and bylaws are also deficient and are attractive to unintended uses as indicated by recent development inquiries reported within the Ayer Road Commercial District for the self-storage facilities, auto repair uses, warehousing and multi-family apartment complexes in excess of 200 units and with no commercial component.

## WATER AND SEWER INFRASTRUCTURE

Along with deficient zoning, the lack of access to public water and sewer systems and prohibitive costs by individual developers of providing compliant individual water and septic systems for projects other than of

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<sup>2</sup> Montachusett Regional Planning Commission (MRPC) under a Direct Local Technical Assistance (DLTA) grant from the Massachusetts Department of Housing and Community Development (DHCD). (November 2014). Town of Harvard: Business Conditions Assessment in C District.

minimal size, has been quoted by stakeholders to be the most important impediment to additional growth in the commercial district.

With many potential access points, the currently debated possibility of connecting Harvard to adjacent Devens' water and sewer utilities could provide a solution to Harvard's infrastructure issues. Devens has a public water supply system estimated to have a capacity in excess of five million gallons/day and a wastewater treatment plant that has a capacity of approximately 4.65 million /gpd and that is presently at 30% of capacity. Both of these infrastructures through gravity and alternative low-pressure system options could be extended to Harvard's Commercial District either via Old Mill Road, Lancaster County Road, or another option.

### FISCAL BASE

The town of Harvard has been challenged by a structural fiscal deficit derived from the lack of diversity of its tax base characterized by an over-reliance on single-family residential property tax, and of recent tax increases in the wake, among others, of its elementary school expansion. As of Fiscal Year 2021, Harvard's residential and open space valuation was 95.74% of the levy which was 20<sup>th</sup> of 351 Massachusetts cities and towns.<sup>3</sup>

### ACCESS AND NODES OF EMPLOYMENT

The Harvard's Commercial District is well located along Ayer Road (Route 110/111), extending 1.2 miles from the Route 2 interchange at the edge of the town of Ayer and within a short distance and good access to many surrounding towns and the Boston metropolitan area. Along with Interstate 495, the east-west running Route 2 is the other major highway which serves Harvard and connects it with the surrounding regional road network.

Situated in Worcester County in the Worcester Metropolitan Statistical Area, the center of Harvard is approximately only four miles west of Interstate 495, approximately 19 miles from Route 128, and approximately 34 miles to the center of Boston, and 37 miles to Logan Airport.<sup>4</sup>

As will also be described in the economic and demographic overview section of our report, the town of Harvard is also located within the heart of the Nashoba Valley; within a shorter 10-mile commute, the town of Harvard benefits from its proximity to Ayer, Littleton, Leominster, and Groton among others.<sup>5</sup>

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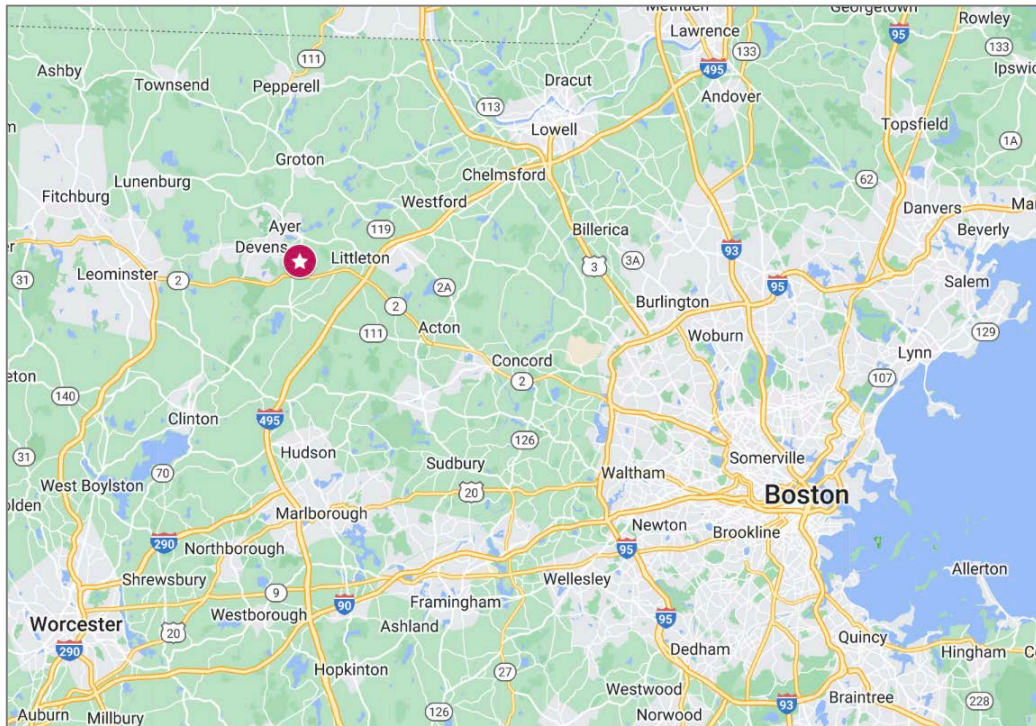
<sup>3</sup> Town of Harvard, MA Planning Board (April 8, 2021). Ayer Corridor Development Vision Plan: Presentation for District Tour.

<sup>4</sup> The town of Harvard lies along the boundaries of two federally defined economic regions: The Boston New England City and Town Area (NECTA) and the Worcester Metropolitan Statistical Area (MSA).

<sup>5</sup> Communities within this 10-mile radius include Ayer, Acton, Westford, Littleton, Sterling, Clinton, Marlborough, Hudson, Leominster, Lunenburg, Stow, Bolton, Boxborough, Shirley Groton, Lancaster, Berlin, Maynard, and Boylston.



## REGIONAL MAP



While there are no stops in town, Harvard is however also served by MBTA commuter rail service along the Fitchburg line with access to the nearby stations in Ayer and Littleton.

At the very local level, the in-progress Ayer Road Transportation Improvement Program ("TIP") Project is designed to compensate for the absence of sidewalks and provide a much-needed safer environment for both pedestrians and cyclists in Harvard's Commercial District. The TIP Project proposes to repave Ayer Road and add a ten-foot-wide multi-use pedestrian/bicycle path. Currently, this project is not programmed in the regional TIP, but the Town of Harvard is working to get it programmed as soon as feasible. The project is currently at the 25% design phase.

Also pending is the long-standing re-establishing of abandoned road connections through the possibility of resuming jurisdiction with Devens through Old Mill Road. In addition to shorter travel time and distance between adjacent communities, such reconnections could also facilitate the expansion and connections of public utilities mentioned above.

## TOWN OF HARVARD: AMENITIES, NATURAL LANDSCAPES AND HISTORICAL ARCHITECTURE

As an under-developed environment, the Commercial District echoes the rest of the Town of Harvard, which, with more than 35% of its total land area vacant, 27.0 square mile in area and a population of 6,800, also offers a very low-density environment. In contrast with the Commercial District, the rest of the Town of Harvard offers with many historical structures a more pristine environment with a distinctive strong New England rural character,

TABLE 6  
**ZONING DISTRICT BY AREA**  
TOWN OF HARVARD

District	Acres	Percent
Agricultural Residential	11,753	78%
Business	3	0%
Commercial	346	2%
Multiple Residence	0	0%
Watershed Protection and Floodplain	2,985	20%
<b>Acres subject to Harvard zoning</b>	<b>15,088</b>	<b>100%</b>
Acres of Devens in Harvard	2,275	15%

Source: MRPC, Harvard Zoning Coverage, 2015

TABLE 7  
**LAND AVAILABLE FOR DEVELOPMENT**  
TOWN OF HARVARD

Land Use Category	Acres
Vacant Residential Land, Lot>5 acres	650
Chapter 61, Forestry, Lot>5 acres	1,189
Chapter 61 A, Agriculture, Lot>5 acres	381
Chapter 61 B, Agriculture, Lot>5 acres	594
Single Family Home, Lot>10 acres	1,839
Other Residential Use, Lot>10 acres	296
<b>Total</b>	<b>4,950</b>

Source: MRPC, Harvard Zoning Coverage, 2015

Natural and architectural heritage features derived from predominantly agricultural and single-family residential uses are exceptional and abundant in Harvard as whole. These include winding roads lined with trees with panoramic vistas of surrounding hills composed of agricultural and untouched natural landscapes.

These also include a range of historical structures in a farming community settled in 1658 and in a town incorporated in 1732 which are characterized by colonial and Victorian homes, churches, town hall and library clustered around a historic common; many historic farmhouses amidst working apple and peach orchards often marked by stone walls; the four-centuries old village of Still River, and Harvard Shaker Village founded at the end of the 18<sup>th</sup> Century.

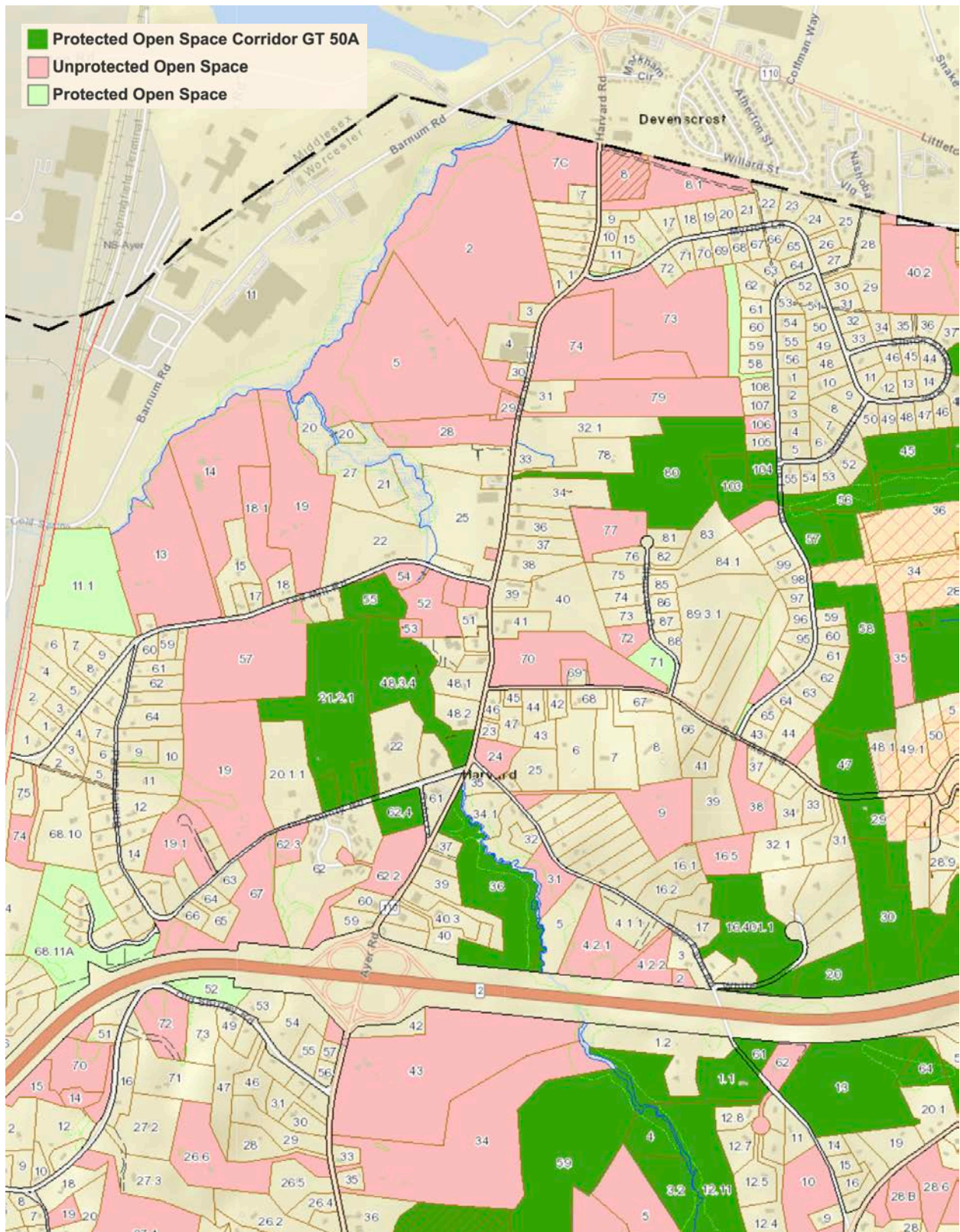
Harvard's scenic roads and hills are already known to attract bicyclists while its orchards and farm stands also enjoy strong business during the growing season.

Family life in well-maintained large homes and homesteads is well supported by local top-performing elementary and high school facilities, and access to quality recreational facilities. As an example, Bare Hill Pond is a 330-acre lake where swimming, sailing and canoeing lessons are offered in the summer and cross-country skiing and skating take place in winter.

As indicated in the map below, in addition to its historic preservation efforts, the town of Harvard is also appreciated for its on-going concern for the preservation of open space through conservation land purchases, with over 2,000 acres of conservation land throughout the town, much of it interconnected by walking trails.

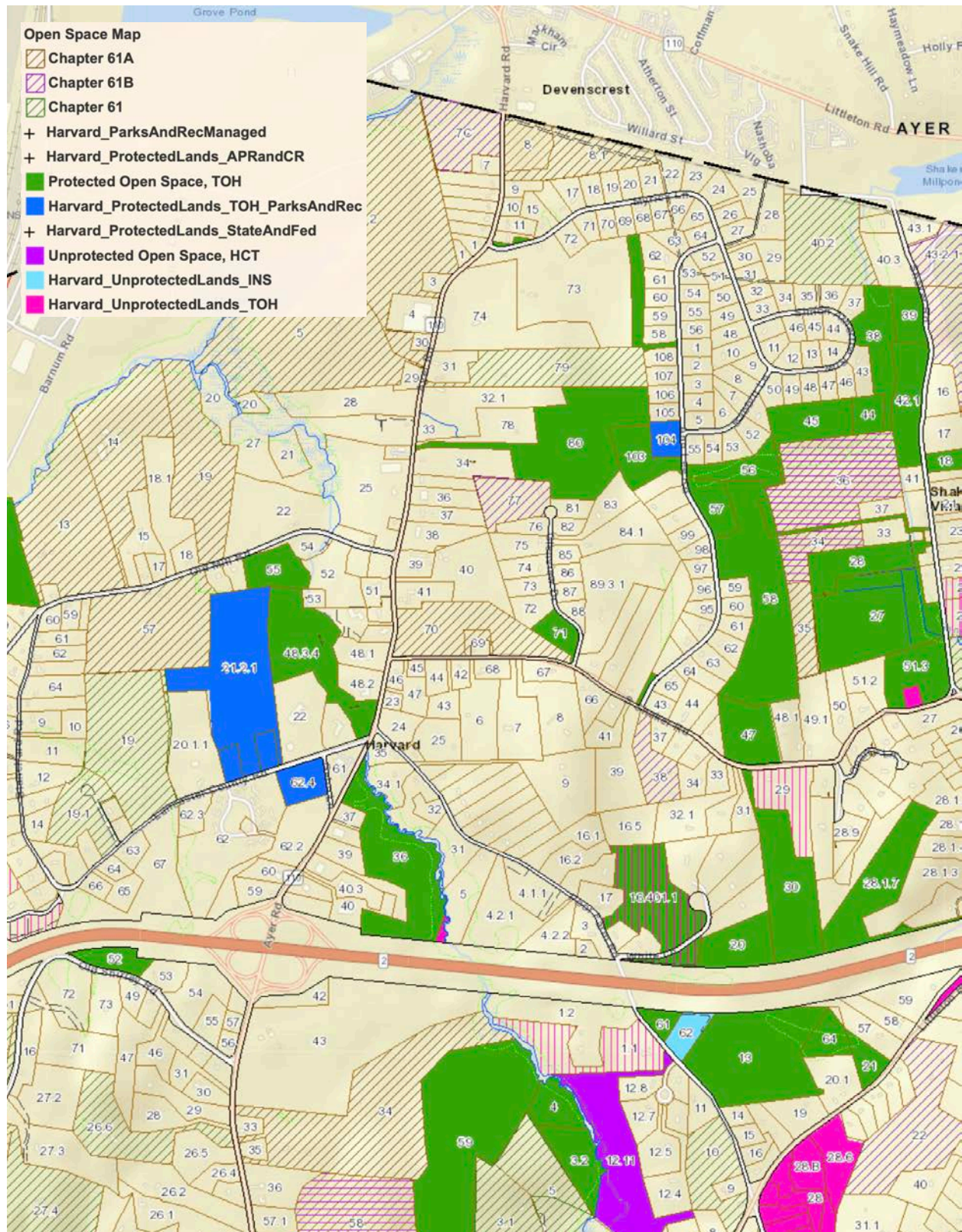


PROTECTED OPEN SPACE MAP- HARVARD'S COMMERCIAL DISTRICT





# DETAILED OPEN SPACE MAP- HARVARD'S COMMERCIAL DISTRICT



## DEVENS

Devens is a 6.87 sq mi regional enterprise zone within the Town of Harvard, as well as nearby Ayer and Shirley. Formerly military base Fort Devens, it was used as an army post from 1917 to 1996, when it was relegated for civilian use. Devens borders the Ayer Road district to the northwest and consists primarily of commercial parcels.

As a relatively new community Devens has no formal elected government and lacks its own public education system and administrative infrastructure. However, it does have a schooling contract with the Town of Harvard.

Fort Devens was one of the largest military training and operations bases in the Northeast. Following its decommissioning, ownership of parcels was given to the Massachusetts National Guard, Massachusetts Veterans, and MassDevelopment to repurpose into a business-residential community. The product of being a military base left many large open spaces and industrial-style buildings in its wake. The major command/training center became the Federal Medical Center, Devens, a special medical/mental health prison. Additionally, Devens has many fields remaining from military training grounds, many of which have been repurposed for public recreational use. Such large open areas have also made Devens a popular destination for industrial companies who require large plots to develop factories. As a result, Devens has a high concentration of manufacturing, transportation, and wholesale trade businesses, and an economy that is complementary to that of Harvard.

An inventory of existing housing units in the 1994 Devens Reuse Plan indicated 1,700 units. It was also determined that the Reuse Plan would accommodate a maximum of 282 residential units of which 25% would be reserved for low and moderate-income households and/or special needs populations. The 282-unit residential cap is confirmed in Devens' by-laws (Article IX E.1.) which also passed the 2015 Supertown Meeting. This cap does not include the maximum 120 Senior Residential Units to be developed in the Shirley Village Growth I Zoning District.



## POSITIVE AND CHALLENGING FEATURES OF PROSPECTIVE DEVELOPMENT OPPORTUNITIES

Based on our primary research, conversations with local market participants and stakeholders, and experience visiting the town of Harvard, we have established a list of challenges and opportunities that should be considered when conceptualizing the marketability of development opportunities in the Commercial District:

### *Positive Features of the Commercial District:*

- Opportunity for Well-Guided Sustainable Growth through many small-scale walkable and “village-like” mixed-use commercial and residential developments on vacant land and on many other underdeveloped properties. There is also the possibility for these mixed-use developments to be further supported by existing and new community uses (such as the post office and Council for Aging Center, among others).
- Opportunities for More Street-Oriented Retail, Entertainment and Service Uses for local residents, and visitors given the almost 100% current leak of the town’s disposable income and the town’s untapped potential for agro-tourism.
- Opportunity to Promote Commercial Development in Support of Harvard’s Agricultural Economy targeted to both locals and visitors with commercial establishments such as artisan shops, lodging and food and beverage venues, as well as new flex uses such as food incubators or accelerators.
- Opportunities for Broadening Residential Options and for developing a range of small-scale for-sale and rental multi-family residential developments as an alternative to the current town supply of predominantly single-family homes.
- Good Location within Harvard in close proximity to Route 2 and I-495, with good visibility and excellent access to Harvard’s outlying region as a location in the heart of the Nashoba Valley and within a relatively short distance from the metropolitan Boston area.
- Possibility of Providing Commercial Tax Revenues currently lacking in the Town’s portfolio including “outside money” from visitors as the only land zoned for commercial uses in Harvard.
- Picturesque Character. Possibility to draw from the town’s overall unique picturesque character which includes a rare pristine environment with a distinctive strong New England rural character with exceptional natural and architectural heritage features.
- In addition to important historic preservation efforts with many buildings and in two distinctive historic districts, Exceptional Preservation Efforts of Open Space through conservation land purchases, with over 2,000 acres of conservation land throughout the town, much of it interconnected by walking trails.
- Top Schools. Access to a top-performing elementary and high-school school system and to many high-quality outdoor and indoor amenities.
- Synergies with Adjacent Towns. Complementarity and potential synergy with many adjacent communities including the adjacent area of Devens. Synergies with Devens includes the presence of

an industrial and manufacturing economic base as well as the possibility to connect to its water and sewer infrastructure.

- Potentially Good Post-Pandemic Location and possibility to capitalize on post-COVID-19 shifting work/life patterns which favor demand for living and conducting business in high-quality and well-integrated small-town settings.

*Challenging Features of the Commercial District:*

- Lack of Access to Public Water and Sewer Infrastructures and their costly alternatives have been identified as the biggest impediment to commercial development in Harvard's Commercial District.
- Lack of Overall Character, continuity, design theme or pattern of development in the C District other than its very low density.
- Almost Exclusively Car-Oriented Environment with no local direct access to public transit, lack of sidewalks for pedestrians, and lack of bicycle lanes.
- Older Commercial Buildings Supply with much obsolescence and many reported vacancies.
- Limited Residential Options Other than Single-Family Homes.
- Deficient Zoning conducive to extremely low density (0.1 FAR) and scattered suburban-type development also conducive to unintended uses such as recent development inquiries for self-storage facilities, auto repair uses, warehousing and multi-family apartment complexed in excess of 200 units and with no commercial component.
- Relative Distance from "Center of Town" and the resources of its historic district.

## ECONOMIC AND DEMOGRAPHIC OVERVIEW

## ECONOMIC AND DEMOGRAPHIC ANALYSIS

The Town of Harvard is located in Worcester County, Massachusetts, about 25 miles northwest of Boston. The Study Area, Harvard's Commercial District, sits near the town's northern edge along Ayer Road, bound by Route 2 to the south and Ayer to the north. To further examine the region, we have conducted an economic and demographic analysis to determine the market underpinnings that may bolster or inhibit the success of residential and retail development within the Ayer Road Commercial District. We find that the broader communities of Harvard and Devens are both well-positioned for growth, while the immediate Study Area holds significant opportunity for revitalization—via clustered development opportunities.

The following summarizes the findings and conclusion of our economic and demographic analyses:

- **Excellent Potential for Growth and Improvement.** The economies of Harvard and the broader Worcester and Boston MSAs are in excellent condition from an economic standpoint, despite the ongoing COVID-19 pandemic. The fundamentals that have been driving the region's growth are resilient, though the economy must be closely monitored over the next several years. While population and household growth in Harvard have remained stable over the past decade—trends projected to persist similarly through 2027—income growth continues forcibly and is one of the region's strengths. Residential and retail developments could be well-positioned in Harvard's Commercial District once the necessary, catalytic improvements are introduced along Ayer Road north of Route 2. Additionally, considering its regional proximity, Harvard housing developments could also stand to benefit from the mature and rich markets of Boston and the suburban submarkets in between.
- **Excellent Affluent Population.** Median and average household income in Harvard has grown moderately since 2010 and is projected to continue well through 2027. As of 2022, median and average household income in Harvard reached \$167,509 and \$251,589, respectively. Compared to the broader Metropolitan Statistical Areas (MSA), average household income in Harvard sits about \$136,000 higher than Worcester and \$104,000 higher than Boston-Cambridge-Newton. By 2027, Harvard's lead in average income is expected to increase to being \$150,000 above Metro Worcester and \$115,000 above Metro Boston. By reactivating Ayer Road and introducing diverse retail and residential offerings, the Commercial District could strengthen Harvard and the surrounding region by improving Consumer Spending Potential and facilitating agency among residents to secure housing.
- **Highly Educated Population.** In comparison with many nearby towns, the Town of Harvard holds a significantly large percentage of highly educated individuals. Of those older than 25, roughly 67.6% of its population is comprised of those with a Bachelor's Degree or higher, compared to the 32.0% of Devens, 37.7% of Greater Worcester, and 51.1% of Greater Boston. Of those with a Master's Degree or higher, Harvard holds 20.5% more of these individuals than Devens, 19.0% more than Greater Worcester, and 10.3% more than Greater Boston. Considering Harvard's substantial affluence and impressive educational attainment levels, the Ayer Road Commercial District is well positioned to serve a community already primed with need, capacity, and demand.
- **Growing Senior and Young Adult Populations.** Harvard's senior (ages over 64) and young adult (ages 25 to 34) populations are growing fast. Compared to the Worcester and Boston MSAs,

Harvard's growth projections in both categories average about 2% faster, compounded annually, between 2022 and 2027. Additionally, seniors are expected to compose 23% of Harvard's population by 2027, higher than Devens, Greater Worcester, and Greater Boston. Considering Harvard's shifting demographics, it's important to provide housing offerings that cater to the needs of these age groups—especially senior residents as there currently are no alternative residential options available other than larger, single-family homes.

- **Strong Connection to Greater Boston.** Although Harvard is located properly in Worcester, the town has more significant economic connections to Greater Boston given its stronger urban presence and larger employment base, especially considering most Harvard residents are employed outside the county within the Boston region. Approximately 53% of Harvard's population commutes outside of Worcester County for work, with 52% traveling more than 30 minutes (with the average commute between Boston and Harvard being about 45 minutes). Given Boston's fiscal health and prospects for growth are brighter than most major metro areas—outpacing all but one dozen of the nation's major metro areas—Harvard's workforce is capable of returning some of this economic viability back into the town through heightened consumer spending within an activated commercial district.
- **A Dominant Educational and Health Services Industry.** As of 2022, the largest employment sector in both Worcester and Boston Metropolitan Statistical Areas, inclusive of Harvard, was the Educational and Health Services sector, which accounted for 21.8% in Greater Boston and 24.1% in Greater Worcester. Similarly between both metro areas, the Professional and Business Services sector has grown fast over recent years, experiencing the largest distribution change over the last three-, five-, and ten-year periods. In Harvard as of 2022, the Educational and Health Services sector and Professional and Business Services sector held the largest and third-largest shares of total-non-farm employment, comprising 25.4% and 14.9% of total employment, respectively. The Mining and Construction sector held the second-largest share at 17.4%.

## OVERVIEW OF REGIONAL ECONOMY

At the onset of the pandemic, the economic outlook for Massachusetts tumbled. Within the state during 2020, hospitals overflowed, unemployment peaked at 17.1%, employment fell by an unprecedented 272,700 jobs (during March and April alone), and the state GDP plunged by 43.8% in the second quarter. Most of the jobs lost were within the leisure and hospitality sector. Office-using employment was similarly affected, though many of the jobs have since been recovered.

After a record year in 2021, the most recent employment numbers show Massachusetts on a steady path to recovery. As of May 2022, employment in Massachusetts has risen to about 98.75% of the pre-pandemic levels, with the unemployment rate having fallen to 3.9% after 13 months of consecutive job growth. In 2021, wages rose by 4.7%, retail sales climbed by 11.4%, and state GDP reached record levels. Paired with hot housing demand, rising stock markets, and elevated corporate profits, all of these increases reflect a strengthening Massachusetts economy. Rather than requiring several years for recovery—like did the Great Recession—state revenues returned to and subsequently surpassed pre-pandemic peaks after one down year in FY20.

While the FY23 revenue forecast of 2.7% assumes a moderation in growth from recent robust performance—up just 0.1% over FY22—this does not suggest a declining economy. As state officials and others are predicting, these forecasts assume employment growth continues, economic expansion endures, inflation moderates, and stability returns. After two years of revenue surges, the FY23 forecast should rather be interpreted as an economic realignment. Massachusetts' economy will continue to react to national and global economic trends such as increases in interest rates and the gradual decrease in the impact of pandemic-era fiscal and monetary stimulus programs. Despite the projected moderate growth in FY23, Massachusetts remains one of the fastest-recovering economies from the effects of the pandemic.

However, with national and international economic concerns for FY23—regarding supply chain issues and interest rates—caution is still advised. Recent negative movement in stock markets and signs of a tightening labor market may affect businesses based in Boston and the state.

Moreover, Massachusetts continues to be a prominent center for biotechnology and life sciences, with the industry creating over 131% more jobs over the last 15 years. Supported by the state's large concentration of institutions of higher education, demand for workers in biotech has peaked in recent years. Large corporations such as Sanofi Genzyme, Biogen, and Pfizer among others have expanded business ventures considering both increased demand for health services following the pandemic as well as general business trends favoring biotechnology.

Although Harvard is located properly within Greater Worcester, it has a more significant economic connections to the Greater Boston Area given Boston's stronger urban presence and larger employment base. The Greater Boston Area has the 10th largest economy of any MSA in the United States when measured by gross domestic product (GDP). According to the U.S. Bureau of Economic Analysis, the Total Real GDP of the Boston MSA in 2020 was \$412 billion, which ranks 39<sup>th</sup> in the world against other countries, behind Denmark (\$414.5 billion) and ahead of the Philippines (\$406 billion). With Boston as a financial hub due to



its expansive and robust economic structure, the surrounding areas in the Greater Boston Area also prove to benefit. Nevertheless, despite the strengths of the local economy, it has not been immune to the effects of the pandemic.

*Town of Harvard, Massachusetts:*

The Town of Harvard, located in Northern Worcester County, is in one of the state's fastest-growing economic regions. The town's status as a relatively exclusive, higher-income housing market aligns with recent business growth in the region, making it a tight, in-demand market. Most homes in Harvard are single-family owned parcels, with only 4.5% of rental homes as compared to the 36.7% in the Greater Boston and Worcester areas. In 2021, 2,700 new businesses relocated into the area, an increase of over 14% from the previous year. Notable sectors include the Health and Education services sectors as well as the Professional, Scientific, and Technical sectors. In Worcester County, the education and healthcare sectors combined employ approximately 109,550 individuals. Within Harvard, the two sectors employ around 700 individuals, constituting nearly 19.8% of its workforce. The region includes two major hospitals and eight colleges/universities, such as UMass Chan and the UMass Memorial Hospital.

Rapid growth in the Professional, Scientific, and Technical sectors has allowed for significant economic development in recent years. Despite the Covid-19 pandemic, the sector has added nearly 2,000 jobs since 2010. The sector's growth in the Research and Development and Video Game Development subsectors is aided by the presence of educational and scientific institutions in the region. As the sector regionally creates more middle-upper salary positions, Harvard's niche property market looks to benefit from such trends.

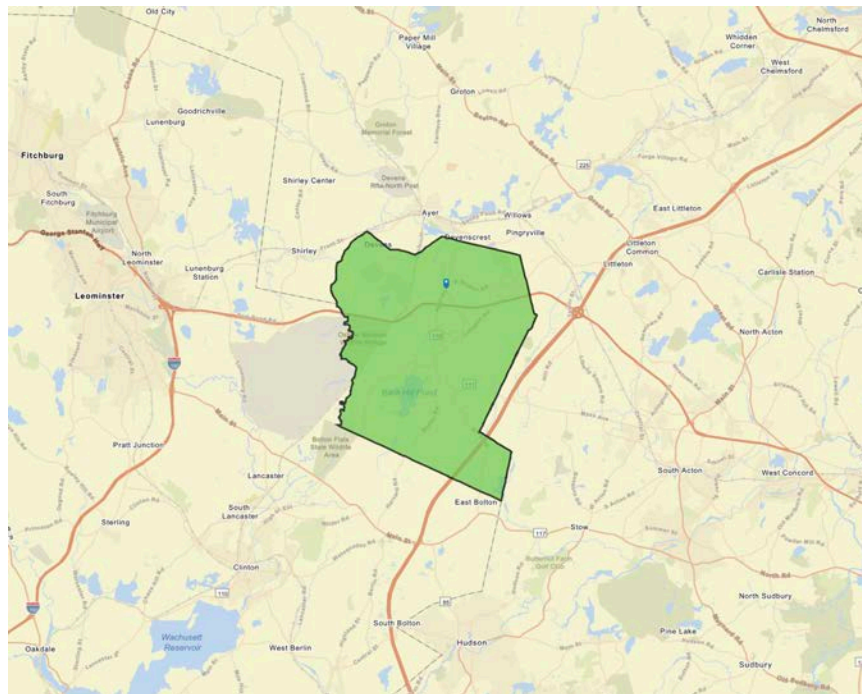
Housing market conditions within Harvard reflect the overall business and population trends of the town. It is one of the most expensive real-estate markets in the nation, with a median home price of \$611,166. The town has a higher proportion of 4–5-bedroom homes than 98% of markets in America. Only 2% of single-family homes have a value of less than \$250,000. In 2014, the median rent was \$1,522, which was much higher than the national median of \$877 at the time. The high price barrier of the town has prompted plans to develop more affordable housing in 2017. Under Chapter 40B, Massachusetts's affordable housing law, all communities within the state are required to maintain 10% of their year-round housing stock as affordable to low-income households, even when robust market conditions appreciate home values much higher. Within communities with less than the statutory minimum (10%), qualified developers building affordable housing may override local zoning through single comprehensive permits, allowing for zoning discontinuities until the affordability minimum is met. As of January 2017, Harvard sat over halfway to the 10% goal; of its year-round units, 5.7% qualified as Subsidized Housing Inventory (SHI). Due to severely limited public water and sewer systems, most of Harvard's subsidized housing developments are modest in scale. While poor soil conditions restrict the placement of public water supplies and shared septic systems—and thus greater housing density—these systems are crucial to eventually meet SHI requirements and support the growing needs of the town.

Office availability within Harvard itself is quite scarce, with only 15 listings and around 28,048 in combined space available. This is because Harvard remains a primarily residential town, with most economic reliability coming from the expanding markets of nearby locales in Worcester County and the Greater Boston Area.

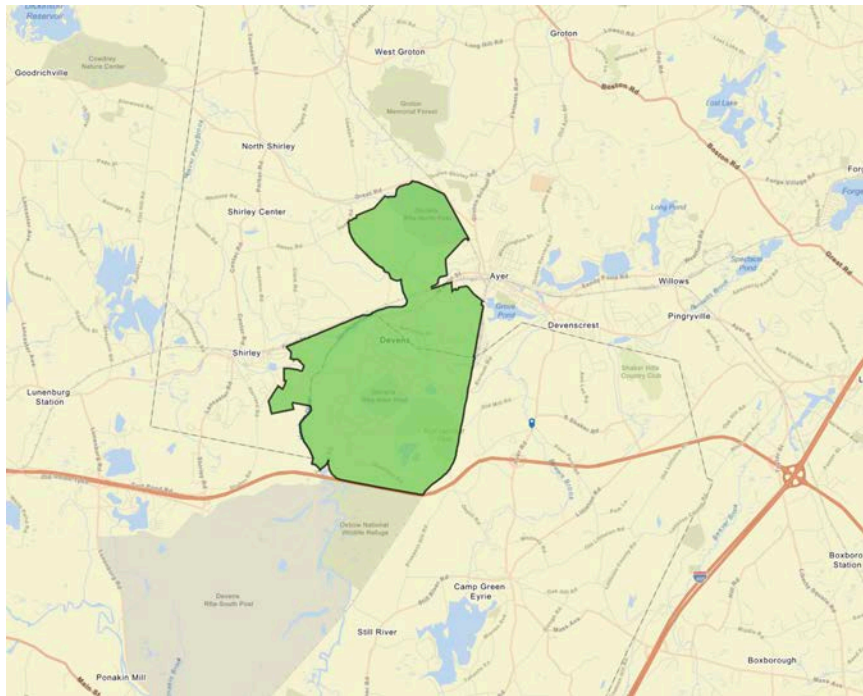
## DEMOGRAPHIC ANALYSIS

The subject region, Harvard's Commercial District (C-District), is located along Ayer Road near the northern edge of town, bracketed between Route 2 to the south and Ayer to the north. As a part of our analysis, we have delineated geographic market areas that we believe are the most relevant to the marketability of development opportunities within the C-District and comprise the potential housing market for residential units within the subject region. The examined market areas include the Town of Harvard and Devens, as well as the Metropolitan Statistical Areas (MSAs) of Greater Worcester and Greater Boston. We have selected these market areas for analysis as we project the residents seeking new housing opportunities will be those already residing locally within Harvard and its surrounding neighborhoods. Additional demand may also come from those residing further within the MSAs who embrace Harvard as an upscale, nature-centric community. Of those currently residing within the region—as further detailed in our Rental and For-Sale Housing Demand Analyses—we believe the target market for residential development in the C-District will mostly involve affluent primary and secondary homeowners, high-income primary and secondary homeowners, young local families, renters by choice, households down-sizing, and older populations seeking walkability. The market areas are summarized as follows:

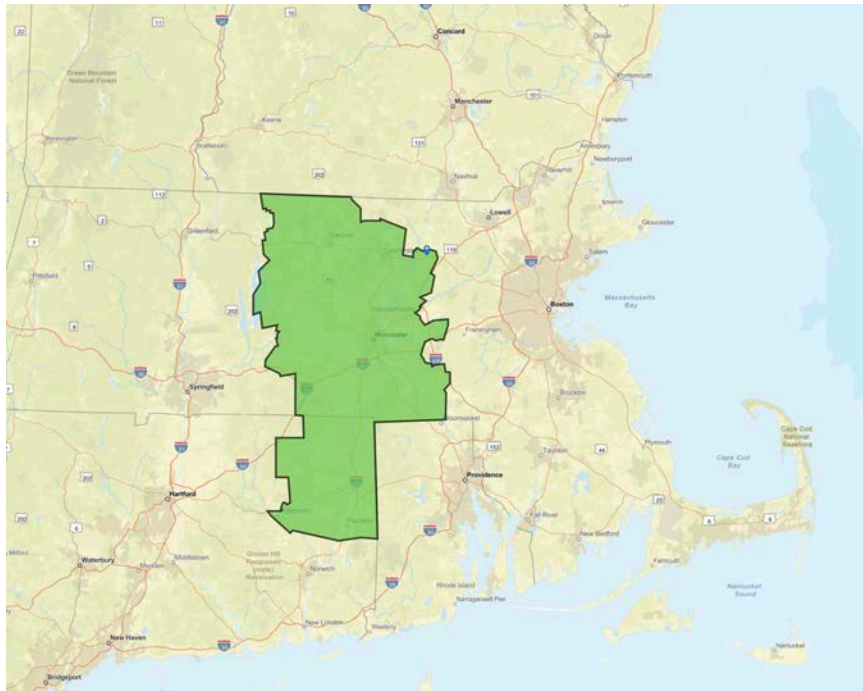
### TOWN OF HARVARD



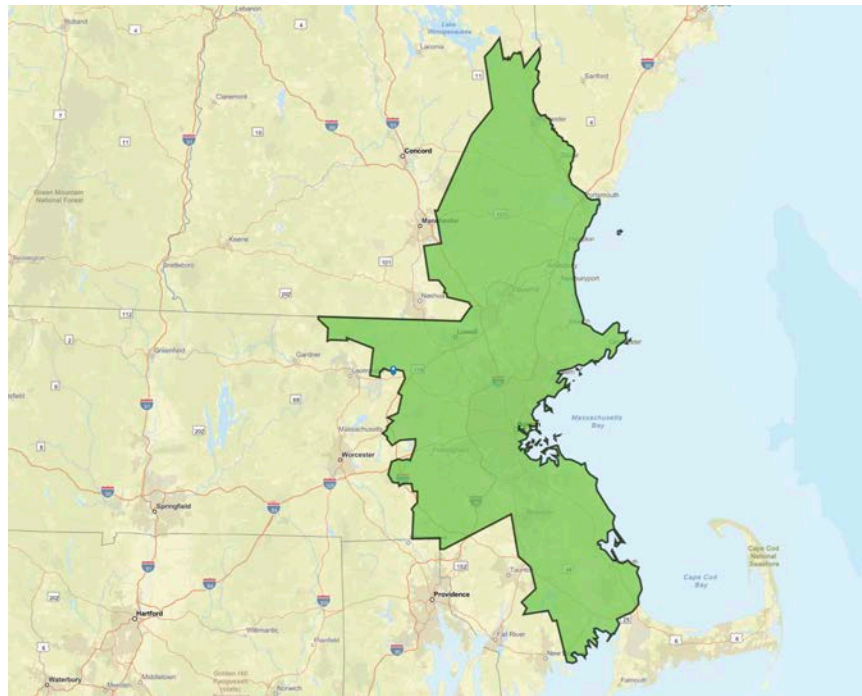
## DEVENS CDP



## WORCESTER METROPOLITAN STATISTICAL AREA



## BOSTON-CAMBRIDGE-NEWTON METROPOLITAN STATISTICAL AREA



We project that many new residents will derive from those already residing within Harvard and its regional neighborhoods. However, well-positioned developments within the C-District may also draw residents from other parts of Greater Worcester and Greater Boston. A review of 2022 population trends for the market areas shows approximately 6,972 residents reside in Harvard, 1,716 residents reside in Devens, and 984,619 residents reside within Greater Worcester. Compared to 2010, Harvard and Greater Worcester grew by 0.6% compounded annually, while Devens compounded annually compressed by 0.4%. Population growth in Harvard almost matched that of Greater Boston to the east, growing just 0.2% slower. Over the next five years, projections in population growth slow across all market areas except Devens, though its growth trends may still be negative. Seeing as Harvard is expected to grow through 2027 at a pace almost triple that of the other markets, there's significant evidence pointing toward the town's growing desirability, especially considering real estate in the area is, on average, valued higher and more spacious. With the right residential products and an activated commercial district, there is significant potential to capture this growing market demand.

Similarly, the number of households increased within each market between 2010 and 2022, with household growth in Harvard outpacing that of Greater Worcester and Greater Boston by 0.2%. While household growth in Devens neared 3.0% compounded annually, this is largely due to its much smaller size (fewer than 200 households). As of 2022, about 2,142 households live in Harvard, 188 households live in Devens, and 380,920 households live in Greater Worcester. Understandably, Greater Boston supports many more at about 1,933,934 households. In line with regional population trends, while household growth in each area is expected to slow through 2027, Harvard is expected to slow the least among the market areas.

In terms of household size, averages trend largest in Devens and second largest in Harvard. Estimates for 2022 show households in Harvard average 2.72 persons in size, while households in Devens average much larger at 3.22 persons. Among both MSAs (Worcester and Boston), the average household size is smaller at 2.50 persons. Of the four, Harvard is the only market projected to experience growth in average household size through 2027.

Considerable growth in average and median household income is expected across all market areas. Between 2022 and 2027, each area is projected to grow between 2.1% and 3.5% compounded annually. Though income growth is slower in Harvard, average and median income levels in the town lead the market. As of 2022, the average household income in Harvard (\$251,589) is between \$104,000 and \$135,800 higher than in the other markets; the median household income in Harvard (\$167,509) is also higher, by about \$63,100 to \$83,200 comparably. This income gap is predicted to grow further over the coming years. By 2027, projections show average and median household income in Harvard reaching \$285,814 and \$186,183, respectively, thus increasing the gaps in average income by up to \$150,000 and median income by up to \$86,000.

The following table summarizes past and projected population and household trends for the four market areas:



TABLE 8  
POPULATION AND HOUSEHOLD TRENDS

	Annual Values			Compounded Annual Growth	
	2010	2022	2027	2010-2022	2022-2027
<b>Town of Harvard</b>					
Population	6,520	6,972	7,082	0.6%	0.3%
Households	1,893	2,142	2,182	1.0%	0.4%
Avg. Household Size	2.76	2.72	2.74	-0.1%	0.1%
Avg. Household Income	-	\$251,589	\$285,814	-	2.6%
Median Household Income	-	\$167,509	\$186,183	-	2.1%
<b>Devens CDP</b>					
Population	1,794	1,716	1,707	-0.4%	-0.1%
Households	132	188	186	3.0%	-0.2%
Avg. Household Size	3.46	3.22	3.21	-0.6%	-0.1%
Avg. Household Income	-	\$142,563	\$167,782	-	3.3%
Median Household Income	-	\$110,677	\$126,289	-	2.7%
<b>Worcester MSA</b>					
Population	916,980	984,619	990,362	0.6%	0.1%
Households	347,890	380,920	384,505	0.8%	0.2%
Avg. Household Size	2.54	2.50	2.49	-0.1%	-0.1%
Avg. Household Income	-	\$115,761	\$135,447	-	3.2%
Median Household Income	-	\$84,298	\$100,022	-	3.5%
<b>Boston-Cambridge MSA</b>					
Population	4,552,402	4,995,283	5,002,052	0.8%	0.0%
Households	1,760,584	1,933,934	1,942,810	0.8%	0.1%
Avg. Household Size	2.50	2.50	2.49	0.0%	-0.1%
Avg. Household Income	-	\$147,562	\$171,495	-	3.1%
Median Household Income	-	\$104,372	\$120,880	-	3.0%

1) 2027 values are projections from Esri (stdb)

Source: [www.stdb.com](http://www.stdb.com); compiled by Weitzman Associates, LLC

In Harvard, 27.9% of the population is under the age of 25, 53.7% of the population is between the ages of 25 and 64, and 18.4% of the population is over the age of 64. When compared to Greater Worcester and Greater Boston, Harvard has on average a higher proportion of residents between the ages of 55 and 64 (18.3%), while maintaining lower levels of residents between the ages of 25 and 44 (18.9%). However, Harvard's senior (ages over 64) and young adult (ages 25 to 44) populations are growing fast. Compared to the Worcester and Boston MSAs, Harvard's growth projections in both categories average about 2% faster, compounded annually, between 2022 and 2027. Additionally, seniors are expected to compose 23% of Harvard's population by 2027, higher than Devens, Greater Worcester, and Greater Boston. Considering Harvard's shifting demographics, it's important to provide housing offerings that cater to the needs of these age groups—especially senior residents as there currently are no alternative residential options available other than larger, single-family homes. The following table summarizes past and projected population distribution by age group in the market areas:

TABLE 9  
POPULATION DISTRIBUTION BY AGE

	2010		2022		2027		Compounded Annual Growth	
	#	%	#	%	#	%	2010-2022	2022-2027
<b>Town of Harvard</b>								
Under 25	1,976	30.3%	1,945	27.9%	1,792	25.3%	-0.1%	-1.6%
25 - 34	717	11.0%	627	9.0%	708	10.0%	-1.1%	2.4%
35 - 44	763	11.7%	690	9.9%	744	10.5%	-0.8%	1.5%
45 - 54	1,382	21.2%	1,150	16.5%	1,041	14.7%	-1.5%	-2.0%
55 - 64	1,004	15.4%	1,276	18.3%	1,183	16.7%	2.0%	-1.5%
Over 64	678	10.4%	1,283	18.4%	1,615	22.8%	5.5%	4.7%
Total	6,520	100.0%	6,972	100.0%	7,082	100.0%	0.6%	0.3%
<b>Devens CDP</b>								
Under 25	504	28.1%	405	23.6%	392	23.0%	-1.8%	-0.6%
25 - 34	579	32.3%	417	24.3%	425	24.9%	-2.7%	0.4%
35 - 44	274	15.3%	326	19.0%	326	19.1%	1.4%	0.0%
45 - 54	308	17.2%	281	16.4%	268	15.7%	-0.8%	-1.0%
55 - 64	74	4.1%	165	9.6%	160	9.4%	7.0%	-0.5%
Over 64	54	3.0%	122	7.1%	136	8.0%	7.0%	2.3%
Total	1,793	100.0%	1,715	100.0%	1,705	100.1%	-0.4%	-0.1%
<b>Worcester MSA</b>								
Under 25	302,603	33.0%	294,401	29.9%	283,244	28.6%	-0.2%	-0.8%
25 - 34	106,370	11.6%	127,016	12.9%	125,776	12.7%	1.5%	-0.2%
35 - 44	129,294	14.1%	121,108	12.3%	130,728	13.2%	-0.5%	1.5%
45 - 54	150,385	16.4%	130,954	13.3%	121,815	12.3%	-1.1%	-1.4%
55 - 64	110,955	12.1%	138,831	14.1%	130,728	13.2%	1.9%	-1.2%
Over 64	117,373	12.8%	172,308	17.5%	198,072	20.0%	3.3%	2.8%
Total	916,980	100.0%	984,619	100.0%	990,362	100.0%	0.6%	0.1%
<b>Boston-Cambridge MSA</b>								
Under 25	1,456,769	32.0%	1,473,608	29.5%	1,415,581	28.3%	0.1%	-0.8%
25 - 34	619,127	13.6%	699,340	14.0%	695,285	13.9%	1.0%	-0.1%
35 - 44	628,231	13.8%	634,401	12.7%	670,275	13.4%	0.1%	1.1%
45 - 54	705,622	15.5%	629,406	12.6%	600,246	12.0%	-0.9%	-0.9%
55 - 64	546,288	12.0%	674,363	13.5%	630,259	12.6%	1.8%	-1.3%
Over 64	591,812	13.0%	884,165	17.7%	995,408	19.9%	3.4%	2.4%
Total	4,552,402	99.9%	4,995,283	100.0%	5,002,052	100.1%	0.8%	0.0%

1) 2027 values are projections from Esri (stdb)

Source: www.stdb.com; compiled by Weitzman Associates, LLC

As of 2022, 56.9% of Harvard households earn greater than \$150,000, averaging between 23.5% and 33.4% more than Devens and the broader MSAs. Notably 40.6% of these households earn above \$200,000, while the MSAs' households in this bracket average below 20.0%. When inclusive of those earning above \$100,000, Harvard's percent of wealthy households increases to 75.4%, a trend projected to continue over the next five years. By 2027, approximately 82.8% of Harvard households will earn above \$100,000, of which 45.7% will earn above \$200,000, evidencing the strength of Harvard's purchasing power. The following table presents a summary of the distribution of households by income:

TABLE 10  
HOUSEHOLD INCOME DISTRIBUTION

Household Income	Annual Values		Compounded Annual Growth
<b>Town of Harvard</b>	2022	2027	2022-2027
Less than \$25,000	3.9%	2.6%	-7.8%
\$25,000 - \$49,999	6.7%	4.7%	-6.8%
\$50,000 - \$74,999	7.3%	4.9%	-7.7%
\$75,000 - \$99,999	6.7%	5.0%	-5.7%
\$100,000 - \$149,999	18.5%	17.2%	-1.4%
\$150,000 - \$199,999	16.3%	19.9%	4.1%
Greater than \$200,000	40.6%	45.7%	2.4%
<b>Devens CDP</b>	2022	2027	2022-2027
Less than \$25,000	2.1%	1.6%	-5.3%
\$25,000 - \$49,999	12.3%	10.8%	-2.6%
\$50,000 - \$74,999	20.3%	10.8%	-11.9%
\$75,000 - \$99,999	4.8%	3.8%	-4.6%
\$100,000 - \$149,999	32.1%	35.1%	1.8%
\$150,000 - \$199,999	9.6%	14.1%	8.0%
Greater than \$200,000	18.7%	23.8%	4.9%
<b>Worcester MSA</b>	2022	2027	2022-2027
Less than \$25,000	14.0%	11.0%	-4.7%
\$25,000 - \$49,999	16.0%	13.5%	-3.3%
\$50,000 - \$74,999	14.4%	12.9%	-2.2%
\$75,000 - \$99,999	13.1%	12.6%	-0.8%
\$100,000 - \$149,999	19.2%	20.3%	1.1%
\$150,000 - \$199,999	11.6%	15.0%	5.3%
Greater than \$200,000	11.9%	14.7%	4.3%
<b>Boston-Cambridge MSA</b>	2022	2027	2022-2027
Less than \$25,000	12.0%	9.1%	-5.4%
\$25,000 - \$49,999	11.5%	9.2%	-4.4%
\$50,000 - \$74,999	12.5%	11.0%	-2.5%
\$75,000 - \$99,999	11.6%	10.7%	-1.6%
\$100,000 - \$149,999	19.0%	19.3%	0.3%
\$150,000 - \$199,999	13.4%	16.7%	4.5%
Greater than \$200,000	20.0%	23.9%	3.6%

1) 2027 values are projections from Esri (stdb)

Source: [www.stdb.com](http://www.stdb.com); compiled by Weitzman Associates, LLC

As one could expect based on the average income levels of the region, Harvard has the highest percentage of highly-educated individuals compared to Devens and the broader MSAs. Of those older than 25, roughly 67.6% of its population is comprised of those with a Bachelor's Degree or higher, compared to the 32.0% of Devens, 37.7% of Greater Worcester, and 51.1% of Greater Boston. Of those with a Master's Degree or higher, Harvard holds 20.5% more of these individuals than Devens, 19.0% more than Greater Worcester, and 10.3% more than Greater Boston. Considering Harvard's substantial affluence and impressive educational attainment levels, the Ayer Road Commercial District is well positioned to serve a community already primed with need, capacity, and demand.

TABLE 11  
**DISTRIBUTION OF POPULATION OLDER THAN 25 BY EDUCATIONAL ATTAINMENT**  
NUMBER OF PERSONS  
2022

Education	Town of Harvard		Devens CDP	
	#	%	#	%
Less than 9th Grade	50	1.0%	10	0.8%
9th - 12th Grade, No diploma	65	1.3%	45	3.4%
High School Graduate	437	8.7%	156	11.9%
GED/Alternative Credential	286	5.7%	275	21.0%
Some College, No Degree	628	12.5%	296	22.6%
Associate Degree	161	3.2%	109	8.3%
Bachelor's Degree	1,679	33.4%	240	18.3%
Master's/Professional/Doctorate Degree	1,719	34.2%	179	13.7%
Total	5,026	100.0%	1,309	100.0%
Education	Worcester MSA		Boston-Cambridge MSA	
	#	%	#	%
Less than 9th Grade	18,635	2.7%	119,705	3.4%
9th - 12th Grade, No diploma	36,579	5.3%	119,705	3.4%
High School Graduate	169,783	24.6%	683,022	19.4%
GED/Alternative Credential	27,607	4.0%	91,539	2.6%
Some College, No Degree	111,118	16.1%	450,654	12.8%
Associate Degree	66,947	9.7%	257,014	7.3%
Bachelor's Degree	155,289	22.5%	957,639	27.2%
Master's/Professional/Doctorate Degree	104,907	15.2%	841,455	23.9%
Total	690,175	100.1%	3,520,733	100.0%

Source: [www.stdb.com](http://www.stdb.com); compiled by Weitzman Associates, LLC

*Demographics Conclusion:*

Based on the preceding demographic analysis, residential and commercial developments would be well-positioned to benefit from the population and income growth within Harvard. Furthermore, considering its regional proximity, Harvard should also stand to benefit from the mature and rich markets of Greater Boston. The accelerating growth projected over the next few years in Harvard—particularly in population, age demographics, and annual income—can be attributed to the town's growing desirability. Although the region has been significantly impacted by the COVID-19 pandemic, the Harvard market, adjacent neighborhoods, and broader MSAs have strong resilient qualities and are anticipated to fully recover.

EMPLOYMENT TRENDS: BOSTON AND WORCESTER MSAs

Although Harvard is located properly in Worcester, the town has more significant economic connections to Greater Boston given its Boston's stronger urban presence and larger employment base, especially considering most Harvard residents are employed outside the county within the Boston region. Thus, our analysis places greater emphasis on the Boston Metropolitan Statistical Area (MSA) to properly gauge non-farm employment performance as it relates to Harvard, though we also provide data trends for Greater Worcester as a reference.

The Boston and Worcester MSAs have seen consistent employment growth since 2012. Since declining by 8.3% (Boston) and 7.2% (Worcester) in 2020, due to the pandemic's recessionary effect on the national economy, non-farm employment in both metropolitan regions has rebounded significantly. From the onset of the pandemic through May 2022, non-farm employment swiftly grew by 7.5% in Greater Boston and 6.5% in Greater Worcester, though both areas still remain slightly below 2019 levels (between 0.7% and 0.8%). Overall, between 2012 to May 2022, non-farm employment in the MSAs have grown by 0.9% (Boston) and 0.6% (Worcester) compounded annually, adding a net total of 280,308 and 20,383 new jobs, respectively.

As of 2022, the Educational and Health Services sector serves as the largest employment sector in both MSAs, comprising 21.8% (Boston) and 24.1% (Worcester) of total non-farm employment. The Educational and Health Services sector currently supports approximately 597,800 employees in Greater Boston, with an additional 68,100 employees supported in Greater Worcester. Similarly between both metro areas, the Professional and Business Services sector has grown fast over recent years, experiencing the largest distribution change over the last three-, five-, and ten-year periods. Over the last 10 years, the Professional and Business Services sector's share of total non-farm employment has grown by 2.48% in the Boston MSA and 1.59% in the Worcester MSA, with 1.09% and 1.24% of this distribution change, respectively, occurring over the last three years. In Greater Boston, the Professional and Business Services sector has grown by 116,983 employees since 2012, or 2.1% compounded annually. Overall, the Total Services sector—inclusive of Professional and Business Services, Educational and Health Services, Leisure and Hospitality Services, and Other Services—accounts for 53.4% of total non-farm employment in Greater Boston and 47.4% in Greater Worcester.

In Greater Boston, the Mining, Logging, and Construction sector has grown the fastest over the last five- and ten-year periods, followed by the Professional and Business Services sector and the Educational and Health Services sector. Over the last ten years, these sectors have respectively grown by 4.02%, 2.29%, and 1.53%



compounded annually. However, over the last three years, the Professional and Business Services sector grew much faster than the Mining, Logging, and Construction sector, growing 0.47% faster in Greater Boston and 3.55% faster in Greater Worcester.

Given Boston's fiscal health and prospects for growth are brighter than most major metro areas—outpacing all but one dozen of the nation's major metro areas—Harvard's workforce is capable of returning some of this economic viability back into the town through heightened consumer spending within an activated commercial district.

**TABLE 12**  
EMPLOYMENT TRENDS  
BOSTON METROPOLITAN STATISTICAL AREA

	<u>Total Employment in Thousands</u>											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 (2)	May 2022 *
Mining, Logging, and Construction	83.8	89.3	94.6	103.7	109.4	112.4	118.1	122.5	113.7	123.0	124.2	130.4
Manufacturing	190.3	189.6	188.7	187.9	185.0	185.5	187.2	188.3	178.1	178.7	182.4	184.8
Trade, Transportation, and Utilities	402.1	406.5	411.1	417.8	422.3	425.2	425.8	427.4	388.8	399.5	406.2	408.3
Information	76.7	76.4	77.4	79.3	80.3	81.9	81.5	83.1	81.0	81.7	84.1	85.8
F.I.R.E. (1)	176.6	176.9	177.4	180.5	184.2	184.8	185.1	186.4	182.6	181.9	179.0	178.4
Professional and Business Services	424.7	439.1	449.9	465.3	479.0	491.3	503.6	517.5	499.9	515.7	532.4	541.7
Educational and Health Services	513.0	522.8	535.1	549.9	563.9	573.8	579.1	597.3	563.5	581.0	597.2	597.8
Leisure and Hospitality Services	237.7	245.4	251.9	257.7	266.2	272.8	277.7	281.8	192.2	213.8	232.1	253.2
Other Services	96.9	97.9	98.9	99.4	100.3	100.9	102.3	103.0	85.6	91.2	94.2	95.0
Government	302.5	304.8	310.5	309.7	311.8	310.0	310.7	312.6	301.4	300.2	306.9	309.2
Total Non-Farm Employment	2,504.3	2,548.7	2,595.6	2,650.9	2,702.4	2,738.4	2,771.0	2,819.9	2,586.8	2,666.6	2,738.7	2,784.6
Annual Change		1.8%	1.8%	2.1%	1.9%	1.3%	1.2%	1.8%	-8.3%	3.1%	2.7%	1.7%
	<u>Compounded Annual Change</u>											
	2012- 2022	2013- 2022	2014- 2022	2015- 2022	2016- 2022	2017- 2022	2018- 2022	2019- 2022	2020- 2022	2021- 2022	2021 - May	
Mining, Logging, and Construction	4.0%	3.7%	3.5%	2.6%	2.1%	2.0%	1.3%	0.5%	4.5%	1.0%	6.0%	
Manufacturing	-0.4%	-0.4%	-0.4%	-0.4%	-0.2%	-0.3%	-0.6%	-1.1%	1.2%	2.1%	3.4%	
Trade, Transportation, and Utilities	0.1%	0.0%	-0.2%	-0.4%	-0.6%	-0.9%	-1.2%	-1.7%	2.2%	1.7%	2.2%	
Information	0.9%	1.1%	1.0%	0.8%	0.8%	0.5%	0.8%	0.4%	1.9%	2.9%	5.0%	
F.I.R.E. (1)	0.1%	0.1%	0.1%	-0.1%	-0.5%	-0.6%	-0.8%	-1.3%	-1.0%	-1.6%	-1.9%	
Professional and Business Services	2.3%	2.2%	2.1%	1.9%	1.8%	1.6%	1.4%	0.9%	3.2%	3.2%	5.0%	
Educational and Health Services	1.5%	1.5%	1.4%	1.2%	1.0%	0.8%	0.8%	0.0%	2.9%	2.8%	2.9%	
Leisure and Hospitality Services	-0.2%	-0.6%	-1.0%	-1.5%	-2.3%	-3.2%	-4.4%	-6.3%	9.9%	8.5%	18.4%	
Other Services	-0.3%	-0.4%	-0.6%	-0.8%	-1.0%	-1.4%	-2.0%	-2.9%	4.9%	3.3%	4.2%	
Government	0.1%	0.1%	-0.1%	-0.1%	-0.3%	-0.2%	-0.3%	-0.6%	0.9%	2.2%	3.0%	
Total Non-Farm Employment	0.9%	0.8%	0.7%	0.5%	0.2%	0.0%	-0.3%	-1.0%	2.9%	2.7%	4.4%	
	<u>Employment Distribution</u>											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 (2)	May 2022 *
Mining, Logging, and Construction	3.3%	3.5%	3.6%	3.9%	4.0%	4.1%	4.3%	4.3%	4.4%	4.6%	4.5%	4.7%
Manufacturing	7.6%	7.4%	7.3%	7.1%	6.8%	6.8%	6.8%	6.7%	6.9%	6.7%	6.7%	6.6%
Trade, Transportation, and Utilities	16.1%	15.9%	15.8%	15.8%	15.6%	15.5%	15.4%	15.2%	15.0%	15.0%	14.8%	14.7%
Information	3.1%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	3.1%	3.1%	3.1%	3.1%
F.I.R.E. (1)	7.1%	6.9%	6.8%	6.8%	6.8%	6.7%	6.7%	6.6%	7.1%	6.8%	6.5%	6.4%
Professional and Business Services	17.0%	17.2%	17.3%	17.6%	17.7%	17.9%	18.2%	18.4%	19.3%	19.3%	19.4%	19.5%
Educational and Health Services	20.5%	20.5%	20.6%	20.7%	20.9%	21.0%	20.9%	21.2%	21.8%	21.8%	21.8%	21.5%
Leisure and Hospitality Services	9.5%	9.6%	9.7%	9.7%	9.9%	10.0%	10.0%	10.0%	7.4%	8.0%	8.5%	9.1%
Other Services	3.9%	3.8%	3.8%	3.7%	3.7%	3.7%	3.7%	3.7%	3.3%	3.4%	3.4%	3.4%
Government	12.1%	12.0%	12.0%	11.7%	11.5%	11.3%	11.2%	11.1%	11.7%	11.3%	11.2%	11.1%
Total Non-Farm Employment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

(1) Finance, Insurance, and Real Estate

(2) Represents the monthly average figure for January through April. May 2022 data is preliminary.

(\*) Preliminary data.

Source: The Bureau of Labor Statistics; compiled by Weitzman Associates, LLC

**TABLE 13**  
**EMPLOYMENT TRENDS**  
**WORCESTER METROPOLITAN STATISTICAL AREA**

	<u>Total Employment in Thousands</u>											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 (4)	May 2022 *
Mining, Logging, and Construction	8.9	9.2	9.5	10.0	10.6	11.0	11.4	11.2	10.9	11.8	11.0	11.8
Manufacturing	27.6	27.0	27.2	27.7	27.8	27.4	27.9	28.1	26.5	26.6	26.9	27.1
Trade (1)	39.8	40.4	41.0	40.7	40.6	40.4	39.7	38.9	36.1	37.6	38.1	38.1
Transportation and Utilities (2)	10.7	11.2	11.9	12.0	12.7	13.1	13.5	13.9	13.6	14.4	14.9	14.9
Information	3.7	3.7	3.7	3.9	3.9	3.7	3.6	3.3	2.9	2.9	2.8	2.9
F.I.R.E. (3)	15.0	14.8	15.0	15.0	14.9	14.9	14.9	14.7	14.4	14.0	13.4	13.3
Professional and Business Services	26.1	25.9	26.2	26.5	27.7	28.3	29.0	29.4	28.0	30.8	32.1	33.2
Educational and Health Services	61.5	62.5	63.7	65.3	66.3	67.9	68.5	70.4	66.5	67.2	68.0	68.1
Leisure and Hospitality Services	23.0	23.4	24.0	24.4	24.9	25.5	25.6	25.7	19.2	21.7	23.0	24.8
Other Services	9.2	9.9	10.2	10.4	10.6	10.6	10.6	10.6	8.9	9.5	9.7	9.7
Government	41.0	42.1	42.9	42.9	43.1	43.2	43.5	43.8	42.0	42.0	42.6	42.9
Total Non-Farm Employment	266.4	270.2	275.2	278.8	283.2	286.1	288.1	289.9	269.0	278.6	282.5	286.8
Annual Change		1.4%	1.9%	1.3%	1.6%	1.0%	0.7%	0.6%	-7.2%	3.6%	1.4%	1.5%
	<u>Compounded Annual Change</u>											
	2012-2022	2013-2022	2014-2022	2015-2022	2016-2022	2017-2022	2018-2022	2019-2022	2020-2022	2021-2022	2021 - May	
Mining, Logging, and Construction	2.1%	2.0%	1.8%	1.4%	0.6%	-0.1%	-0.9%	-0.5%	0.4%	-6.8%	0.2%	
Manufacturing	-0.3%	-0.1%	-0.1%	-0.4%	-0.6%	-0.4%	-1.0%	-1.5%	0.7%	1.1%	2.0%	
Trade (1)	-0.4%	-0.6%	-0.9%	-0.9%	-1.0%	-1.1%	-1.0%	-0.6%	2.8%	1.3%	1.2%	
Transportation and Utilities (2)	3.4%	3.2%	2.8%	3.1%	2.7%	2.6%	2.6%	2.5%	4.6%	3.4%	3.4%	
Information	-2.5%	-2.8%	-3.3%	-4.4%	-5.0%	-5.2%	-5.6%	-5.0%	-1.5%	-2.1%	0.0%	
F.I.R.E. (3)	-1.1%	-1.1%	-1.4%	-1.6%	-1.8%	-2.2%	-2.6%	-3.1%	-3.6%	-4.6%	-5.2%	
Professional and Business Services	2.1%	2.4%	2.6%	2.8%	2.5%	2.6%	2.6%	3.0%	7.1%	4.4%	7.8%	
Educational and Health Services	1.0%	0.9%	0.8%	0.6%	0.4%	0.0%	-0.2%	-1.2%	1.2%	1.2%	1.3%	
Leisure and Hospitality Services	0.0%	-0.2%	-0.5%	-0.8%	-1.4%	-2.1%	-2.7%	-3.7%	9.4%	5.9%	14.2%	
Other Services	0.5%	-0.3%	-0.7%	-1.1%	-1.6%	-1.9%	-2.3%	-3.0%	4.4%	1.9%	2.3%	
Government	0.4%	0.1%	-0.1%	-0.1%	-0.2%	-0.3%	-0.5%	-0.9%	0.7%	1.4%	2.1%	
Total Non-Farm Employment	0.6%	0.5%	0.3%	0.2%	0.0%	-0.2%	-0.5%	-0.9%	2.5%	1.4%	3.0%	
	<u>Employment Distribution</u>											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 (4)	May 2022 *
Mining, Logging, and Construction	3.3%	3.4%	3.5%	3.6%	3.7%	3.9%	3.9%	3.8%	4.1%	4.2%	3.9%	4.1%
Manufacturing	10.4%	10.0%	9.9%	9.9%	9.8%	9.6%	9.7%	9.7%	9.8%	9.5%	9.5%	9.4%
Trade (1)	15.0%	14.9%	14.9%	14.6%	14.3%	14.1%	13.8%	13.4%	13.4%	13.5%	13.5%	13.3%
Transportation and Utilities (2)	4.0%	4.1%	4.3%	4.3%	4.5%	4.6%	4.7%	4.8%	5.1%	5.2%	5.3%	5.2%
Information	1.4%	1.4%	1.4%	1.4%	1.4%	1.3%	1.2%	1.1%	1.1%	1.0%	1.0%	1.0%
F.I.R.E. (3)	5.6%	5.5%	5.4%	5.4%	5.3%	5.2%	5.2%	5.1%	5.4%	5.0%	4.7%	4.6%
Professional and Business Services	9.8%	9.6%	9.5%	9.5%	9.8%	9.9%	10.1%	10.1%	10.4%	11.1%	11.4%	11.6%
Educational and Health Services	23.1%	23.1%	23.1%	23.4%	23.4%	23.7%	23.8%	24.3%	24.7%	24.1%	24.1%	23.7%
Leisure and Hospitality Services	8.6%	8.7%	8.7%	8.8%	8.8%	8.9%	8.9%	8.9%	7.1%	7.8%	8.1%	8.6%
Other Services	3.5%	3.7%	3.7%	3.7%	3.8%	3.7%	3.7%	3.6%	3.3%	3.4%	3.4%	3.4%
Government	15.4%	15.6%	15.6%	15.4%	15.2%	15.1%	15.1%	15.1%	15.6%	15.1%	15.1%	15.0%
Total Non-Farm Employment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

(1) Wholesale and Retail Trade  
 (2) Transportation, Warehousing, and Public Utilities  
 (3) Finance, Insurance, and Real Estate  
 (4) Represents the monthly average figure for January through April. May 2022 data is preliminary.  
 (\*) Preliminary data.

Source: The Bureau of Labor Statistics; compiled by Weitzman Associates, LLC

## UNEMPLOYMENT TRENDS

From 2008 to 2010, unemployment rates in Massachusetts and across the United States significantly increased as the economy entered into The Great Recession, which sparked a series of job layoffs. However, the economy rebounded significantly through 2019 prior to the onset of the pandemic, which uniformly spiked unemployment across the country. As of the second quarter of 2022, the national and local levels have returned near pre-pandemic lows. As of May 2022, unemployment nationally sits at approximately 3.4%. However, the rates for the State (3.4%), Boston MSA (3.0%), Worcester MSA (3.5%), and Town of Harvard (2.8%) still sit slightly above 2019 levels, though are projected to improve with time. A gradual recovery will be driven by local commercial and leisure restrictions. The unemployment rates of the past decade for the United States, Massachusetts, Greater Boston (MSA), Greater Worcester (MSA), Town of Harvard, City of Boston, and select counties near the subject region are presented in the following table:

TABLE 14  
UNEMPLOYMENT TRENDS  
2012 - 2022

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	May 2022	Jun 2022
<b>Town of Harvard</b>	<b>5.5%</b>	<b>5.0%</b>	<b>4.3%</b>	<b>3.6%</b>	<b>2.9%</b>	<b>3.0%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>5.9%</b>	<b>4.0%</b>	<b>2.4%</b>	<b>2.8%</b>	-
City of Boston	6.1%	6.1%	5.2%	4.4%	3.7%	3.5%	3.1%	2.7%	9.9%	5.8%	3.5%	3.2%	-
Worcester County	7.2%	7.1%	6.1%	5.1%	4.3%	4.0%	3.7%	3.3%	9.4%	5.9%	4.1%	3.5%	-
Middlesex County	5.4%	5.4%	4.7%	3.9%	3.3%	3.1%	2.8%	2.4%	7.8%	4.6%	3.0%	2.7%	-
Suffolk County	6.2%	6.1%	5.3%	4.4%	3.7%	3.5%	3.1%	2.7%	10.3%	6.0%	3.6%	3.3%	-
Worcester MSA	7.4%	7.2%	6.2%	5.1%	4.3%	4.0%	3.7%	3.3%	9.0%	5.8%	4.0%	3.5%	-
Boston MSA	6.1%	6.1%	5.2%	4.3%	3.6%	3.5%	3.1%	2.8%	9.0%	5.3%	3.5%	3.0%	-
Massachusetts	6.7%	6.6%	5.7%	4.8%	4.0%	3.8%	3.5%	3.1%	9.5%	5.7%	4.0%	3.4%	-
United States	8.1%	7.4%	6.2%	5.3%	4.9%	4.4%	3.9%	3.7%	8.1%	5.4%	3.8%	3.4%	3.8%

(1) Represents monthly average employment rate for the calendar year.

(2) All most recent month data is preliminary.

(3) Data as of July 2022

Source: The Bureau of Labor Statistics; compiled by Weitzman Associates, LLC.

GRAPH I  
UNEMPLOYMENT TRENDS  
2012 - 2022



#### Employment Conclusion:

The economic outlook for the overall local area remains positive. While regional unemployment still sits slightly above 2019 levels, this is projected to improve with time. Despite Harvard's ongoing recovery from the Coronavirus pandemic, unemployment levels in the town remain below national and regional averages. The Educational and Health Services sector endures as the the largest employment sector in both MSAs (Worcester and Boston), inclusive of Harvard. Similarly between both metro areas, the Professional and Business Services sector has grown fast over recent years, experiencing the largest distribution change over the last three-, five-, and ten-year periods. In Harvard as of 2022, the Educational and Health Services sector and Professional and Business Services sector held the largest and third-largest shares of total-non-farm employment, comprising 25.4% and 14.9% of total employment, respectively. Despite the pandemic's impact on regional and national employment, the Boston and Worcester MSAs have shown a positive compounded annual growth rate of 0.9% and 0.6%, respectively, between 2011 and May 2022. Overall, the demand for residential and commercial real estate should continue to be robust in Harvard, with potential for similar demand in the Commercial District following the necessary, catalyzing redevelopment.

## MAJOR EMPLOYERS: NORTH CENTRAL MASSACHUSETTS

According to the North Central Massachusetts Development Corporation, North Central Massachusetts comprises 27 communities<sup>6</sup> spread over 800 square-miles, presenting ample available space for new construction and downtown development. Within North Central Massachusetts, Health Care and Manufacturing are the most prevalent industries among top private-sector employers. Of the top ten employers highlighted below, 2,964 employees are in Health Care, and 1,805 are in Manufacturing. The three largest employers in North Central Massachusetts are the Health Alliance Hospital Burbank (1,464 employees), Future Electronics Corp. (1,100 employees), and Nypro Inc. (1,000 employees). Future Electronics Corp. is a large technology supplier and distributor, and Nypro Inc. is an advanced plastics manufacturer. Other notable large employers in the region include the Henry Heywood Memorial Hospital, Sterilite, and Fitchburg State College.

Per the North Central Massachusetts Development Corporation, the following table summarizes the top private-sector employers in North Central Massachusetts as of 2022:

TABLE 15  
**TOP PRIVATE SECTOR EMPLOYERS**  
North Central Massachusetts

Company	Industry	# of Employees
Health Alliance Hospital – Burbank	Health Care	1,464
Future Electronics Corp	Technology	1,100
Nypro Inc.	Manufacturing	1,000
Henry Heywood Memorial Hospital	Health Care	1,000
Sterilite Corp.	Manufacturing	605
Fitchburg State College	Education	550
MCI Shirley Complex	Prison	500
Nashoba Valley Medical Center	Health Care	500
Wachusett Mountain Ski Area	Hospitality	225
Simplex Grinnell	Manufacturing	200

*Source: North Central Massachusetts Development Corporation; compiled by Weitzman Associates, LLC*

<sup>6</sup> North Central Massachusetts consists of 27 communities: Ashburnham, Ashby, Athol, Ayer, Barre, Clinton, Devens, Fitchburg, Gardner, Groton, Harvard, Hubbardston, Lancaster, Leominster, Lunenburg, Orange, Pepperell, Petersham, Phillipston, Princeton, Royalston, Shirley, Sterling, Templeton, Townsend, Westminster, and Winchendon



Given Harvard sits between North Central and Metro West Massachusetts, we have prepared several brief descriptions of the top private employers within both regions, as follow:

*Boston Scientific – (14.5 miles from C-District)*

Boston Scientific is a biomedical/biotechnology corporation headquartered in Marlborough, MA. Founded in 1979, the company specializes in producing specialized devices that focus on minimizing invasiveness of various medical procedures. With over 41,000 employees worldwide and \$11.9 billion in sales in 2021, Boston Scientific is one of the largest and most prominent biotechnology companies focused on cutting-edge technology. Ranked 319 on the Fortune 500 and listed on the New York Stock Exchange, Boston Scientific looks to continue expanding its businesses and developing new products.

The Marlborough headquarters, opened in 2014, specializes in Endoscopy and Urology & Women's health divisions of its business. It includes state-of-the-art amenities for communication and innovation that allows for further product development and efficiency.

*Hologic – (19.2 miles from C-District)*

Hologic is a women's medical company based in Marlborough, MA. Since its founding in 1985, Hologic has focused on using lab technologies to help medical professionals worldwide diagnose and treat female patients. Promoting women's health equality through its Project Health Equality, Hologic serves communities beyond the scope of its products and technologies. With over 3,000 patents and business in more than 100 countries and territories, Hologic is one of the premier women's health companies in the world.

Hologic's headquarters in Marlborough operates as center for Hologic's logistic and administrative base, helping serve the surrounding community and beyond.

*Sandisk – (15.8 miles from C-District)*

Sandisk is a technology company specializing in flash drives, memory cards, and other memory products. Headquartered in Milpitas, CA, it was founded in 1988. Manufactured and operated by Western Digital, Sandisk is one of many brands that make up the international technology company. Western Digital and Sandisk focus on technological innovation to create business and consumer solutions globally. Sandisk products are used by people in almost every nation to store and transport data and other information. In an age where digital technology plays a critical role in the global economy, Sandisk is an important supplier of products. In Marlborough, Sandisk's office focuses on product innovation, efficiency, and job creation in Marlborough.

*TJX – (22.9 miles from C-District)*

TJX is a department store corporation headquartered in Framingham, MA. Founded in 1987, TJX is one of the largest department store corporations in the nation. Owning brands such as T.J. Maxx, HomeGoods, and Homesense, TJX has a strong nationwide presence, particularly in the off-price category. TJX offers a variety

of products at discount in over 4,700 stores spread across nine different countries. A perennial top performer, TJX was ranked 75<sup>th</sup> in the Fortune 500.

*Bose – (25.5 miles from C-District)*

Bose is an audio technology company based in Framingham, MA. Founded in 1964, Bose is a pioneer of headphone and speaker technology. With a sales revenue of \$3.2 billion in 2021, Bose is one of the largest and well-known audio system manufacturers in the world. Used by all people from Olympic athletes to pilots, Bose products are a staple of modern society. The Bose headquarters in Framingham has served as a hub of innovation since the company's founding and has created countless job opportunities in the area.

*Raytheon – (18.6 miles from C-District)*

Raytheon is a US defense contractor that produces weapons and military technology. Founded in 1922, Raytheon is one of the most prominent defense companies in the United States. With brands such as Collins Aerospace, Pratt & Whitney, Raytheon Intelligence & Space, and Raytheon Missiles and Defense. Raytheon focuses on developing the most advanced and efficient aerospace technologies for commercial and defense superiority applications. Partnered with the US military on several projects, Raytheon is the world's largest producer of guided missiles. Raytheon's Marlborough division is part of the Navigation, Measuring, Electromedical, and Control Instruments manufacturing division.

*Staples – (21.6 miles from C-District)*

Staples is an office retail company founded in 1986. Based in Framingham, MA, Staples is one of the largest office suppliers and business-to-business delivery operations in the United States. Along with offering office supplies, Staples also offers facilities management, print, and design services. With over 1,067 stores in the United States, Staples has maintained a dominant position in the office supplies market for years. Its Framingham headquarters serves as a base of operations for the Fortune 500 company, creating a myriad of opportunities for development inside of the company's array of services and within the Framingham community.

*Sanofi Genzyme – (31.3 miles from C-District)*

Sanofi Genzyme is a biotechnology company based in Cambridge, MA. One of the premiere global healthcare companies in the world since 1981, Sanofi focuses on using scientific innovation and discovery to improve the practice of medicine and provide life-changing treatments to people. By pushing the boundaries of science daily, Sanofi strives to achieve the newest and most effective vaccines and medicines. With over 70 manufacturing sites and 20 R&D sites across 100 countries, Sanofi is creating and making available top treatments and specialty care items for a wide market. Framingham houses one of Sanofi's premier manufacturing facilities, is the recipient of many sustainability and efficiency awards for its cutting edge and emission-reducing equipment. Opened in 2019, it's Cambridge office serves as a hub of production for the company's substantial distribution network.

*Future Electronics Corp – (8.2 miles from C-District)*

Future Electronics is an electronics distributor founded in 1968. The Corporation focuses on bringing supply chain solutions, market intelligence, engineering expertise, and innovative products to its customers from its headquarters in Montreal. Future Electronics is globally integrated through a single IT structure, which allows it to provide real time inventory access across the globe. With services ranging from lighting to home health and advanced design, Future Electronics provides a diverse array of services for its customers.

*Health Alliance Hospital – (12.4 miles from C-District)*

The Health Alliance Burbank Hospital is a group practice hospital in Fitchburg, MA. With 36 physicians covering 12 specialty areas of medicine, it is one of the top hospitals in the North Central Massachusetts area. With 110 beds, the Burbank Hospital is a top-ranked hospital in the state. The hospital provides emergency care as well as scheduled diagnostic, laboratory, and labor services. With a wide array of services and a staff of around 1,200 employees, the Burbank hospital is a top medical facility. It has been serving the community for over 108 years, with a continual dedication towards medical advancement and innovation.

*Massachusetts Correctional Institution – Shirley – (7.3 miles from C-District)*

The Massachusetts Correctional Institution – Shirley is a medium security prison in Shirley, Massachusetts. It is home to 13 inmate housing units, a 28-bed hospital, and a 59-bed segregation unit. One of the major prisons in the Central Massachusetts area, it houses around 1,400 male prisoners. It also has a minimum-security wing for less dangerous inmates. The prison also offers chaplain services, vocational courses, and inmates can earn a GED while incarcerated. There are over 485 work detail positions that are available to level 3 and 4 inmates. The facility works not only to correct its inmates, but also creates various job opportunities for prison staff, educators, and other positions in administrative roles.

*Nashoba Valley Medical Center – (3.4 miles from C-District)*

The Nashoba Valley Medical Center is a regional hospital providing emergency medicine, diagnostic imaging, cardiology, gastroenterology, ophthalmology, oncology, orthopedics, physical therapy, and general surgery. Located in Ayer, MA, it serves 16 communities in North Central Massachusetts with 115 active and associate member physicians. Awarded as a top hospital for health and safety, the hospital is committed to serving all communities with effective, affordable healthcare and exceeding expectations of all patients. The hospital is a 73-bed complex that also has a satellite aquatic therapy program in Groton.

*Nypro Inc. – (11.3 miles from C-District)*

Nypro Inc. is a corporation that designs and manufactures high-precision injection molds. Specializing in high precision plastic molding and mold engineering since 1987, Nypro serves the healthcare, packaging, consumer, and electronics markets. The Clinton, MA location is a subsidiary of Jabil healthcare, a technologically advanced healthcare and packaging company. The facility includes molding and assembly cleanrooms and an advanced Customer Engagement and Innovation Center. The center offers customers the opportunity to use a unique

3D holographic display to design products and customize specific items based on their needs. The space also has 625,000 sq ft of manufacturing space fully equipped to serve its distribution and production needs.

*Fitchburg State University – (14.4 miles from C-District)*

Fitchburg State University is a public university in Fitchburg, MA. With over 7,000 full and part time students, the university offers 30 undergraduate and 22 graduate degrees in different disciplines. Established in 1894, the university integrates professional programs with liberal arts and sciences studies. The university is committed to teaching the liberal arts and sciences while preparing students for the world through exposure to the social and cultural needs of North Central Massachusetts and the world. The university's 45-acre campus is located just 40 minutes away from Boston, providing students with excellent access to all of Massachusetts. With approximately 520 employees, it is also a major employer in the Nashoba Valley Area.

#### TOURISM OVERVIEW: GREATER BOSTON MSA AND HARVARD

The Greater Boston Area and the Town of Harvard are popular tourism destinations offering a diverse array of urban, rural, and suburban attractions throughout the state. In 2020, Massachusetts hosted 26.2 million domestic visitors, and 2.4 million international visitors in 2019. Massachusetts, however, did experience significantly less economic impact from tourism in 2020 due to the pandemic's unique circumstances. Massachusetts' tourism industry generated a total economic impact of \$10 billion in 2020, including 102,100 jobs and \$4.3 billion in wages and salaries. These figures are a 54%, 35%, and 30% decrease from 2019 figures, respectively. Additionally, tourism also provided the government with \$879.9 million in local and state tax revenue, a 45% decrease from 2019. The losses to Massachusetts' tourism industry in 2020 is not a reflection of a diminishing interest in the area's attractions, but rather a reflection of travel bans and closures—both domestically and internationally—due to the pandemic. Not accounting for 2020, tourism expenditures have steadily increased each year from 2016 to 2019, going from \$21.8 billion to \$24.8 billion. As pandemic conditions have eased in 2021 and 2022, Massachusetts looks to rebound in yet unreleased data.

Harvard is in the juncture of both the Greater Boston and Central Massachusetts tourism regions, which received \$4 billion and \$395.6 million in total tourism expenditures, respectively. Being located between two of the most visited and profitable regions in the state, Harvard shows great potential to capture a spillover effect in its economy.

Overall, 51.6% of total spending was allocated to Foodservice and Lodging, with each respectively earning 25.9% and 25.7% of the total spending. Harvard, a market based around agrotourism, historic sites, and cultural preservation is well-positioned within this spending model.

TABLE 16  
DIRECT ECONOMIC IMPACT OF TRAVEL ON MASSACHUSETTS  
2016 – 2020

Year	Employment	In \$ Millions			
		Expenditures	Payroll	State Taxes	Local Taxes
2020	102,100	\$9,965.2	\$4,293.1	\$568.7	\$311.2
2019	155,500	\$24,869.8	\$5,933.3	\$1,025.2	\$619.5
2018	153,200	\$24,156.5	\$5,618.8	\$990.6	\$596.5
2017	149,400	\$22,869.8	\$5,330.6	\$943.4	\$566.5
2016	146,300	\$21,820.2	\$5,040.9	\$904.8	\$541.5

1) The state and local taxes reflect tax receipts

Source: USTA, Tien Tian LLC, Domestic plus International

TABLE 17  
ECONOMIC IMPACT OF TRAVEL ON MASSACHUSETTS RTCs  
CY 2020

Regional Tourism Councils (RTCs)	Employment	In \$ Millions			
		Expenditures	Payroll	State Taxes	Local Taxes
Greater Boston	46,900	\$4,017.9	\$2,231.9	\$204.6	\$100.3
Greater Merrimack Valley	6,400	\$557.6	\$261.1	\$44.7	\$18.6
Metro West	6,500	\$499.5	\$261.8	\$37.8	\$14.2
Johnny Appleseed	800	\$91.1	\$30.4	\$6.4	\$2.4
Central Massachusetts	3,000	\$395.6	\$111.8	\$27.1	\$9.4
Cape Cod (Barnstable County)	7,800	\$968.9	\$269.5	\$45.4	\$59.5
1 Berkshires	3,400	\$389.9	\$109.4	\$21.5	\$11.3
Southeastern MA (Bristol County)	2,900	\$360.2	\$101.9	\$22.8	\$7.7
Martha's Vineyard (Duke's County)	1,100	\$134.8	\$37.7	\$5.5	\$8.4
North of Boston (Essex County)	6,000	\$638.6	\$203.5	\$42.1	\$17.0
Franklin County	400	\$52.4	\$12.6	\$3.3	\$1.7
Greater Springfield	3,100	\$466.1	\$138.4	\$29.9	\$9.9
Hampshire County	800	\$92.6	\$27.7	\$5.9	\$2.5
Nantucket Chamber	900	\$171.7	\$38.5	\$5.6	\$6.1
Plymouth Chamber	3,600	\$471.7	\$116.2	\$28.6	\$23.4
<b>Statewide Total</b>	<b>93,600</b>	<b>\$9,308.7</b>	<b>\$3,952.4</b>	<b>\$531.3</b>	<b>\$292.4</b>
Statewide 2019	129,700	\$20,870.0	\$4,996.5	\$856.5	\$533.3
Statewide 2018	125,430	\$19,863.8	\$4,652.6	\$810.8	\$503.8
Statewide 2017	122,180	\$18,731.1	\$4,403.3	\$769.9	\$477.4
Statewide 2016	119,710	\$17,904.7	\$4,160.9	\$739.8	\$457.1

1) The state and local taxes reflect tax receipts

2) Massachusetts' 16 Regional Tourism Councils (RTCs) are independent, membership-based, not-for-profit organizations that market their regions as travel destinations.

3) Each RTC focuses on the travel market segments that generate the greatest economic return for its region: domestic visitors, international visitors, leisure visitors, group travel, meetings, conventions, and sports events.

Source: USTA, Tien Tian LLC, Domestic plus International



TABLE 18  
**DOMESTIC AND INTERNATIONAL DIRECT EXPENDITURES**  
BY INDUSTRY SECTOR  
CY 2020

2020 Expenditures	Domestic	International	Total	% of Total
Public Transportation	\$1,895.3	\$60.5	\$1,955.8	19.6%
Auto Transportation	\$1,493.9	\$9.0	\$1,502.9	15.1%
Lodging	\$2,303.4	\$259.1	\$2,562.5	25.7%
Foodservice	\$2,453.8	\$128.7	\$2,582.5	25.9%
Entertainment & Recreation	\$447.5	\$51.3	\$498.8	5.0%
General Retail Trade	\$714.7	\$147.9	\$862.6	8.7%
2020 Totals	\$9,308.6	\$656.5	\$9,965.3	100.0%
- Percentages	93.4%	6.6%	100.0%	-
2019 Totals	\$20,870.0	\$3,999.7	\$24,869.6	-
- Percentages	83.9%	16.1%	100.0%	-

Source: USTA, Tien Tian LLC, Domestic plus International

Massachusetts's tourism industry is also bolstered by the MOTT Grant Programs, which provide funding to Regional Tourist Centers to best market their regions as attractive tourist destinations. Grants are awarded based on regional performance, and use additional state funding to expand the number and size of available grants. In response to Covid-19, the MOTT program has also adjusted its total funding available to help combat the ongoing effects the pandemic has had on the tourism industry. In April 2021, MOTT announced \$1,587,791 in additional funding became available to the 59 tourism chambers across Massachusetts to support a return to normalcy.

The Town of Harvard's specific tourism specialties include its historic and scenic areas. Harvard's most notable attractions include St Benedict Abbey, the Shaker cemetery (and other Shaker sites), The Fruitlands Museum, film sites from the movie Little Woman, apple orchards, Christmas tree farms, and other various local farms—many of which are profiled in a visitors' brochure by the Agriculture Commission. The Abbey is a historically significant church founded by Benedictine monks and is still run by the order to this day. It holds significance in the town's enduring status as a classic rural community rooted in tradition. Moreover, the Fruitlands Museum holds relics of the Utopian society that characterized Harvard's past and remains a popular tourist destination, along with the classic General Store in the town center.

Harvard and the Greater Boston Area are significant drivers of tourism in Massachusetts. Pre-pandemic trends indicate a continual rise in visitor volume and spending, rooted in the state's unique array of attractions. Harvard—with its specialty market of agrotourism and quintessential "New England Town" atmosphere—is easily accessible from the Boston Area. Within a 45-minute drive of Boston's Downtown, Harvard is an ideal escape for agro-tourists seeking to enjoy the scenic countryside of Massachusetts as pandemic restrictions ease toward normalcy.

## FOR-SALE MARKET ANALYSIS

## FOR-SALE MARKET ANALYSIS

To gain a broader understanding of the for-sale market into which potential units within the Ayer Road Commercial District would be delivered, Weitzman Associates has researched the for-sale housing market trends in the Greater Boston Metropolitan Area, Central Middlesex Region, and the Town of Harvard. To inform our conclusions, we have analyzed sales data for single-family homes, condominiums, and townhomes from Redfin and local brokerage sources. In addition, we have analyzed comparable developments to help frame the market and consider how to best position potential condominium and townhome offerings within Harvard's Commercial District.

Based on our research of the for-sale market, our findings are summarized as follows:

- **Healthy Sale Price Appreciation.** Average sale prices have appreciated healthily throughout the region. Despite the COVID-19 pandemic, housing prices have grown steadily over the past several years, speaking to Harvard's and the surrounding area's resilience and desirability. Between 2020 and 2021, average sale pricing has increased by 17% for single-family homes, 9% for townhomes, and 25% for condominiums. As of May, year-to-date average sale pricing in Harvard was about 30% to 36% higher in 2022 than in the previous year.
- **Strong Homeownership.** Homeownership in Harvard is very strong; of the units occupied, 93.7% are by those who own their homes. Under similar market conditions, this owner-dominated market is expected to continue through 2027. Harvard's significant owner-occupied market is a product of the town's higher median household income, large affordability gap, and minimal rental inventory. As a commercial district emerges and new jobs enter the town, the local market should expect to diversify.
- **High Home Values.** The number owner-occupied properties valued above \$1 million is increasingly rapidly in Greater Worcester, with growth projections of about 18.2% compounded annually between 2022 and 2027. While this category's growth is much more stable in Harvard, average and median home values are much higher. In 2022, median home value in Harvard was about \$304,000 higher than in Greater Worcester, and about \$106,000 higher than in Greater Boston, with these trends projected to continue through 2027.
- **High Saturation of Single-Family Homes.** Single-family homes compose the majority of the market and are achieving the highest sale prices. Across geographies, single-family homes command the highest price points. However, they are in excess supply, and not necessarily a strong proposition for Harvard's Commercial District. Rather, condominiums and townhomes are the appropriate housing product for the Study Area.
- **Limited Supply of Condominiums and Townhomes.** There's a very limited supply of condominiums and townhomes in and adjacent to Harvard's Commercial District, and a shortage within Harvard overall. As of 2020, multi-family properties (accommodating two or more families) comprised just 7% of all housing stock in Harvard; single-family homes comprised the remainder at 93%. Additionally, as of 2020, over 50% of the housing stock available was built before 1970, with most of the remainder built before 2014. Since the release of this 2020 American Community Survey, no new properties have delivered, with very few projects reported in the pipeline. Of the pipeline projects, Craftsman

Village is one of the newer developments, a community of 20 detached cottages set to complete in 2023.

- **Achievable Sale Pricing.** Assuming average unit sizes between 950 and 2,600 square feet, we believe that price points between approximately \$250 and \$285 per square foot could be achieved if condominiums and/or townhomes were built within the Ayer Road Commercial District. Our space and pricing conclusions stem from the profiled comparable properties. There is a dearth of condominiums and townhomes near the Subject Area, and a shortage in Harvard overall. Thus, developers could likely construct condominiums and townhomes in the Study Area that piggyback on the pricing trends set by proximate projects.
- **Ample For-Sale Demand.** The residential demand analysis confirms that there is ample for-sale demand within a 25-minute drive of the Commercial District from households earning above \$75,000 per year. There is sufficient, demographically-supported depth of demand for condominiums and townhomes within the Ayer Road Commercial District, driven primarily by the local market (Town of Harvard and within a 15-minute drive time radius from the study area), with additional support from more distant locales.
- **Achievable For-Sale Absorption Pace.** An absorption pace of four to six units per month could be achieved if relying only on regional demand, and notably more if also relying on demand from the Tertiary market. Considering a range of typologies inclusive of townhomes, small cottages, and condominiums, we conservatively conclude that absorption between four and six units per month could be achievable in the Study Area with homes that span between 950 and 2,600 square feet, and sell on average between \$250,000 and \$620,000.
- **Affordable Component.** Because they can access a comprehensive permit that bypasses current zoning per the 40B Chapter mandate of the State of Massachusetts, most developers of recently completed and under construction for-sale and rental multi-family projects in Harvard include an affordable component. The share of the affordable units in these projects range from 14% to 100% for developments ranging in size from 5 to 42 units.

## FOR-SALE MARKET OVERVIEW

### Greater Boston Metropolitan Area:

Based on the market data provided by the Greater Boston Association of Realtors, 2021 home sales rebounded strongly across Greater Boston, signaling a steady recovery from the lasting effects of COVID-19.

By year-end 2021, 14,501 single-family homes sold in the metropolitan area, 5% more than in 2020. Home sales have grown by 1.1% compounded annually since 2017. However, the sale pace has slowed moving into 2022; comparing year-to-date sales, 2022 saw 420 fewer single-family homes sales by May than by the same time in 2021. Despite the slower sale pace, year-to-date average sale price as of May 2022 (\$798,700) was 12% higher than the year-to-date average one year prior. This trend has maintained steady since 2020, growing by 9% in 2020 and 11% in 2021. Since 2017, the average sale price of single-family homes has grown by 6.7% compounded annually. Over the same period, average price-per-square-foot has grown by 5.4% compounded annually, reaching \$381 by year-end 2021 and \$403 by May 2022. Meanwhile, average months of supply<sup>7</sup> has steadily fallen, falling to its lowest point (1.1 months of supply) in 2021. In other words, demand for single family homes in Greater Boston has surged considerably over the course of the pandemic, and has continued through May 2022. The following table summarizes single-family market trends in Greater Boston since 2017:

TABLE 19  
GREATER BOSTON METROPOLITAN AREA  
SINGLE-FAMILY SALES HISTORY

Year	Homes Sold	% Chg.	Avg. Sale Price (1)	% Chg.	Avg. PPSF	% Chg.	Avg. Sale -to-List	% Chg.	Avg. Mo. Supply	% Chg.
2017	13,859	-	\$572,722	-	\$309	-	99%	-	2.4	-
2018	13,581	-2%	\$599,945	5%	\$326	6%	99%	1%	2.6	8%
2019	13,605	0%	\$613,200	2%	\$332	2%	98%	-1%	2.4	-9%
2020	13,746	1%	\$670,073	9%	\$349	5%	99%	2%	1.7	-28%
2021	14,501	5%	\$741,079	11%	\$381	9%	103%	4%	1.1	-37%
<b>WAVG / CAGR</b>	<b>13,858</b>	<b>1.1%</b>	<b>\$640,550</b>	<b>6.7%</b>	<b>\$340</b>	<b>5.4%</b>	<b>100%</b>	<b>1.1%</b>	<b>2.1</b>	<b>-18.1%</b>
<u>Year-to-Date</u>										
May 2021	4,510	-	\$712,610	-	\$358	-	103%	-	1.3	-
May 2022	4,090	-9%	\$798,700	12%	\$403	13%	105%	3%	1.2	-8%

1) Reflects yearly average of monthly median sale prices

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

<sup>7</sup> The average number of months it would take for the current inventory of homes on the market to sell given the current sales pace.

Condominium home sales skyrocketed in 2021, selling 32% more units than in the previous year. Approximately 13,822 condominium units sold in Greater Boston during 2021, growing by 5.8% compounded annually since 2017. As with the single-family homes, the condominium sales pace also slowed moving into 2022, by 16% between May of 2022 and 2021. However, over the same period, average sale price rose by 9% to \$667,000, reaching the highest average since 2017. Over the past five years, the average sale price of condominium units has grown by 4.5% compounded annually, with average price-per-square-foot having grown by 2.7% compounded annually. As of May 2022, average price-per-square-foot stands at \$568, 7% higher than one year prior. Average months of supply for condominium units fell sharply in 2021, falling 30% below 2020 averages to 1.9 months of supply—noting regional, pandemic-influenced demand similar to the single-family homes. The following table summarizes condominium market trends in Greater Boston since 2017:

TABLE 20  
GREATER BOSTON METROPOLITAN AREA  
CONDOMINIUM SALES HISTORY

Year	Homes Sold	% Chg.	Avg. Sale Price (1)	% Chg.	Avg. PPSF	% Chg.	Avg. Sale -to-List	% Chg.	Avg. Mo. Supply	% Chg.
2017	11,021	-	\$520,625	-	\$518	-	100%	-	2.1	-
2018	10,892	-1%	\$560,987	8%	\$557	8%	100%	0%	2.3	13%
2019	10,872	0%	\$567,383	1%	\$561	1%	99%	-1%	2.5	10%
2020	10,487	-4%	\$587,489	4%	\$561	0%	99%	0%	2.7	8%
2021	13,822	32%	\$620,771	6%	\$576	3%	100%	1%	1.9	-30%
<b>WAVG / CAGR</b>	<b>11,419</b>	<b>5.8%</b>	<b>\$573,755</b>	<b>4.5%</b>	<b>\$555</b>	<b>2.7%</b>	<b>99%</b>	<b>-0.2%</b>	<b>2.3</b>	<b>-1.9%</b>
<u>Year-to-Date</u>										
May 2021	5,165	-	\$611,220	-	\$529	-	99%	-	2.2	-
May 2022	4,348	-16%	\$667,000	9%	\$568	7%	101%	2%	1.8	-16%

1) Reflects yearly average of monthly median sale prices

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

### Central Middlesex Region:

Within Greater Boston, the Central Middlesex region is the closest subregion to Harvard, sharing borders and similar market characteristics.

In Central Middlesex, there has been an average of 2,003 single-family homes sold annually since 2017, growing at a compounded annual rate of 1.5%. While home sales have generally trended downward since 2017, a 12% sales gain in 2020 has had lasting effects, signaling the market's allure among those relocating from dense urban centers during COVID-19 and preferring open, nature-centric spaces. Throughout the pandemic, average months of supply has fallen severely, shrinking by 42% in 2020 and 42% again in 2021—from 3.7 in 2019 to 1.3 in 2021. Lacking inventory growth in tandem with robust demand has caused sale prices to surge considerably, growing by an average of 9% in 2020 and 17% in 2021. Growing by 6.9% compounded annually since 2017, the average sale price has reached \$977,792 as of year-end 2021 and \$1,063,100 as of May 2022.



Price-per-square-foot has grown similarly, increasing from \$306 in 2017 to \$374 in 2021 and \$411 by May 2022. The following table summarizes single-family market trends in Central Middlesex since 2017:

**TABLE 21**  
**CENTRAL MIDDLESEX REGION (SUBREGION OF BOSTON MSA)**  
**SINGLE-FAMILY SALES HISTORY**

Year	Homes Sold	% Chg.	Avg. Sale Price (1)	% Chg.	Avg. PPSF	% Chg.	Avg. Sale -to-List	% Chg.	Avg. Mo. Supply	% Chg.
2017	1,973	-	\$747,767	-	\$306	-	97%	-	3.7	-
2018	1,915	-3%	\$789,867	6%	\$320	5%	97%	0%	3.5	-5%
2019	1,902	-1%	\$763,721	-3%	\$313	-2%	97%	-1%	3.7	7%
2020	2,136	12%	\$834,875	9%	\$332	6%	98%	2%	2.2	-42%
2021	2,090	-2%	\$977,792	17%	\$374	13%	104%	6%	1.3	-42%
<b>WAVG / CAGR</b>	<b>2,003</b>	<b>1.5%</b>	<b>\$825,421</b>	<b>6.9%</b>	<b>\$330</b>	<b>5.1%</b>	<b>99%</b>	<b>1.8%</b>	<b>2.8</b>	<b>-23.6%</b>
<u>Year-to-Date</u>										
May 2021	617	-	\$957,300	-	\$356	-	103%	-	1.6	-
May 2022	554	-10%	\$1,063,100	11%	\$411	16%	107%	5%	1.5	-11%

1) Reflects yearly average of monthly median sale prices

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

Compared to Harvard, Central Middlesex has an extensive condominium market, averaging 584 units sold annually since 2017, with the most sold in 2021 at 624 units. As with the single-family homes of the region, limited supply continues to boost condominium sale prices--by 5.7% compounded annually since 2017. While regional supply shrunk by 27% in 2020 and 30% in 2021, average sale price grew from \$421,004 in 2019 to \$470,850 in 2021, continuing further to \$535,300 by May 2022. The following table summarizes the historical market performance for condominiums in Central Middlesex since 2017:

**TABLE 22**  
**CENTRAL MIDDLESEX REGION (SUBREGION OF BOSTON MSA)**  
**CONDOMINIUM SALES HISTORY**

Year	Homes Sold	% Chg.	Avg. Sale Price (1)	% Chg.	Avg. PPSF	% Chg.	Avg. Sale -to-List	% Chg.	Avg. Mo. Supply	% Chg.
2017	602	-	\$376,854	-	\$257	-	98%	-	2.4	-
2018	552	-8%	\$407,045	8%	\$269	4%	99%	1%	3.2	30%
2019	582	5%	\$421,004	3%	\$280	4%	99%	0%	2.6	-17%
2020	560	-4%	\$451,729	7%	\$295	5%	99%	0%	1.9	-27%
2021	624	11%	\$470,850	4%	\$309	5%	102%	3%	1.3	-30%
<b>WAVG / CAGR</b>	<b>584</b>	<b>0.9%</b>	<b>\$425,808</b>	<b>5.7%</b>	<b>\$282</b>	<b>4.7%</b>	<b>99%</b>	<b>1.1%</b>	<b>2.3</b>	<b>-14.0%</b>
<u>Year-to-Date</u>										
May 2021	215	-	\$426,100	-	\$283	-	101%	-	1.5	-
May 2022	196	-9%	\$535,300	26%	\$334	18%	105%	4%	1.6	4%

1) Reflects yearly average of monthly median sale prices

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

*Town of Harvard (excluding Devens):*

Since 2017, the Town of Harvard has averaged 82 single-family homes sold per year, with sale volume peaking in 2020 at 100 homes sold, 41% more homes sold than in the previous year. Average sale price has also appreciated healthily since 2017. At a compounded annual rate of 4.4%, average sale price has risen to \$737,900 by year-end 2021 and \$919,125 by May 2022, 35% higher than the year-to-date average in 2021. Given the strong regional demand since the onset of the pandemic, single-family homes have begun to sell at a premium in 2021, a trend that has continued through May 2022. The following table summarizes single-family market trends in the Town of Harvard since 2017:

TABLE 23  
**TOWN OF HARVARD**  
SINGLE-FAMILY SALES HISTORY

Year	Homes Sold	% Chg.	Avg. Sale Price (1)	% Chg.	Avg. Sale-to-List	% Chg.
2017	65	-	\$622,069	-	99%	-
2018	77	18%	\$606,125	-3%	97%	-2%
2019	71	-8%	\$588,345	-3%	98%	1%
2020	100	41%	\$633,013	8%	98%	0%
2021	97	-3%	\$737,900	17%	105%	7%
<b>WAVG / CAGR</b>	<b>82</b>	<b>10.5%</b>	<b>\$643,308</b>	<b>4.4%</b>	<b>100%</b>	<b>1.5%</b>
<u>Year-to-Date</u>						
May 2021	28	-	\$683,357	-	106%	-
May 2022	13	-54%	\$919,125	35%	104%	-2%

1) Reflects yearly average of monthly median sale prices

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

Harvard's condominium market accounts for a small portion of its total home sales, averaging just 8 condominium units sold each year since 2017. Despite an off year in 2019, sale volume has remained between 10 and 12 units per year since 2018. Average sale price has similarly appreciated over this period, growing substantially to \$575,516 in 2021 (a historical peak), reflecting 9% annual growth since 2017. Per the town's average sale-to-list ratios, condominiums in Harvard have historically sold virtually at ask price, if not slightly above, a trend that has continued through May 2022. The following table summarizes condominium market trends in the Town of Harvard since 2017:

**TABLE 24**  
**TOWN OF HARVARD**  
**CONDOMINIUM SALES HISTORY**

Year	Homes Sold	% Chg.	Avg. Sale Price (1)	% Chg.	Avg. Sale-to-List	% Chg.
2017	6	-	\$413,122	-	101%	-
2018	12	100%	\$465,365	13%	102%	1%
2019	2	-83%	\$454,318	-2%	99%	-3%
2020	12	500%	\$461,665	2%	101%	2%
2021	10	-17%	\$575,516	25%	95%	-6%
<b>WAVG / CAGR</b>	<b>8</b>	<b>13.6%</b>	<b>\$482,545</b>	<b>8.6%</b>	<b>100%</b>	<b>-1.5%</b>
<u>Year-to-Date</u>						
May 2021	4	-	\$364,999	-	90%	-
May 2022	1	-75%	\$475,000	30%	100%	11%

1) Reflects yearly average of monthly median sale prices

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

Like Harvard's condominiums, townhomes are also limited in inventory. Since 2017, an average of 14 townhomes were sold per year, at a weighted average sale price of approximately \$318,519. Average sale price has grown astronomically over recent years, from an annual average of \$285,080 in 2017 to \$388,321 in 2021. As of May 2022, average sale price has grown much higher to \$562,727, a 36% increase from the year-to-date average in 2021. Townhomes are trending upward in Harvard, evidenced by recent sale-to-list ratios that have exceeded 100% since 2019. The following table summarizes the performance of the townhome market in Harvard since 2017:

**TABLE 25**  
**TOWN OF HARVARD**  
**TOWNHOME SALES HISTORY**

Year	Homes Sold	% Chg.	Avg. Sale Price (1)	% Chg.	Avg. Sale-to-List	% Chg.
2017	6	-	\$285,080	-	99%	-
2018	20	233%	\$278,220	-2%	99%	0%
2019	13	-35%	\$265,157	-5%	100%	1%
2020	14	8%	\$355,213	34%	101%	0%
2021	17	21%	\$388,321	9%	103%	3%
<b>WAVG / CAGR</b>	<b>14</b>	<b>29.7%</b>	<b>\$318,519</b>	<b>8.0%</b>	<b>101%</b>	<b>1.0%</b>
<u>Year-to-Date</u>						
May 2021	10	-	\$414,733	-	105%	-
May 2022	12	20%	\$562,727	36%	107%	2%

1) Reflects yearly average of monthly median sale prices

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

## BUILDING PERMITS

One of the key means by which we can determine the level of new residential development taking place in a market is to analyze longitudinal building permit data. Weitzman has obtained the building permit data for all residential construction in the Worcester Metropolitan Area and Middlesex County from 2000 to 2021. Middlesex County represents the smallest-scale, census region nearest Harvard with data that is publicly available and complete. It is important to note that the following tables do not differentiate between for-sale and for-rent residential units. Furthermore, a filed building permit does not necessarily lead to new construction – not all units that are permitted get built. Development is subject to financing, market trends, and competitive positioning, among other factors that may prevent actual construction.

### *Worcester MSA:*

As reported by the Census Bureau, approximately \$303,520 in new residential development was permitted between 2015 and 2021. The majority (97%) of permits issued during this time were for single-family homes, totaling approximately \$293,224 in development cost. Leading up to the recession of 2008, the market averaged \$338,179 in permits issued annually from 2000 to 2007 and peaked in 2004 with 3,308 permits issued for a total of \$580,023. Following the recession, the market dipped to 502 permits or \$100,409 in 2011. The market has never truly returned to pre-recession levels. We note that 2022 data has not yet been released, but we predict the number of permits issued will pass 2021 levels considerably given the pace of permits issued by year-to-date May 2021 exceeded year-to-date 2020 levels by nearly 622%. It is also worth noting that there is limited reporting in the area when compared to Middlesex County. The following table and chart summarize the building permit data in the Worcester MSA from 2000 to 2021:

TABLE 26  
BUILDING PERMITS - NEW RESIDENTIAL CONSTRUCTION  
**WORCESTER MSA**  
2000 - AUGUST 2021

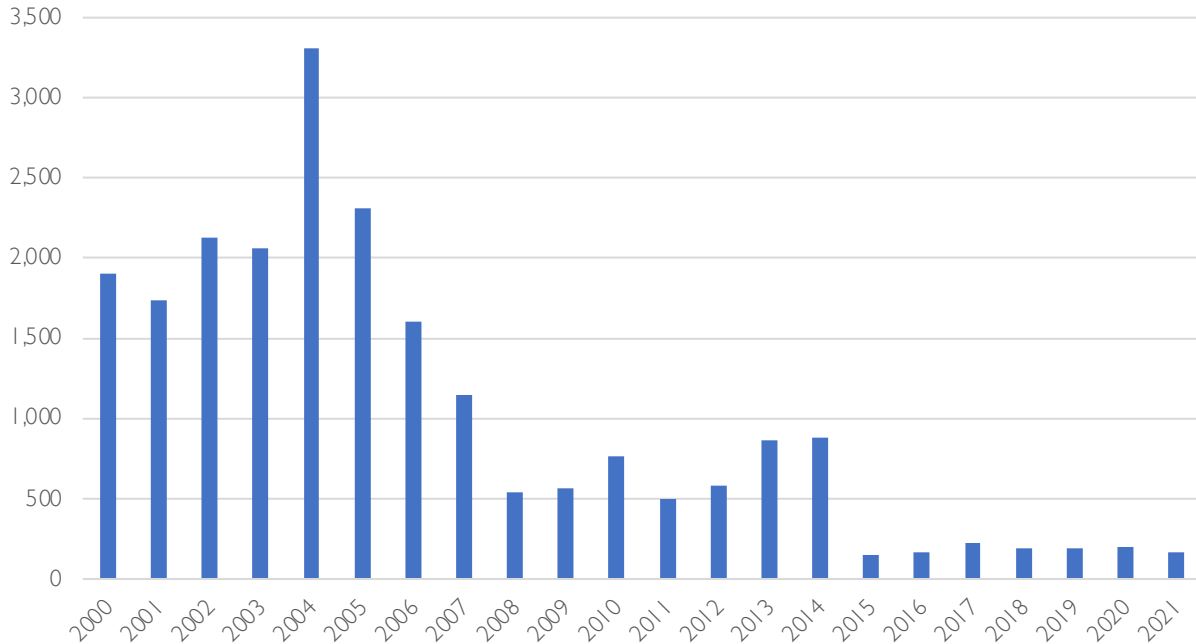
	<u>1 family</u>		<u>2 family</u>		<u>3-4 family</u>		<u>5+ family</u>		<u>Total</u>	
	Bldgs	Units	Bldgs	Units	Bldgs	Units	Bldgs	Units	Bldgs	Units
2000	1,857	1,857	28	56	7	21	8	59	1,900	1,993
2001	1,718	1,718	20	40	1	4	2	115	1,741	1,877
2002	2,090	2,090	12	24	20	73	7	92	2,129	2,279
2003	1,995	1,995	30	60	24	88	13	387	2,062	2,530
2004	3,237	3,237	28	56	34	120	9	176	3,308	3,589
2005	2,215	2,215	41	82	47	155	7	100	2,310	2,552
2006	1,543	1,543	27	54	17	53	17	297	1,604	1,947
2007	1,125	1,125	6	12	10	31	3	35	1,144	1,203
2008	526	526	12	24	2	7	1	13	541	570
2009	541	541	4	8	13	39	6	58	564	646
2010	710	710	11	22	28	107	17	377	766	1,216
2011	493	493	4	8	1	3	4	53	502	557
2012	543	543	13	26	18	66	7	153	581	788
2013	834	834	12	24	14	47	5	118	865	1,023
2014	848	848	16	32	6	18	8	107	878	1,005
2015	149	149	2	4	2	6	1	14	154	173
2016	164	164	2	4	1	3	0	0	167	171
2017	221	221	3	6	0	0	5	120	229	347
2018	181	181	2	4	1	3	5	36	189	224
2019	179	179	3	6	1	3	6	46	189	234
2020	197	197	1	2	0	0	4	21	202	220
2021	168	168	0	0	0	0	1	6	169	174
<u>YTD MAY</u>										
2020	79	79	0	0	0	0	0	0	79	79
2021	532	532	22	44	1	3	15	293	570	872

(1) All data is the most recent, as of July 2022. May is the most recent month available.

Source: U.S Bureau of the Census; compiled by Weitzman Associates, LLC

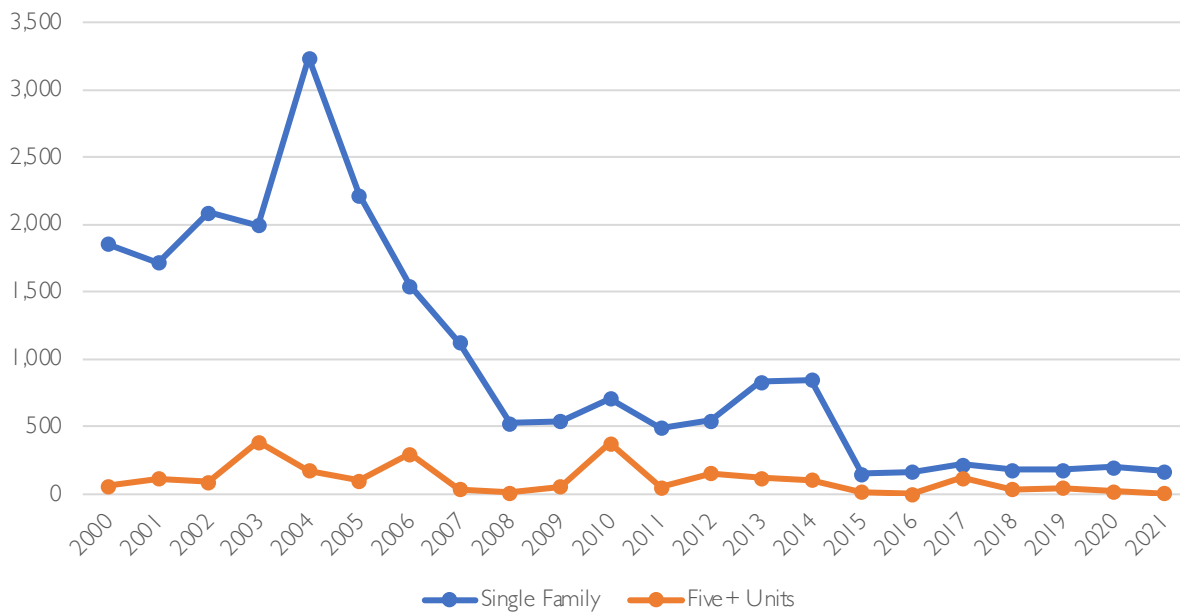
GRAPH 2

**WORCESTER MSA BUILDING PERMITS ISSUED (2000 - 2021)**



GRAPH 3

**WORCESTER MSA BUILDING PERMITS ISSUED (2000 - 2021)**  
SINGLE FAMILY V. FIVE+ UNIT BUILDINGS





*Middlesex County:*

The Census Bureau reports approximately \$6.03 billion in new residential development was permitted between 2015 and 2021. As with the Worcester MSA, the majority (82.7%) of permits issued in Middlesex County during this time were for single-family homes, totaling approximately \$3.15 billion in development cost. Leading up to the recession of 2008, the market averaged \$599.7 million in permits issued annually from 2000 to 2007, and peaked in 2005 with 2,630 permits issued for a total of \$835.6 million. Following the recession, the market reached an all-time low of 1,190 permits, or \$343 million in cost, in 2009. It took until 2013 for over \$900 million in permits to be issued. We note that 2022 data has not yet been released, but we expect there will be more permits issued in 2022 than in the previous year, given the strength of the housing market through COVID-19 and that May 2022 year-to-date numbers have surpassed that of the previous year by 20.9%.

The market in Middlesex County is significantly larger than that of Worcester County, particularly in recent years. Middlesex has continued to issue thousands of permits while Worcester's permit issuing has not surpassed 250 total since 2015. It is evident that the Middlesex County market has effectively bounced back following the 2008 recession, while the Worcester Market has since shrunk. The following table and chart summarize the building permit data in Middlesex County from 2000 to 2021:

TABLE 27  
BUILDING PERMITS - NEW RESIDENTIAL CONSTRUCTION  
MIDDLESEX COUNTY  
2000 - AUGUST 2021

	<u>1 family</u>		<u>2 family</u>		<u>3-4 family</u>		<u>5+ family</u>		<u>Total</u>	
	Bldgs	Units	Bldgs	Units	Bldgs	Units	Bldgs	Units	Bldgs	Units
2000	2,229	2,229	57	114	38	137	43	1,126	2,367	3,606
2001	1,836	1,836	60	120	21	73	35	821	1,952	2,850
2002	1,836	1,836	60	120	21	73	35	821	1,952	2,850
2003	1,915	1,915	41	82	31	120	56	1,234	2,043	3,351
2004	2,192	2,192	79	158	25	90	74	1,130	2,370	3,570
2005	2,409	2,409	86	172	27	97	108	2,973	2,630	5,651
2006	1,925	1,925	81	162	27	94	58	1,261	2,091	3,442
2007	1,601	1,601	56	112	18	64	76	2,432	1,751	4,209
2008	1,140	1,140	35	70	8	28	51	822	1,234	2,060
2009	1,111	1,111	41	82	9	30	29	454	1,190	1,677
2010	1,308	1,308	36	72	10	37	30	357	1,384	1,774
2011	1,133	1,133	18	36	5	19	35	595	1,191	1,783
2012	1,410	1,410	29	58	10	33	48	1,417	1,497	2,918
2013	1,587	1,587	38	76	12	43	61	2,878	1,698	4,584
2014	1,581	1,581	36	72	5	20	60	1,887	1,682	3,560
2015	1,582	1,582	79	158	15	47	72	2,252	1,748	4,039
2016	1,663	1,663	76	152	26	88	84	2,164	1,849	4,067
2017	1,509	1,509	78	156	17	61	94	2,058	1,698	3,784
2018	1,411	1,411	96	192	22	76	74	2,637	1,603	4,316
2019	1,162	1,162	76	152	34	116	433	4,008	1,705	5,438
2020	1,313	1,313	79	158	17	60	275	2,968	1,684	4,499
2021	1,272	1,272	61	122	20	64	350	3,495	1,703	4,953
<u>YTD MAY</u>										
2020	542	542	20	40	5	16	163	1,378	730	1,976
2021	456	456	28	56	9	27	55	1,160	548	1,699

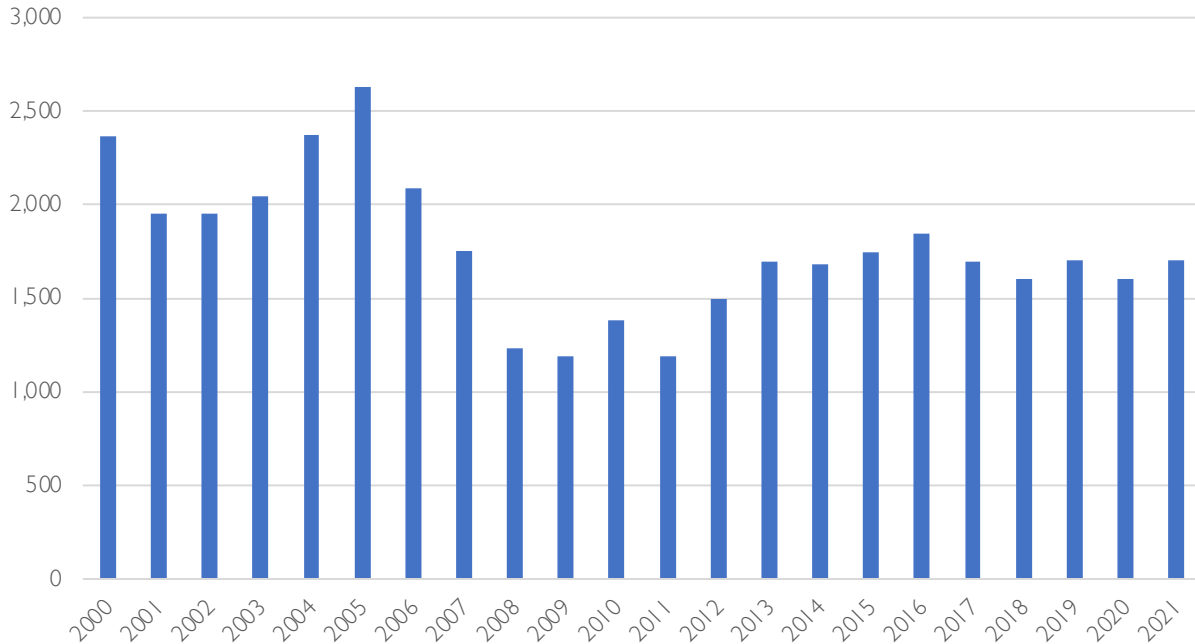
(1) Middlesex is the nearest county with available and substantial building permit data

(2) All data is the most recent, as of July 2022. May is the most recent month available.

Source: U.S Bureau of the Census; compiled by Weitzman Associates, LLC

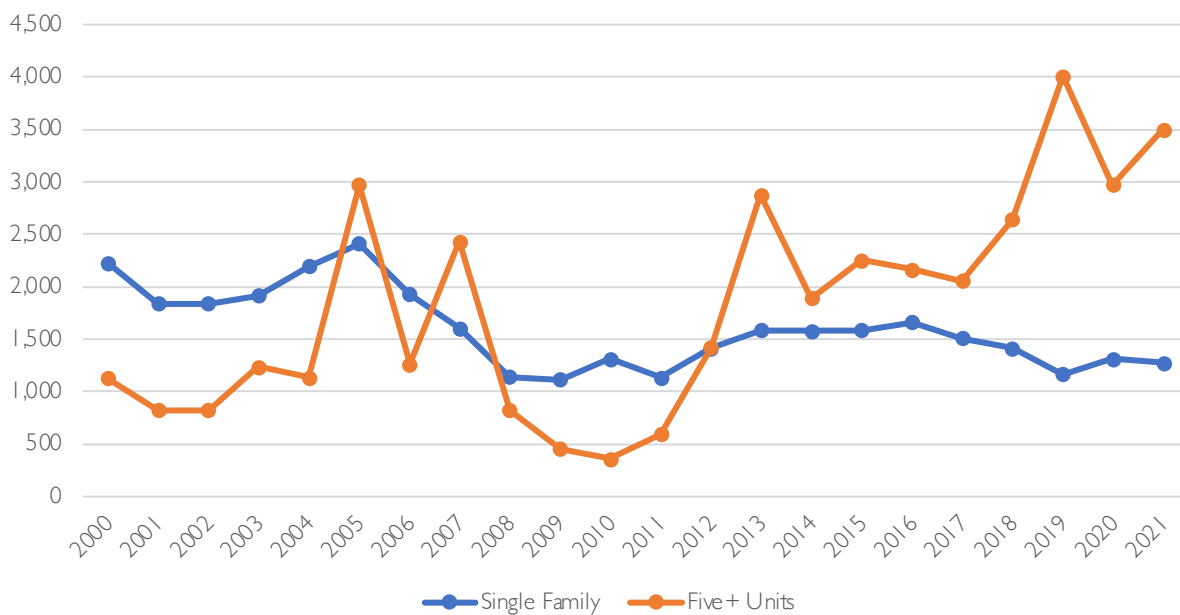
GRAPH 4

**MIDDLESEX COUNTY BUILDING PERMITS ISSUED (2000 - 2021)**



GRAPH 5

**MIDDLESEX COUNTY BUILDING PERMITS ISSUED (2000 - 2021)**  
SINGLE FAMILY V. FIVE+ UNIT BUILDINGS



## VACANCY AND HOUSING TENURE

In the Town of Harvard, vacancy has contracted by 0.2% compounded annually since 2010, settling near 6.5% in 2022 but increasing to 6.7% by 2027. This minor increase attributes to projected inventory growth over the next few years and a possible settling of the extremely hot current housing market. Strong homeownership characterizes the housing market in Harvard, with 87.5% of non-vacant units occupied by owners in 2022, a 1.2% annual increase from 2010. Projections show Harvard becoming more of an owner-dominated market by 2027, increasing compounded annually by 0.5% to 87.7%. Harvard's significant owner-occupied market is a product of the town's higher median household income and large affordability gap. As an activated commercial district emerges and a new influx of diverse housing offerings enters town, the rental market should look to expand.

Compared to Harvard, vacancy in the Worcester Metropolitan Statistical Area is slightly lower, at 6.2% in 2022. However, past and future trends mirror those of Harvard, with vacancy projected to increase by 0.9% annually to 6.4% in 2027. Unlike Harvard, Worcester has a larger rental market, with 33.1% of non-vacant units currently occupied by renters and 60.8% occupied by owners as of 2022. By 2027, the rental market may decrease slightly by 0.4% compounded annually.

Vacancy in the Boston MSA closely compares with that of Harvard and Greater Worcester. Within 0.1% and 0.4% of the two regions, respectively, vacancy in Greater Boston as of 2022 sits at 6.6%. This is a departure from 2010, when vacancy levels in Harvard and the Worcester MSA were much greater. Despite current levels being similar, vacancy in Greater Boston may increase considerably over the next five years—unlike Harvard and Greater Worcester—by 5.0% compounded annually, to 8.2% in 2027. Of the three regions, Greater Boston has the largest rental market, with 36.4% of non-vacant units occupied by renters in 2022. While expected to decrease slightly through 2027, at 0.4% compounded annually, Greater Boston's renter market will remain robust. The table below shows past and projected trends in vacancy and housing tenure within Harvard, Worcester MSA, and Boston MSA:

TABLE 28  
HOUSING UNITS BY OCCUPANCY STATUS AND TENURE  
2022 - 2027

	2010		2022		2027		Compounded Annual Growth	
<b>Town of Harvard</b>	#	%	#	%	#	%	2010-2022	2022-2027
- Owner	1,730	84.5%	2,006	87.5%	2,052	87.7%	1.2%	0.5%
- Renter	163	8.0%	136	5.9%	130	5.6%	-1.5%	-0.9%
Total Occupied	1,893	92.5%	2,142	93.5%	2,182	93.3%	1.0%	0.4%
Vacant	154	7.5%	150	6.5%	157	6.7%	-0.2%	0.9%
Total Housing Units	2,047	100.0%	2,292	100.0%	2,339	100.0%	0.9%	0.4%
<b>Worcester MSA</b>	#	%	#	%	#	%	2010-2022	2022-2027
- Owner	231,397	61.6%	246,677	60.8%	253,240	61.7%	0.5%	0.5%
- Renter	116,493	31.0%	134,243	33.1%	131,265	32.0%	1.2%	-0.4%
Total Occupied	347,890	92.6%	380,920	93.8%	384,505	93.6%	0.8%	0.2%
Vacant	27,971	7.4%	25,048	6.2%	26,201	6.4%	-0.9%	0.9%
Total Housing Units	375,861	100.0%	405,968	100.0%	410,706	100.0%	0.6%	0.2%
<b>Boston MSA</b>	#	%	#	%	#	%	2010-2022	2022-2027
- Owner	1,082,688	57.5%	1,179,898	57.0%	1,202,606	56.8%	0.7%	0.4%
- Renter	677,896	36.0%	754,036	36.4%	740,204	35.0%	0.9%	-0.4%
Total Occupied	1,760,584	93.5%	1,933,934	93.4%	1,942,810	91.8%	0.8%	0.1%
Vacant	122,622	6.5%	136,229	6.6%	174,009	8.2%	0.9%	5.0%
Total Housing Units	1,883,206	100.0%	2,070,163	100.0%	2,116,819	100.0%	0.8%	0.4%

Source: ESRI Business Analyst; compiled by Weitzman Associates, LLC

## HOUSING UNITS BY VALUE

In 2022, the percentage of housing units between \$500,000 and \$999,999 was highest in Harvard at 66.6%. In the Worcester and Boston MSAs, percentages were 19.9% and 48.4%, respectively. By 2027, this bracket in Harvard may grow to 79.2%. Of houses with a value greater than \$2,000,000, the Boston MSA held the highest percentage at 1.9%, followed by Harvard at 0.8% and Greater Worcester at 0.5%. Inversely, Harvard also has the least amount of affordable housing, with only 27.4% of its owner-occupied units valued below \$500,000 compared to 78% in Greater Worcester and 38.3% in Greater Boston. Projections for Harvard's affordable housing inventory (owner-occupied housing units valued under \$500,000) shrink further over the next five years, by 13.6% compounded annually. Meanwhile, over the same period, Harvard's luxury stock (owner-occupied housing units valued at over \$1 million) projects increases of 5.84% compounded annually through 2027. Harvard's fastest growing value bracket is its \$1,000,000 to \$1,499,999 bracket likely to increase by 8.27% annually, followed by its \$1,500,000 to \$1,999,999 bracket at 4.24% compounded annually. While the growth rates of these brackets are much higher in Greater Worcester, the total percentages of each by 2027 are still higher in Harvard.

As of 2022, the median home value in Harvard (\$661,166) was \$304,364 higher than Greater Worcester's and \$105,950 higher than Greater Boston's, with similar trends in average home value. Harvard's lead in both median and average home value is expected to continue through 2027. The following table summarizes household distribution by unit value from 2022 to 2027:



TABLE 29  
OWNER OCCUPIED HOUSING UNITS BY VALUE  
2022 - 2027

Value	2022		2027		Compounded Annual Growth
<b>Town of Harvard</b>	#	%	#	%	
Under \$250,000	14	0.7%	0	0.0%	-100.00%
\$250,000 - \$499,999	535	26.7%	265	12.9%	-13.11%
\$500,000 - \$999,999	1,335	66.6%	1,625	79.2%	4.01%
\$1,000,000 - \$1,499,999	80	4.0%	119	5.8%	8.27%
\$1,500,000 - \$1,999,999	26	1.3%	32	1.6%	4.24%
Greater than \$2,000,000	16	0.8%	11	0.5%	-7.22%
<b>Total</b>	<b>2,006</b>	<b>100.0%</b>	<b>2,052</b>	<b>100.0%</b>	<b>0.45%</b>
Median Value	\$661,166		\$667,769		0.20%
Average Value	\$657,976		\$722,466		1.89%
<b>Worcester MSA</b>	#	%	#	%	
Under \$250,000	59,034	23.9%	31,125	12.3%	-12.02%
\$250,000 - \$499,999	133,548	54.1%	112,125	44.3%	-3.44%
\$500,000 - \$999,999	48,979	19.9%	98,232	38.8%	14.93%
\$1,000,000 - \$1,499,999	2,573	1.0%	6,081	2.4%	18.77%
\$1,500,000 - \$1,999,999	1,175	0.5%	2,935	1.2%	20.09%
Greater than \$2,000,000	1,345	0.5%	2,717	1.1%	15.10%
<b>Total</b>	<b>246,654</b>	<b>100.0%</b>	<b>253,215</b>	<b>100.0%</b>	<b>0.53%</b>
Median Value	\$356,802		\$469,426		5.64%
Average Value	\$407,615		\$529,913		5.39%
<b>Boston MSA</b>	#	%	#	%	
Under \$250,000	62,929	5.3%	20,835	1.7%	-19.83%
\$250,000 - \$499,999	436,107	37.0%	298,955	24.9%	-7.27%
\$500,000 - \$999,999	570,913	48.4%	726,110	60.4%	4.93%
\$1,000,000 - \$1,499,999	60,690	5.1%	87,096	7.2%	7.49%
\$1,500,000 - \$1,999,999	27,088	2.3%	40,445	3.4%	8.35%
Greater than \$2,000,000	21,992	1.9%	28,982	2.4%	5.68%
<b>Total</b>	<b>1,179,719</b>	<b>100.0%</b>	<b>1,202,423</b>	<b>100.0%</b>	<b>0.38%</b>
Median Value	\$555,216		\$639,050		2.85%
Average Value	\$634,458		\$729,481		2.83%

Source: ESRI Business Analyst; compiled by Weitzman Associates, LLC

## HOUSING INVENTORY – TOWN OF HARVARD

Based on the latest records from the Assessor's Office, the Town of Harvard is largely a community of single family residences. Of the town's 1,949 total residential parcels as of 2016, 1,768 support single family structures, comprising approximately 91% of total housing stock. The remaining parcels encompass 23 two-family structures, two three-family structures, and four multi-family structures (excluding condominiums). Bowers Brook (42 units) and Foxglove Apartments (24 units) are the two largest of these structures, both of which serve elderly communities.

Second to the single-family structures, condominiums also comprise a notable share of Harvard's housing market—though much less at 125 parcels or 6.4% of total inventory. Significant demand for condominium units is understandable, given the low maintenance responsibilities and appealing lifestyle choice among those downsizing.

Per the June 2017 Harvard Housing Production Plan, the following table summarizes the type of housing units in Harvard as of 2016, as well as the number of parcels within each category:

TABLE 30  
**HOUSING STRUCTURES**  
TOWN OF HARVARD  
*as of 2016*

Type of Structure	# of Parcels
Single Family	1,704
Single Family Residential Waterfront	64
Two Family	23
Three Family	2
Condominium	125
Four or More Units in a Structure	4
Multiple Houses on One Parcel	27
<b>Total</b>	<b>1,949</b>
Total Parcels in Harvard	2,562
Percent of Parcels in Residential Use	76%

*Source: Harvard Assessors, 2016, Dept. of Rev.*

The American Community Survey data is consistent with the Assessor's parcel coverage. As of 2020, approximately 93% of Harvard's total housing units are single family buildings (attached or detached), while single family residences comprise about 58% of total inventory statewide. Thus, Massachusetts maintains a much higher percentage of multi-family units, as well as 'other' units as there are no mobile homes within Harvard.

TABLE 31  
**COMPARISON OF HOUSING UNITS**  
TOWN OF HARVARD AND MASSACHUSETTS  
*as of 2020*

Building Size:	<u>Harvard</u>		<u>Massachusetts</u>	
	Units	% of Total	Units	% of Total
1-Unit	1,723	93%	1,675,343	58%
2-9 Units	80	4%	760,871	26%
10-19 Units	7	0%	125,042	4%
20 Units or more	49	3%	327,497	11%
Other	0	0%	24,256	1%
<b>Total</b>	<b>1,859</b>	<b>100%</b>	<b>2,913,009</b>	<b>100%</b>

Source: 2016-2020 American Community Survey; compiled by Weitzman Associates, LLC

Approximately 99.7% of Harvard's housing units were built before 2014. While 49% of the town's units were built between 1970 and 2014, 23% of units were built before 1940, with the remainder (28%) built in between. Comparably, in Massachusetts, about 10% more of its units were built before 1940, with 10% less built between 1970 and 2014. However, Massachusetts does exceed Harvard in newer housing stock with a greater percentage and quantity of units built after 2014.

TABLE 32  
**AGE OF HOUSING STOCK**  
TOWN OF HARVARD AND MASSACHUSETTS  
*as of 2020*

Units Built:	<u>Harvard</u>		<u>Massachusetts</u>	
	Units	% of Total	Units	% of Total
Before 1940	421	23%	928,460	32%
1940-1970	522	28%	784,361	27%
1970-2014	911	49%	1,132,882	39%
After 2014	5	0%	67,306	2%
<b>Total Housing Units</b>	<b>1,859</b>	<b>100%</b>	<b>2,913,009</b>	<b>100%</b>

Source: 2016-2020 American Community Survey; compiled by Weitzman Associates, LLC

Under Chapter 40B, the state's affordable housing law, all communities within Massachusetts are supposed to maintain at least 10% of their year-round housing stock as affordable to low-income households, even under robust market conditions. These units retain their affordability under long-term deed restrictions. When communities fall below this minimum, qualified developers may apply for a single comprehensive permit to build affordable or mixed-income housing. These special permits replace the approvals otherwise required from local zoning and permitting authorities. Affordable units that count toward a community's 10% statutory minimum are recorded as Subsidized Housing Inventory (SHI). The following table summarizes Harvard's SHI as of 2017, revealing that the Town is over halfway to the 10% goal at 5.7%. Compared to larger communities with established public water and sewer systems, Harvard's subsidized housing developments (which range in size from 5 to 42 units) are on average more modest in size. As mentioned in the District and Area Assessment section of this report, the lack of access to public utilities has been one of the main impediments to both multi-family and commercial growth in Harvard's Commercial District. Until these public utilities are acquired, the town will continue unable to support densities required of larger developments.

TABLE 33  
**SUBSIDIZED HOUSING INVENTORY**  
TOWN OF HARVARD  
*as of 2017*

Project Name	Address	Type	Restriction	SHI Units	Total Units
The Elms (1)/The Great Elms	105 Stow Rd.	Rental	-	9	5
Harvard Elderly/ Foxgloves Apts.	253 Ayer Rd.	Rental	Age 62+ / Disabled	24	24
Harvard Green	Lancaster County Rd.	Ownership	Approved as a LIP	8	32
Estates at Harvard Hills	Walnut St. (Devens)	Rental	-	13	-
Harvard Housing Rehab Program	Various Single Family Homes	Ownership	-	5	5
Trail Ridge (2)	Littleton County Rd.	Ownership	50% Aged 55+	9	24
Harvard Commons Condominiums	15 Littleton Rd.	Ownership	-	3	12
Bowers Brook	196 Ayer Rd.	Rental	Age 55+	42	42
Total SHI Units	-	-	-	113	-
Year-Round Units	-	-	-	1,982	-
% of SHI Units	-	-	-	5.7%	-

1) Great Elms and Harvard Inn were listed together on the DHCD inventory with a total of 9 units. The Harvard INN sold for market-rate housing after foreclosure of the property in 2012, resulting in a loss of 4 units. Five units remained at Great Elms. In 2014, the Board of Appeals approved a comprehensive permit for 9 units at the site by the Chelmsford Housing Authority. Renamed The Elms, the new project will replace those lost at the Harvard Inn and Great Elms, for no net change. The Elms received a building permit in the fall of 2016, and the 9 units will remain on the SHI.

2) Trail Ridge is still under construction. At build out, the project will consist of 52 units, 13 of which will be affordable. Of the 52 units, 24 will be restricted to persons 55 years or above, and 28 units will be set aside for families.

Source: Harvard Planning Department, January 2017

Based on the 2010 Census count of 1,982 year-round housing units (including Devens), the Chapter 40B 10% affordability goal establishes a target of 198 SHI units. As of 2017, Harvard has a shortfall of 88 units. Notably, of the town's 110 SHI units, 35 are homeownership units and 65 are rental. However, this gap will continue to narrow with the addition of new affordable housing projects, including those directed toward seniors. Despite losing five Housing Rehab Program units in 2020 upon the expiration of their affordable housing restrictions, Harvard is currently assumed to meet nearly 8% of its SHI affordability goal.

The following table profiles affordable housing projects that, as of 2017, showed a strong likelihood of delivering by 2020.

TABLE 34  
**SHI UNITS IN THE PIPELINE**  
TOWN OF HARVARD  
*as of 2017*

Project Name	Address	Type	Restriction	SHI Units	Total Units
Pine Hill Village	Stow Rd.	Ownership	-	6	24
Craftsman Village	361 Ayer Rd.	Ownership	-	5	18
Devens Village Green (1)	Frant Rd, Devens	Rental	-	40	124
Trail Ridge	Littleton County Rd.	Ownership	Age 55+	4	28
Loss of HOR Units	-	-	-	-5	-
Net of New SHI Units	-	-	-	50	198
Existing SHI Units	-	-	-	113	-
Est. Total SHI Units	-	-	-	163	-
Est.% of SHI Units in 2019 (3)	-	-	-	8.3%	-

1) Devens Village Green is a mixed income/mixed housing type development under construction in Devens in 2016. The Harvard Municipal Affordable Housing Trust Fund offered a contribution of \$140,000 to the developer to subsidize 8 units in two 20-unit apartment buildings to rents that will be affordable to households earning up to 80% of the AMI. As a rental project, all 40 units will qualify for placement on the SHI.

2) The above total assumes a no change between the loss of 9 units at the Harvard Inn/Great Elms and the 9 new units under construction at The Elms in 2016.

3) The SHI percentage will decrease when new number of year-round housing units (the denominator in the equation) becomes available from the 2020 decennial census.

Source: Harvard Planning Department, January 2017

Per the Harvard Housing Production Plan, the following table forecasts Harvard producing 118 new affordable units over an 11-year period from 2017. This production likely will not occur linearly. Assuming the delivery of all pipeline units, Harvard will require an additional 60 SHI units by 2027 to achieve the 10% affordability goal. The town may achieve this through a combination of various initiatives: including local zoning incentives, subsidies from the Municipal Affordable Housing Trust, and comprehensive permits by private parties.

TABLE 35  
**PLANNING TARGETS TO ACHIEVE 10% AFFORDABLE HOUSING**  
TOWN OF HARVARD

Projects in the Pipeline	SHI Units	Type
Pine Hill Village	6	Owner
Craftsman Village	5	Rental
Devens Village Green	40	Rental
Trail Ridge	7	Owner
Subtotal	58	-
<u>Additional Units:</u>		
Town-Sponsored Projects	6	Owner
Affordable Accessory Apartments	2	Rental
Open Space Design Developments	4	Owner
Other Devens Housing	6	Unknown
MAHT Subsidies	10	Unknown
Other Comprehensive Permits	32	Unknown
Subtotal	60	-
Total	118	-

Source: MRPC, Harvard Zoning Coverage, 2015

*Existing Residential Supply within Commercial District:*

Harvard's Commercial District is also home to long-standing residential uses. Residential uses occupy 75.9 acres for approximately 22.0% of the total district area. Located on sites which range from 0.78 to 29.6 acres, residential uses are mostly single-family properties with some of them representative of Harvard's distinguished historic heritage. (See the following Table 36).

As will be described in more details later in this section, there are only a few multi-family developments in Harvard's Commercial District. As in the case of multi-family properties built in other areas of Harvard, and as described above, the completion of these projects has been facilitated by the inclusion of affordable units through a comprehensive permit per the 40B Chapter mandate of the State of Massachusetts.



These multi-family developments include the following:

- Foxglove is an older all affordable 24-unit and age-restricted rental property located at 253 Ayer Road.
- Bower Brooks Apartment at 186 Ayer Road mentioned above is a 42-unit senior residence that is part of the mixed-use cluster built in the spirit of a village center at the southern end of the Commercial District. This complex is also comprised of all affordable units for age-restricted renters.
- Harvard Green at 15 Lancaster County Road a successful 32-unit neo-traditional townhome community designed around a central green and completed in 1998. Eight of the 32 units in the complex are deeded affordable. This property is located across from a municipal park and across from a cluster of older commercial buildings, one of which is slated to house the Council for Aging Center which will be relocating from the town center. Because of its redevelopment potential, its mix of adjacent uses which includes the proximity of the post office, this area holds great potential for denser, pedestrian-oriented development, yet in scale with its surroundings.
- Craftsman Village at 5 Baldwin Crescent under construction at the northern end of the Commercial District consists of 20 two-bedroom detached farmhouse-style cottages also designed around a walkable environment. Five of the 20 homes in this community have an affordable designation.

Per our research and discussions with stakeholders, no new residential properties have been reported to be in the pipeline in the Commercial District.

TABLE 36  
SURVEY OF EXISTING RESIDENTIAL BUILDINGS  
COMMERCIAL DISTRICT  
HARVARD, MA

	Lot Size (Acres)	Address	Zoning	Year Built	Building Area (Sq.Ft.)	# Stories	# Units	Building Type	Building Style	Tenants (1)
1	0.8	19 South Shaker Rd	RI	1954	1,850	1	1	Single Family Residential	Ranch	Stone Realty Tr
2	1.9	20 Myrick Ln	RI	1977	3,802	2	1	Single Family Residential	Garrison	Fenton, Lawrence J & Janice M
3	0.4	275 Ayer Rd	C	1936	2,368	1	1	Single Family Residential	Cape Cod	Rdj Realty Co
4	8.5	288 Ayer Rd	C	1890	3,206	2	2	Single Family Residential	Conventional	Yusuf, Jibrayil N
5	6.5	292 Ayer Rd	RI	1975	3,220	2	1	Single Family Residential	Modern/Contemp	Myer, Vic E
6	13.4	295 Ayer Rd	C	1935	2,027	1	1	Single Family Residential	Bungalow	Rdj Realty Co
7	10.6	304 Ayer Rd	RI	1892	5,819	1.5	1	Single Family Residential	Cape Cod	West, Richard W & Poitras, Sandra J
8	1.5	307 Ayer Rd	C	1850	8,740	2	1	Single Family Residential	Colonial	Brown, Lisa C & Briggs, Andrew W
9	3.6	31 Glenview Dr	RI	1968	2,880	1	1	Single Family Residential	Ranch	Raynes, Alfred H
10	3.8	310 Ayer Rd	C	1865	9,555	2	1	Single Family Residential	Colonial	Watson, Richard B Jr
11	1.0	313 Ayer Rd	C	1723	6,059	2	2	Single Family Residential	Colonial	Fairbanks, Dana
12	23.0	320 Ayer Rd	C	1948	3,097	1	1	Single Family Residential	Ranch	Lti Harvard Orchard Lp
13	1.0	327 Ayer Rd	C	1870	4,296	2	1	Single Family Residential	Conventional	Doe, Lawrence C & Lawson, Pamela C
14	8.1	39 Glenview Dr	RI	1968	7,658	2.5	1	Single Family Residential	Colonial	Ferguson Daniel A & Anne T
15	1.2	6 Old Mill Rd	RI	1964	2,333	1	1	Single Family Residential	Ranch	Johnston, Paul V & Doris A
16	29.6	6 Myrick Ln	RI	1968	4,970	2	2	Two-Family Residential	Colonial	Hannigan, James R & Sibley A
17	12.6	5 Baldwin Ct	RI	2023	43,588	2	20	Single Family Residential Community	Farmhouse Cottages	Craftsman Village
18	3.2	253 Ayer Rd	C	1993	25,436	2	24	Multi-Unit Apartments	Apartments for 55+	Foxglove Housing Assoc Ltd
19	19.9	306 Ayer Rd	RI	1967	3,136	2	1	Mixed Use (Residential / Forest)	Garrison	Mccarthy Realty Tr
20	53.7	309 Ayer Rd	RI	1750	5,952	2	1	Mixed Use (Residential / Agriculture)	Conventional	Berwind Brothers Llc
21	3.5	196 Ayer Rd	C	2011	46,356	3	42	Mixed Use (Mainly Multifamily Residential)	Senior Housing	Bower Brook Apartments
Min	0.4				1,850					
Avg	9.9				9,350					
Max	53.7				46,356					
Total	207.9	Total for 21 properties			196,348	Total for 21 properties				

Note (1) Tenant list might include some expired leases

Note (2) Craftsman Village is currently under construction; estimated 2023 completion. Building area reflects an estimated total between the 20 single-family residences

Source: Town of Harvard Assessor's Office, Field Survey; Compiled by Weitzman Associates, LLC

## SINGLE-FAMILY FOR-SALE MARKET

Across the region, single-family homes compose the majority of the market and command the highest price points. However, they are in excess supply, and not necessarily a strong proposition for Harvard's Commercial District. In order to properly understand the impact of single family homes on the for-sale market, we have compiled 24-month trailing sale history trends for the single-family markets within the Town of Harvard (primary) and a 30-minute drive-time radius from the Commercial District (secondary). Our analysis reviews the number of sales in relation to bedroom mix, chunk price, square footage, and price per square foot.

### *Primary Market - Town of Harvard:*

Of the identified 193 single-family home sales within Harvard, 19.1% (36 sales) were priced under \$600,000, 56.2% (109 sales) were priced between \$600,000 and \$999,999, and 24.7% (48 sales) were priced at \$1,000,000 or more. It is noted that these sales do not reflect a comprehensive survey of all sales within the market, but rather those sales that were identified through the MLS; nonetheless, these price levels are reflective of the current product available in the market.

TABLE 37  
TRAILING SALES HISTORY OF SINGLE FAMILY INVENTORY  
**PRIMARY MARKET SUMMARY - TOWN OF HARVARD**  
By Price Range

Sold Price Range	Sales		Avg. SF	Avg. PSF
	#	%		
\$0 - \$399,999	7	4.1%	1,209	\$291
\$400,000 - \$599,999	29	14.9%	1,857	\$296
\$600,000 - \$799,999	69	35.6%	2,530	\$299
\$800,000 - \$999,999	40	20.6%	3,243	\$289
\$1,000,000 - \$1,499,999	36	18.6%	3,892	\$306
\$1,500,000 - \$2,000,000	10	5.2%	5,095	\$354
\$2,000,000+	2	1.0%	5,254	\$403
Total/ Weighted Average	193	100%	2,944	\$301

1) Limited to trailing 24 months

2) All data is recent as of July 2022

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

Of the identified sales, 1.6% were one-bedroom homes, 3.1% were two-bedroom homes, 35.8% were three-bedroom homes, 47.7% were four-bedroom homes, and 11.9% were homes with five-or-more bedrooms. It is noted that price-per-square-foot is highest among two-bedroom homes, approximately \$235 higher than the weighted average at \$535. The high percentage of four-bedroom units sold over the last 24 months (47.7%) is mostly driven by the high saturation of larger, older homes within the market. The identified 295 single-family home sales had an average sale price of about \$886,144, or \$301 per square foot based upon an average unit size of 2,944 square feet (these sales, organized by address and bedroom count, are summarized below in the addenda).

TABLE 38  
TRAILING SALES HISTORY OF SINGLE FAMILY INVENTORY  
**PRIMARY MARKET SUMMARY - TOWN OF HARVARD**  
By Unit Type

Bedrooms	Sales		Avg. SF	Avg. PSF
	#	%		
1	3	1.6%	894	\$357
2	6	3.1%	1,333	\$535
3	69	35.8%	2,179	\$329
4	92	47.7%	3,316	\$274
5+	23	11.9%	4,438	\$261
Total/ Weighted Average	193	100.0%	2,944	\$301

1) Limited to trailing 24 months

2) All data is recent as of July 2022

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

*Secondary Market - Within a 30-Minute Drive of C-District:*

Of the 350 single-family home sales identified within a 30-minute drive of the Commercial District, 35.4% (124 sales) were priced under \$600,000, 41.1% (144 sales) were priced between \$600,000 and \$999,999, and 23.4% (82 sales) were priced at \$1,000,000 or more.

TABLE 39  
TRAILING SALES HISTORY OF SINGLE FAMILY INVENTORY  
**SECONDARY MARKET SUMMARY - 30-MIN DRIVE TIME**  
By Price Range

Sold Price Range	Sales		Avg. SF	Avg. PSF
	#	%		
\$0 - \$399,999	41	11.7%	1,350	\$260
\$400,000 - \$599,999	83	23.7%	1,683	\$316
\$600,000 - \$799,999	88	25.1%	2,312	\$319
\$800,000 - \$999,999	56	16.0%	2,888	\$328
\$1,000,000 - \$1,499,999	51	14.6%	3,287	\$373
\$1,500,000 - \$2,000,000	17	4.9%	4,189	\$433
\$2,000,000+	14	4.0%	5,720	\$557
Total/ Weighted Average	350	100%	2,512	\$336

1) Limited to trailing 24 months

2) All data is recent as of July 2022

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

Of the identified sales, 0.6% were one-bedroom homes, 6.9% were two-bedroom homes, 37.1% were three-bedroom homes, 45.7% were four-bedroom homes, and 9.7% were homes with five-or-more bedrooms. Within this wider market, price-per-square-foot is notably highest among one-bedroom homes, approximately \$109 higher than the weighted average at \$445. As with the Harvard primary market, the high percentage of four-bedroom units sold over the last 24 months (45.7%) is mostly driven by the high saturation of larger, older homes within this secondary market. The identified 350 single-family home sales had an average sale price of about \$844,032, or \$336 per square foot based upon an average unit size of 2,512 square feet (these sales, organized by address and bedroom count, are summarized below in the addenda).

TABLE 40  
TRAILING SALES HISTORY OF SINGLE FAMILY INVENTORY  
**SECONDARY MARKET SUMMARY - 30-MIN DRIVE TIME**  
By Unit Type

Bedrooms	Sales		Avg. SF	Avg. PSF
	#	%		
1	2	0.6%	865	\$445
2	24	6.9%	1,367	\$322
3	130	37.1%	1,857	\$336
4	160	45.7%	2,855	\$336
5+	34	9.7%	4,302	\$339
Total/ Weighted Average	350	100.0%	2,512	\$336

1) Limited to trailing 24 months

2) All data is recent as of July 2022

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

## CONDOMINIUM AND TOWNHOME FOR-SALE MARKET

There's a very limited supply of condominiums and townhomes in and adjacent to Harvard's Commercial District, and a shortage within Harvard overall. As of 2020, multi-family properties (accommodating two or more families) comprised just 7% of all housing stock in Harvard; single-family homes comprised the remainder at 93%. Therefore, to mend this gap, we believe condominiums and townhomes are highly appropriate for the Study Area. To frame the for-sale market and inform potential future development in the Commercial District, we have profiled a selection of condominium and townhome developments that we believe are most relevant. Our profiles include an analysis of these developments' unit mixes, unit sizes, prices per square foot, and competitive positioning within the local market.

### *Summary of For-Sale Comparables:*

Located along the border between the Worcester and Boston MSAs, the Town of Harvard sits centrally within the state of Massachusetts. We utilized two target markets defined by drive time: a primary and secondary market extending 20 and 30 minutes from the Commercial District, respectively. Given most condominium and townhome inventory sits within the towns surrounding Harvard, the Town of Harvard itself is a strong candidate for additional development of this product type.

Of the identified 85 closed sales within comparable condominium and townhome developments in the primary market, 17.6% (15 sales) were priced under \$300,000, 27.1% (22 sales) were priced from \$300,000 to \$499,999, 45.9% (39 sales) were priced from \$500,000 to \$699,999, and 9.4% (8 sales) were priced from \$700,000 to \$899,999. It is noted that these sales do not reflect a comprehensive survey of all sales at the comparable properties, but rather those sales that were identified through Redfin; nonetheless, these price levels are reflective of the current product available in the market.

TABLE 4I  
TRAILING SALES HISTORY OF COMPARABLES  
**PRIMARY FOR-SALE MARKET SUMMARY**  
By Price Range

Sold Price Range	Sales		Avg. SF	Avg. PSF
	#	%		
\$0 - \$199,999	1	1%	1,000	\$168
\$200,000 - \$299,999	14	16%	1,191	\$209
\$300,000 - \$399,999	14	16%	1,334	\$267
\$400,000 - \$499,999	9	11%	1,804	\$252
\$500,000 - \$599,999	17	20%	1,896	\$304
\$600,000 - \$699,999	22	26%	2,180	\$312
\$700,000 - \$799,999	7	8%	2,325	\$327
\$800,000 - \$899,999	1	1%	2,450	\$347
Total / Weighted Average	85	100%	1,782	\$280

1) Excludes the affordable units within Boynton Meadows

2) Inclusive of condominium and townhome properties

3) All data is recent as of July 2022

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

In the secondary market, of the identified 58 closed sales within comparable developments (excluding those from the primary market), 3.4% (2 sales) were priced from \$200,000 to \$299,999, 75.9% (44 sales) were priced from \$300,000 to \$499,999, 19.0% (11 sales) were priced from \$500,000 to \$699,999, and 1.7% (1 sale) were priced from \$700,000 to \$799,999. Compared to the secondary market, the primary market sells more condominiums/townhomes at higher price ranges, with 55.3% of its closed sales priced above \$500,000 while the falls to 20.7% in the secondary market. Furthermore, of the single brackets, the primary market closed the most sales within the \$600,000 to \$699,999 range (at 25.9%), while the secondary market closed the most sales within the \$400,000 to \$499,999 range (at 46.6%), evidencing the stronger appetite for higher-end homes closer to Harvard's Commercial District.



TABLE 42  
TRAILING SALES HISTORY OF COMPARABLES  
**SECONDARY FOR-SALE MARKET SUMMARY**  
By Price Range

Sold Price Range	Sales		Avg. SF	Avg. PSF
	#	%		
\$0 - \$199,999	-	-	-	-
\$200,000 - \$299,999	2	3.4%	1,020	\$215
\$300,000 - \$399,999	17	29.3%	1,219	\$307
\$400,000 - \$499,999	27	46.6%	1,638	\$296
\$500,000 - \$599,999	6	10.3%	2,643	\$210
\$600,000 - \$699,999	5	8.6%	3,238	\$198
\$700,000 - \$799,999	1	1.7%	3,713	\$197
\$800,000 - \$899,999	-	-	-	-
Total / Weighted Average	58	100%	1,771	\$278

- 1) Excludes data from the Primary Market
- 2) Inclusive of condominium and townhome properties
- 3) All data is recent as of July 2022

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

Between the identified sales of both primary and secondary markets, the overwhelming majority sold were two-bedroom units, at 120 sales or 85% of total sales. Most properties with two-bedroom sales sold between 4 to 13 units each—with the exception of Barret Farm in the secondary market which sold the most per property at 24 units. Additionally, there are several properties that only sold two-bedroom units; these include Craftsman Village and Trail Ridge from the primary market, and Ava Estates and Wayside at Chelmsford from the secondary market. Furthermore, only four properties within the primary market sold one-bedroom units over the past 24 months; during this time, no one-bedroom units sold within the secondary market. Within the primary market, selling either one or two units each, the four properties with one-bedroom sales included: Boynton Meadows, Conant Commons, Meeting House of Stow, and The Falls at Arden Mills. Regarding three-bedroom sales, both markets sold between one and four units per property, though the primary market sold slightly more. Between all unit types, the primary market sold 6 more one-bedroom units, 16 more two-bedroom units, and 4 more three-bedroom units.

TABLE 43  
TRAILING SALES HISTORY OF COMPARABLES  
**FOR-SALE MARKET SUMMARY**  
By Unit Type

Property	1 BR		2 BR		3 BR		Total
	#	%	#	%	#	%	#
<u>Primary Market</u>							
Boynton Meadows (1)	2	1%	5	4%	3	2%	10
Conant Commons	1	1%	10	7%	4	3%	15
Craftsman Village	-	-	7	5%	-	-	7
Harvard Green	-	-	4	3%	2	1%	6
Littleton Ridge Estates	-	-	9	6%	1	1%	10
* Meeting House of Stow	1	1%	13	9%	-	-	14
The Falls at Arden Mills	2	1%	11	8%	-	-	13
* Trail Ridge	-	-	9	6%	-	-	9
Subtotal / Percentage	6	4%	68	48%	10	7%	84
<u>Secondary Market</u>							
216 Rangeway	-	-	6	4%	4	3%	10
Ava Estates	-	-	6	4%	-	-	6
Barrett Farm	-	-	24	17%	1	1%	25
Swanson Meadow Townhomes	-	-	4	3%	1	1%	5
Wayside at Chelmsford	-	-	12	8%	-	-	12
Subtotal / Percentage	0	0%	52	37%	6	4%	58
Total / Percentage	6	4%	120	85%	16	11%	142

1) The listed one-bedroom units at Boynton Meadows are affordable-rate units

2) Inclusive of condominium and townhome properties

3) Properties with a " \* " are 55+ communities

4) All data is recent as of July 2022

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

## CONDOMINIUM AND TOWNHOME FOR-SALE COMPARABLES

In this report, we detail our findings of several comparable condominium and townhome for-sale properties throughout the Central Massachusetts area. Of these properties, we review unit mix, trailing sales history, location suitability, unit features, and absorption pace, as provided below. We analyzed the competitive market in the surrounding area and gathered the information in this report in July of 2022, sourced from public listings, databases, and press releases.

*Primary Comparables – (20-minute drive-time radius from Commercial District):*



### **Harvard Green** (Harvard, MA)

Built in 1998, Harvard Green is a condominium development with 32 market-rate and affordable units located at the southern end of Harvard's Commercial District. Rising two stories and offering between two and three bedrooms, unit floorplans range from 1,699 to 2,850 square feet in size. From the center of Harvard's Commercial District, Harvard Green sits 0.7 miles to the south.

Over the past 36 months, we identified six sales that closed between March 2020 and June 2022, with an average sales price of \$558,667, or \$226 per square foot based upon an average unit size of 2,524 square feet. These past sales included four two-bedroom units and one three-bedroom units. For the most recent sale closed within the property (on June 30, 2022), the sales price was \$665,000 for 2,271 square feet, or about \$293 per square foot. The following table summarizes the 36-month trailing resale history at Harvard Green:

**TABLE 44**  
**TRAILING 36-MONTH RESALE HISTORY**  
**HARVARD GREEN**  
35 Lancaster County Road, Harvard

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
7C	\$665,000	\$293	2	2.5	2,271	6/30/22
9C	\$625,000	\$234	2	2.5	2,666	2/4/22
10A	\$510,000	\$182	2	2.5	2,808	6/30/21
3A	\$604,000	\$212	3	2.5	2,850	5/28/21
11B	\$525,000	\$184	3	2.5	2,847	12/30/20
4C	\$423,000	\$249	2	2.5	1,699	3/13/20
<b>AVERAGE</b>	<b>\$558,667</b>	<b>\$226</b>	<b>2.3</b>	<b>2.5</b>	<b>2,524</b>	<b>-</b>

1) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



### Craftsman Village (Harvard, MA)

Also located within the Town of Harvard, Craftsman Village is a new community recently delivered in 2022. The community offers 20 two-story cottages, each with two bedrooms and floorplans that range between 1,826 and 2,215 square feet in size. Five of the 20 units are affordable and rent-restricted, reserved for households earning less than 80% of the area's median income (AMI). Pricing averages \$700,000 for market-rate homes and approximately \$220,000 for affordable homes. Craftsman Village sits at the northern end of Harvard's Commercial District.

Over the past 36 months, we identified two confirmed sales that closed in May 2022, and five sales estimated by Redfin. Overall, the identified sales sold for an average price of \$639,166, or \$294 per square foot based upon an average unit size of 2,179 square feet. All of these past sales were two-bedroom units. For the two confirmed sales closed within the property (on May 13, 2022 and May 18, 2022), the respective sale prices were \$606,332 (about \$276 per square foot for 2,200 square feet) and \$579,900 (about \$305 per square foot for 1,900 square feet). The developer for this development reported that all units were sold before delivery. The following table summarizes the 36-month trailing resale history at Craftsman Village:

TABLE 45  
TRAILING 36-MONTH RESALE HISTORY  
**CRAFTSMAN VILLAGE**  
Baldwin Court, Harvard

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
10	\$579,900	\$305	2	2.5	1,900	5/18/22
1	\$606,332	\$276	2	2.5	2,200	5/13/22
SUBAVERAGE	\$593,116	\$291	2.0	2.5	2,050	-
Estimated (1)	Sold Price	PPSF	Beds	Baths	SF	Sold Date
2	\$664,791	\$291	2	2.5	2,288	-
4	\$684,688	\$293	2	2.5	2,340	-
8	\$669,087	\$292	2	2.5	2,288	-
7	\$715,926	\$306	2	2.5	2,340	-
9	\$691,591	\$302	2	2.5	2,288	-
SUBAVERAGE	\$685,217	\$297	2.0	2.5	2,309	-
<b>AVERAGE</b>	<b>\$639,166</b>	<b>\$294</b>	<b>2.0</b>	<b>2.5</b>	<b>2,179</b>	<b>-</b>

1) Represents Redfin's estimates for 'Off Market' sales within the past 36 months

2) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



### Trail Ridge (Harvard, MA)

Within the Town of Harvard, Trail Ridge is a mixed townhome development with both age-restricted (over the age of 55) and non-age-restricted units. Built in 2008, each two-story townhome offers two bedrooms, ranging from 2,148 to 2,971 square feet in size. Trail Ridge sits approximately 3.6 miles from the center of Harvard's Commercial District.

Over the past 36 months, we identified nine sales that closed between November 2019 and June 2022, with an average sales price of \$576,108, or \$246 per square foot based upon an average unit size of 2,352 square feet. All of these past sales were two-bedroom units. For the most recent sale closed within the property (on June 21, 2022), the sales price was \$725,000 for 2,248 square feet, or about \$323 per square foot. The following table summarizes the 36-month trailing resale history at Trail Ridge:

TABLE 46  
TRAILING 36-MONTH RESALE HISTORY  
**TRAIL RIDGE**  
Trail Ridge Way, Harvard

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
15D	\$725,000	\$323	2	2.5	2,248	6/21/22
2D	\$620,000	\$289	2	2.5	2,148	6/1/22
5A	\$703,000	\$237	2	3	2,971	4/26/22
10B	\$550,000	\$248	2	2.5	2,220	7/9/21
10D	\$508,100	\$229	2	2.5	2,220	7/1/21
13D	\$499,900	\$210	2	2.5	2,377	5/29/21
12A	\$525,000	\$234	2	2.5	2,245	12/1/20
12D	\$573,970	\$243	2	2.5	2,360	1/21/20
13A	\$480,000	\$202	2	2.5	2,377	11/22/19
<b>AVERAGE</b>	<b>\$576,108</b>	<b>\$246</b>	<b>2.0</b>	<b>2.6</b>	<b>2,352</b>	<b>-</b>

1) Trail Ridge is a 55+ community

2) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



**Boynton Meadows**  
(Groton, MA)

Located in Groton, MA, Boynton Meadows was developed by Senate Construction Corporation in 2015. Comprising 15 two-story units, the property offers floorplans of one to three bedrooms, ranging between 786 and 2,500 square feet in size. Boynton Meadows sits approximately 5.6 miles from Harvard's Commercial District.

Over the past 60 months, we identified eight market-rate sales that's closed between January 2018 and June 2022, and two affordable sales that closed between December 2020 and June 2021. The market-rate sales averaged \$676,850 in sale price, or \$291 per square foot based upon an average unit size of 2,420 square feet. These past sales included two affordable one-bedroom units, five market-rate two-bedroom units, and three market-rate three-bedroom units. For the affordable units, sale price averaged \$190,714, or \$202 per square foot based upon an average unit size of 941 square feet. For the most recent market-rate sale closed within the property (on June 10, 2022), the sales price was \$775,000 for 2,009 square feet, or about \$386 per square foot. The following table summarizes the 60-month trailing resale history at Boynton Meadows:

**TABLE 47**  
**TRAILING 60-MONTH RESALE HISTORY**  
**BOYNTON MEADOWS**  
134 Main St, Groton

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
18A	\$775,000	\$386	2	2.5	2,009	6/10/22
19A	\$675,000	\$314	2	2.5	2,148	5/23/22
27B	\$632,500	\$213	3	3.5	2,970	1/31/19
27A	\$632,500	\$176	3	2.5	3,590	1/31/19
25A	\$680,000	\$310	2	2.5	2,191	6/26/18
18A	\$649,900	\$309	2	2.5	2,100	5/4/18
18C	\$519,900	\$274	2	2.5	1,900	3/23/18
24B	\$850,000	\$347	3	3.5	2,450	1/31/18
<b>AVERAGE</b>	<b>\$676,850</b>	<b>\$291</b>	<b>2.4</b>	<b>2.8</b>	<b>2,420</b>	<b>-</b>
Aff. Units	Sold Price	PPSF	Beds	Baths	SF	Sold Date
1C	\$225,000	\$208	1	1.5	1,084	6/11/21
2B	\$156,427	\$196	1	1	797	12/22/20
<b>AVERAGE</b>	<b>\$190,714</b>	<b>\$202</b>	<b>1.0</b>	<b>1.3</b>	<b>941</b>	<b>-</b>

1) For broader context, trailing sales history extends to 60 months

2) Select units at Boynton Meadows are affordable-rate units

3) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



**Littleton Ridge Estates**  
(Littleton, MA)

The Littleton Ridge Estates in Littleton, Massachusetts was built in 2009 by Emanouil Development. The property offers 70 two-bedroom units at either one or two stories, with floorplans ranging between 1,200 and 2,343 square feet in size. The Littleton Ridge Estates sits approximately 7.5 miles from Harvard's Commercial District.

Over the past 48 months, we identified 10 sales that closed between October 2018 and July 2022, with an average sales price of \$444,940, or \$244 per square foot based upon an average unit size of 1,851 square feet. These past sales included nine two-bedroom units and one three-bedroom unit. For the most recent sale closed within the property (on July 30, 2022), the sales price was \$500,000 for 1,446 square feet, or about \$346 per square foot. The following table summarizes the 48-month trailing resale history at Littleton Ridge Estates:

TABLE 48  
TRAILING 48-MONTH RESALE HISTORY  
**LITTLETON RIDGE ESTATES**  
1-8 Charles Ridge Road, Littleton

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
2B	\$500,000	\$346	2	2.5	1,446	7/30/22
2D	\$557,500	\$258	2	2.5	2,158	4/29/22
6D	\$550,000	\$268	3	2.5	2,050	11/3/21
7C	\$430,900	\$266	2	2.5	1,618	9/25/20
8C	\$403,000	\$257	2	2.5	1,570	9/21/20
5A	\$432,000	\$212	2	2.5	2,041	5/18/20
5C	\$415,000	\$195	2	3.5	2,123	8/19/19
6B	\$389,000	\$212	2	2.5	1,836	7/1/19
4B	\$392,000	\$214	2	2.5	1,836	10/17/18
6C	\$380,000	\$207	2	2.5	1,836	10/14/18
<b>AVERAGE</b>	<b>\$444,940</b>	<b>\$244</b>	<b>2.1</b>	<b>2.6</b>	<b>1,851</b>	<b>-</b>

1) For broader context, trailing sales history extends to 48 months

2) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC





### Meeting House of Stow (Stow, MA)

The Meeting House of Stow, located in Stow, Massachusetts, is an over-55 adult community built in 2002. The property offers 76 units spread between three stories. Offering one or two bedrooms, units at the property range between 762 and 2,034 square feet in size. The Meeting House of Stow sits approximately 11.4 miles from Harvard's Commercial District.

Over the past 36 months, we identified 14 sales that closed between December 2019 and May 2022, with an average sales price of \$327,429, or \$282 per square foot based upon an average unit size of 1,178 square feet. These past sales included one one-bedroom unit and 13 two-bedroom units. For the most recent sale closed within the property (on May 17, 2022), the sales price was \$389,000 for 1,286 square feet, or about \$302 per square foot. The following table summarizes the 36-month trailing resale history at Meeting House of Stow:

TABLE 49  
TRAILING 36-MONTH RESALE HISTORY  
**MEETING HOUSE OF STOW**  
34 Meeting House Lane, Stow

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
210	\$389,000	\$302	2	2	1,286	5/17/22
108	\$335,000	\$353	2	1.5	949	4/29/22
202	\$400,000	\$289	2	2	1,384	3/10/22
304	\$325,000	\$303	2	2	1,074	1/12/22
102	\$319,000	\$306	2	1.5	1,041	12/3/21
220	\$330,000	\$281	2	2	1,175	12/2/21
217	\$320,000	\$265	2	2	1,209	10/28/21
219	\$310,000	\$297	2	2	1,043	9/29/21
201	\$355,000	\$219	2	2	1,619	9/8/21
107	\$337,000	\$262	2	2	1,285	5/21/21
211	\$312,000	\$261	2	2	1,197	6/30/20
321	\$290,000	\$247	2	2	1,175	4/1/20
310	\$322,000	\$250	2	2	1,286	3/27/20
314	\$240,000	\$315	1	1	762	12/18/19
<b>AVERAGE</b>	<b>\$327,429</b>	<b>\$282</b>	<b>1.9</b>	<b>1.9</b>	<b>1,178</b>	<b>-</b>

1) Meeting House is a 55+ community

2) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



**The Falls at Arden Mills**  
(Fitchburg, MA)

Located in Fitchburg, Massachusetts, The Falls at Arden Mills was delivered in 2006. Developed by Global Property Developers, The Falls at Arden Mills comprises 48 condominium units spread between three stories. Unit floorplans offer either one or two bedrooms, ranging between 1,000 and 1,321 square feet in size. The Falls at Arden Mills sits approximately 12.7 miles from

Harvard's Commercial District.

Over the past 36 months, we identified 13 sales that closed between June 2019 and June 2022, with an average sales price of \$235,485, or \$194 per square foot based upon an average unit size of 1,211 square feet. These past sales included 2 one-bedroom units and 11 two-bedroom units. For the most recent sale closed within the property (on June 24, 2022), the sales price was \$287,000 for 1,237 square feet, or about \$232 per square foot. The following table summarizes the 36-month trailing resale history at The Falls at Arden Mills:

TABLE 50  
TRAILING 36-MONTH RESALE HISTORY  
**THE FALLS AT ARDEN MILLS**  
118 Bemis Road, Fitchburg

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
2102	\$287,000	\$232	2	2	1,237	6/24/22
2209	\$260,000	\$210	2	2	1,240	5/13/22
2215	\$299,900	\$227	2	2	1,320	4/28/22
2302	\$240,000	\$200	2	2	1,200	8/31/21
2206	\$210,000	\$210	1	1	1,000	8/5/21
2210	\$214,000	\$173	2	2	1,240	2/17/21
2312	\$234,900	\$193	2	2	1,220	1/22/21
2108	\$239,000	\$181	2	2	1,320	10/23/20
2213	\$229,000	\$185	2	2	1,240	9/25/20
2106	\$167,500	\$168	1	1	1,000	8/28/20
2309	\$230,000	\$192	2	2	1,200	3/13/20
2310	\$220,000	\$183	2	2	1,200	12/16/19
2115	\$230,000	\$174	2	2	1,321	7/25/19
<b>AVERAGE</b>	<b>\$235,485</b>	<b>\$194</b>	<b>1.8</b>	<b>1.8</b>	<b>1,211</b>	<b>-</b>

1) All data is recent as of July 2022.

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



**Conant Commons**  
(Concord, MA)

Conant Commons is a three-story condominium property located in Concord, Massachusetts. Built in 2007, the property offers 58 units of one, two, or three bedrooms, ranging in size between 896 and 2,224 square feet. Conant Commons sits approximately 13.1 miles from Harvard's Commercial District.

Over the past 36 months, we identified 15 sales that closed between September 2019 and September 2021, with an average sales price of \$586,860, or \$403 per square foot based upon an average unit size of 1,472 square feet. These past sales included one one-bedroom unit, 10 two-bedroom units, and four three-bedroom units. For the most recent sale closed within the property (on September 28, 2021), the sales price was \$505,000 for 1,253 square feet, or about \$403 per square foot. The following table summarizes the 36-month trailing resale history at Conant Commons:

TABLE 51  
TRAILING 36-MONTH RESALE HISTORY  
**CONANT COMMONS**  
95 Conant Street, Concord

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
218	\$505,000	\$403	2	2	1,253	9/28/21
320	\$550,000	\$454	2	2	1,212	9/2/21
306	\$518,000	\$411	2	2	1,261	7/23/21
211	\$610,000	\$435	2	2	1,401	7/19/21
308	\$660,000	\$449	3	2	1,469	6/7/21
213	\$629,000	\$398	2	2	1,582	2/16/21
313	\$625,000	\$395	2	2	1,582	1/20/21
301	\$707,000	\$476	2	2	1,486	1/12/21
201	\$649,000	\$437	2	2	1,486	6/23/20
405	\$655,000	\$307	3	2	2,131	6/6/20
312	\$650,000	\$358	2	2	1,814	4/30/20
215	\$405,000	\$388	1	1	1,045	3/10/20
311	\$500,000	\$357	2	2	1,401	1/2/20
208	\$579,900	\$395	3	2	1,469	9/20/19
302	\$560,000	\$376	3	2	1,488	9/18/19
<b>AVERAGE</b>	<b>\$586,860</b>	<b>\$403</b>	<b>2.2</b>	<b>1.9</b>	<b>1,472</b>	<b>-</b>

1) All data is recent as of July 2022.

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC

*Secondary Comparables – (30-minute drive-time radius from Commercial District):*

As the condominium and townhome market in Harvard is relatively small with limited comparable development, we also review comparable developments within a broader, 30-minute drive-time radius from the Commercial District. The comparable developments are profiled below, inclusive of both condominium and townhome properties.



**Wayside at Chelmsford**  
(North Chelmsford, MA)

Wayside at Chelmsford is an adult townhome community located in North Chelmsford, Massachusetts. Completed in 2001, the property rises three stories and offers 72 one- and two-bedroom units. Unit floor plans range from 1,382 to 1,745 square feet in size. Wayside at Chelmsford sits approximately 16.9 miles from Harvard's Commercial District.

Over the past 36 months, we identified 12 sales that closed between November 2019 and June 2022, with an average sales price of \$403,333, or \$246 per square foot based upon an average unit size of 1,652 square feet. All of these past sales were two-bedroom units. For the most recent sale closed within the property (on June 15, 2022), the sales price was \$452,500 for 1,745 square feet, or about \$259 per square foot. The following table summarizes the 36-month trailing resale history at Wayside at Chelmsford:

TABLE 52  
TRAILING 36-MONTH RESALE HISTORY  
**WAYSIDE AT CHELMSFORD**  
6 Technology Drive, North Chelmsford

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
317	\$452,500	\$259	2	2	1,745	6/15/22
322	\$400,000	\$229	2	2	1,745	6/7/22
236	\$450,000	\$258	2	2	1,745	4/15/22
224	\$430,000	\$311	2	2	1,382	4/12/22
134	\$425,000	\$280	2	2	1,517	3/29/22
222	\$415,000	\$238	2	2	1,745	12/13/21
213	\$430,000	\$246	2	2	1,745	11/12/21
337	\$385,000	\$221	2	2	1,745	6/24/21
331	\$370,000	\$249	2	2	1,484	3/12/21
127	\$370,000	\$212	2	2	1,745	6/30/20
137	\$368,000	\$211	2	2.5	1,745	3/20/20
121	\$344,500	\$232	2	2	1,484	11/8/19
<b>AVERAGE</b>	<b>\$403,333</b>	<b>\$246</b>	<b>2.0</b>	<b>2.0</b>	<b>1,652</b>	<b>-</b>

1) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



**Ava Estates**  
(North Billerica, MA)

Built in 2016 by Garden Homes, Ava Estates is located in North Billerica, Massachusetts. The development offers 26 two-story, two-bedroom townhomes, with floor plans ranging from 1,458 to 2,300 square feet in size. Ava Estates sits approximately 19.2 miles from Harvard's Commercial District.

Over the past 48 months, we identified six sales that closed between August 2018 and April 2022, with an average sales price of \$449,700, or \$252 per square foot based upon an average unit size of 1,799 square feet. All of these past sales were two-bedroom units. For the most recent sale closed within the property (on April 7, 2022), the sales price was \$541,000 for 1,833 square feet, or about \$295 per square foot. The following table summarizes the 48-month trailing resale history at Ava Estates:

TABLE 53  
TRAILING 48-MONTH RESALE HISTORY  
**AVA ESTATES**  
82-98 Rangeway Road, North Billerica

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
205	\$541,000	\$295	2	2.5	1,833	4/7/22
304	\$450,100	\$215	2	2.5	2,093	11/16/18
207	\$430,000	\$235	2	2.5	1,833	11/15/18
109	\$422,000	\$264	2	2.5	1,600	10/18/18
303	\$435,100	\$237	2	2.5	1,833	9/29/18
103	\$420,000	\$263	2	2.5	1,600	8/13/18
<b>AVERAGE</b>	<b>\$449,700</b>	<b>\$252</b>	<b>2.0</b>	<b>2.5</b>	<b>1,799</b>	<b>-</b>

1) For broader context, trailing sales history extends to 48 months

2) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



**Barrett Farm**  
(North Billerica, MA)

Located in North Billerica, Massachusetts, Barrett Farm was completed in 2009. The property offers 132 units, each with a ground level garage and two residential floors above. The condominium units at Barrett Farm offer two or three bedrooms, ranging from 1,020 to 1,350 square feet in size. Barrett Farm sits approximately 19.3 miles from Harvard's Commercial District.

Over the past 24 months, we identified 25 sales that closed between July 2020 and June 2022, with an average sales price of \$373,048, or \$355 per square foot based upon an average unit size of 1,053 square feet. All of these past sales were two-bedroom units. For the most recent sale closed within the property (on June 3, 2022), the sales price was \$440,000 for 1,080 square feet, or about \$407 per square foot. The following table summarizes the 24-month trailing resale history at Barrett Farm:

**TABLE 54**  
**TRAILING 24-MONTH RESALE HISTORY**  
**BARRETT FARM**  
41 Boston Road, North Billerica

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
175	\$440,000	\$407	2	1.5	1,080	6/3/22
434	\$437,000	\$405	2	1.5	1,078	4/15/22
454	\$430,000	\$412	2	1.5	1,044	3/17/22
331	\$430,100	\$422	2	1.5	1,020	3/11/22
324	\$431,000	\$423	2	1.5	1,020	3/6/22
481	\$420,000	\$402	2	1.5	1,044	2/25/22
233	\$213,200	\$209	2	1.5	1,020	10/28/21
215	\$402,000	\$394	2	1.5	1,020	7/29/21
166	\$400,000	\$383	2	1.5	1,044	7/21/21
314	\$406,101	\$398	2	1.5	1,020	7/14/21
164	\$385,000	\$369	2	1.5	1,044	7/8/21
341	\$391,000	\$383	2	1.5	1,020	6/25/21
161	\$344,000	\$330	2	1.5	1,044	6/17/21
332	\$224,200	\$220	2	1.5	1,020	6/14/21
241	\$418,000	\$310	3	1.5	1,350	6/2/21
425	\$405,000	\$388	2	1.5	1,044	4/30/21
181	\$360,000	\$345	2	1.5	1,044	3/12/21
352	\$350,000	\$343	2	1.5	1,020	2/22/21
183	\$360,000	\$333	2	1.5	1,080	12/22/20
494	\$355,111	\$340	2	1.5	1,044	12/8/20
465	\$360,000	\$345	2	1.5	1,044	11/19/20
483	\$350,500	\$336	2	1.5	1,044	10/13/20
436	\$330,000	\$316	2	1.5	1,044	7/29/20
161	\$344,000	\$330	2	1.5	1,044	7/17/20
152	\$340,000	\$326	2	1.5	1,044	7/15/20
<b>AVERAGE</b>	<b>\$373,048</b>	<b>\$355</b>	<b>2.0</b>	<b>1.5</b>	<b>1,053</b>	<b>-</b>

1) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC



**Swanson Meadow Townhomes**  
(Billerica, MA)

Built in 2004, the Swanson Meadow Townhomes are located adjacent to the Swanson Meadows Golf Course in Billerica, Massachusetts. The property offers 80 two- and three-bedroom units, each at three stories. These townhomes range in size between 2,143 and 3,439 square feet. The Swanson Meadow Townhomes sit approximately 19.4 miles from Harvard's

Commercial District.

Over the past 60 months, we identified five sales that closed between November 2017 and May 2022, with an average sales price of \$526,400, or \$172 per square foot based upon an average unit size of 3,066 square feet. These past sales included four two-bedroom units and one three-bedroom unit. For the most recent sale closed within the property (on May 16, 2022), the sales price was \$645,000 for 3,280 square feet, or about \$197 per square foot. The following table summarizes the 60-month trailing resale history at Swanson Meadow Townhomes:

TABLE 55  
TRAILING 60-MONTH RESALE HISTORY  
**SWANSON MEADOW TOWNHOMES**  
218 Rangeway Road, North Billerica

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
242	\$645,000	\$197	2	2.5	3,280	5/16/22
211	\$640,000	\$201	3	2.5	3,185	7/14/21
231	\$477,000	\$183	2	2.5	2,613	7/31/18
262	\$440,000	\$142	2	2.5	3,100	1/12/18
252	\$430,000	\$136	2	2.5	3,154	11/16/17
<b>AVERAGE</b>	<b>\$526,400</b>	<b>\$172</b>	<b>2.2</b>	<b>2.5</b>	<b>3,066</b>	<b>-</b>

1) For broader context, trailing sales history extends to 60 months

2) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC





**216 Rangeway Road**  
(Billerica, MA)

Located in Billerica, Massachusetts, the townhome complex at 216 Rangeway Road was completed in 2005. Arranged around the Swanson Meadows Golf Course, the property offers 86 three-story units of two or three bedrooms, and floor plans ranging from 2,143 to 3,713 square feet in size. The townhome complex sits approximately 19.6 miles from Harvard's

Commercial District.

Over the past 36 months, we identified 10 sales that closed between October 2019 and October 2021, with an average sales price of \$576,925, or \$191 per square foot based upon an average unit size of 3,046 square feet. These past sales included six two-bedroom units and four three-bedroom units. For the most recent sale closed within the property (on October 26, 2021), the sales price was \$520,000 for 2,143 square feet, or about \$243 per square foot. The following table summarizes the 36-month trailing resale history at 216 Rangeway:

TABLE 56  
TRAILING 36-MONTH RESALE HISTORY  
**216 RANGEWAY**  
216 Rangeway Road, Billerica

Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
1111	\$520,000	\$243	3	2.5	2,143	10/26/21
1102	\$615,000	\$197	2	3	3,121	10/8/21
133	\$650,000	\$195	3	3	3,326	9/9/21
134	\$730,000	\$197	3	3	3,713	7/15/21
123	\$650,000	\$198	3	2.5	3,277	6/15/21
174	\$533,250	\$178	2	3.5	3,000	3/19/21
1103	\$495,000	\$165	2	2.5	3,000	2/1/21
1104	\$508,000	\$169	2	2.5	3,000	12/28/20
1104	\$508,000	\$210	2	2.5	2,421	12/28/20
131	\$560,000	\$162	2	3	3,458	10/3/19
<b>AVERAGE</b>	<b>\$576,925</b>	<b>\$191</b>	<b>2.4</b>	<b>2.8</b>	<b>3,046</b>	<b>-</b>

1) All data is recent as of July 2022

Source: Redfin; and Local Brokerage Data; compiled by Weitzman Associates, LLC

## FOR-SALE MARKET CONCLUSION

In Harvard, home-ownership is very strong. Of the housing units occupied, 93.7% are by those who own their homes. Harvard's large owner-occupied market is primarily a product of the town's higher median household income, large affordability gap, and minimal rental inventory. Further, single-family homes compose the majority of this owner-occupied market, and are achieving the highest sale prices. As of 2020, single-family homes comprised 93% of all housing stock in Harvard, while multi-family properties (accommodating two or more families) comprised the remainder at just 7%. Notably, single family homes are in excess supply, and thus not necessarily a strong proposition for Harvard's Commercial District. Rather, condominiums and townhomes are the most appropriate housing product for the Study Area. Given there's a very limited supply of condominiums and townhomes in and adjacent to Harvard's Commercial District—and a shortage within Harvard overall—there's significant unmet market potential. Since the release of this 2020 American Community Survey, no new properties have delivered, with very few projects reported in the pipeline. Therefore, new condominium and/or townhome construction in Harvard—particularly within the Commercial District—would face little comparable competition.

In line with this, the profiled for-sale condominium and townhome properties above demonstrate the breadth of existing, purchasable housing inventory within in the local market. Of the profiled properties, we believe that Harvard Green, Craftsman Village, and Conant Commons offer successful examples of components of village center typologies, and are most indicative of the sales performance that could be achieved in the Commercial District. An average sale price point of approximately \$280 per square foot (based on an average unit size of 1,770 square feet) is likely achievable.

## MAP OF NEARBY COMPARABLE FOR-SALE PROPERTIES



TABLE 57  
COMPARABLE PROPERTY SUMMARY  
REVIEW OF CONDOMINIUM AND TOWNHOME PROPERTIES  
Town of Harvard

Property	Town	Stories	Condo Units	Unit Mix					Average		Trailing Sales History				
				Studio	Unit Mix				Interior SQFT		Condo Price (1)		Condo PPSE (1)		
					1 BR	2 BR	3 BR	4+ BR	Min	Max	Min	Max	Min	Max	
<u>Primary Market</u>															
Boynton Meadows	Groton	2	15	-	Y	Y	Y	-	786	2,500	\$519,900	\$850,000	\$176	\$386	
Conant Commons	Concord	3	58	-	Y	Y	Y	-	896	2,224	\$405,000	\$707,000	\$307	\$476	
Craftsman Village	Harvard	2	20	-	-	Y	-	-	1,826	2,215	\$579,900	\$715,926	\$276	\$306	
Harvard Green	Harvard	2	32	-	-	Y	Y	-	1,699	2,850	\$423,000	\$665,000	\$182	\$293	
Littleton Ridge Estates	Littleton	2	70	-	-	Y	-	-	1,200	2,343	\$380,000	\$557,500	\$195	\$346	
* Meeting House of Stow	Stow	3	76	-	Y	Y	-	-	762	2,034	\$240,000	\$400,000	\$219	\$353	
The Falls at Arden Mills	Fitchburg	3	48	-	Y	Y	-	-	1,000	1,321	\$167,500	\$299,900	\$168	\$232	
* Trail Ridge	Harvard	2	52	-	-	Y	-	-	2,148	2,971	\$480,000	\$725,000	\$202	\$323	
<u>Secondary Market</u>															
216 Rangeway Rd	Billerica	3	86	-	-	Y	Y	-	2,143	3,713	\$495,000	\$730,000	\$162	\$243	
Ava Estates	North Billerica	2	26	-	-	Y	-	-	1,458	2,300	\$420,000	\$541,000	\$215	\$295	
Barrett Farm	North Billerica	3	132	-	-	Y	Y	-	1,020	1,350	\$213,200	\$440,000	\$209	\$423	
Swanson Meadow Townhomes	North Billerica	3	80	-	-	Y	Y	-	2,143	3,439	\$430,000	\$645,000	\$136	\$201	
* Wayside at Chelmsford	North Chelmsford	3	72	-	-	Y	Y	-	1,382	1,745	\$344,500	\$452,500	\$211	\$311	

(1) Based on the standing of the current market and trailing months sales history

(2) All information presented for Unit Mix, Average Sizes, Average Prices, and Average PPSF are strictly for the condominium units within each property

Source: Costar; Local Brokerage Data; compiled by Weitzman Associates, LLC

(3) Unit count data by bedroom is provided as available.

(4) Reported pricing for Boynton Meadows excludes its affordable units

(5) Properties with a " \* " are adult / 55+ communities

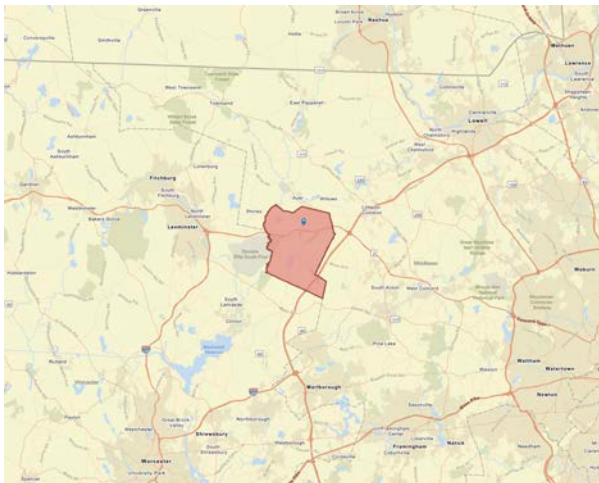


## FOR-SALE HOUSING DEMAND ANALYSIS

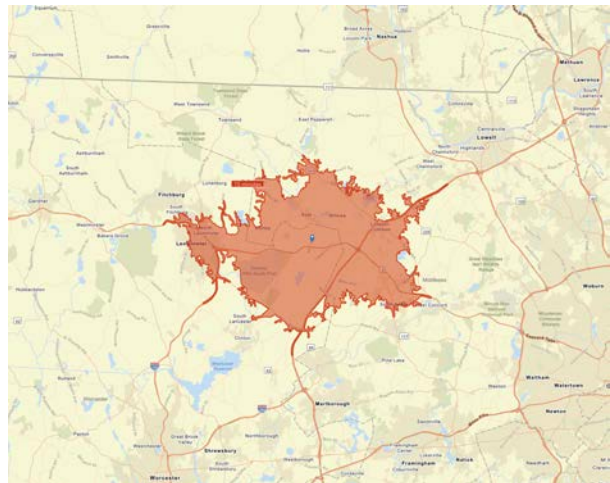
We have attempted to quantify the demographic depth of demand for for-sale housing in the Harvard Commercial District. This task is accomplished by estimating (1) the minimum income threshold necessary, by unit type, to comfortably afford for-sale residences within Harvard's Commercial District; (2) the underlying demand for for-sale housing in the market areas; and (3) the percent of total demand that the district must capture in order to be readily absorbed by the market. Not only does this analysis provide a significant test of the overall marketability and ease of entry for the homes, but it is an additional quantifying factor in determining the development and investment risk associated with absorption. We note that this analysis is used as a check on the underlying demographic strength in the market that could support sales within the Commercial District. This analysis is conservative: It forms the foundation of demand locally and does not account for potential demand from households that live outside our defined market areas. Nor does it account for demand from households that might not achieve indicated minimum annual income thresholds to pay a mortgage, but who benefit from saved equity.

We have defined the Primary, Secondary, and Tertiary Market Areas from which we believe most of the for-sale housing demand in the Commercial District will come. The Primary Market Area is the Town of Harvard; the Secondary Market is a 15-minute drive-time region from the Commercial District, as defined by ESRI Business Analyst (a leading GIS and demographics firm); and the Tertiary Market is a 25-minute drive-time region, inclusive of the primary and secondary markets. We believe that the vast majority of demand for the proposed development will come from households presently living in the Primary and Secondary Market Areas, as those most likely to choose the housing location are homeowners who already live within the region. However, some households located as far as the tertiary market may also embrace Harvard's Commercial District as an ideal destination to move to. The following maps show each defined market area.

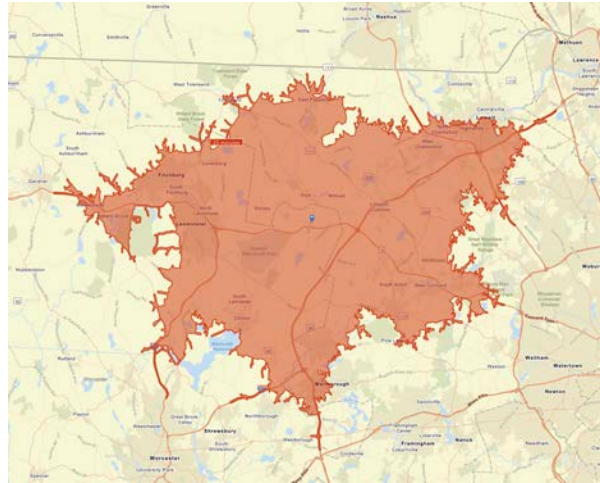
PRIMARY MARKET  
TOWN OF HARVARD



SECONDARY MARKET  
15-MINUTE DRIVE TIME REGION



### TERTIARY MARKET 25-MINUTE DRIVE TIME REGION



#### *Affordability:*

To estimate the minimum income threshold necessary to comfortably afford for-sale residences within Harvard's Commercial District, we have performed an affordability analysis based on the unit mix and pricing of the for-sale comparables within the region, which is summarized in the following table. This affordability analysis demonstrates that average one-bedroom for-sale units would be affordable for households earning at least \$67,600, while the larger three-bedroom homes would be affordable for households earning at least \$169,200. However, despite the higher cost associated with purchasing a home, a portion of this affordability estimate is skewed in that accumulated household wealth and/or equity built up in a current residence over time largely reduces the annual income burden of home buyers. As such, a portion of these potential buyers who have wealth or equity in a residence may also indicate lower annual household income and not be captured by our demand analysis. The following table presents our for-sale analysis of the average unit types within the comparable market:

**TABLE 58**  
**FOR-SALE AFFORDABILITY ANALYSIS**  
**TOWN OF HARVARD**  
as of August 2022

	1-Bdrm	2-Bdrm	3-Bdrm	Weighted Average
Avg. Unit Sq. Ft.	952	1,700	2,582	1,778
Avg. Price per Sq. Ft.	\$270	\$281	\$258	\$278
Overall Avg. Sale Price	\$255,625	\$449,361	\$613,112	\$462,264
Mortgage Percentage	75%	75%	75%	75%
Amount of Mortgage	\$191,719	\$337,021	\$459,834	\$346,698
Assumed Interest Rate	5.90%	5.90%	5.90%	5.90%
Projected Monthly Mortgage	\$1,137	\$1,999	\$2,595	\$2,056
- Real Estate Taxes	\$381	\$670	\$844	\$690
- HOA Maintenance	\$171	\$306	\$465	\$320
Total Monthly Housing Payment	\$1,690	\$2,975	\$3,904	\$3,066
Total Annual Housing Payment	\$20,278	\$35,703	\$50,756	\$36,791
Required Annual Household Income	\$67,593	\$119,012	\$169,188	\$122,637

**Assumptions:**

- 1) Unit sizes and sale prices are averages from the comparable properties within 30 minutes of the C-District
- 2) Downpayment is assumed to be 25%
- 3) Financing is assumed to be 30-year fixed, conservative interest rate
- 4) 2022 Real Estate Taxes in Harvard are estimated to be approximately 1.79% of purchase price.
- 5) Homeowners Association Fees are estimated to be \$0.18 psf per month
- 6) Required Annual Income assumes 30% of pre-tax income is devoted to housing

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

*Demand and Capture Rates:*

This analysis only includes households who presently own a home in each of the defined market areas. Of the 1,760 income qualified households in the Primary Market Area, ESRI estimates that 93.7% are homeowners. In the Secondary Market Area, of the 20,732 income qualified households, ESRI estimates that 69.1% are homeowners. In the Tertiary Market Area, ESRI estimates that 67.5% of the 105,883 income qualified households are homeowners. Additionally, based on past experience, we have assumed that up to 10% of households in each market area will consider buying a new home each year. Applying an estimated internal mobility rate of 10% helps to determine annual internal demand within the defined market areas, effectively quantifying the number of owner households that are likely to change their housing situation. Overall, the total mobility indicated that 165, 1,433, and 7,152 income-qualified households in Primary, Secondary, and Tertiary market areas, respectively, would seek new housing in any given year.

We then quantified the number of new income-qualified households projected to be created within each market area. We did this by multiplying the annual household owner growth rate of each market area to the current number of income-qualified owner households. Between 2022 and 2027, the number of annual



income-qualified households is estimated to grow by 6 households in the primary market and 19 households in the tertiary market, while reducing by 7 households in the secondary market.

Based upon household growth and internal mobility within each market area, among households meeting our target criteria, we are able to capture the total potential number of qualified households seeking housing in any given year. We then compared total households seeking housing with several scenarios of total absorption at the development in order to gauge the portion of potential demand that the project must capture in order to be readily absorbed by the market. Based on our experience, resulting capture rates of approximately 7.0% or less indicate the potential for relatively easy absorption by the market.

As shown in the following table, there are estimated to be 171, 1,426, and 7,171 total income-qualified households seeking new housing in the Primary, Secondary, and Tertiary market areas, respectively. While the aforementioned for-sale demand also captures households who would also consider single-family homes, we note that there is ample demand within the region for all for-sale products. If the district was to rely solely on demand from the Primary and Secondary Markets, we estimate that the district may achieve an absorption pace of up to eight units per month, assuming a capture rate of 6.7% is achieved. A much quicker absorption pace could be achieved by including the Tertiary Market Area. Considering a range of typologies inclusive of townhomes, small cottages, and condominiums, we conservatively recommend underwriting an absorption pace between four and six units per month for in the Study Area. We expect that demand will mostly stem from the Primary and Secondary Market Areas, though other households living within the bounds of the Tertiary Market Area may consider Harvard's Commercial District as a place to buy a primary or even secondary residence.

Overall, the for-sale market within Harvard and its surrounding communities is strong. While the region's for-sale inventory is currently dominated by single-family homes, there's been a healthy appetite for the limited condominium and townhome inventory that does exist. Thus, we believe there is significant unmet market potential for more multi-family for-sale developments.

TABLE 59  
**FOR-SALE HOUSING DEMAND ANALYSIS**  
All Households Earning Above \$75,000 Annually  
By Household Income, 2022 Estimate

	<u>Primary Market Area</u> Town of Havard	<u>Secondary Market Area</u> 15-Minute Drive Time	<u>Tertiary Market Area</u> 25-Minute Drive Time
<u>Household Income:</u>			
- \$75,000 - \$99,999	144	3,123	19,075
- \$100,000 - \$149,000	397	5,895	31,787
- \$150,000 - \$199,999	349	4,047	22,703
- \$200,000+	870	7,667	32,318
Total Income Qualified Households	1,760	20,732	105,883
- Ratio of Owner Households	93.7%	69.1%	67.5%
Total Owner Households	1,648	14,333	71,518
- Household Mobility Rate	10%	10%	10%
Total Estimated Internal Mobility	165	1,433	7,152
- Annual Household Growth Rate (2)	0.37%	-0.05%	0.03%
Annual Household Growth	6	-7	19
<b>Total Housing Demand</b>	<b>171</b>	<b>1,426</b>	<b>7,171</b>
Projected Annual Capture Rate 48 units per year 4 units per month	28.1%	3.4%	0.7%
Projected Annual Capture Rate 72 units per year 6 units per month	42.1%	5.0%	1.0%
Projected Annual Capture Rate 96 units per year 8 units per month	56.2%	6.7%	1.3%

1) Drive-time market areas reflect driving distance in minutes from commercial district.

2) Reflects the projected growth rate between 2022 and 2027

Source: ESRI, American Community Survey; compiled by Weitzman Associates, LLC.

## RENTAL APARTMENT MARKET ANALYSIS

## RENTAL APARTMENT MARKET ANALYSIS

Weitzman Associates has researched the rental apartment market in Northeast Worcester, Chelmsford/ Tyngsborough/ Townsend, Route 2, and Greater Worcester overall in support of its determination of the appropriate product recommendations, pricing, and absorption assumptions that should be utilized in underwriting potential rental housing development(s) within the Ayer Road C-District. The Town of Harvard sits along the northeast edge of Northeast Worcester, bordered by Chelmsford/ Tyngsborough/ Townsend to the north and Route 2 to the south.

Based on our research of the rental housing market, including primary research of existing supply and demand, and discussions with local market participants, our findings are summarized as follows:

- **Steady Inventory Growth in Submarket.** Despite the nation-wide impact of COVID-19, inventory growth has maintained steady within Greater Worcester and Harvard's surrounding submarkets. Following the pandemic, new growth in Greater Worcester is expected to average 1.41% compounded annually from 2022 through 2026 based on projects already planned. Within Northeast Worcester, projected growth over the same period averages much higher at 2.65% compounded annually.
- **Lack of New Inventory and High Demand in Harvard.** While new residential development in the Ayer Road Commercial District may face competition from towns to the east closer to Boston, it will likely face little local competition.
- **Underserved Demand.** There is a considerably underserved demand for rental properties within Harvard, exacerbated by the region's short supply and stalled pipeline. While there has been construction activity over recent years, no new properties have delivered over the past 12 months and nothing is currently underway. New rental construction in the Ayer Road Commercial District would provide much needed relief for this neglected market.
- **Growing Rents in Submarket.** Rents in the Northeast Worcester submarket are trending considerably above rental averages across Greater Worcester, with renters willing to pay a premium to live in the area. Compared to an average \$1,730 per month in Greater Worcester, rents in the submarket average about 17.3% higher, closer to \$2,030 per month. Over the past 12 months, rents have grown at an impressive 11.9%, one of the highest annualized rates over the past three years. Considering a longer horizon, rent growth in the submarket and overall market have skyrocketed over the past decade, rising cumulatively in the submarket by 46.6%. Given regional rental demand is largely underserved, newer product in Northeast Worcester could eventually allow the submarket to match the strong rental performance of its eastern neighbors.
- **Stable Vacancy Rate.** In spite of the apparent volatility of a vacancy rate correlated to a smaller-size inventory, the vacancy rate for the Northeast Worcester's rental market, has over the past year remained stable at 3.8% which essentially aligns with the region's long-term average. Given Harvard's limited rental inventory, we speculate vacancy in Harvard to be even less. Harvard's neighboring submarkets to the east have experienced much higher long-term averages. Over the same period, vacancy in Route 2 averaged 4.8%, while averaging 6.3% in Chelmsford/Tyngsborough/Townsend.

Thus, there's greater capacity for additional rental product in Northeast Worcester that could be accommodated by Harvard's Commercial district.

- **High Rents Among Comparables.** The comparable properties profiled in our study achieve a wide range of rental rates. Within the primary market, one-bedroom units are averaging \$2,124, per month, with three-bedroom units averaging near \$3,521. There is sturdy demand for rental properties in the area and the achievable rental rates are reflective of that.
- **Impressive Absorption Among Comparables.** Within the Primary market, absorption pace averages 2.58 units leased per month, reaching highs of 2.66 (Avalon Acton) and 3.61 (Prescott at Concord) since opening. While there are very few rental properties within Harvard, comparable properties within a 20-minute drive of the Commercial District provide helpful guidance with respect to potential new development in Harvard and the absorption paces one may project.
- **Disadvantaged Study Area.** While the Study Area has its own locational advantages, it's also disadvantaged compared to these comparables for a variety of reasons (inactivated commercial core, lacking pedestrian/biking infrastructure, etc.). While new rental product may initially rent at a discount per these disadvantages, we believe rental offerings within the Commercial District can experience rapid lease-up and eventually match, if not exceed, the performance of competitive comparables over time.
- **Achievable Rental Absorption Pace.** We recommend underwriting a conservative absorption pace between five and seven units per month for a prospective rental project within Harvard's Commercial District. While our demand analysis suggests that there is more than enough demographically based demand to support rental offerings in Harvard given how underserved the region is, we must ensure this mixed-use development is small-scale to match with the town's preferred village cluster typologies.
- **Optimistic Demand Forecast.** While forecasts for total rental housing demand in Harvard seem slim, these projections by standard methodology are distorted by short rental supply and current ratio of renter households. Given the lack of rental options in Harvard, our demand forecasts place greater emphasis on recent successful comparables in adjacent areas. Thus, we believe new rental developments in Harvard will be much more competitive to these properties and could support high capture rates, similar to Avalon Acton and The Paddock Estates at Boxborough.
- **Diverse Renter Profiles.** We expect households interested in leasing an apartment in Harvard will come primarily from a range of age and income cohorts within Harvard and its close vicinity, as confirmed by our conversations with local market participants. With a competitive development, complimentary demand may also come from the secondary market area. Direct access to nature and the activated commercial core will aid in attracting households to rent in Harvard's Commercial District.
- **Affordable Housing.** See our comment under the for-sale market analysis findings above.
- **Senior Housing.** There are only a few age-restricted independent-living residential developments in Harvard and its outlying region for which supply does not meet demand. These include the older 24-unit Foxglove Apartments and 42-unit Bowers Brook Apartment complexes in Harvard's Commercial

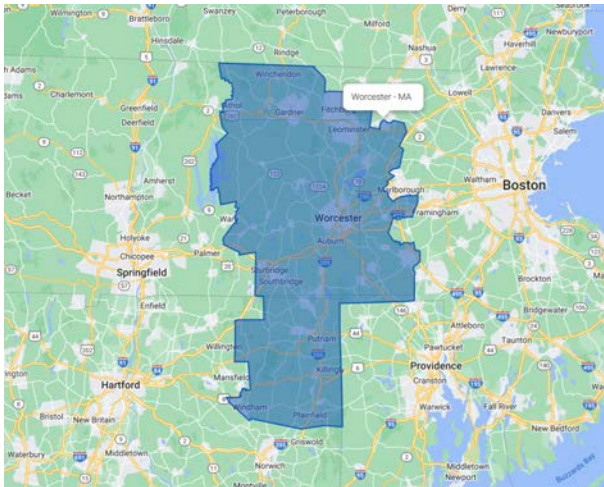
District, as well as the Harvard Trail Ridge for-sale complex at the outskirts of town in which 50% of the units are offered to senior residents.

- **Senior Housing Demand.** As indicated in our summary of demographic findings, we note there's demand for housing from senior residents currently living in Harvard given their higher share of the general population. We also note the opportunity to provide senior housing in the Commercial District in proximity to the soon-to-be relocated Council for Aging Center at 12 Lancaster Road.

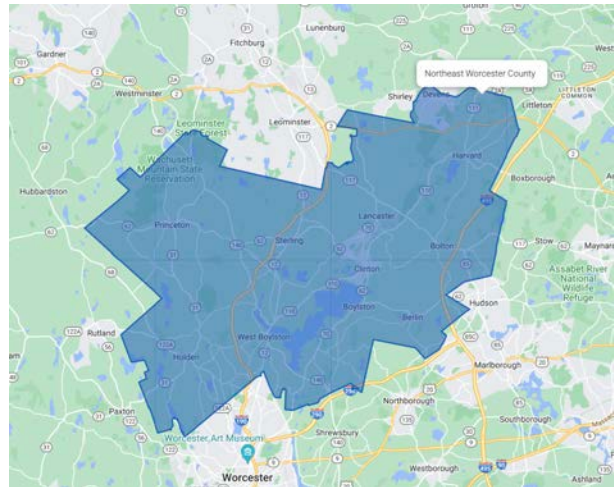
## PRIMARY RENTAL MARKET OVERVIEW

In order to inform potential residential developments within the Commercial District, we have analyzed data compiled by CoStar, which tracks trends in the multifamily rental market. Within our analysis, we primarily consider trends from the Greater Worcester market and the Northeast Worcester submarket. The following maps outline the two geographies covered.

**COSTAR MARKET  
GREATER WORCESTER**



**COSTAR SUBMARKET  
NORTHEAST WORCESTER**



Market fundamentals for the rental residential market in Greater Worcester—where the study district is located—have recovered steadily from the impact of COVID-19. As of May 2021, Massachusetts dropped all COVID-19 restrictions, allowing businesses to resume operations at pre-pandemic capacities. As consumers and businesses return to normal life and operations, the rental market is projected to continue its upward momentum.

Generally, the Greater Worcester rental market has grown steadily since 2010, experiencing slight lulls from 2014 to 2015 and in 2019. Inventory growth was minimally impacted by the pandemic, accelerating after the slight slowdown in 2019 and exceeding the 10-year average growth rate of 1.1%. Inventory grew by 1.6% in 2020 and 1.8% in 2021. Over the next five years, inventory growth is projected to accelerate further, averaging 1.6% compounded annually through 2026, with annual growth rates ranging between 1.1% and 2.6%. The expanding rate of inventory growth matches the expanding demand for new properties.

Between 2010 and 2019, net absorption outpaced inventory additions with 2,297 units delivered and 2,980 net units absorbed. These absorption trends look to continue through 2022 and into 2026. Similarly, growth in the number of units under construction has also outpaced inventory additions. In 2010 there were 553 units under construction, representing 2.25% of total supply. By 2021, there were 812 units under construction, representing 2.93% of total supply. Between 2010 and 2021, the number of units under construction grew by 3.6% compounded annually, while overall inventory grew compounded annually by 1.1%. The following table illustrates the multifamily supply and demand trends of Brooklyn:



TABLE 60  
**GREATER WORCESTER RENTAL MARKET**  
SUPPLY AND DEMAND

Year	No. of Units	<u>Inventory</u> Additions	Percent Growth	Net Absorption	Under Construction
2010	24,509	-	-	258	553
2011	24,689	180	0.7%	239	373
2012	24,876	187	0.8%	229	354
2013	25,220	344	1.4%	234	84
2014	25,304	84	0.3%	243	173
2015	25,477	173	0.7%	384	791
2016	25,817	340	1.3%	209	711
2017	26,163	346	1.3%	424	612
2018	26,648	485	1.9%	432	258
2019	26,806	158	0.6%	328	846
2020	27,234	428	1.6%	403	500
2021	27,734	500	1.8%	574	812
YTD	27,984	250	0.9%	184	980
2022	28,451	717	2.6%	450	-
2023	28,924	473	1.7%	355	-
2024	29,235	311	1.1%	442	-
2025	29,643	408	1.4%	372	-
2026	30,087	444	1.5%	367	-

(1) Shaded values are projected; projections are as of 7/11/2022

Source: CoStar; compiled by Weitzman Associates, LLC

Between 2010 and 2019, as net absorption outpaced inventory additions, the overall vacancy rate declined from 5.2% to 3.2%. Vacancy rose to 3.3% in 2020, largely due to the COVID-19 pandemic, and then fell down to 2.9% in 2021. From 2010 to 2021, asking and effective rents both increased at compounded annual rates of 3.5%. As of July 2022, asking and effective rents in Greater Worcester averaged \$1,735 and \$1,728 per month, respectively.

By the end of 2022, CoStar projects asking and effective rents both to increase by 5.3%, resulting in average asking and effective rents of \$1,737 and \$1,731 per month, respectively. Through 2026, projections show average asking and effective rents increasing further, by 3.3% compounded annually. The following table illustrates past and projected vacancy and rent trends for the Greater Worcester multifamily market:

TABLE 6I  
**GREATER WORCESTER RENTAL MARKET**  
VACANCY AND RENT

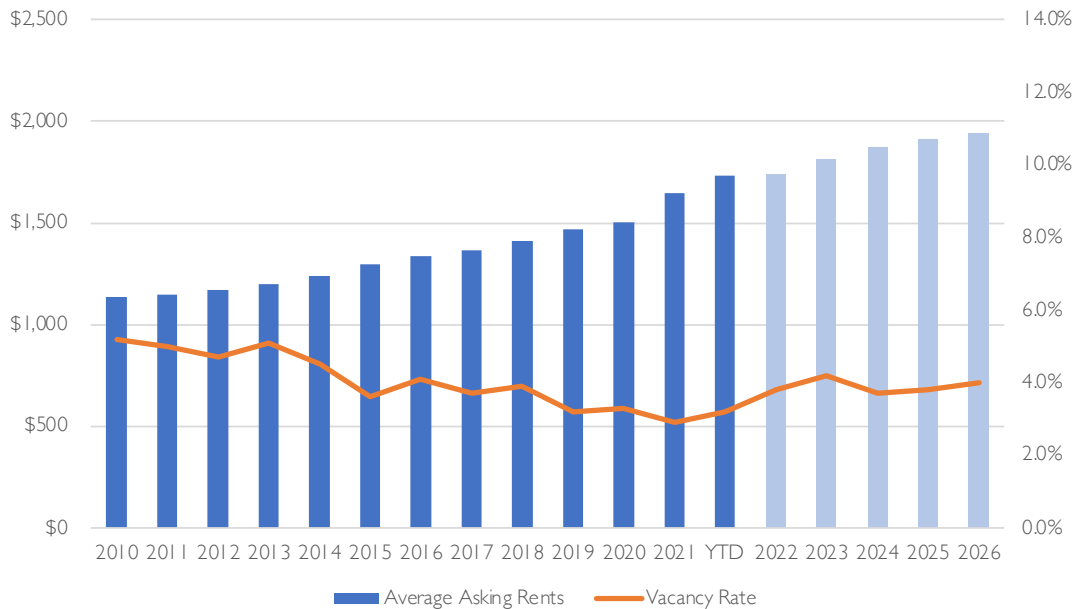
Year	Vacancy Rate	Asking Rent			Effective Rent		
		Per Unit	Percent Growth	Per Square Foot	Per Unit	Percent Growth	Per Square Foot
2010	5.2%	\$1,135	-	\$1.23	\$1,129	-	\$1.22
2011	5.0%	\$1,150	1.3%	\$1.24	\$1,143	1.2%	\$1.24
2012	4.7%	\$1,171	1.8%	\$1.27	\$1,161	1.6%	\$1.26
2013	5.1%	\$1,199	2.4%	\$1.30	\$1,187	2.2%	\$1.28
2014	4.5%	\$1,238	3.3%	\$1.34	\$1,226	3.3%	\$1.33
2015	3.6%	\$1,295	4.6%	\$1.40	\$1,285	4.8%	\$1.39
2016	4.1%	\$1,335	3.1%	\$1.45	\$1,321	2.8%	\$1.43
2017	3.7%	\$1,363	2.1%	\$1.48	\$1,344	1.7%	\$1.46
2018	3.9%	\$1,414	3.7%	\$1.53	\$1,398	4.0%	\$1.52
2019	3.2%	\$1,469	3.9%	\$1.59	\$1,462	4.6%	\$1.59
2020	3.3%	\$1,506	2.5%	\$1.63	\$1,500	2.6%	\$1.63
2021	2.9%	\$1,649	9.5%	\$1.79	\$1,644	9.6%	\$1.79
YTD	3.2%	\$1,735	5.2%	\$1.89	\$1,728	5.1%	\$1.88
2022	3.8%	\$1,737	5.3%	\$1.89	\$1,731	5.3%	\$1.88
2023	4.2%	\$1,814	4.4%	\$1.98	\$1,807	4.4%	\$1.97
2024	3.7%	\$1,870	3.1%	\$2.04	\$1,863	3.1%	\$2.03
2025	3.8%	\$1,911	2.2%	\$2.08	\$1,904	2.2%	\$2.07
2026	4.0%	\$1,942	1.6%	\$2.11	\$1,934	1.6%	\$2.11

(1) Shaded values are projected; projections are as of 7/11/2022

Source: CoStar, compiled by Weitzman Associates, LLC

GRAPH 6

**GREATER WORCESTER MULTIFAMILY SUBMARKET**  
ASKING RENT V. VACANCY



*Northeast Worcester Submarket Description:*

Northeast Worcester is a group of towns that includes Harvard and spans along the border of Worcester. The submarket covers most of Worcester County's northwestern corner and is situated within central Massachusetts. The region includes Harvard, Princeton, Holden, West Boylston, Sterling, Lancaster, Clinton, Boylston, Berlin, and Bolton. Similar to Harvard, these towns comprise relatively few rental properties as single-family homes run dominant in these markets—in line with regional trends for higher-income households and older populations. Most of the offerings in this submarket are higher-end and more upscale than those of the broader Worcester market, with higher asking and effective rents.

Northeast Worcester is crossed by Route 2 and Blue Star Memorial Parkway, two major highways in the state. Due to the region's natural beauty and historic agricultural tradition, agrotourism is a major draw for many tourists. Frequently visited attractions in the area include the Fruitlands Museum in Harvard and the New England Botanic Garden at Tower Hill. The area is well serviced by public transportation, with access to the WRTA transportation service as well as the MBTA train line offering transport to Boston and throughout the county.

*Northeast Worcester Submarket Analysis:*

Since 2010, the rental apartment supply in Northeast Worcester has remained limited and relatively level, with only two years of new deliveries. Inventory grew in 2012 by 187 units, and once more in 2020 by 270 units. Overall, Northeast Worcester has reacted positively to the new additions in supply, as 471 units—or approximately 103% of total inventory additions—were absorbed between 2010 and 2021. By year-end 2022, however, net absorption is projected to fall –33 units, a sharp departure from gain experienced since the onset of the pandemic in 2020. The following table summarizes past and projected supply and demand trends in Northeast Worcester between 2010 and 2026:

TABLE 62  
**NORTHEAST WORCESTER RENTAL SUBMARKET**  
SUPPLY AND DEMAND

Year	No. of Units	<u>Inventory</u> Additions	Percent Growth	Net Absorption	Under Construction
2010	924	-	-	0	187
2011	924	0	0.0%	2	187
2012	1,111	187	20.2%	156	0
2013	1,111	0	0.0%	29	0
2014	1,111	0	0.0%	(2)	0
2015	1,111	0	0.0%	8	0
2016	1,111	0	0.0%	(2)	0
2017	1,111	0	0.0%	6	0
2018	1,111	0	0.0%	12	0
2019	1,111	0	0.0%	2	270
2020	1,381	270	24.3%	128	0
2021	1,381	0	0.0%	132	0
YTD	1,381	0	0.0%	(31)	0
2022	1,379	(2)	-0.1%	(33)	-
2023	1,381	2	0.1%	0	-
2024	1,417	36	2.6%	18	-
2025	1,471	54	3.8%	45	-
2026	1,531	60	4.1%	55	-

(1) Shaded values are projected; projections are as of 7/11/2022

Source: CoStar; compiled by Weitzman Associates, LLC

Rental vacancy in Northwest Worcester has gradually declined from its peak of 6.4% in 2012 to a low of 1.5% by the close of 2021—with an exception in 2020 when vacancy spiked to 11.2% due to the pandemic's onset. However, vacancy has since risen considerably, with year-to-date vacancy at 3.8% and Costar projections rising to 6.0% by 2026.

Moreover, average asking rents in Northwest Worcester have grown considerably, with annual growth rates ranging from 1.3% to 7.2%. Most recently in 2021, the overall average asking rent was \$1,895 per month, representing a 6.8% increase from 2020. Average asking rent is projected to increase further by 9.0% by year-end 2022, though growth projections look to slow thereafter leading through 2026. The sharp increase is plausibly attributed to the COVID-19 pandemic's effects on the rental market, including a desire by many tenants to leave dense, urban markets for sparsely-populated, suburban areas, such as Harvard. Generally, effective rents have hovered around 0.5% below asking rents—indicating strong, consistent demand likely driven by limited inventory—and are projected to grow parallel to asking rents over the next five years.

TABLE 63  
**NORTHEAST WORCESTER RENTAL SUBMARKET**  
VACANCY AND RENT

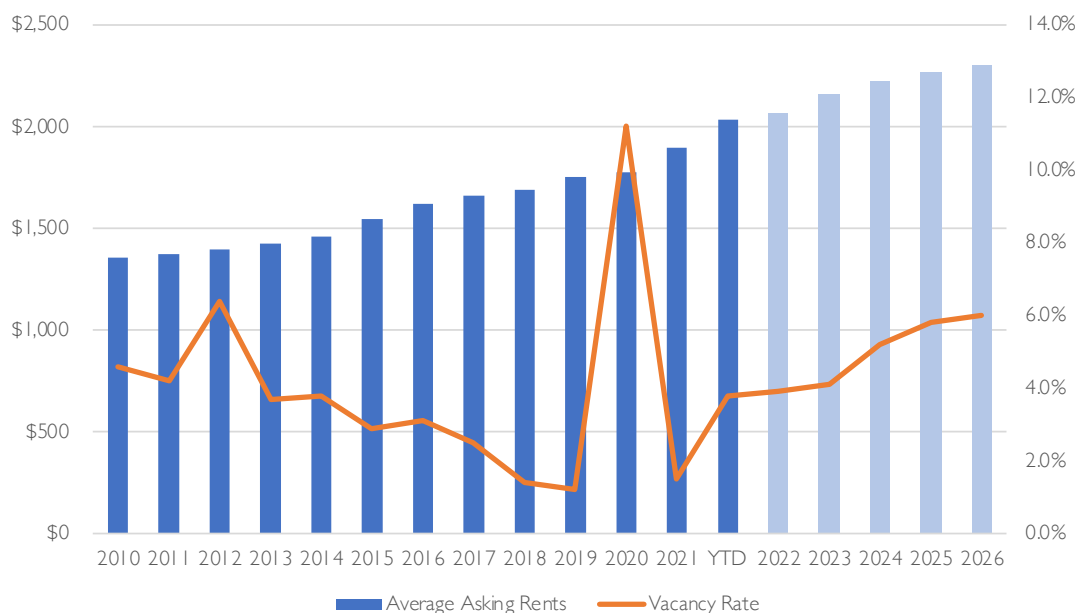
Year	Vacancy Rate	Asking Rent			Effective Rent		
		Per Unit	Percent Growth	Per Square Foot	Per Unit	Percent Growth	Per Square Foot
2010	4.6%	\$1,355	-	\$1.36	\$1,349	-	\$1.36
2011	4.2%	\$1,372	1.3%	\$1.38	\$1,366	1.3%	\$1.37
2012	6.4%	\$1,399	2.0%	\$1.41	\$1,384	1.3%	\$1.39
2013	3.7%	\$1,424	1.8%	\$1.43	\$1,417	2.4%	\$1.42
2014	3.8%	\$1,462	2.7%	\$1.47	\$1,452	2.5%	\$1.46
2015	2.9%	\$1,544	5.6%	\$1.55	\$1,535	5.7%	\$1.64
2016	3.1%	\$1,622	5.1%	\$1.63	\$1,613	5.1%	\$1.62
2017	2.5%	\$1,663	2.5%	\$1.67	\$1,636	1.4%	\$1.65
2018	1.4%	\$1,690	1.6%	\$1.70	\$1,680	2.7%	\$1.69
2019	1.2%	\$1,750	3.6%	\$1.76	\$1,747	4.0%	\$1.76
2020	11.2%	\$1,775	1.4%	\$1.78	\$1,764	1.0%	\$1.77
2021	1.5%	\$1,895	6.8%	\$1.91	\$1,886	6.9%	\$1.90
YTD	3.8%	\$2,031	7.2%	\$2.04	\$2,027	7.5%	\$2.04
2022	3.9%	\$2,066	9.0%	\$2.08	\$2,061	9.3%	\$2.07
2023	4.1%	\$2,157	4.4%	\$2.17	\$2,152	4.4%	\$2.17
2024	5.2%	\$2,221	3.0%	\$2.24	\$2,216	3.0%	\$2.23
2025	5.8%	\$2,268	2.1%	\$2.28	\$2,263	2.1%	\$2.28
2026	6.0%	\$2,303	1.5%	\$2.32	\$2,298	1.5%	\$2.31

(1) Shaded values are projected; projections are as of 7/11/2022

Source: CoStar, compiled by Weitzman Associates, LLC

GRAPH 7

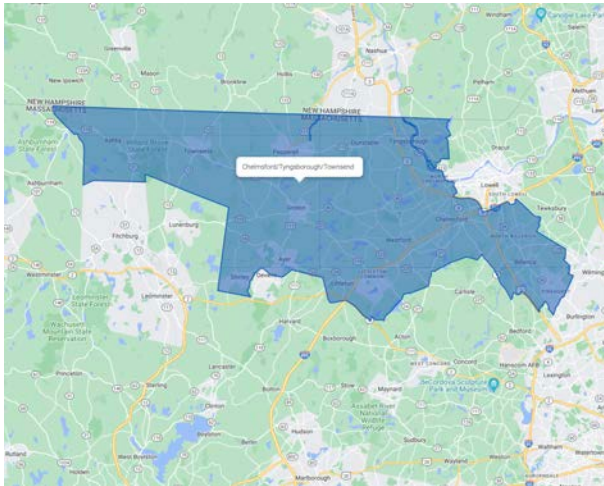
**NORTHEAST WORCESTER MULTIFAMILY SUBMARKET**  
ASKING RENT V. VACANCY



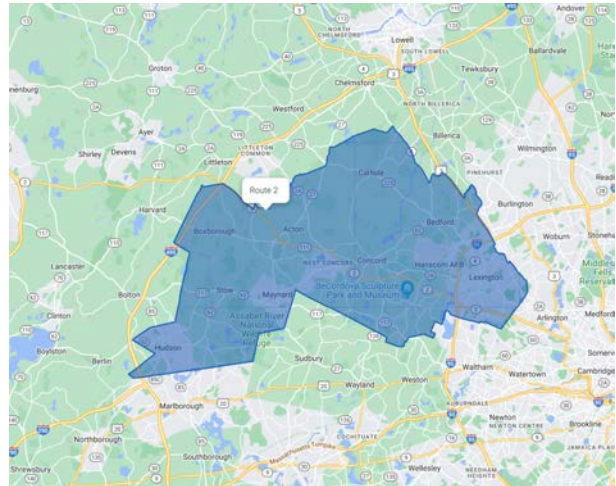
## SECONDARY RENTAL MARKET OVERVIEW

To better understand the markets surrounding and immediately adjacent to Harvard, we have also analyzed CoStar-compiled rental submarket trends for the following regions: Chelmsford/Tyngsborough/Townsend (north of Harvard) and Route 2 (east of Harvard). While Harvard is located properly within the northeast corner of the Northeast Worcester submarket, our analysis includes Chelmsford/Tyngsborough/Townsend and Route 2 because of the similar demographics and market fundamentals allowed by their shared border. The following maps outline the two supplemental geographies covered.

**COSTAR SUBMARKET  
CHELMSFORD / TYNGSBOROUGH /  
TOWNSEND**



**COSTAR SUBMARKET  
ROUTE 2**



### *Chelmsford / Tyngsborough / Townsend Submarket Description:*

North of Harvard, Chelmsford/Tyngsborough/Townsend spans northwest from Billerica to Willard Brook State Forest. Much of the submarket borders New Hampshire to the north, and is crossed by the Merrimack River. The towns of this area include Ashby, Ayer, Billerica, Chelmsford, Dunstable, Groton, Littleton, Pepperell, Shirley, Townsend, Tyngsborough, and Westford.

The residential units within this region are mostly owner-occupied, with a relatively slim inventory of rental properties that often price below market and broader county averages. Additionally, there are relatively few upscale offerings in the area, though the number of these residences have been increasing over recent years.

Nature-centric tourism is a major draw for both tourists and summer residents. There are several state parks in the area, including Pearl Hill State Park, Squannacook Brook State Forest, and Stony Brook conservation land.

*Chelmsford / Tyngsborough / Townsend Submarket Analysis:*

Rental apartment supply in Chelmsford/Tyngsborough/Townsend has grown sporadically since 2010, witnessing growth only in years 2014, 2015, 2018, 2019, and 2021. Excluding the years in which no units were supplied, deliveries ranged between 144 and 671 unit additions per growth year, or averaged 384 units across the five years. Overall, Chelmsford/Tyngsborough/Townsend has responded well to the new inventory additions, as 1,966 units—or approximately 102.5% of the of the new units added to the market—were absorbed between 2010 and year-to-date 2022. Despite trailing the two years of highest inventory growth, net absorption in the submarket peaked in 2019 at 737 net units, and has remained strong in the years since. There has been no new construction activity in Chelmsford/Tyngsborough/Townsend since the delivery of 315 units in 2021.

The following table summarizes supply and demand trends in Chelmsford/Tyngsborough/Townsend since 2010, with projections through 2026:

TABLE 64  
**CHELMSFORD / TYNGSBOROUGH / TOWNSEND RENTAL SUBMARKET**  
SUPPLY AND DEMAND

Year	No. of Units	<u>Inventory</u> Additions	Percent Growth	Net Absorption	Under Construction
2010	3,065	-	-	19	0
2011	3,065	0	0.0%	(7)	0
2012	3,065	0	0.0%	59	0
2013	3,065	0	0.0%	43	200
2014	3,265	200	6.5%	116	144
2015	3,409	144	4.4%	177	0
2016	3,409	0	0.0%	(2)	384
2017	3,409	0	0.0%	3	671
2018	4,080	671	19.7%	242	588
2019	4,668	588	14.4%	737	20
2020	4,668	0	0.0%	169	295
2021	4,983	315	6.7%	332	0
YTD	4,983	0	0.0%	78	0
2022	4,983	0	0.0%	132	-
2023	4,984	1	0.0%	(3)	-
2024	5,025	41	0.8%	12	-
2025	5,090	65	1.3%	43	-
2026	5,159	69	1.4%	50	-

(1) Shaded values are projected; projections are as of 7/11/2022

Source: CoStar, compiled by Weitzman Associates, LLC



Since the submarket's peak of 14.4% in 2018, rental vacancy in Chelmsford/Tyngsborough/Townsend has declined significantly to 3.6% as of year-to-date 2022, the region's lowest level since 2010. Over the next five years, vacancy rates are expected to remain between 2.5% and 3.8%. Inversely, average asking rents in the area have grown considerably, with the annual growth rates accelerating from 1.5% in 2011 to 10.9% in 2021. This excludes a minor decrease in 2020, which can largely be attributed to the effects COVID-19 and high unemployment rates had on the rental market. By year-end 2022, average asking rent is projected to grow to \$2,463 per month, representing an 8.6% increase from 2021 which significantly exceeds the average annual growth rate (3.5%) of the past decade. Moderate growth is expected to continue through 2026. Effective rents have averaged around 1.2% below asking rents—indicating few leasing incentives—and are projected to grow parallel to asking rents over the next five years.

TABLE 65  
**CHELMSFORD / TYNGSBOROUGH / TOWNSEND RENTAL SUBMARKET**  
VACANCY AND RENT

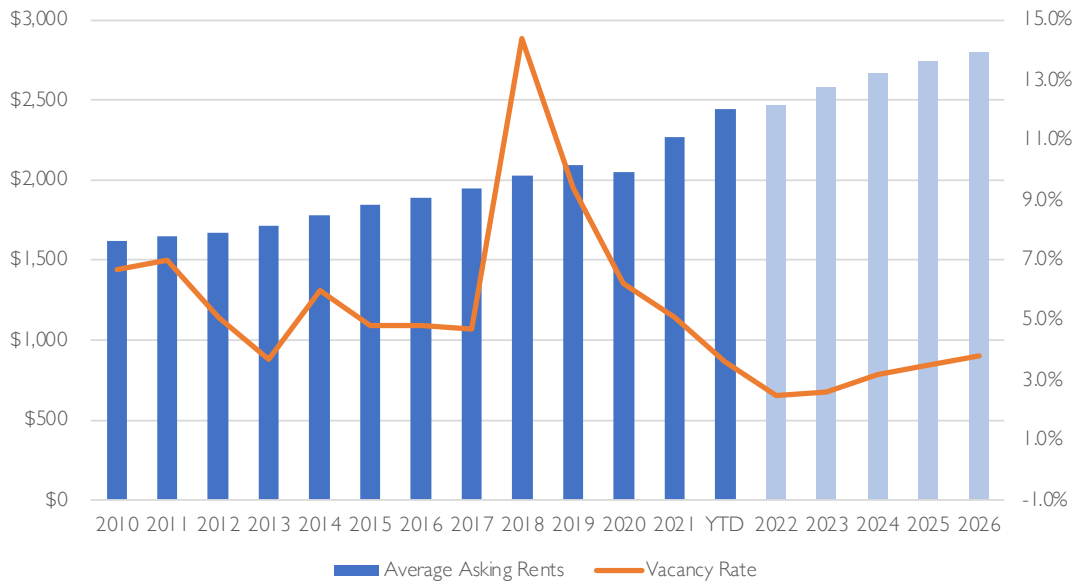
Year	Vacancy Rate	Asking Rent			Effective Rent		
		Per Unit	Percent Growth	Per Square Foot	Per Unit	Percent Growth	Per Square Foot
2010	6.7%	\$1,620	-	\$1.68	\$1,610	-	\$1.67
2011	7.0%	\$1,645	1.5%	\$1.71	\$1,635	1.6%	\$1.69
2012	5.1%	\$1,669	1.5%	\$1.73	\$1,656	1.3%	\$1.72
2013	3.7%	\$1,713	2.6%	\$1.78	\$1,698	2.5%	\$1.76
2014	6.0%	\$1,779	3.9%	\$1.84	\$1,751	3.1%	\$1.82
2015	4.8%	\$1,845	3.7%	\$1.91	\$1,825	4.2%	\$1.89
2016	4.8%	\$1,889	2.4%	\$1.96	\$1,862	2.0%	\$1.93
2017	4.7%	\$1,944	2.9%	\$2.02	\$1,900	2.0%	\$1.97
2018	14.4%	\$2,031	4.5%	\$2.11	\$1,991	4.8%	\$2.07
2019	9.4%	\$2,091	3.0%	\$2.17	\$2,066	3.8%	\$2.14
2020	6.2%	\$2,046	-2.2%	\$2.12	\$2,022	-2.1%	\$2.10
2021	5.1%	\$2,268	10.9%	\$2.35	\$2,248	11.2%	\$2.33
YTD	3.6%	\$2,440	7.6%	\$2.53	\$2,425	7.9%	\$2.52
2022	2.5%	\$2,463	8.6%	\$2.57	\$2,444	8.7%	\$2.55
2023	2.6%	\$2,584	4.9%	\$2.70	\$2,565	5.0%	\$2.68
2024	3.2%	\$2,671	3.4%	\$2.79	\$2,651	3.4%	\$2.77
2025	3.5%	\$2,743	2.7%	\$2.87	\$2,723	2.7%	\$2.84
2026	3.8%	\$2,801	2.1%	\$2.93	\$2,780	2.1%	\$2.90

(1) Shaded values are projected; projections are as of 7/11/2022

Source: CoStar; compiled by Weitzman Associates, LLC

GRAPH 9

**CHELMSFORD / TYNGSBOROUGH / TOWNSEND  
MULTIFAMILY SUBMARKET  
ASKING RENT V. VACANCY**



*Route 2 Submarket Description:*

East of Harvard and south of Chelmsford/Tyngsborough/Townsend, Route 2 spans between Boxborough to the west and Lexington to the east. The towns of this area include Acton, Bedford, Boxborough, Carlisle, Concord, Hanscom, Hudson, Lexington, Maynard, and Stow. Similar to the Chelmsford/Tyngsborough/Townsend submarket, homeownership is dominant in this region. However, the slim inventory of the region more closely matches the asking and effective averages of the broader market.

The submarket is diagonally bifurcated by Route 2—running northwest to southeast—hence its name. Serving as a main alternative to the state’s Turnpike/I-90 toll highway, Route 2 stretches 142 miles along the entire northern tier of Massachusetts, beginning at the New York border and ending near Boston Common in Boston.

Notable landmarks in the area include the 2,230-acre Assabet River National Wildlife Refuge and the deCordova Sculpture Park and Museum, a 30-acre sculpture park and contemporary art museum on the shore of Flint’s Pond in Lincoln, Massachusetts. Established in 1950, deCordova is the largest park of its kind in New England, located approximately 20 miles northwest of Boston.

*Route 2 Submarket Analysis:*

Similar to the Chelmsford/Tyngsborough/Townsend submarket, rental supply in Route 2 has also grown sporadically over the past decade, though has been much slower over recent years. Most growth in the submarket occurred between 2012 and 2017, averaging 181 inventory additions per growth year. Inventory

grew further in 2020 by an additional 240 units, but has since remained stagnant and is projected to condense slightly over the next five years. As with Chelmsford/Tyngsborough/Townsend, net absorption in Route 2 has also outpaced its inventory additions. Since 2010, the submarket has absorbed 1,230 units, or 107.6% of its new inventory additions. Considering inventory is expected to shrink, net absorption is naturally projected to be negative more frequently over the coming years, ranging between -14 and 21 through 2026. Since the delivery of 240 units in 2020, there has been no new construction activity in Route 2 to date.

The following table summarizes supply and demand trends in Route 2 since 2010, with projections through 2026:

TABLE 66  
**ROUTE 2 RENTAL SUBMARKET**  
SUPPLY AND DEMAND

Year	No. of Units	<u>Inventory</u> Additions	Percent Growth	Net Absorption	Under Construction
2010	3,547	-	-	65	350
2011	3,547	0	0.0%	19	350
2012	3,897	350	9.9%	85	0
2013	3,897	0	0.0%	264	30
2014	3,927	30	0.8%	34	279
2015	4,030	103	2.6%	74	176
2016	4,206	176	4.4%	155	244
2017	4,450	244	5.8%	167	0
2018	4,450	0	0.0%	134	240
2019	4,450	0	0.0%	(10)	240
2020	4,690	240	5.4%	179	0
2021	4,690	0	0.0%	101	0
YTD	4,690	0	0.0%	28	0
2022	4,690	0	0.0%	21	-
2023	4,688	(2)	0.0%	(4)	-
2024	4,687	(1)	0.0%	(12)	-
2025	4,688	1	0.0%	(8)	-
2026	4,687	(1)	0.0%	(14)	-

(1) Shaded values are projected; projections are as of 7/11/2022

Source: CoStar; compiled by Weitzman Associates, LLC

Vacancy rates in Route 2 have been consistently lower than those of Chelmsford/Tyngsborough/Townsend, averaging about 1.5% lower over the past decade. Since its peak of 11.1% in 2012, year-to-date vacancy in Route 2 has fallen to 2.2%; however it's expected to rise to 3.2% by 2026. With an exception in 2020, average asking and effective rents in Route 2 have grown consistently since 2010, averaging 3.6% compounded annually through 2021. Despite respectively falling by 2.1% and 2.7% in 2020, year-to-date averages for asking and effective rent have rebounded significantly. As of July 2022, average asking rent in Route 2 has risen to \$2,790 from \$1,727 in 2010, with average effective rent close behind at \$2,780. Over the next five years, averages asking and effective rent are projected to grow by 3.4% compounded annually through 2026.

TABLE 67  
**ROUTE 2 RENTAL SUBMARKET**  
VACANCY AND RENT

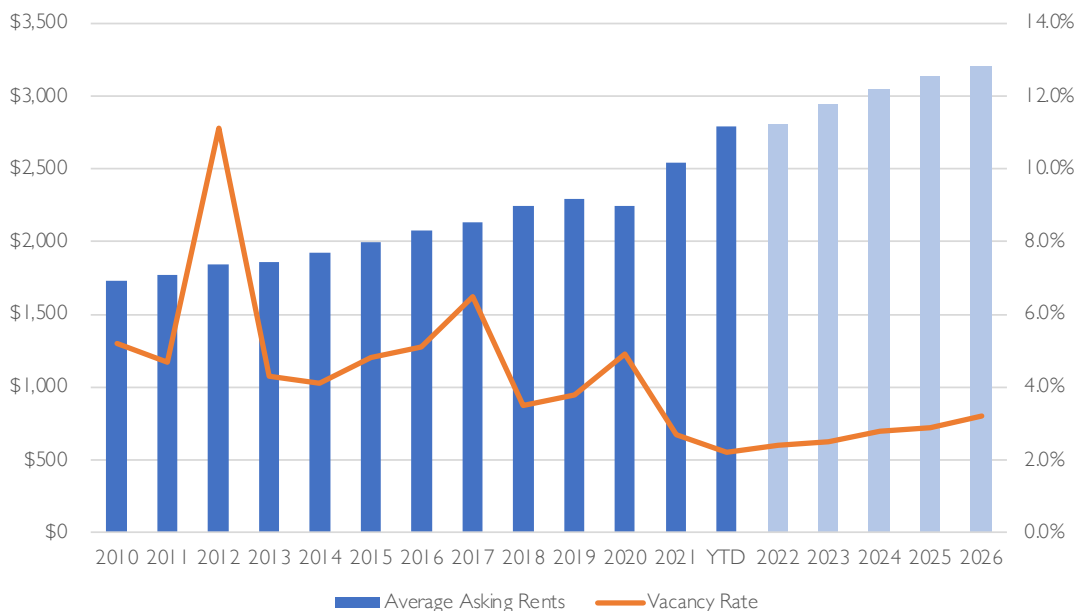
Year	Vacancy Rate	Asking Rent			Effective Rent		
		Per Unit	Percent Growth	Per Square Foot	Per Unit	Percent Growth	Per Square Foot
2010	5.2%	\$1,727	-	\$1.68	\$1,717	-	\$1.67
2011	4.7%	\$1,767	2.3%	\$1.72	\$1,757	2.3%	\$1.71
2012	11.1%	\$1,841	4.2%	\$1.79	\$1,816	3.4%	\$1.77
2013	4.3%	\$1,859	1.0%	\$1.81	\$1,847	1.7%	\$1.80
2014	4.1%	\$1,920	3.3%	\$1.87	\$1,885	2.1%	\$1.83
2015	4.8%	\$1,995	3.9%	\$1.94	\$1,978	4.9%	\$1.93
2016	5.1%	\$2,073	3.9%	\$2.02	\$2,057	4.0%	\$2.00
2017	6.5%	\$2,131	2.8%	\$2.07	\$2,087	1.5%	\$2.03
2018	3.5%	\$2,240	5.1%	\$2.18	\$2,220	6.4%	\$2.16
2019	3.8%	\$2,289	2.2%	\$2.23	\$2,269	2.2%	\$2.21
2020	4.9%	\$2,241	-2.1%	\$2.18	\$2,208	-2.7%	\$2.15
2021	2.7%	\$2,540	13.3%	\$2.47	\$2,533	14.7%	\$2.47
YTD	2.2%	\$2,790	9.8%	\$2.72	\$2,780	9.8%	\$2.71
2022	2.4%	\$2,804	10.4%	\$2.73	\$2,793	10.3%	\$2.72
2023	2.5%	\$2,944	5.0%	\$2.87	\$2,932	5.0%	\$2.86
2024	2.8%	\$3,045	3.4%	\$2.97	\$3,033	3.4%	\$2.96
2025	2.9%	\$3,132	2.9%	\$3.05	\$3,119	2.8%	\$3.04
2026	3.2%	\$3,202	2.2%	\$3.12	\$3,189	2.2%	\$3.11

(1) Shaded values are projected; projections are as of 7/11/2022

Source: CoStar, compiled by Weitzman Associates, LLC

GRAPH 10

**ROUTE 2 MULTIFAMILY SUBMARKET**  
ASKING RENT V. VACANCY



### MULTIFAMILY RENTAL MARKET- SUMMARY OF RENTAL COMPARABLES:

As with the region's for-sale condominiums and townhomes, there's a very limited rental supply within Harvard overall. As mentioned in the for-sale section of this report, multi-family properties (accommodating two or more families) comprise just 7% of all housing stock in Harvard as of 2020; single-family homes comprise the remaining 93%. While there has been construction activity over recent years, no new rental properties have delivered over the past 12 months and nothing is currently underway. Exacerbated by the region's short supply and stalled pipeline, there's a considerably underserved demand for rental properties within Harvard. We believe new rental construction in Harvard's Commercial District would provide much needed relief for this neglected market. To better understand the rental market and guide potential future development in the Commercial District, we have profiled a selection of rental multi-family developments that we believe are most relevant. Our profiles include an analysis of these developments' unit mixes, unit sizes, average rents, rents per square foot, absorption pace, and competitive positioning within the local market.

As with the for-sale condominium and townhome comparables, we utilized two target markets defined by drive time: a primary and secondary market extending 20 and 30 minutes from the Commercial District, respectively. Given most rental inventory sits within the towns surrounding Harvard, the Town of Harvard itself is a strong candidate for additional development of this product type. We note however that recommended rental development in the Commercial District would be at a smaller scale than most of the comparables outlined in our survey.

Between the six comparable rental developments identified in the primary market, five offer one-bedroom units, all six offer two-bedroom units, and four offer three-bedroom units. Among the properties with one-bedroom units, unit mix averages 46.3% of this unit type, with units ranging between 800 and 991 square feet and averaging 877 square feet. Unit mix averages highest among two-bedroom units at 49.6%. Between the six primary comparables, two-bedroom units range between 989 and 1,317 square feet, at an average of 1,236 square feet. While unit mix averages much lower among the three-bedroom units (14.9%), the size range of these units is widest, between 1,151 and 1,746 square feet, and naturally averaging the most space at 1,501 square feet.

Of the six additional comparable developments identified in the secondary market (excluding those from the primary market), all six offer one- or two-bedroom units—except for Arrive Lunenburg with only two-bedroom offerings. None of the secondary comparables offer three-bedroom units. Matching the primary market, unit mix for one-bedroom units in the secondary market averages 46.3%. Though experiencing a wider range in sizes, one-bedroom units in the secondary market average larger at 889 square feet. However, unlike the primary market, average unit mix for two-bedroom units in the secondary market sits 24.5% higher, at 74.1%. Similar to the one-bedroom units in this market, the secondary market's two-bedroom units are also larger than those of the primary market. Ranging between 1,053 and 1,373 square feet, two-bedroom units in this market average 35 square feet larger than the primary market's at 1,271 square feet.

Despite larger sizes and higher unit mixes in the secondary market, the inventory of one- and two-bedroom units in the primary market is much larger. Compared to the secondary market, there are 373 more one-

bedroom units and 133 more two-bedroom units. However, despite the primary market totaling 656 one-bedroom and 723 two-bedroom units, one must note that none of these comparable properties are within Harvard. Rather, these properties are spread between Acton, Boxborough, Concord, Leominster, Stow, and Westford—averaging between 3.0 and 12.5 miles from Harvard's Commercial District.

Between the identified comparables of both the primary and secondary markets, asking rent averaged higher in the secondary market for one-bedroom units, while averaging higher in the primary market for two-bedroom units. Among available one-bedroom units, asking rent averaged \$313 higher in the secondary market, at an weighted average of \$2,437 monthly or \$33.26 annually per square foot. However, average asking rent for two-bedroom units in the primary market surpasses that of the secondary market by approximately \$92. At a weighted average of \$2,863 monthly, two-bedroom units in the primary market are asking for \$1.25 more per square foot annually. It is noted that these rents do not reflect a comprehensive survey of all leases at the comparable properties, but rather leasing averages identified through Costar and property management; nonetheless, these rent levels are reflective of the current product available in the market and the respective market rates at which current inventory is being absorbed.

**TABLE 68**  
**COMPARABLE PROPERTY SUMMARY**  
**REVIEW OF MULTIFAMILY RENTAL PROPERTIES**  
Town of Harvard

Property	Unit Type	# of Units	Unit Mix	Unit	Size	Average	Annual Rent per
						Asking Monthly Rents	Sq. Ft.
Primary Market							
The Paddock Estates at Boxborough	One Bedroom	132	54.1%	800		\$2,058	\$30.87
The Prescott at Concord	One Bedroom	135	38.6%	814		\$2,434	\$35.88
Brooks Pond	One Bedroom	173	48.1%	991		\$1,300	\$15.74
Avalon Acton	One Bedroom	209	44.8%	872		\$2,681	\$36.91
The Residences at Stony Brook	One Bedroom	7	46.7%	900		\$1,122	\$14.96
Minimum		7	38.6%	800		\$1,122	\$14.96
Weighted Average		131	46.3%	877		\$2,124	\$29.67
Maximum		209	54.1%	991		\$2,681	\$36.91
Pilot Grove	Two Bedrooms	15	50.0%	989		\$1,528	\$18.54
The Paddock Estates at Boxborough	Two Bedrooms	106	43.4%	1,177		\$2,569	\$26.19
The Prescott at Concord	Two Bedrooms	187	53.4%	1,196		\$3,896	\$39.09
Brooks Pond	Two Bedrooms	187	51.9%	1,237		\$1,576	\$15.28
Avalon Acton	Two Bedrooms	220	47.2%	1,317		\$3,366	\$30.67
The Residences at Stony Brook	Two Bedrooms	8	53.3%	1,137		\$1,387	\$14.64
Minimum		8	43.4%	989		\$1,387	\$14.64
Weighted Average		121	49.6%	1,236		\$2,863	\$27.78
Maximum		220	53.4%	1,317		\$3,896	\$39.09
The Paddock Estates at Boxborough	Three Bedrooms	6	2.5%	1,468		\$3,344	\$27.34
The Prescott at Concord	Three Bedrooms	28	8.0%	1,373		\$3,818	\$33.36
Avalon Acton	Three Bedrooms	37	7.9%	1,746		\$4,033	\$27.72
Pilot Grove	Three Bedrooms	15	50.0%	1,151		\$1,777	\$18.53
Minimum		6	2.5%	1,151		\$1,777	\$18.53
Weighted Average		22	14.9%	1,501		\$3,521	\$27.93
Maximum		37	50.0%	1,746		\$4,033	\$33.36
Secondary Market							
The Rockwell	One Bedroom	77	37.7%	956		\$2,530	\$31.76
Orchards Apartments	One Bedroom	78	50.0%	994		\$2,356	\$28.44
The Commons at Drum Hill	One Bedroom	36	33.3%	743		\$2,277	\$36.78
Oriole Landing	One Bedroom	38	63.3%	826		\$2,623	\$38.11
Mill & 3 Apartments	One Bedroom	54	50.0%	785		\$2,395	\$36.61
Minimum		36	33.3%	743		\$2,277	\$28.44
Weighted Average		57	46.3%	889		\$2,437	\$33.26
Maximum		78	63.3%	994		\$2,623	\$38.11
Arrive Lunenburg	Two Bedrooms	240	100.0%	1,373		\$2,432	\$21.26
The Rockwell	Two Bedrooms	124	60.8%	1,269		\$3,251	\$30.74
Orchards Apartments	Two Bedrooms	78	50.0%	1,305		\$2,714	\$24.96
The Commons at Drum Hill	Two Bedrooms	72	66.7%	1,053		\$2,717	\$30.96
Oriole Landing	Two Bedrooms	22	36.7%	1,189		\$3,831	\$38.66
Mill & 3 Apartments	Two Bedrooms	54	50.0%	1,096		\$2,897	\$31.72
Minimum		22	36.7%	1,053		\$2,432	\$21.26
Weighted Average		98	74.1%	1,271		\$2,771	\$26.53
Maximum		240	100.0%	1,373		\$3,831	\$38.66
Total One Bedroom							
Minimum		7	33.3%	743		\$1,122	\$14.96
Weighted Average		94	46.3%	881		\$2,253	\$31.29
Maximum		209	63.3%	994		\$2,681	\$38.11
Total Two Bedrooms							
Minimum		8	36.7%	989		\$1,387	\$14.64
Weighted Average		109	60.6%	1,252		\$2,886	\$27.85
Maximum		240	100.0%	1,373		\$3,896	\$39.09



### Leasing Velocity:

Based on the leasing performance of the competitive set over the last 18 months and since opening, we have reviewed the velocity of leased units at each comparable property within both markets. Our analysis indicates that rental apartments in the secondary market were absorbed faster than those in the primary market, especially over recent months. Over the past 18 months, the primary market averaged 58.6% less units leased per month. The difference between the primary and secondary markets levels to 2.3% when inclusive of all months since opening. Notably, the larger properties with more units achieved faster leasing velocities. Over the past 18 months, three of the top-four fastest absorption rates were achieved within the secondary market, by The Rockwell (2.28), Mill & 3 Apartments (0.44), and Oriole Landing (0.44). Within the primary market, The Prescott at Concord ranked second, at 0.61 units absorbed per month over the past 18 months. The following table summarizes the leasing velocity of rental apartments within our competitive set of properties:

TABLE 69  
LEASING VELOCITY  
RENTAL MARKET SUMMARY

Property	Town	Built	Units	Leasing Pace	
				Since Opening	Past 18 Months
<u>Primary Market</u>					
1 ) Avalon Acton	Acton	2008	466	2.66	0.22
2 ) Brooks Pond	Leominster	2008	360	2.05	0.11
3 ) Pilot Grove	Stow	2014	30	0.27	0.00
4 ) The Paddock Estates at Boxborough	Boxborough	2017	244	3.61	0.00
5 ) The Prescott at Concord	Concord	2012	350	2.61	0.61
6 ) The Residences at Stony Brook	Westford	2006	15	0.08	0.00
Subtotal Weighted Average				2.58	0.24
<u>Secondary Market</u>					
7 ) Arrive Lunenburg	Lunenburg	2010	240	1.56	0.00
8 ) Mill & 3 Apartments	Chelmsford	2018	108	1.86	0.44
9 ) Orchards Apartments	Marlborough	2002	156	0.60	-0.33
10 ) Oriole Landing	Lincoln	2020	60	1.79	0.44
11 ) The Commons at Drum Hill	North Chelmsford	2007	108	0.55	0.17
12 ) The Rockwell	Berlin	2020	204	7.26	2.28
Subtotal Weighted Average				2.64	0.58
<b>Total Weighted Average</b>				<b>2.60</b>	<b>0.37</b>

1) All data is recent as of July 2022

2) We note these averages may not reflect the full impact of the pandemic on the moving patterns of residents.

Source: Costar; Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

## MULTIFAMILY RENTAL COMPARABLES

In this report, we detail our findings of several comparable rental properties throughout the Central Massachusetts area. Of these properties, we review unit mix, rental performance, absorption pace, location suitability, unit features, and reported occupancy, as provided below. We analyzed the competitive market in the surrounding area and gathered the information in this report in July of 2022, sourced from public listings, databases, and press releases.

*Primary – (20-minute drive-time radius from Commercial District):*



### **The Paddock Estates at Boxborough** (Boxborough, MA)

Located in Boxborough, Massachusetts, The Paddock Estates at Boxborough was completed in September 2017 by developer JPI/TDI. Approximately 5.6 miles from Harvard's Commercial District, the complex comprises 244 rental units spread between 11 three-story buildings. As of July 2022, occupancy was reported at 96.8%.

At The Paddock Estates at Boxborough, unit mix includes 132 one-bedroom units (54.1%), 106 two-bedroom units (43.4%), and six three-bedroom units (2.5%). One-bedroom units average 800 square feet with asking rents averaging \$2,058 per month, or \$30.87 per square foot annually. Two-bedroom units average 1,177 square feet in size and \$2,569 per month in asking rent, or \$26.19 per square foot annually. And three-bedroom units average 1,468 square feet at an average asking rent of \$3,370, or \$30.87 per square foot annually. The average annual asking rent for this building is \$28.30 per square foot. Since its opening, the property averaged 3.61 units absorbed per month. The rental property is summarized below:

**TABLE 70**  
RENTAL COMPARABLE  
**THE PADDOCK ESTATES AT BOXBOROUGH**  
1 Paddock Lane, Boxborough

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average			Reported Occupancy
					Unit Size	Asking Monthly Rents	Annual Rent per Sq. Ft.	
2017	3	One Bedroom	132	54.1%	800	\$2,058	\$30.87	96.8%
		Two Bedroom	106	43.4%	1,177	\$2,569	\$26.19	
		Three Bedroom	6	2.5%	1,468	\$3,344	\$27.34	
		Total / Avg.	244	100.0%	980	\$2,312	\$28.30	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



### The Residences at Stony Brook (Westford, MA)

The Residences at Stony Brook in Westford, Massachusetts was completed in 2006. Approximately 10.0 miles from Harvard's Commercial District, the property originally comprised 15 affordable rental units spread between two-story buildings. Though not reflected on Costar, current property data reflects the property has since expanded to 51 units and now includes three-bedroom floorplans. Estimated using Area Median Income (AMI) and potentially household size, the property offers fixed and income-based rent options (usually 30%). Current occupancy levels are not publicly available.

At The Residences at Stony Brook—of the units reflected on Costar—unit mix includes seven one-bedroom units (46.7%) and eight two-bedroom units (53.3%). One-bedroom units average 900 square feet with asking rents averaging \$1,122 per month, or \$14.96 per square foot annually. Two-bedroom units average 1,137 square feet in size and \$1,387 per month in asking rent, or \$14.64 per square foot annually. The average annual asking rent for this building is \$14.77 per square foot. Since its completion, the property averaged 0.08 units absorbed per month. Notably low for a rental property, this is due to the project's 2006 delivery and low unit count (15). Including the newer units not reported on Costar, we expect absorption at the property to be notably higher. The rental property is summarized below:

TABLE 71  
RENTAL COMPARABLE  
THE RESIDENCES AT STONY BROOK  
7 Coakley Circle, Westford

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average			Reported Occupancy
					Unit Size	Asking Monthly Rents	Annual Rent per Sq. Ft.	
2006	2	One Bedroom	7	46.7%	900	\$1,122	\$14.96	-
		Two Bedroom	8	53.3%	1,137	\$1,387	\$14.64	
		Total / Avg.	15	100.0%	1,026	\$1,263	\$14.77	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



### Pilot Grove (Stow, MA)

Located in Stow, Massachusetts, Pilot Grove was delivered in two phases by The Community Builders, Inc. Phase I completed in 1990 with 60 rental units from one to three bedrooms, 30 units of which are affordable and rent-restricted. Phase II (the most comparable portion profiled below) completed in 2014 with an additional 30 affordable units, between two and three bedrooms. The 30 units of Pilot Grove II are spread between five three-story buildings. As of July 2022, occupancy was reported at 97.8%. Both phases of Pilot Grove sit approximately 10.2 miles from Harvard's Commercial District.

At Pilot Grove, unit mix includes 15 two-bedroom units (50.0%) and 15 three-bedroom units (50.0%). Two-bedroom units average 989 square feet in size and \$1,528 per month in asking rent, or \$18.54 per square foot annually. Three-bedroom units average 1,151 square feet at an average asking rent of \$1,777, or \$18.53 per square foot annually. The average annual asking rent for this building is \$18.53 per square foot. Since its completion, the property averaged 0.27 units absorbed per month, affected mostly by the project's smaller size (30 units). The rental property is summarized below:

**TABLE 72**  
RENTAL COMPARABLE  
**PILOT GROVE**  
22 Grove Hill Road, Stow

Year Built	Stories	Unit Type	# of Units	Unit Mix	Unit Size	Average	Annual Rent per Sq. Ft.	Reported Occupancy
						Asking Monthly Rents		
2014	3	Two Bedroom	15	50.0%	989	\$1,528	\$18.54	97.8%
		Three Bedroom	15	50.0%	1,151	\$1,777	\$18.53	
		Total / Avg.	30	100.0%	1,070	\$1,653	\$18.53	

Source: Field survey, CoStar, compiled by Weitzman Associates, LLC.



### **Avalon Acton** (Acton, MA)

Located in Acton, Massachusetts, Avalon Acton was built in 2008 by Omni Properties, LLC. Spread between 11 three-story buildings, the Avalon comprises 466 rental units, of which 76 are affordable/rent-subsidized units. Approximately 10.6 miles from Harvard's Commercial District, occupancy as of July 2022 was reported at 100%.

At Avalon Acton, unit mix includes 209 one-bedroom units (44.8%), 220 two-bedroom units (47.1%), and 37 three-bedroom units (7.9%). One-bedroom units average 872 square feet with asking rents averaging \$2,681 per month, or \$36.91 per square foot annually. Two-bedroom units average 1,317 square feet in size and \$3,366 per month in asking rent, or \$30.67 per square foot annually. And three-bedroom units average 1,746 square feet at an average asking rent of \$4,027, or \$27.68 per square foot annually. The average annual asking rent for this building is \$33.42 per square foot. Since its opening, the property averaged 2.66 units absorbed per month. The rental property is summarized below:

**TABLE 73**  
RENTAL COMPARABLE  
**AVALON ACTON**  
1000 Avalon Drive, Acton

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average		Annual Rent per Sq. Ft.	Reported Occupancy
					Unit Size	Asking Monthly Rents		
2008	3	One Bedroom	209	44.8%	872	\$2,681	\$36.91	100.0%
		Two Bedroom	220	47.2%	1,317	\$3,366	\$30.67	
		Three Bedroom	37	7.9%	1,746	\$4,027	\$27.68	
		Total / Avg.	466	100.0%	1,151	\$3,326	\$33.42	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



**Brooks Pond**  
(Leominster, MA)

Brooks Pond in Leominster, Massachusetts was completed in 2008.

Arranged in a campus style, the complex comprises 13 three-story buildings, with 360 one- and two-bedroom rental units spread between 30 different floorplans. Approximately 10.9 miles from Harvard's Commercial District, Brooks Pond serves as an affordable, 55+ community. As of July 2022, occupancy was reported at 99.6%.

At Brooks Pond, unit mix includes 173 one-bedroom units (48.1%) and 187 two-bedroom units (51.9%). One-bedroom units average 991 square feet with asking rents averaging \$1,300 per month, or \$15.74 per square foot annually. Two-bedroom units average 1,237 square feet in size and \$1,576 per month in asking rent, or \$15.28 per square foot annually. The average annual asking rent for this building is \$15.48 per square foot. Since its completion, the property averaged 2.05 units absorbed per month. The rental property is summarized below:

**TABLE 74**  
RENTAL COMPARABLE  
**BROOKS POND**  
200 Brooks Pond Road, Leominster

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average		Annual Rent per Sq. Ft.	Reported Occupancy
					Unit Size	Asking Monthly Rents		
2008	3	One Bedroom	173	48.1%	991	\$1,300	\$15.74	99.6%
		Two Bedroom	187	51.9%	1,237	\$1,576	\$15.28	
		Total / Avg.	360	100.0%	1,119	\$1,443	\$15.48	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



### **The Prescott at Concord** (Concord, MA)

Located in Concord, Massachusetts, The Prescott at Concord was built in February 2012. Managed by Greystar, the Prescott comprises 350 rental units between three stories, ranging from one to three bedrooms. Of the total, 88 units are affordable and rent-restricted. Approximately 13.0 miles from Harvard's Commercial District, occupancy as of July 2022 was reported at 98.4%.

At The Prescott at Concord, unit mix includes 135 one-bedroom units (38.6%), 187 two-bedroom units (53.4%), and 28 three-bedroom units (8.0%). One-bedroom units average 814 square feet with asking rents averaging \$2,434 per month, or \$40.21 per square foot annually. Two-bedroom units average 1,196 square feet in size and \$3,896 per month in asking rent, or \$43.78 per square foot annually. And three-bedroom units average 1,373 square feet at an average asking rent of \$3,818, or \$33.25 per square foot annually. The average annual asking rent for this building is \$41.64 per square foot. Since its delivery, the property averaged 2.61 units absorbed per month. The rental property is summarized below:

**TABLE 75**  
RENTAL COMPARABLE  
**THE PRESCOTT AT CONCORD**  
1 Nathan Pratt Drive, Concord

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average			Reported Occupancy
					Unit Size	Asking Monthly Rents	Annual Rent per Sq. Ft.	
2012	3	One Bedroom	135	38.6%	814	\$2,434	\$40.21	98.4%
		Two Bedroom	187	53.4%	1,196	\$3,896	\$43.78	
		Three Bedroom	28	8.0%	1,373	\$3,818	\$33.25	
		Total / Avg.	350	100.0%	1,063	\$3,688	\$41.64	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



*Secondary Comparables – (30-minute drive-time radius from Commercial District):*

We have also reviewed comparable rental properties within a broader, 30-minute drive-time region. The comparable properties are profiled below:



**Arrive Lunenburg**  
(Lunenburg, MA)

Arrive Lunenburg in Lunenburg, Massachusetts was built in 2010 by Callahan Construction Management. Between 28 two-story buildings, the development offers 240 market-rate rental units. Current occupancy levels are not publicly available. Arrive Lunenburg sits approximately 12.4 miles from Harvard's Commercial District.

At Arrive Lunenburg, unit mix includes exclusively two-bedroom units, at 240 total units. These two-bedroom units average 1,373 square feet in size and \$2,432 per month in asking rent, or \$21.26 per square foot annually. Since its completion, the property averaged 1.56 units absorbed per month. The rental property is summarized below:

TABLE 76  
RENTAL COMPARABLE  
**ARRIVE LUNENBURG**  
1-56 Carousel Lane, Lunenburg

Year Built	Stories	Unit Type	# of Units	Unit Mix	Unit Size	Average	Annual Rent per Sq. Ft.	Reported Occupancy
						Asking Monthly Rents		
2010	2	Two Bedroom	240	100.0%	1,373	\$2,432	\$21.26	-
		Total / Avg.	240	100.0%	1,373	\$2,432	\$21.26	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



**The Rockwell**  
(Berlin, MA)

Located in Berlin, Massachusetts, The Rockwell was built in October 2020. Developed by NRP Construction, The Rockwell comprises seven three-story buildings with 204 rental units, of which 20 units are affordable and rent-restricted. As of July 2022, occupancy was reported at 96.1%. The Rockwell sits approximately 14.8 miles from Harvard's Commercial District.

At The Rockwell, unit mix includes three studio units (1.5%), 77 one-bedroom units (37.7%), and 124 two-bedroom units (60.8%). Studio units average 725 square feet at an average asking rent of \$1,899, or \$31.43 per square foot annually. One-bedroom units average 956 square feet with asking rents averaging \$2,530 per



month, or \$31.76 per square foot annually. And two-bedroom units average 1,269 square feet in size and \$3,251 per month in asking rent, or \$30.74 per square foot annually. The average annual asking rent for this building is \$31.07 per square foot. Since its opening, the property averaged 7.26 units absorbed per month—though not yet stabilized given the project's recent completion. The rental property is summarized below:

**TABLE 77**  
RENTAL COMPARABLE  
**THE ROCKWELL**  
12 Tyler Road, Berlin

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average			Reported Occupancy
					Unit Size	Asking Monthly Rents	Annual Rent per Sq. Ft.	
2020	3	Studio	3	1.5%	725	\$1,899	\$31.43	96.1%
		One Bedroom	77	37.7%	956	\$2,530	\$31.76	
		Two Bedroom	124	60.8%	1,269	\$3,251	\$30.74	
		Total / Avg.	204	100.0%	1,143	\$2,959	\$31.07	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



### Orchards Apartments (Marlborough, MA)

Located in Marlborough, Massachusetts, the Orchards Apartments was completed in 2002. Approximately 16.4 miles from Harvard's Commercial District, the complex comprises 156 rental townhome units spread between 11 three-story buildings. Of the total, 31 units are affordable and rent-restricted. As of July 2022, occupancy was reported at 93.0%.

At the Orchards Apartments, unit mix includes 78 one-bedroom units (50.0%) and 78 two-bedroom units (50.0%). One-bedroom units average 994 square feet with asking rents averaging \$2,356 per month, or \$28.44 per square foot annually. Two-bedroom units average 1,305 square feet in size and \$2,714 per month in asking rent, or \$24.96 per square foot annually. The average annual asking rent for this building is \$26.46 per square foot. Since its delivery, the property averaged 0.60 units absorbed per month. The rental property is summarized below:

**TABLE 78**  
RENTAL COMPARABLE  
**ORCHARDS APARTMENTS**  
3 Farmhouse Lane, Marlborough

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average			Reported Occupancy
					Unit Size	Asking Monthly Rents	Annual Rent per Sq. Ft.	
2002	3	One Bedroom	78	50.0%	994	\$2,356	\$28.44	93.0%
		Two Bedroom	78	50.0%	1,305	\$2,714	\$24.96	
		Total / Avg.	156	100.0%	1,150	\$2,535	\$26.46	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



### The Commons at Drum Hill (North Chelmsford, MA)

The Commons at Drum Hill in North Chelmsford, Massachusetts was built in 2007. Spread between four three-story buildings, the property offers 108 one- and two-bedroom units, of which 20 units are affordable and rent-restricted. Approximately 16.7 miles from Harvard's Commercial District, occupancy as of July 2022 was reported at 98.6%.

At The Commons at Drum Hill, unit mix includes 36 one-bedroom units (33.3%) and 72 two-bedroom units (66.7%). One-bedroom units average 743 square feet with asking rents averaging \$2,277 per month, or \$36.78 per square foot annually. Two-bedroom units average 1,053 square feet in size and \$2,717 per month in asking rent, or \$30.96 per square foot annually. The average annual asking rent for this building is \$32.48 per square foot. Since its completion, the property averaged 0.55 units absorbed per month. The rental property is summarized below:

TABLE 79  
RENTAL COMPARABLE  
**THE COMMONS AT DRUM HILL**  
1 Technology Drive, North Chelmsford

Year Built	Stories	Unit Type	# of Units	Unit Mix	Unit	Average	Annual Rent per Sq. Ft.	Reported Occupancy
					Size	Asking Monthly Rents		
2007	3	One Bedroom	36	33.3%	743	\$2,277	\$36.78	98.6%
		Two Bedroom	72	66.7%	1,053	\$2,717	\$30.96	
		Total / Avg.	108	100.0%	950	\$2,570	\$32.48	

Source: Field survey, CoStar, compiled by Weitzman Associates, LLC.



### Oriole Landing (Lincoln, MA)

Located in Lincoln, Massachusetts, Oriole Landing was recently completed in July 2020. Developed by CIVICO Development, the property comprises 60 rental units between 2 three-story buildings. Of the total, 15 units are affordable and rent-restricted. As of July 2022, occupancy was reported at 97.2%. Oriole Landing sits approximately 16.9 miles from Harvard's Commercial District.

At Oriole Landing, unit mix includes 38 one-bedroom units (63.3%) and 22 two-bedroom units (36.7%). One-bedroom units average 826 square feet with asking rents averaging \$2,623 per month, or \$38.11 per square foot annually. Two-bedroom units average 1,189 square feet in size and \$3,831 per month in asking rent, or \$38.66 per square foot annually. The average annual asking rent for this building is \$38.36 per square

foot. Since its opening, the property averaged 1.79 units absorbed per month. The rental property is summarized below:

**TABLE 80**  
RENTAL COMPARABLE  
**ORIOLE LANDING**  
1 Marys Way, Lincoln

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average		Annual Rent per Sq. Ft.	Reported Occupancy
					Unit Size	Asking Monthly Rents		
2020	3	One Bedroom	38	63.3%	826	\$2,623	\$38.11	97.2%
		Two Bedroom	22	36.7%	1,189	\$3,831	\$38.66	
		Total / Avg.	60	100.0%	959	\$3,066	\$38.36	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.



### **Mill & 3 Apartments** (Chelmsford, MA)

Located in Chelmsford, Massachusetts, the Mill & 3 Apartments was completed in April 2018 at 276 Mill Road. Approximately 18.1 miles from Harvard's Commercial District, the complex comprises 108 market-rate rental units spread between three three-story buildings. As of July 2022, occupancy was reported at 98.1%.

At the Mill & 3 Apartments, unit mix includes 54 one-bedroom units (50.0%) and 54 two-bedroom units (50.0%). One-bedroom units average 785 square feet with asking rents averaging \$2,395 per month, or \$36.61 per square foot annually. Two-bedroom units average 1,096 square feet in size and \$2,897 per month in asking rent, or \$31.72 per square foot annually. The average annual asking rent for this building is \$33.76 per square foot. Since its completion, the property averaged 1.86 units absorbed per month. The rental property is summarized below:

**TABLE 81**  
RENTAL COMPARABLE  
**MILL & 3 APARTMENTS**  
276 Mill Road, Chelmsford

Year Built	Stories	Unit Type	# of Units	Unit Mix	Average		Annual Rent per Sq. Ft.	Reported Occupancy
					Unit Size	Asking Monthly Rents		
2018	3	One Bedroom	54	50.0%	785	\$2,395	\$36.61	98.1%
		Two Bedroom	54	50.0%	1,096	\$2,897	\$31.72	
		Total / Avg.	108	100.0%	941	\$2,646	\$33.76	

Source: Field survey, CoStar; compiled by Weitzman Associates, LLC.

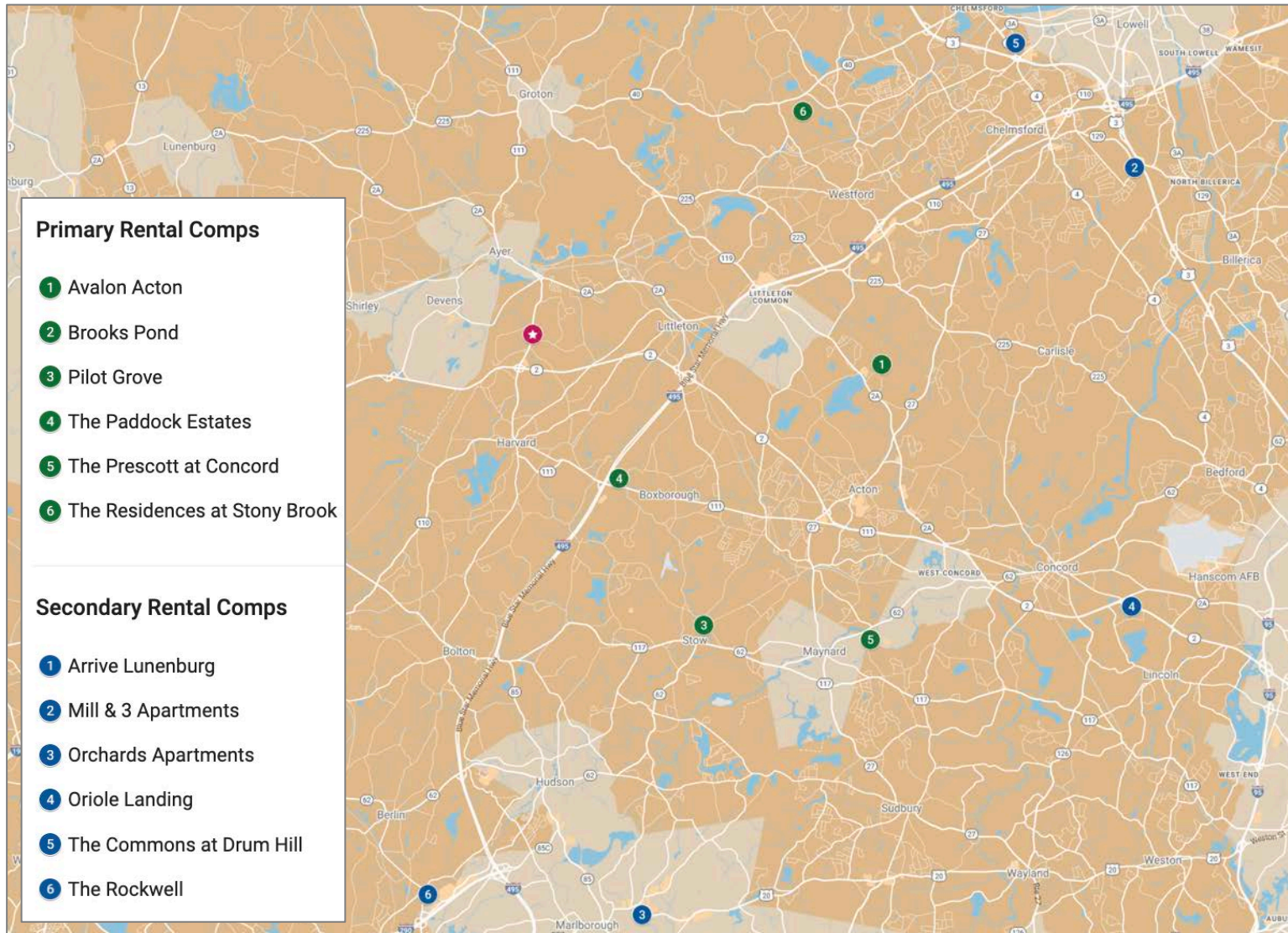
## RENTAL MARKET CONCLUSION

Despite the nation-wide impact of COVID-19, inventory growth has maintained steady within Greater Worcester and Harvard's surrounding submarkets. However, in Harvard proper, rental inventory remains stagnant and lacking. The underserved demand for rental properties within Harvard has been exacerbated by the region's short supply and stalled pipeline. While some construction activity has occurred over recent years, no new properties have delivered over the past 12 months and nothing is currently underway. New rental construction in the Ayer Road Commercial District would provide much needed relief for this neglected market.

The 12 properties profiled above are, in our view, helpful data points for informing future potential rental apartment development within Harvard's Commercial District. The comparable properties profiled in our study achieve a wide range of rental rates. Within the primary market, one-bedroom units are averaging \$2,124 per month, with three-bedroom units averaging near \$3,521. There is sturdy demand for rental properties in the area and the achievable rental rates are reflective of that. This demand is further evident in the impressive leasing paces seen among the comparables. Within the Primary market, leasing pace averages 31 units leased per year, reaching annual highs of 32 units (Avalon Acton) and 43 units (Prescott at Concord) since opening. While there are very few rental properties within Harvard, comparable properties within a 20-minute drive of the Commercial District provide helpful guidance with respect to potential new development in Harvard and the absorption paces one may project. Considering the region's already low vacancy rates, we believe there's greater capacity for additional rental product in Northeast Worcester that could be accommodated by Harvard's Commercial District.



## MAP OF NEARBY COMPARABLE RENTAL PROPERTIES



**TABLE 82**  
**COMPARABLE PROPERTY SUMMARY**  
**REVIEW OF MULTIFAMILY RENTAL PROPERTIES**  
Town of Harvard

Property	Unit Type	# of Units	Unit Mix	Unit	Size	Average	Annual Rent per
						Asking Monthly Rents	Sq. Ft.
Primary Market							
The Paddock Estates at Boxborough	One Bedroom	132	54.1%	800		\$2,058	\$30.87
The Prescott at Concord	One Bedroom	135	38.6%	814		\$2,434	\$35.88
Brooks Pond	One Bedroom	173	48.1%	991		\$1,300	\$15.74
Avalon Acton	One Bedroom	209	44.8%	872		\$2,681	\$36.91
The Residences at Stony Brook	One Bedroom	7	46.7%	900		\$1,122	\$14.96
Minimum		7	38.6%	800		\$1,122	\$14.96
Weighted Average		131	46.3%	877		\$2,124	\$29.67
Maximum		209	54.1%	991		\$2,681	\$36.91
Pilot Grove	Two Bedrooms	15	50.0%	989		\$1,528	\$18.54
The Paddock Estates at Boxborough	Two Bedrooms	106	43.4%	1,177		\$2,569	\$26.19
The Prescott at Concord	Two Bedrooms	187	53.4%	1,196		\$3,896	\$39.09
Brooks Pond	Two Bedrooms	187	51.9%	1,237		\$1,576	\$15.28
Avalon Acton	Two Bedrooms	220	47.2%	1,317		\$3,366	\$30.67
The Residences at Stony Brook	Two Bedrooms	8	53.3%	1,137		\$1,387	\$14.64
Minimum		8	43.4%	989		\$1,387	\$14.64
Weighted Average		121	49.6%	1,236		\$2,863	\$27.78
Maximum		220	53.4%	1,317		\$3,896	\$39.09
The Paddock Estates at Boxborough	Three Bedrooms	6	2.5%	1,468		\$3,344	\$27.34
The Prescott at Concord	Three Bedrooms	28	8.0%	1,373		\$3,818	\$33.36
Avalon Acton	Three Bedrooms	37	7.9%	1,746		\$4,033	\$27.72
Pilot Grove	Three Bedrooms	15	50.0%	1,151		\$1,777	\$18.53
Minimum		6	2.5%	1,151		\$1,777	\$18.53
Weighted Average		22	14.9%	1,501		\$3,521	\$27.93
Maximum		37	50.0%	1,746		\$4,033	\$33.36
Secondary Market							
The Rockwell	One Bedroom	77	37.7%	956		\$2,530	\$31.76
Orchards Apartments	One Bedroom	78	50.0%	994		\$2,356	\$28.44
The Commons at Drum Hill	One Bedroom	36	33.3%	743		\$2,277	\$36.78
Oriole Landing	One Bedroom	38	63.3%	826		\$2,623	\$38.11
Mill & 3 Apartments	One Bedroom	54	50.0%	785		\$2,395	\$36.61
Minimum		36	33.3%	743		\$2,277	\$28.44
Weighted Average		57	46.3%	889		\$2,437	\$33.26
Maximum		78	63.3%	994		\$2,623	\$38.11
Arrive Lunenburg	Two Bedrooms	240	100.0%	1,373		\$2,432	\$21.26
The Rockwell	Two Bedrooms	124	60.8%	1,269		\$3,251	\$30.74
Orchards Apartments	Two Bedrooms	78	50.0%	1,305		\$2,714	\$24.96
The Commons at Drum Hill	Two Bedrooms	72	66.7%	1,053		\$2,717	\$30.96
Oriole Landing	Two Bedrooms	22	36.7%	1,189		\$3,831	\$38.66
Mill & 3 Apartments	Two Bedrooms	54	50.0%	1,096		\$2,897	\$31.72
Minimum		22	36.7%	1,053		\$2,432	\$21.26
Weighted Average		98	74.1%	1,271		\$2,771	\$26.53
Maximum		240	100.0%	1,373		\$3,831	\$38.66
Total One Bedroom							
Minimum		7	33.3%	743		\$1,122	\$14.96
Weighted Average		94	46.3%	881		\$2,253	\$31.29
Maximum		209	63.3%	994		\$2,681	\$38.11
Total Two Bedrooms							
Minimum		8	36.7%	989		\$1,387	\$14.64
Weighted Average		109	60.6%	1,252		\$2,886	\$27.85
Maximum		240	100.0%	1,373		\$3,896	\$39.09

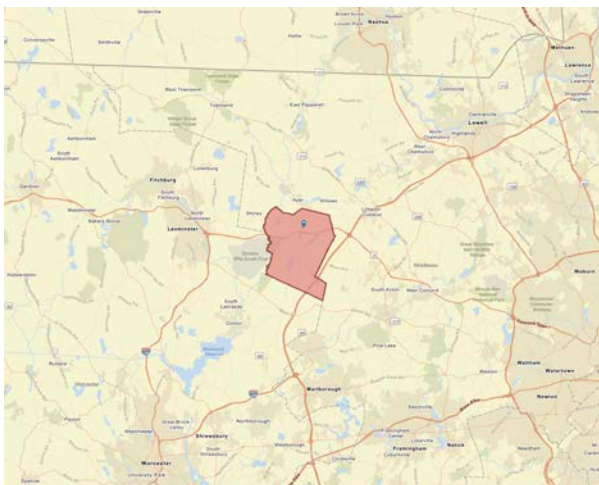
## RESIDENTIAL RENTAL DEMAND ANALYSIS

Utilizing the data from the demographic analyses, we have analyzed the ease of market entry for a new residential rental project (or projects) built in the Harvard Commercial District. This task is accomplished by estimating (1) the minimum income threshold necessary, by unit type, to comfortably afford renting at market-rate within Harvard's Commercial District; (2) the underlying demand for market-rate rental housing in the market areas; and (3) the percent of total demand that the district must capture in order to be readily absorbed by the market. Not only does this analysis provide a significant test of overall project marketability and ease of market entry, but it also defines the level of investment risk in the recommended development.

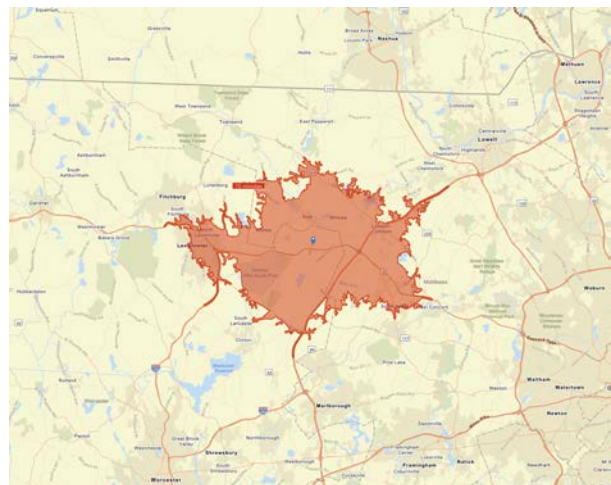
Furthermore, we have selected identical market areas for the rental demand analysis as we did for the for-sale demand analysis in the previous report section, per the maps below. We believe most of the rental demand for housing in the Commercial District will come from the Town of Harvard (primary market), a 15-minute drive-time radius from the Commercial District (secondary market), and a 25-minute drive-time radius (tertiary market), inclusive of the primary and secondary markets. We believe that the vast majority of demand for the proposed development will come from households presently living in the Primary and Secondary Market Areas, as those most likely to choose the housing location are renters who already live nearby. However, some households located as far as the tertiary market may also embrace Harvard's Commercial District as an ideal destination to move to. The following maps show each defined market area.

Akin to the for-sale demand analysis conducted in the previous report section, we believe that households from a middle-income demographic and above (i.e. those earning \$75,000 or more annually) will be attracted to rent housing in the subject region, assuming unit rates are accessible and sufficient inventory is readily available.

PRIMARY MARKET  
TOWN OF HARVARD



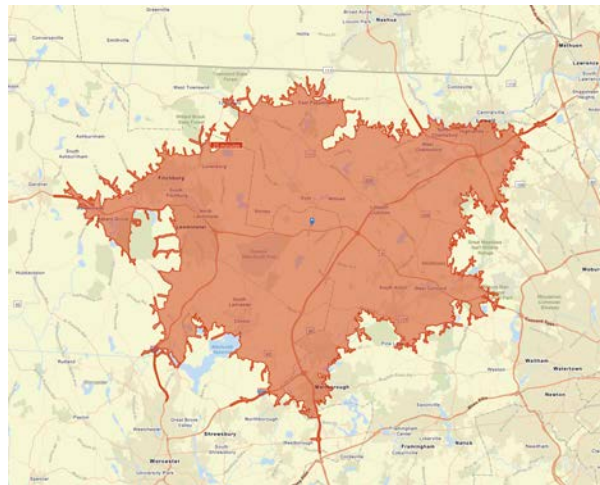
SECONDARY MARKET  
15-MINUTE DRIVE TIME REGION



TERTIARY MARKET



## 25-MINUTE DRIVE TIME REGION



### *Affordability:*

To estimate the minimum income threshold necessary to comfortably afford market-rate rentals within Harvard's Commercial District, we have performed an affordability analysis based on the unit mix and pricing of rental comparables within the region, which is summarized in the following table. Our analysis assumes that 30% of a household's gross income is dedicated to rent, although this is conservative given many rental properties are likely to allow a tenant to rent an apartment that costs as much as 40% of their gross household income. This affordability analysis demonstrates that the average rental apartment within the comparable market should be affordable for households earning at least \$106,200 annually. Furthermore, one-bedroom rental units should be affordable for households earning at least \$90,100 on average, while larger three-bedroom homes should be affordable for households earning at least \$140,700 on average. The following table presents our rental affordability analysis of the average unit types within the comparable market:

TABLE 83  
RENTAL AFFORDABILITY ANALYSIS  
**TOWN OF HARVARD**  
as of August 2022

	1-Bdrm	2-Bdrm	3-Bdrm	Weighted Average
Avg. Unit Sq. Ft.	881	1,252	1,501	1,112
Avg. Rent per Sq. Ft.	\$31.29	\$27.85	\$27.90	\$29.23
Avg. Monthly Rent	\$2,253	\$2,886	\$3,518	\$2,655
Overall Annual Rent	\$27,036	\$34,632	\$42,216	\$31,860
Typical % of Income Devoted to Housing	33.0%	33.0%	33.0%	33.0%
Required Annual Income	\$81,927	\$104,945	\$127,927	\$96,546
Harvard % of Income Devoted to Housing (2)	30.0%	30.0%	30.0%	30.0%
Required Annual Income	\$90,120	\$115,440	\$140,720	\$106,201

1) Unit sizes and sale prices are averages from the comparable properties within 30 minutes of the C-District.

2) As per the Town of Harvard's Affordable Housing Primer, "housing is generally considered affordable if the household pays less than 30 percent of its monthly income to secure the housing."

Source: Costar, Local Brokerage Data; compiled by Weitzman Associates, LLC

#### *Demand and Capture Rates:*

Many of the residents of a potential development will be renting by choice, having perhaps sold a larger single-family home and not being interested in the costs of ownership at their stage in life. Nevertheless, to be conservative, our analysis considers only those households presently renting, despite the limited rental supply in Harvard suggesting much stronger unmet demand. Our analysis is particularly conservative because we believe that there is an ongoing structural shift taking place in the United States toward rental housing, whereby otherwise financially qualified households are choosing to rent instead of buying, and in many respects, like a significant portion of the senior community and empty nesters, have no interest in homeownership even if they have the financial means. This trend has been accelerated somewhat by the recently passed tax legislation, which disincentivizes home ownership in many states with higher real estate and state and local income taxes. ESRI regularly publishes data related to housing tenure. Of the 1,760 income qualified households in the Primary Market Area, ESRI estimates that 6.3% are renters. In the Secondary Market Area, of the 20,732 income qualified households, ESRI estimates that 30.9% are renters. In the Tertiary Market Area, ESRI estimates that 32.5% of the 105,883 income qualified households are renters. By multiplying these figures, we estimate the total number of households that are both renters and income-qualified. Thus, we estimate that there are 112, 6,399, and 34,365 households within each market area, respectively, that rent and are income-qualified.

The calculation for determining household demand is based upon several components: internal mobility within a market area (a household changing their housing situation within the market), the anticipated household growth constituting new households coming from outside the market area, and new households being created within the market area. A conservative estimated internal mobility rate of 25.0% was applied to determine annual internal demand, effectively quantifying the number of renter households annually that are likely to change their housing situation. This is based loosely on the fact that the turnover rate at typical apartment communities throughout the United States is 35% to 50% depending on the market circumstances. It is therefore conservative to forecast that at least one in four tenants will consider changing housing in any given year. Overall, the total internal mobility indicated that 28 currently renting, income-qualified households in the Primary Market Area, 1,600 households in the Secondary Market Area, and 8,951 households in the Tertiary Market Area would seek new rental housing in any given year.

We then quantified the number of new income-qualified households projected to be created within each market area, based on the projected annual household growth rates within the markets between 2022 and 2027. However, projections show only the Tertiary Market growing its income-qualified households over the coming years, adding an average of nine households annually through 2027. As shown in the following table, there are estimated to be 28 total income-qualified households in the Primary Market Area, 1,597 households in the Secondary Market Area, and 8,600 households in the Tertiary Market Area seeking new rental housing during any given year.

Based on household growth and internal mobility within each market—among households meeting our target criteria—we are able to measure the potential number of income-qualified households seeking rental housing in any given year. This is then compared with several scenarios of total annual absorption within the Harvard Commercial District in order to gauge the portion of the potential rental demand that the district must capture in order to be readily absorbed by the market. From our experience, resulting capture rates should be approximately 7.0% or less in order for the development to be readily absorbed in the market. While capture rates of about 10.0% or more usually signal greater difficulty entering the market, Harvard is an exception given how severely limited and underserved its rental market is. With more rental offerings, Harvard's renter pool would naturally increase, and thus lower its required capture rates significantly.

Projecting absorption scenarios at the rates of five, seven, and nine units leased per month, the resulting capture rates—given the estimated annual income-qualified housing demand—indicate demographic support for the subject district's absorption at a pace between seven and nine units per month if relying on the Primary and Secondary Market Areas. If relying additionally on the Tertiary Market, the capture rates fall much lower, near 1.3% at an absorption pace of nine units per month. Thus, we believe that the Harvard Commercial District could accommodate absorption between five and seven market-rate rental units per month.

### Residential Rental Demand Analysis Conclusion:

Based on our analysis, we conclude that there is sufficient demographic depth of demand for rental apartments in the Harvard Commercial District. Given the above capture rates, there is likely sufficient demand for multiple developments. We expect households interested in leasing an apartment in Harvard will come primarily from a range of age and income cohorts within Harvard and its close vicinity, as confirmed by our conversations with local market participants. These may also include renters by choice whose income could otherwise suggest capacities for homeownership. With a competitive development, complimentary demand may also from the secondary market area. Direct access to nature and the activated commercial core will aid in attracting households to rent in Harvard's Commercial District.

TABLE 84  
**RENTAL HOUSING DEMAND ANALYSIS**  
All Households Earning Above \$75,000 Annually  
By Household Income, 2022 Estimate

	<u>Primary Market Area</u> Town of Havard	<u>Secondary Market Area</u> 15-Minute Drive Time	<u>Tertiary Market Area</u> 25-Minute Drive Time
<u>Household Income:</u>			
- \$75,000 - \$99,999	144	3,123	19,075
- \$100,000 - \$149,000	397	5,895	31,787
- \$150,000 - \$199,999	349	4,047	22,703
- \$200,000+	870	7,667	32,318
Total Income Qualified Households	1,760	20,732	105,883
- Ratio of Renter Households	6.3%	30.9%	32.5%
Total Renter Households	112	6,399	34,365
- Household Mobility Rate	25%	25%	25%
Total Estimated Internal Mobility	28	1,600	8,591
- Annual Household Growth Rate (2)	0.37%	-0.05%	0.03%
Annual Household Growth	0	-3	9
<b>Total Housing Demand</b>	<b>28</b>	<b>1,597</b>	<b>8,600</b>
Projected Annual Capture Rate 60 units per year 5 units per month	211.6%	3.8%	0.7%
Projected Annual Capture Rate 84 units per year 7 units per month	296.3%	5.3%	1.0%
Projected Annual Capture Rate 108 units per year 9 units per month	380.9%	6.8%	1.3%

1) Drive-time market areas reflect driving distance in minutes from commercial district.

2) Reflects the projected growth rate between 2022 and 2027

Source: ESRI, American Community Survey; compiled by Weitzman Associates, LLC.

## OFFICE MARKET ANALYSIS

## OFFICE MARKET ANALYSIS

Weitzman Associates has researched the office market in support of its determination of the appropriate product recommendations, pricing, and absorption assumptions that should be utilized in underwriting potential commercial development in the Ayer Road Commercial District. Our analysis begins with an overview of macro and regional office trends, then examines local conditions specific to Harvard.

### EXECUTIVE SUMMARY

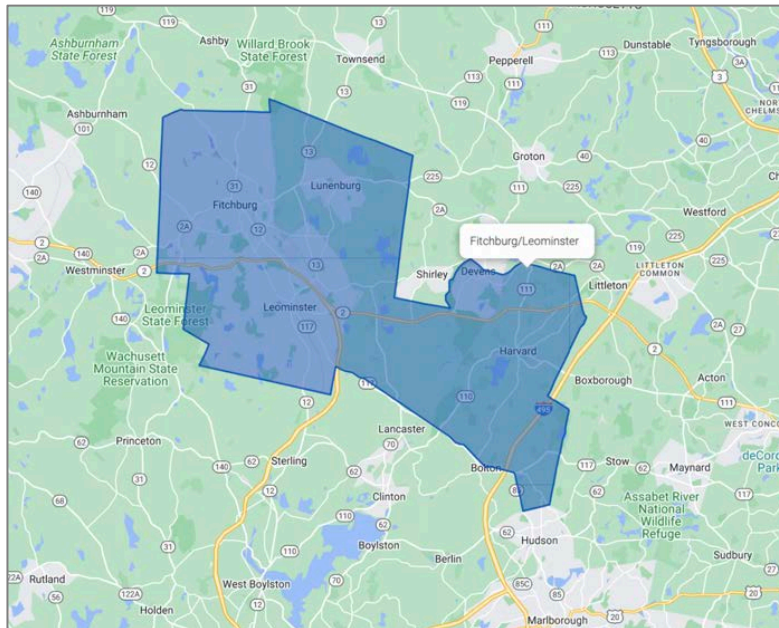
Based on our research of the office market, our findings are summarized as follows:

- **Midsize Office Submarket.** The town of Harvard is part of midsize submarket (the Fitchburg/Leominster submarket in the Worcester area) that includes approximately 3.6 million square feet of office space.
- **Rising Vacancy Rates Correlated with Product Quality.** The office vacancy rate in this market has risen significantly over the past 12 months, and at 16.5%, as of July 2022, is substantially above the long-term average. Vacancy rate is however correlated with quality with 0% for 4- and 5-Star product (a very small share of overall supply with 15,840 square feet of space), 5.3% for 3-Star supply (1.5 million square feet or 42% of overall supply), and 24.8% for 1- and 2-Star product (2.0 million square feet, or 57% of overall supply).
- **Increasing Office Average Rents.** Despite rents increasing 2.0% over the past year, annual absorption in this market has been negative and has averaged -43,000 square feet over the past five years.
- **Shrinking Office Supply and Office Rents Averaging \$18.12-\$23.14 Per Square Foot.** Recent trends in the Fitchburg/Leominster office submarket suggest that the inventory is likely to shrink moving forward by virtue of demolition activity. Market rents as of July 2022 were \$23.14 per square foot for 4- and 5-Star space, \$19.85 per square foot for 3-Star space, and \$18.12 per square foot for 1- and 2-Star space.
- **28-Property Commercial District.** Per our research, there are 28 properties currently used for commercial purposes in Harvard's Commercial District. The 24 commercial properties for which data is available comprise a total of approximately 321,457 square feet in building area.
- **Mostly General and Medical Office.** Commercial development in Harvard's C District consists primarily of office uses as well as of retail and service space with the exception of a few heavy commercial, warehousing and community uses.
- **Old Commercial Supply.** Except for a cluster of three office and retail buildings completed almost twenty years ago at the southern end of Ayer Road, all other commercial property in Harvard is older with apparent functional and physical obsolescence. We have noted office space availability in many of the commercial buildings along Ayer Road in Harvard. In addition to a lack of demand for office uses, this situation suggests the opportunity for major upgrades and or redevelopment.
- **No Office Projects in the Pipeline.** There is no supply-side pressures on vacancy or rent in this market over the near term, with no projects under construction.

## FITCHBURG / LEOMINSTER OFFICE SUBMARKET

The Harvard Commercial District is located in the Fitchburg/Leominster office submarket as defined by CoStar and shown in the map below. Fitchburg/Leominster is a group of towns that spans from Harvard to the border of Worcester. It covers most of the northwestern corner of Worcester County and is situated in the central portion of Massachusetts. The region includes Harvard, Devens, Leominster, Lunenburg, and Fitchburg. It accounts for 3.5 million square feet of office space, or 10.7% of the Worcester Metro area's total inventory.

FITCHBURG / LEOMINSTER OFFICE SUBMARKET



According to CoStar, there is currently 3,556,733 square feet of inventory in the Fitchburg/Leominster office market as of July 2022. Between 2010 and July 2022, total office inventory has grown by 0.2% compounded annually, and has accelerated over recent years, growing by 0.3% compounded annually since 2016. However, moving through 2026, inventory is expected to shrink by 16,314 square feet, or by 0.11% compounded annually. Despite being largely positive each year since 2010, net absorption has begun trending negatively over recent years, and is expected to remain negative through 2026. The following table illustrates overall supply and demand trends and projections in the Fitchburg/Leominster office market:



TABLE 85  
**FITCHBURG / LEOMINSTER OFFICE SUBMARKET**  
 SUPPLY AND DEMAND

Year	<u>Inventory</u>			<u>Net Absorption</u>	
	Sq Ft	Additions	% Growth	Sq Ft	% Inventory
2010	3,471,676	20,000	0.6%	49,127	1%
2011	3,471,676	0	0.0%	111,074	3%
2012	3,471,676	0	0.0%	6,868	0%
2013	3,489,676	18,000	0.5%	(2,520)	0%
2014	3,489,676	0	0.0%	10,284	0%
2015	3,489,676	0	0.0%	35,701	1%
2016	3,489,676	0	0.0%	190,847	5%
2017	3,494,626	4,950	0.1%	(8,834)	0%
2018	3,566,243	71,617	2.0%	85,141	2%
2019	3,566,243	0	0.0%	(62,614)	-2%
2020	3,566,243	0	0.0%	13,956	0%
2021	3,566,243	0	0.0%	(21,108)	-1%
YTD	3,556,733	(9,510)	-0.3%	(459,482)	-13%
2022	3,555,840	(10,403)	-0.3%	(472,687)	-13%
2023	3,551,939	(3,901)	-0.1%	(20,136)	-1%
2024	3,548,098	(3,841)	-0.1%	(16,433)	0%
2025	3,544,268	(3,830)	-0.1%	(18,854)	-1%
2026	3,540,419	(3,849)	-0.1%	(18,887)	-1%

(1) Shaded values are projected; projections are as of 7/20/2022

Source: CoStar; compiled by Weitzman Associates, LLC

Meanwhile, asking rents have gradually increased since 2010, rising from \$14.54 per square foot to \$18.87 in July 2022, or by 2.2% compounded annually. This growth has also continually accelerated over this period, growing by 2.7% compounded annually since 2016. Rents are projected to continue increasing through 2024, and then decrease through 2026, settling near \$19.11 per square foot by year-end 2026. Furthermore, vacancy has decreased steadily since peaking in 2010, falling from 11.5% in 2010 to 3.8% in 2021. However, over the past year vacancy has spiked to 16.5% and is projected to continue increasing to 18.6% by 2026. The following table summarizes vacancy and rent trends and projections for Fitchburg/Leominster office market:

TABLE 86  
**FITCHBURG / LEOMINSTER OFFICE SUBMARKET**  
VACANCY AND RENT

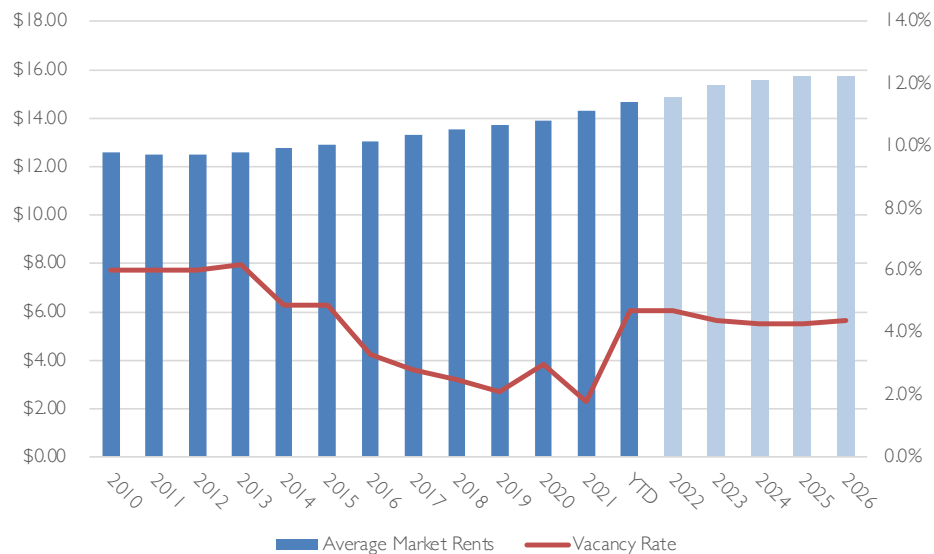
Year	<u>Vacancy</u>			<u>Market Rent</u>	
	Sq Ft	Rate	% Change	Per Sq Ft	% Growth
2010	400,028	11.5%	-	\$14.54	-
2011	288,954	8.3%	-27.8%	\$14.38	-1.1%
2012	282,086	8.1%	-2.4%	\$14.62	1.7%
2013	302,606	8.7%	7.3%	\$15.13	3.5%
2014	292,322	8.4%	-3.4%	\$15.83	4.6%
2015	256,621	7.4%	-12.2%	\$16.64	5.1%
2016	65,774	1.9%	-74.4%	\$16.11	-3.2%
2017	79,558	2.3%	21.0%	\$16.12	0.1%
2018	66,034	1.9%	-17.0%	\$17.09	6.0%
2019	128,648	3.6%	94.8%	\$18.24	6.7%
2020	114,692	3.2%	-10.8%	\$18.44	1.1%
2021	135,800	3.8%	18.4%	\$18.71	1.5%
YTD	585,772	16.5%	331.3%	\$18.87	0.9%
2022	598,146	16.8%	340.5%	\$18.98	1.4%
2023	614,696	17.3%	2.8%	\$19.17	1.0%
2024	627,596	17.7%	2.1%	\$19.25	0.4%
2025	642,935	18.1%	2.4%	\$19.21	-0.2%
2026	658,271	18.6%	2.4%	\$19.11	-0.5%

(1) Shaded values are projected; projections are as of 7/20/2022

Source: CoStar; compiled by Weitzman Associates, LLC

GRAPH 11

**FITCHBURG / LEOMINSTER RETAIL SUBMARKET**  
ASKING RENT V. VACANCY



## EXISTING OFFICE SUPPLY – TOWN OF HARVARD

In order to contextualize the depth of office supply within Harvard, we have compiled data from the Town's Assessor's Office and third party sources that reflect the existing office and mixed-use buildings within the Commercial District.

As indicated in the area assessment and retail market sections, commercial development in the C District consists primarily of general and medical office uses, as well as of retail and service space—with the exception of a few heavy commercial, warehousing and community uses. Per our research, there are 30 properties currently used for commercial purposes in Harvard's Commercial District. The 28 commercial properties for which data is available comprise a total of approximately 478,530 square feet in building area. We have noted office space availability in many of the commercial buildings along Ayer Road in Harvard. In addition to a lack of demand for office uses, this situation suggests the opportunity for major upgrades and or redevelopment, especially given the physical and functional obsolescence of many of these older structures. With no office projects under construction, there is no supply-side pressures on vacancy or rent in this market over the near term.

Except for a cluster of three office and retail buildings completed almost twenty years ago at the southern end of Ayer Road, all other commercial property in Harvard is older with apparent functional and physical obsolescence. Most existing buildings in the C district are older and have been built from 1817 to 2010.

Over a seven-year period starting almost twenty-years ago, the three most recently completed commercial properties in the C District (188, 198 and 200 Ayer Road) were built under a special permit (Ayer Road Village Special Permit-ARV-SP) which enabled a cluster typology with a higher density than otherwise permitted in the rest of the C District. Comprising a total of 46,442 square feet in building area, these three two-story neo-traditional buildings include ground floor retail with professional and medical offices above, complemented by an adjacent multi-family property (the 42-unit senior Bower Brooks Apartment complex at 186 Ayer Road).

The following table summarizes our survey of size, location, age, building type and tenants for each of the existing office and mixed-use properties currently used within the Commercial District. Of the 30 commercial properties within the subject district, 17 are primarily office properties and 4 are mixed-use. Excluding the mixed-use properties, these office spaces comprise a total of 300,814 square feet in building area. Excluding two larger outliers—206 Ayer Road (65,340 square feet) and 249 Ayer Road (68,825 square feet)—these office properties range in size from 2,667 square feet to 20,952 square feet in building area for an average size of 11,110 square feet. Most of these properties rise either one or two stories on parcels ranging in size from 1.3 to 8.9 acres, averaging 3.1 acres per parcel. Average floor area ratio for these parcels is only 0.084.

Given the overall picturesque character of the town as a whole and its potential for agro-tourism discussed further below, the deficiency in commercial activity geared towards visitors and in additional fiscal benefits from "outside money" is also notable.

TABLE 87

**SURVEY OF EXISTING OFFICE AND MIXED-USE BUILDINGS**  
COMMERCIAL DISTRICT  
HARVARD, MA

**Mixed-Use Properties:**

	Address	Zoning	Year Built	Lot Size (Acres)	Building Area (Sq.Ft)	# Stories	# Units	Building Type	Tenant Type	Tenants (1)
1	185 AYER RD	C	1817	2.7	4,912	2	4	Mixed Commercial	-	-
2	188 AYER RD	C	2004	1.9	8,418	2	3	General Office / Retail	Fast Food	Dunkin Donuts
3	283 AYER RD	C	N/A	N/A	N/A	1	1	General Office/Retail	Financial Services, bank	Rollstone Bank & Trust
4	325 AYER RD	C	1954	5.0	84,512	1	19	Warehousing/ Retail/ Services/ Offices	aka Appleworks Building, Fast food, fitness, wellness, services, professional office, manufacturing	Siam Pepper Thai Cuisine; Muddy Water Coffee Roasters; India Overseas Wholesalers; Smile Center; AECOM; Atech Investigation; Bodylines Pilates; Harvard Machinery; John Reedy CPAMP Bresnan Corp.; Whole Earth Landscaping; Cannabis Oil Manufacturing; Corrections Physical Therapy; The Appleworks;

**Office Properties:**

	Address	Zoning	Year Built	Lot Size (Acres)	Building Area (Sq.Ft)	# Stories	# Units	Building Type	Tenant Type	Tenants (1)
1	184 AYER RD	C	1890	2.3	3,486	1.75	1	Professional Offices	-	-
2	187 AYER RD	C	1957	2.2	4,800	1	1	General Office	-	-
3	198 AYER RD	C	2010	3.4	20,952	2	1	General Office	Veterinarian	ProFormance Canine Surgical Center
4	200 AYER RD	C	2003	3.8	17,072	2	6	General & Medical Office	Architect, developer, medical	LD Russo; Mangel Destefano Architect; UMass Memorial Harvard Primary Care; Harvard Joyful Adult Health; Vision Solar; Nonotuck Resource Ass.
5	206 AYER RD	C	1987	1.5	65,340	2	5	General Office	Professional Offices	Moeser & Associates; Nikopoulos Insurance; McO & Associates Inc; Albert A. Barbieri Jr.; Mco Housing Service
6	231 AYER RD	C	1987	3.8	15,064	1	3	General Office	Professional Offices	Acton Medical Assoc PC; Watjus Electric, Inc
7	233 AYER RD	C	1987	3.7	16,156	2	10	Medical Office	Medical	Harvard Family Medicine et als
8	249 AYER RD	C	1990	1.6	68,825	3	14	General Office	Professional Offices	Robery Casey, Attorney; Gatehouse Media LLC; Eastern Special Risk Insurance; The Winbridge Group, Inc.; Cybertools; Bairesdev; Lindsay Renner Schwartz, Licsw LLC; Nearcoders; Charter; Robert F Casey Jr Law Office; Blanchard House Condo Associates; L R Solutions Group; Waterlily Acupuncture Incorporated; Christopher W Di Senso PC; Harvard Counseling Associates
9	257 AYER RD	C	1995	1.3	7,456	1	3	Medical Offices	Wellness, Counseling, Medical, Dentist	Terry Anelons, Harvard Chiropractic; Reddy Family Dental; Advocates Community Counseling; Wellness Massage
10	259 AYER RD	C	1994	2.0	14,368	2	4	Medical/Pet Care Center	Pet Care Center	Harvard Family Pet Clinic, LLC; Harvard Kennels; Doggie Day Care; Grooming Center
11	270 AYER RD	C	1965	4.7	6,308	1	3	General Office	Professional Offices	Nancy Catlini Law Office; Luzzi Gilpatrick Financial Services; North Atlantic Concrete
12	276 AYER RD	C	1991	4.0	2,667	1	1	General Office	Professional Offices	Francis Murphy Insurance Agency
13	280 AYER RD	C	1986	3.5	14,148	2	3	General & Medical Office	General & Wellness	Hatch Jennings Inc.; Solar Design Associates; South Coast Development; Harvard Therapeutics
14	284 AYER RD	C	1952	1.9	3,496	1	1	General Office	Professional Offices	David Alexander Accountant
15	6 LANCASTER CNTY RD	C	1988	3.4	18,626	1	6	General Office	Professional offices, surveyor, environmental, developer	David E. Ross, Surveyor; Omni Environmental; Bower Brooks Offices
16	12 LANCASTER CNTY RD	C	1988	8.9	16,600	1	1	General Office, Community Services	aka Renaissance Office Park. General office, future senior community center	HXI; Renaissance Electronic Corp.; Future location of Council for Aging Center
17	16 LANCASTER CNTY RD	C	1995	1.5	5,450	1	1	General Office	Medical Office	Concord Hillside Medical Assoc
<b>Min</b>				<b>1.3</b>	<b>2,667</b>					
<b>Avg</b>				<b>3.1</b>	<b>11,110</b>					
<b>Max</b>				<b>8.9</b>	<b>20,952</b>					
<b>Total</b>				<b>53.4</b>	<b>300,814</b>					

Note (1) Tenant list might include some expired leases

(2) Min / Avg / Max / Total excludes the mixed-use properties

Source: Town of Harvard Assessor's Office, Field Survey; Compiled by Weitzman Associates, LLC

Excluding Larger Outliers - 206 and 249 Ayer Road  
Excluding Larger Outliers - 206 and 249 Ayer Road  
Total for 17 Office Properties Reporting SQFT

*Locally Available Office Inventory (within a 20-minute drive of C-District):*

To frame the Fitchburg/Leominster and Harvard office markets to inform the potential for office uses within the Commercial District, we have compiled a set of the currently available office inventory within a 20-minute drive-time radius of the subject district per Co-star. Commercial development in Harvard's C District consists primarily of general and medical office uses. Except for a cluster of three office and retail buildings completed almost twenty years ago at the southern end of Ayer Road, most commercial property in Harvard is older with apparent functional and physical obsolescence. We have noted office space availability in many of the commercial buildings along Ayer Road in Harvard. In addition to a lack of demand for office uses, this situation suggests the opportunity for major upgrades and or redevelopment. Additionally, with no projects currently under construction, there is no supply-side pressures on vacancy or rent in this market over the near term. We expect that any office space built in the Commercial District should be a component of small village clusters along Ayer Road, either as professional spaces at grade or second-story spaces above retail.

We have identified 11 available leases within a 20-minute drive-time radius of the Harvard Commercial District. These leases sit between 3.7 and 5.7 miles from the subject district. The total available space at each property ranges from 2,300 to 93,450 square feet, varying between single-tenant spaces and others potentially divisible by 53. Excluding single-tenant leases, the leasable offices spaces within these properties range from as small as 105 square feet to as large as 93,450 square feet of maximum contiguous space.

Among those confirmed and publicly available, asking rental rates range between \$14 and \$18 per square foot, with lease arrangements structured on a "plus electric"<sup>9</sup> or "modified gross" basis. Below we highlight several available leases that we consider informative for the potential of office developments within Harvard's Commercial District.

We note that our survey is per data published by Co-star. Missing is space not listed or captured by this service which, per our observations, includes available space in commercial buildings in Harvard.

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<sup>9</sup> A type of Modified Gross Lease where the tenant is responsible for their proportional share of the electrical cost in addition to the rent.

**TABLE 88**  
**SUMMARY OF AVAILABLE OFFICE INVENTORY**  
TOWN OF HARVARD  
20-Minute Drive Time Radius

	Property	Town	Total SF Available	# Spaces	Smallest Space (SF)	Max Contiguous (SF)	Asking Rent PSF	Service Type	% Leased	Property Distance (mi)
1	1 Monarch Drive	Littleton	9,750	5	3,200	14,226	-	-	67%	5.6
2	94 Jackson Road	Devens	9,412	5	1,184	2,348	\$14	MG	59%	4.7
3	29 Buena Vista St	Devens	10,464	3	3,488	10,464	-	-	0%	4.6
4	676 Great Road	Littleton	2,300	1	2,300	2,300	\$17 - \$21 *	-	60%	5.5
5	1300 Massachusetts Avenue	Boxborough	46,145	7	2,623	29,104	-	-	25%	5.7
6	33 Andrews Parkway	Devens	4,685	4	1,004	4,685	\$14	+ELEC	77%	4.3
7	1740 Massachusetts Avenue	Boxborough	4,800	3	1,200	1,800	\$17	+ELEC	61%	3.7
8	85 Swanson Road	Boxborough	16,463	53	105	8,413	\$18	+ELEC	83%	4.3
9	200 Beaver Brook Road	Boxborough	93,450	2	46,725	93,450	-	-	0%	4.5
10	500 Beaver Brook Road	Boxborough	49,670	1	49,670	49,670	-	-	77%	4.6
11	120 Boston Road	Groton	4,000	1	4,000	4,000	\$33 - \$40 *	-	76%	5.6

1) All dashes represent data withheld from market.

\* Costar estimated range

Source: CoStar; 8/3/2022, Projected Rent Roll; compiled by Weitzman Associates

Introducing new office supply in Harvard is difficult because current zoning and bylaws are deficient and have been attractive to unintended uses.<sup>10</sup> Along with deficient zoning, the lack of access to public water and sewer systems, and the prohibitive costs to individual developers for providing compliant individual water and septic systems for projects other than of minimal size, have been quoted by stakeholders to be the most important impediment to additional growth in the commercial district. With many potential access points, the currently debated possibility of connecting Harvard to adjacent Devens' water and sewer utilities could provide a solution to Harvard's infrastructure issues.

We note that there are no significant office properties either proposed or under construction within a reasonable proximity to the Harvard Commercial District. Thus, the greatest competition to prospective office projects would come from existing office inventory; those noted above constitute over 251,100 square feet of the office market.

<sup>10</sup> As indicated by recent development inquiries reported within the Ayer Road Commercial District for the self-storage facilities, auto repair uses, warehousing and multi-family apartment complexes in excess of 200 units with no commercial components.

*Recent Local Office Leases (within a 20-minute drive of C-District):*

Office leasing activity remains minimal in Harvard, with most activity concentrated between a small handful of older properties. Nonetheless, we have identified 20 signed leases within a 20-minute drive-time radius from the Commercial District that generally fit our criteria. Though these have occurred between just five buildings, averaging 5.4 miles from the subject district. These office leases range in size from 170 to 9,710 square feet at rental rates ranging from \$9.00 to \$25.00 per square foot. Most lease arrangements are structured on a “full service<sup>11</sup>” basis, with several others structured as “plus electric.” As these signed leases are spread between just five buildings, there’s little variance between them in terms of building quality and service type. Per our recommendations, arguably none of these leases are comparable to what should be built within Harvard’s Commercial District. Overall, CoStar reports that the average office rent in the Harvard submarket (Fitchburg/Leominster) is approximately \$18.70 per square foot. Below we highlight several recently signed leases that we consider informative for the potential of office developments within Harvard’s Commercial District.

TABLE 89  
SUMMARY OF RECENT OFFICE LEASES  
TOWN OF HARVARD  
20-Minute Drive Time Radius

Property	Town	Suite	SF Leased	Lease Sign Date	Lease Start Date	Rent PSF	Service Type	Property Distance (mi)
1) 2 Shaker	Shirley	D200	1,308	Aug-22	Aug-22	\$16.97	FS	6.0
2) 2 Shaker	Shirley	B209	180	Jul-22	Aug-22	\$24.00	FS	6.0
3) 2 Shaker	Shirley	B215	260	Jul-22	Aug-22	\$16.50	FS	6.0
4) 2 Shaker	Shirley	B217	310	Jul-22	Aug-22	\$15.50	FS	6.0
5) 85 Swanson Road	Boxborough	180	766	Feb-22	Feb-22	\$18.00	+ELEC	4.3
6) 2 Shaker	Shirley	B103	180	Jan-22	Feb-22	\$23.00	FS	6.0
7) 2 Shaker	Shirley	B211	221	Jan-22	Feb-22	\$22.00	FS	6.0
8) 2 Shaker	Shirley	D214	383	Jan-22	Feb-22	\$16.00	FS	6.0
9) 305 Foster Street	Littleton	100	9,710	Nov-21	Jan-22	\$15.50	NNN	5.4
10) 94 Jackson Road	Devens	105A	597	Sep-21	Oct-21	\$14.00	+ELEC	4.7
11) 94 Jackson Road	Devens	110	1,310	Sep-21	Oct-21	\$12.00	+ELEC	4.7
12) 2 Shaker	Shirley	B105	170	Jun-21	Jul-21	\$25.00	FS	6.0
13) 2 Shaker	Shirley	B203	510	Jun-21	Jul-21	\$16.50	FS	6.0
14) 2 Shaker	Shirley	D218	430	May-21	Jun-21	\$16.00	FS	6.0
15) 2 Shaker	Shirley	B207	180	May-21	Jun-21	\$23.00	FS	6.0
16) 85 Swanson Road	Boxborough	310	2,853	May-21	Dec-21	\$15.00	+ELEC	4.3
17) 2 Shaker	Shirley	B217 A/B	570	May-21	Jun-21	\$14.75	FS	6.0
18) 2 Shaker	Shirley	B100	665	Mar-21	Apr-21	\$14.25	FS	6.0
19) 2 Shaker	Shirley	B222 & D219	4,395	Mar-21	May-21	\$12-14.25	+UTIL	6.0
20) 325 Ayer Road	Harvard	B110 B	760	Feb-21	Mar-21	\$9.00	+ELEC	0.6

Source: CoStar Projected Rent Roll; compiled by Weitzman Associates

<sup>11</sup> A rental rate that includes normal building standard services as provided by the landlord within a base year rental.



## OFFICE MARKET CONCLUSION

Harvard's office submarket (Fitchburg/Leominster) comprises 10.7% of Greater Worcester's total office inventory, at 3.6 millions square feet. Amid the nation's recovery from COVID-19, vacancies in this submarket have risen significantly over the past 12 months, with office vacancy as of July 2022 (16.5%) standing substantially above the submarket's long-term average. These rising vacancies correlate direct with the region's poorer office quality. Of the submarket's total inventory, 4- and 5-star products comprise just 0.45% (15,840 square feet), with lower-end 1- and 2-star products comprising over 57% (approximately 2.0 million square feet). Therefore, despite rents increasing 2.0% over the past year, annual absorption in this market has remained negative, averaging -43,000 square feet over the past five years. With no projects currently under construction or in the pipeline, recent trends in the Fitchburg/Leominster office submarket suggest that the inventory is likely to continue shrinking moving forward by virtue of demolition activity. We believe there will be no supply-side pressures on vacancy or rent in this submarket over the near term.

Within Harvard's Commercial District, commercial development consists primarily of general and medical office uses, as well as of retail and service space. Of the subject district's 28 commercial properties, 15 are primarily office properties and 4 are mixed-use. Excluding the mixed-use properties, these office spaces comprise a total of 166,649 square feet in building area, about 1.2% of the submarket's total inventory. Through our primary research and visits to the town, we have noted office space availability in many of the commercial buildings along the district's stretch of Ayer Road. In addition to a lack of demand for office uses, this situation suggests the opportunity for major upgrades and or redevelopment, especially given the physical and functional obsolescence of many of these older structures. Except for a cluster of three office and retail buildings completed almost twenty years ago at the southern end of Ayer Road, all other commercial properties in Harvard are much older, with most built from 1817 to 2010.

## RETAIL MARKET ANALYSIS

## RETAIL MARKET ANALYSIS

Weitzman Associates has researched the retail market in support of its determination of the appropriate product recommendations, pricing, and absorption assumptions that should be utilized in underwriting potential retail development in the Ayer Road Commercial District. Our analysis begins with an overview of macro and regional retail trends, then examines local conditions specific to Harvard.

### EXECUTIVE SUMMARY

Based on our research of the retail market, our findings are summarized as follows:

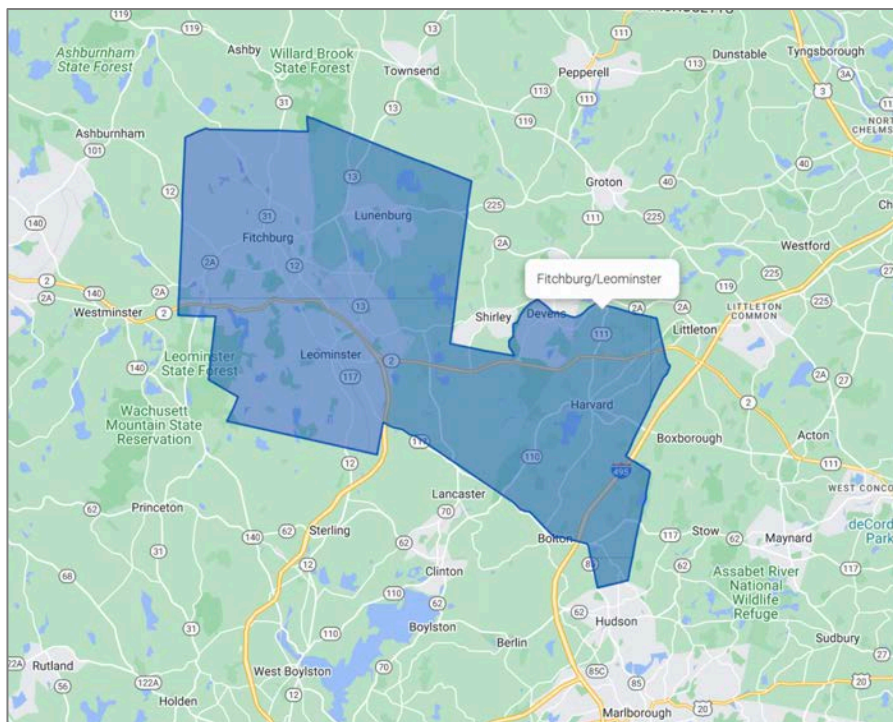
- **Midsize Retail Submarket.** Retail inventory in the Fitchburg/Leominster submarket includes approximately 6,905,900 square feet of space.
- **Rising Retail Rents.** Retail rents in the Fitchburg/Leominster submarket have surged 4.0% over the past year in spite of an increase in the overall vacancy rate of 2.8%, with an average vacancy rate of 4.7% as of July 2022.
- **Retail Rents Averaging \$13.09-\$20.68 Per Square Foot.** The average rental rate for retail space in the Fitchburg/Leominster submarket as of July 2022 was \$14.66 per square foot, including \$13.09 per square foot for general retail (55% of total supply), \$14.52 per square foot for strip centers (5.9% of total supply), \$14.37 per square foot for neighborhood centers (30.5% of total supply), \$18.12 for power centers (10.3% of total supply), and \$20.68 per square foot for mall space (9.6% of total supply).
- **Above-Market Local Retail Leasing Activity.** While retail leasing activity remains minimal in Harvard—with virtually none existing within new or mixed-use developments—regional leasing activity is achieving retail rents well above submarket averages. Within a 20-minute drive from the Commercial District, retail rental rates have averaged approximately \$16 per square foot among recent leases and closer to \$21 per square foot among available leases.
- **28-Property Commercial District.** Per our research, there are 28 properties currently used for commercial purposes in Harvard's Commercial District. The 24 commercial properties for which data is available comprise a total of approximately 321,457 square feet in building area.
- **Old Commercial Supply.** Except for a cluster of three office and retail buildings completed almost twenty years ago at the southern end of Ayer Road, all other commercial property in Harvard is older with apparent functional and physical obsolescence. We have noted office space availability in many of the commercial buildings along Ayer Road in Harvard. In addition to a lack of demand for office uses, this situation suggest the opportunity for major upgrades and or redevelopment.
- **Limited Retail Supply.** While Harvard does not have a verifiable inventory of local businesses, the 2016 Master Plan indicates that retail and entertainment space constitute only approximately 9% of the Commercial District's businesses. Our survey supports this assessment where we have identified the presence of only a few fast-food restaurants (2), one coffee-donut stop, and a few services (such as fitness, bank) in properties which could further benefit from more direct street front exposure.

- **Strong Demand for Retail Uses.** There is strong support for retail uses in Harvard's Commercial District. Based on our demand analysis, and with all emphasis from demand in the Primary trade area, there is enough spending potential to support the development of up to approximately 55,000 square feet of retail space. With most emphasis from demand in the Primary trade area, there is enough potential from the households residing in the Primary and Secondary trade areas to support the development of up to 150,000 square feet of space.
- **Virtually 100% Retail and Small-Business Revenue Leakage.** At almost 100%, retail and small-business revenue leakage to nearby towns is exceptionally high in Harvard with a lack of general and service retail of the quantity and quality which is typically provided in a town of Harvard's size. Such missing retail and services include a grocery store, a fuller range of food and beverage establishments, a pharmacy, a liquor store, a dry cleaner, and an emergency care clinic, among others.
- **Lack of Visitor-Oriented Businesses.** The deficiency in commercial activity geared towards visitors and additional fiscal benefits from "outside money" is notable. In addition to a general weakness in food and beverage offerings, the lack of other visitor-oriented businesses manifests in the absence of small lodging facilities, local brewery, farm-to-table venues, bicycle shop, bookstore and antique shops or local artisan stores that would further support tourism amid other conventional retail offerings.
- **Recommendations for Small-Scale Mixed-Use Village-Center Clusters.** Our recommendations would not be to maximize the development of Harvard's retail potential. We would rather recommend the incremental development of street-oriented retail as part of small-scale mixed-use commercial and residential projects in clusters designed around the sustainable and smart growth principles of a village-center arrangement.

## FITCHBURG / LEOMINSTER RETAIL SUBMARKET

Harvard's Commercial District is located in the Fitchburg/Leominster retail submarket as defined by CoStar and shown in the map below. The Fitchburg/Leominster region spans along the northeast border of Worcester County, from Harvard to Fitchburg, and is situated centrally within the state of Massachusetts. The region includes Harvard, Devens, Leominster, Lunenburg, Fitchburg, and portions of Bolton and Lancaster. It accounts for 6.9 million square feet of retail, or 14.2% of Greater Worcester's total inventory.

FITCHBURG / LEOMINSTER RETAIL SUBMARKET



The Fitchburg/Leominster submarket consists of approximately 6.9 million square feet of retail space, the majority of which (55.1%) is in the General Retail category. The retail inventory of the Fitchburg/Leominster submarket is summarized in the following table. The vacancy rate for Neighborhood Centers within the submarket is reported to be 9.6%, the highest of any category, while overall vacancy is approximately 4.7%.

TABLE 90  
**FITCHBURG / LEOMINSTER RETAIL SUBMARKET**  
RETAIL KEY INDICATORS

Current Quarter	RBA	Vacancy Rate	Asking Rent Per Sq Ft	Availability Rate	Net Absorption Sq Ft	Deliveries Sq Ft	Under Constructon Sq Ft
Malls	661,762	0.0%	\$20.68	0.0%	0	0	0
Power Center	709,810	0.0%	\$18.12	0.5%	0	0	0
Neighborhood Center	1,325,599	9.6%	\$14.37	10.6%	0	0	0
Strip Center	404,048	5.0%	\$14.52	5.0%	756	0	0
General Retail	3,804,681	4.7%	\$13.09	6.4%	17,449	0	0
Other	0	-	-	-	-	-	-
<b>Market</b>	<b>6,905,900</b>	<b>4.7%</b>	<b>\$14.66</b>	<b>5.9%</b>	<b>18,205</b>	<b>0</b>	<b>0</b>

Source: CoStar (as of 7/20/22); compiled by Weitzman Associates, LLC

While Fitchburg/Leominster is the third-largest submarket in Greater Worcester, inventory has grown sluggishly since 2010, increasing by 124,170 square feet, or by 0.2% compounded annually over a decade. Additionally, no new developments delivered during the past ten quarters. However, after shrinking further through 2023 (by 2,207 square feet), inventory is projected to resume annual growth in 2024 and grow slowly through 2026. By the end of 2026, total retail inventory in Fitchburg/Leominster is expected to reach approximately 6.92 million square feet.

The largest retail project in Fitchburg/Leominster currently under construction is 1410 Lunenburg Road in Lancaster. Owned by Boucher Snow Plowing & Removal, the 128,400-square-foot property began construction in September 2022 and is expected to deliver by December 2023.

In the Fitchburg/Leominster submarket, there has been positive absorption in most years since 2010, such that nearly 454,548 net square feet have been absorbed by year-end 2021. Notably, year-to-date net absorption is severely negative, signaling much more commercial space has vacated or supplied than has leased or absorbed. As of July 2022, year-to-date net absorption sits at approximately -201,360 square feet, with 2022 projected to close the year in the negative at -197,862 square feet. Rising rents combined with the effects of resurging COVID-19 variants have significantly impacted vacancies. Despite falling from 3.0% in 2020 to 1.8% in 2021, vacancy in Fitchburg/Leominster has nearly tripled through 2022, surging to 4.7% as of July. Through 2026, CoStar projects a net absorption loss of over 163,242 square feet with vacancy rates remaining around 4.4%—corroborating the lasting effects of rising rents and minimal inventory growth within an aging market. However, we expect that the impact of COVID-19 will lessen significantly moving forward in Fitchburg/Leominster as national efforts to vaccinate and return to a 'new normal' progress.

The average retail asking rent in the Fitchburg/Leominster submarket has grown at a compounded annual rate of 1.2% over the last decade, with rents growing from \$12.57 per square foot in 2010 to \$14.66 per square foot in 2022. Over the next five years, rent growth is expected to continue sturdily, increasing to \$15.73 per square foot by 2026, reflecting annual growth of 1.8% compounded annually. Historical and forecasted retail trends for the Fitchburg/Leominster submarket are summarized in the following table:

TABLE 91  
**FITCHBURG / LEOMINSTER RETAIL SUBMARKET**  
RETAIL TRENDS

Year	<u>Inventory</u>			Net Absorption	Vacancy Rate	<u>Market Rent</u>	
	Sq Ft	Additions	% Growth			Per Sq Ft	% Growth
2010	6,781,730	4,400	0.1%	51,724	6.0%	\$12.57	-
2011	6,854,030	72,300	1.1%	68,700	6.0%	\$12.48	-0.7%
2012	6,880,780	26,750	0.4%	19,151	6.0%	\$12.52	0.3%
2013	6,856,733	(24,047)	-0.3%	(32,990)	6.2%	\$12.60	0.6%
2014	6,862,280	5,547	0.1%	90,759	4.9%	\$12.77	1.3%
2015	6,845,338	(16,942)	-0.2%	(14,648)	4.9%	\$12.91	1.1%
2016	6,873,743	28,405	0.4%	140,509	3.3%	\$13.06	1.2%
2017	6,876,899	3,156	0.0%	37,738	2.8%	\$13.31	1.9%
2018	6,903,900	27,001	0.4%	42,472	2.5%	\$13.54	1.7%
2019	6,905,900	2,000	0.0%	29,226	2.1%	\$13.74	1.5%
2020	6,905,900	0	0.0%	(60,989)	3.0%	\$13.91	1.2%
2021	6,905,900	0	0.0%	82,896	1.8%	\$14.31	2.9%
YTD	6,905,900	0	0.0%	(201,360)	4.7%	\$14.66	2.4%
2022	6,904,915	(985)	0.0%	(197,862)	4.7%	\$14.87	3.9%
2023	6,903,693	(1,222)	0.0%	21,139	4.4%	\$15.33	3.1%
2024	6,907,949	4,256	0.1%	11,107	4.3%	\$15.59	1.7%
2025	6,913,320	5,371	0.1%	5,371	4.3%	\$15.70	0.7%
2026	6,918,304	4,984	0.1%	(2,997)	4.4%	\$15.73	0.2%

Average Annual Change

2010 - 2021	0.2%	-0.10	1.2%
2016 - 2021	0.1%	-0.11	1.8%

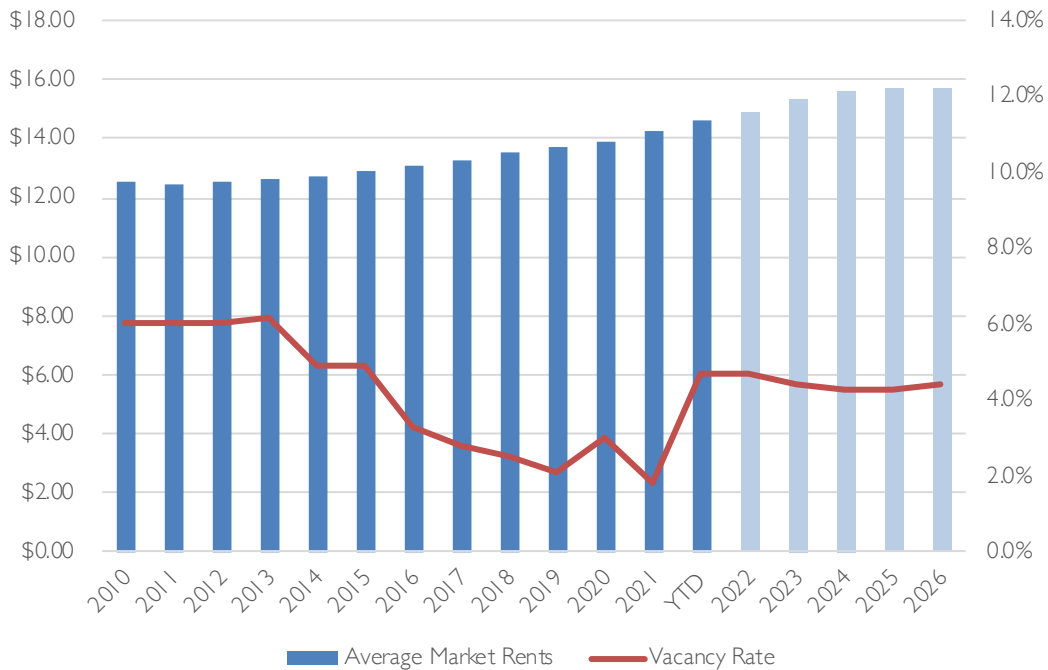
(1) Shaded values are projected; projections are as of 7/20/2022

Source: CoStar; compiled by Weitzman Associates, LLC



GRAPH 13

**FITCHBURG / LEOMINSTER RETAIL SUBMARKET**  
ASKING RENT V. VACANCY



EXISTING RETAIL SUPPLY – TOWN OF HARVARD

In order to contextualize the depth of retail supply within Harvard, we have compiled data from the Town's Assessor's Office and third party sources that reflect the existing retail and mixed-use buildings within the Commercial District.

As indicated in the previous area assessment and office market sections, commercial development in the C District consists primarily of office uses, as well as of retail and service space—with the exception of a few heavy commercial, warehousing and community uses. Per our research, there are 28 properties currently used for commercial purposes in Harvard's Commercial District. The 26 commercial properties for which data is available comprise a total of approximately 344,365 square feet in building area.

Except for a cluster of three office and retail buildings completed almost twenty years ago at the southern end of Ayer Road, all other commercial property in Harvard is older with apparent functional and physical obsolescence. Most existing buildings in the C district are older and have been built from 1817 to 2010.

Over a seven-year period starting almost twenty-years ago, the three most recently completed commercial properties in the C District (188, 198 and 200 Ayer Road) were built under a special permit (Ayer Road Village Special Permit-ARV-SP) which enabled a cluster typology with a higher density than otherwise

permitted in the rest of the C District. Comprising a total of 46,442 square feet in building area, these three two-story neo-traditional buildings include ground floor retail with professional and medical offices above, complemented by an adjacent multi-family property (the 42-unit senior Bower Brooks Apartment complex at 186 Ayer Road).

The following table summarizes our survey of size, location, age, building type and tenants for each of the existing retail and mixed-use properties currently used within the Commercial District. Of the 28 commercial properties within the subject district, nine are primarily retail properties and four are mixed-use. Excluding the mixed-use properties, these retail spaces comprise a total of 79,874 square feet in building area (among the properties for which square footage data was available). These retail properties range in size from 3,236 square feet to 26,354 square feet in building area for an average size of 9,984 square feet. With the exception of 262 Ayer Road, all properties are single-story buildings on parcels ranging in size from 1.0 to 26.1 acres, averaging 7.1 acres per parcel. Average floor area ratio for these parcels is only 0.079.

Retail and service space in Harvard is limited (with a notable lack of food and beverage establishments, pharmacy and grocery store) and not commensurate with the needs of its resident population. While Harvard does not have a verifiable inventory of local businesses, the 2016 Master Plan indicates that retail and entertainment space constitute only approximately 9% of the Commercial District's businesses. Such low numbers are confirmed by our field survey by which we have identified the presence of only a few fast-food restaurants (pizza parlor and Thai food), a donut and a coffee shop (Dunkin Donut). This low inventory is complemented by a range of services (such as fitness, pilate clubs, and bank among others) in properties which could further benefit from more direct street-front exposure.

Given the overall picturesque character of the town as a whole and its potential for agro-tourism as previously discussed, the deficiency in commercial activity geared towards visitors and in additional fiscal benefits from "outside money" is also notable. In addition to a general weakness in food and beverage offerings, the lack of other visitor-oriented businesses is manifested in the absence for instance of local artisan and antique shops, a bicycle shop, a local brewery, a bookstore, as well as a small lodging facility, among others.

TABLE 92  
SURVEY OF EXISTING RETAIL AND MIXED-USE BUILDINGS  
COMMERCIAL DISTRICT  
HARVARD, MA

Mixed-Use Properties:

	Address	Zoning	Year Built	Lot Size (Acres)	Building Area (Sq.Ft.)	# Stories	# Units	Building Type	Tenant Type	Tenants (1)
1	185 AYER RD	C	1817	2.7	4,912	2	4	Mixed Commercial	-	-
2	188 AYER RD	C	2004	1.9	8,418	2	3	General Office / Retail	Fast Food	Dunkin Donuts
3	283 AYER RD	C	N/A	N/A	N/A	1	1	General Office/Retail	Financial Services, bank	Rollstone Bank & Trust
4	325 AYER RD	C	1954	5.0	84,512	1	19	Warehousing/ Retail/ Services/ Offices	aka Appleworks Building. Fast food, fitness, wellness, services, professional office, manufacturing	Siam Pepper Thai Cuisine; Muddy Water Coffee Roasters; India Overseas Wholesalers; Smile Center; AECOM; Atech Investigation; Bodylines Pilates; Harvard Machinery; John Reedy CPA; MP Bresnan Corp.; Whole Earth Landscaping; Cannabis Oil Manufacturing; Corrections Physical Therapy; The Appleworks

Retail Properties:

	Address	Zoning	Year Built	Lot Size (Acres)	Building Area (Sq.Ft.)	# Stories	# Units	Building Type	Tenant Type	Tenants (1)
1	204 AYER RD	C	1950	1.6	20,429	1	1	Recreational	Bowling	Harvard Bowling Lanes
2	215 AYER RD	C	1999	3.1	6,414	1	1	Service	Post Office	USPS
3	256 AYER RD	C	1940	3.5	9,425	1	2	Recreation	Baseball academy	The Barn
4	262 AYER RD	C	1972	11.0	3,960	2	2	Warehousing/ Home servicing	Home equipment services	Hall Pump- Heat Pump Sales & Service
5	264 AYER RD	C	1945	2.7	3,236	1	2	Retail & Services	Landscaping & Garden Store	Three Seasons (Landscape & Garden)
6	285 AYER RD	C	1974	26.1	26,354	1	7	F&B Retail, Recreation, Services	Bank, fast food, wine store, church, fitness, billiard	Sorrentos Pizza; The Grape Vine Beer & Wine; Red Dragon Billiards; Koko Fitness; Seeds of Faith Church
7	289 AYER RD	C	1950	1.0	4,056	1	1	Retail & Services	Home equipment services	Harvard Power Tools
8	294 AYER RD	C	1967	1.7	6,000	1	1	Retail & Auto Service	Auto Repair Facility	Westford Welding & Repair
9	295 AYER RD	C	N/A	13.4	N/A	1	1	Retail & Services	Landscaping & Garden Store	Kennedy Landscaping
Min				1.0	3,236					
Avg				7.1	9,984					
Max				26.1	26,354					
Total				64.1	79,874					Total for 8 Retail Properties Reporting SQFT

Note (1) Tenant list might include some expired leases

(2) Min / Avg / Max / Total excludes the mixed-use properties

Source: Town of Harvard Assessor's Office, Field Survey; Compiled by Weitzman Associates, LLC

*Locally Available Retail Inventory (within a 20-minute drive of C-District):*

In order to contextualize the Fitchburg/Leominster and Harvard retail markets to inform what could potentially be built in the Commercial District, we have compiled a set of the currently available retail inventory within a 20-minute drive-time radius of the subject district. Except for a cluster of three office and retail buildings completed almost twenty years ago at the southern end of Ayer Road, all other commercial property in Harvard is older with apparent functional and physical obsolescence. While Harvard does not have a verifiable inventory of local businesses, the 2016 Master Plan indicates that retail and entertainment space constitute only approximately 9% of the Commercial District's businesses. Our survey supports this assessment where we have identified the presence of only a few fast-food restaurants (2), one coffee-donut stop, and a few services (such as fitness, bank) in properties which could further benefit from more direct street front exposure. We expect that any retail space built in the Commercial District should be a component of either mixed-use, primarily residential developments or small village clusters along Ayer Road. However, considering the locally limited supply, our review below includes all non-shopping center retail spaces currently available within a 20-minute drive-time radius from the Commercial District.

We have identified 16 available leases that generally fit our criteria. Notably, these leases average 9.52 miles from the subject district, ranging between 4.2 and 12.6 miles away. The total available space at each property ranges from 1,219 to 13,449 square feet, at asking rental rates between \$13.32 to \$24.00 per square foot among those confirmed and publicly available. Excluding single-tenant leases, the leasable retail spaces within these properties range from as small as 300 square feet to as large as 5,400 square feet of maximum contiguous space. Lease arrangements vary, though most are structured on a "triple net" or "modified gross" basis. Below we highlight several available leases that we consider informative for the potential of retail developments within Harvard's Commercial District.

**TABLE 93**  
**SUMMARY OF AVAILABLE RETAIL INVENTORY**  
 TOWN OF HARVARD  
 20-Minute Drive Time Radius

Property	Town	Total SF Available	# Spaces	Smallest Space (SF)	Max Contiguous (SF)	Asking Rent PSF	Service Type	% Leased	Property Distance (mi)
1) 448 Great Road	Acton	3,200	1	3,200	3,200	\$18.00	NNN	0.0%	10.9
2) 1 Lan Drive	Westford	3,424	2	1,570	1,854	\$22.00	NNN	71.5%	9.5
3) 9 Cornerstone Road	Westford	2,360	1	2,360	2,360	-	-	88.7%	10.7
4) 355 Littleton Road	Westford	10,783	3	1,350	5,400	\$32 - \$39 *	-	40.6%	8.3
5) 405 Nagog Park	Acton	6,875	4	1,090	3,000	\$19 - \$23 *	-	88.2%	10.2
6) 2-34 Andrews Parkway	Devens	1,500	1	1,500	1,500	\$22.00	NNN	93.2%	4.2
7) 436 Great Road	Acton	2,493	1	2,493	2,493	\$15.00	MG	70.3%	11
8) 452 Great Road	Acton	2,078	1	2,078	2,078	\$15.00	NNN	85.6%	10.8
9) LeMarche Mall	Acton	3,300	3	300	1,500	\$20 - \$24	FS / NNN	82.6%	10.3
10) 9 W Main Street	Groton	3,351	2	650	3,351	\$13.32	NNN	0.0%	7.4
11) 1 Castle Road	Westford	13,449	1	13,449	13,449	-	-	0.0%	10.5
12) 495 Great Road - Building B	Littleton	1,219	2	1,219	1,219	-	-	88.4%	12.6
13) 495 Great Road - Building C	Littleton	4,228	3	1,253	1,575	-	-	91.8%	12.6
14) 134 Main Street	Groton	6,468	2	3,234	3,234	\$15 - \$18 *	-	47.4%	5.6
15) Middlesex Savings Bank	Acton	5,200	2	2,210	2,990	-	-	0.0%	9.5
16) 78-82 Orchard Hill Park Drive	Leominster	3,521	1	3,521	3,521	-	-	52.0%	8.2

1) All dashes represent data withheld from market.

\* Costar estimated range

Source: CoStar; 8/3/2022, Projected Rent Roll; compiled by Weitzman Associates

Retail supply is severely limited in Harvard because current zoning and bylaws are deficient and have been attractive to unintended uses.<sup>12</sup> Along with deficient zoning, the lack of access to public water and sewer systems, and the prohibitive costs to individual developers for providing compliant individual water and septic systems for projects other than of minimal size, have been quoted by stakeholders to be the most important impediment to additional growth in the commercial district. With many potential access points, the currently debated possibility of connecting Harvard to adjacent Devens' water and sewer utilities could provide a solution to Harvard's infrastructure issues.

We note that there are no significant retail properties either proposed or under construction within a reasonable proximity to the Harvard Commercial District. As stated, we expect that most of the retail demand for future potential retail development in the Commercial District will stem from existing and future households living in Harvard and nearby neighborhoods. Thus, the greatest competition prospective retail projects could face would come from existing retail inventory; those noted above constitute over 73,400 square feet of the retail market.

<sup>12</sup> As indicated by recent development inquiries reported within the Ayer Road Commercial District for the self-storage facilities, auto repair uses, warehousing and multi-family apartment complexes in excess of 200 units with no commercial components.

*Recent Local Retail Leases (within a 20-minute drive of C-District):*

Retail leasing activity remains minimal in Harvard. Of the light activity that exists, virtually none is within new developments, or mixed-use properties. Nonetheless, we have identified 13 signed leases within a 20-minute drive-time radius from the Commercial District that generally fit our criteria. These leases average 7.12 miles from the subject district, with no leases signed over the past three years occurring within three miles of the Commercial District. They range in size from 800 to 8,390 square feet at rental rates ranging from \$5.00 to \$24.00 per square foot. As with the available leases, most lease arrangements are structured on a “triple net” or “modified gross” basis. Below we highlight several recently signed leases that we consider informative for the potential of retail developments within Harvard's Commercial District.

TABLE 94  
**SUMMARY OF RECENT RETAIL LEASES**  
TOWN OF HARVARD  
20-Minute Drive Time Radius

	Property	Town	SF Leased	Lease Sign Date	Lease Start Date	Rent PSF	Service Type	Property Distance (mi)
1	489 Main Street	Groton	3,700	8/1/22	8/1/22	\$18.00	NNN	6.8
2	222 Great Road	Littleton	3,645	2/1/22	3/1/22	\$24.00	NNN	7.5
3	671 Great Road	Littleton	1,250	8/21/21	8/21/21	\$17.28	MG	5.5
4	222 Great Road	Littleton	3,645	9/20/20	10/20/20	\$24.00	NNN	7.5
5	271 Great Road	Stow	4,200	8/20/20	9/1/20	\$23.00	NNN	7.3
6	179 W Main Street	Ayer	1,627	8/1/20	9/1/20	\$8.91	MG	3.1
7	205 Main Street	Groton	800	7/1/20	8/1/20	\$16.00	MG	5.9
8	3 Taylor Street	Littleton	2,750	3/1/20	4/1/20	\$13.00	FS	4.4
9	222 Great Road	Littleton	8,390	9/1/19	2/1/20	\$24.00	NNN	7.5
10	136 Main Street	Acton	1,200	7/1/19	8/1/19	\$5.00	MG	10.5
11	134 Main Street	Acton	1,100	6/1/19	6/1/19	\$13.04	+UTIL	10.6
12	136 Main Street	Acton	1,200	6/1/19	7/1/19	\$12.00	MG	10.5
13	676 Great Road	Littleton	2,300	4/1/19	5/1/19	\$11.74	MG	5.5

Source: CoStar Projected Rent Roll; compiled by Weitzman Associates

These signed leases vary greatly in terms of the quality of the buildings in which they reside. Arguably the most relevant signed leases are the Orchard Square (222 Great Road) and 489 Main Street leases as these reflect the types and scales of retail deemed appropriate for the Commercial District, though ideally not within a strip mall configuration. The 271 Great Road lease is also highly relevant, as it reflects the potential of a Food & Beverage tenant situated within a small inn. Overall, CoStar reports that the average retail rent in the Harvard submarket (Fitchburg/Leominster) is approximately \$14.6 per square foot.

## RETAIL TRADE AREA DEMAND ANALYSIS

We have conducted a retail trade area analysis in order to quantify sales potential and retail demand for various types of retailers that could inform new retail spaces within the Ayer Road Commercial District. As stated previously, we believe that retail built in the C-District study area should exist within clusters and may be a component of rental and/or for-sale residential projects along Ayer Road. In particular, we expect that retail should be oriented toward neighborhood services such as a grocery store, a fuller range of food and beverage establishments, a pharmacy, a liquor store, a dry cleaners, and an emergency care clinic, among others.

### *Delineation of the Trade Areas:*

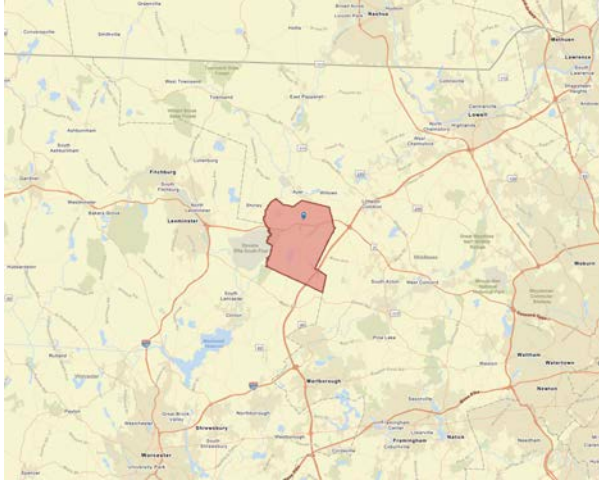
A trade area is defined as the principal geographic source of demand for a retail development. The delineation of the trade area is subjective; typically, the distance a consumer is willing to travel to access a particular type of retail is dependent on a number of factors including local traffic conditions, public transit proximity, types of retail available to the consumer, access to a downtown environment, and mix of tenants, among other important considerations.

Typically, households are likely to walk up to fifteen to twenty minutes, or travel up to five minutes driving for retail that is convenience-oriented and caters to day-to-day consumption (such as in neighborhood and strip centers), and up to ten minutes driving for goods that are purchased for reasons other than convenience, but not requiring comparison shopping. These would also include food, beverage, and entertainment establishments. Destination retail is expected to attract households from greater distances, as these consumers are willing to travel further for larger, less frequent purchases. Retail that represents this market of comparison shopping includes department stores, apparel, home furnishings, etc., such as found in power centers, regional malls, and super-regional malls.

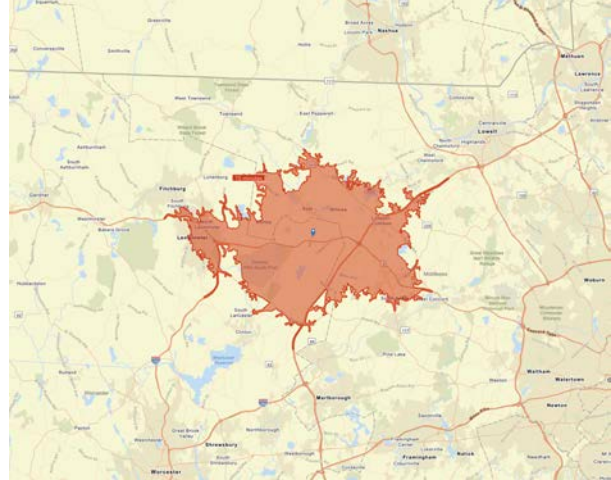
Our Primary Trade Area is the Town of Harvard. Given the sparse nature of Harvard's current retail offerings, we believe that households from throughout the Town would travel to retail built in the Commercial District for their primary shopping needs. The Secondary Trade Area is based on a 15-minute drive time radius from the center of the Commercial District, encompassing Harvard and either all or portions of Ayer, Devens, Little Commons, North Leominster, and Willows. We note that residents regularly travel to these neighborhoods in search of retail offerings given how little is available locally. Similarly, it is reasonable to assume that households living outside of Harvard would travel to its Commercial District to shop and eat. The Tertiary Trade Area is defined as a 25-minute drive from the Ayer Commercial District, fully encompassing the Secondary Market and extending further toward East Pepperell, Marlborough, West Chelmsford, West Concord, and Westminster. Maps of each trade area are displayed below.



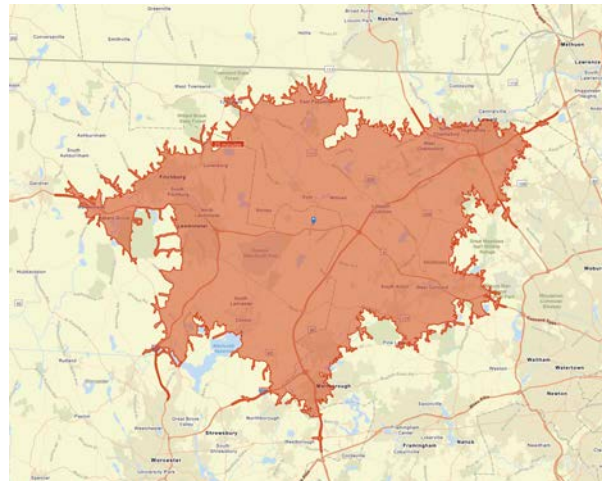
PRIMARY MARKET  
TOWN OF HARVARD



SECONDARY MARKET  
15-MINUTE DRIVE TIME REGION



TERTIARY MARKET  
25-MINUTE DRIVE TIME REGION



The following table summarize population, household, and income estimates as of 2022, and projected for 2027, for each of the trade areas delineated around the C-District Study Area, as provided by ESRI Business Analyst.

TABLE 95  
DEMOGRAPHICS OF SELECTED TRADE AREAS

<b>2022 Estimate</b>	Primary	Secondary	Tertiary
Population	6,972	85,099	437,519
Households	2,142	31,651	164,953
Avg. HH Income	\$251,589	\$160,832	\$146,176
Median HH Income	\$167,509	\$111,207	\$104,657
<b>2027 Forecast</b>	Primary	Secondary	Tertiary
Population	7,082	84,895	438,060
Households	2,182	31,572	165,173
Avg. HH Income	\$285,814	\$184,580	\$168,533
Median HH Income	\$186,183	\$131,394	\$120,146

Source: ESRI Business Analyst; compiled by Weitzman Associates, LLC

## TRADE AREA DEMAND ANALYSIS

The objective of the demand analysis is to measure the strength and depth of the market for potential retail development within the Ayer Road Commercial District. After defining the appropriate trade areas for the site, the methodology involves: (1) quantifying the retail sales potential in the trade areas; and (2) estimating the district's share of total retail sales potential within each trade area, based on estimated average retail sales per square foot for the selected retail groups in each trade area. The results of this analysis provide a barometer to measure the market share of a given retail use in a trade area.

In projecting the retail sales potential in a trade area, we reviewed retail demand from households within the trade area. In our analysis, we primarily suggest activating the Commercial District with community- and neighborhood-oriented retail uses and services. However, we must also note a deficiency in commercial activity geared towards visitors and additional fiscal benefits from "outside money." In addition to a general weakness in food and beverage offerings, the lack of other visitor-oriented businesses manifests in the absence of small lodging facilities, local brewery, farm-to-table venues, bicycle shop, bookstore and antique shops or local artisan stores that would further support tourism amid other conventional retail offerings.

### *Retail Sales Potential:*

In projecting the retail sales potential from households in a trade area, we estimated the following:

- **Projected Total Personal Income** – This is accomplished by multiplying average household income times the number of households in the trade area.
- **Disposability Factor** – The disposability factor is the proportion of annual income expended in one year. As shown in the table below, the disposability factor (based on after-tax income) is calculated

by dividing the total average household budget expenditures by the average annual household income in each of the trade areas.

TABLE 96  
**DISPOSABILITY FACTOR**

<b>2022 Estimate</b>	Primary	Secondary	Tertiary
Total Avg. HH Budget Expenditures	\$203,928	\$134,452	\$122,760
Avg. HH Income	\$251,589	\$160,832	\$146,176
Disposability Factor	81.1%	83.6%	84.0%

*Source: ESRI Business Analyst; compiled by Weitzman Associates, LLC*

- **Percent of DPI Channeled into Traditional Retail Sales** – To calculate the percent of disposable personal income (DPI) channeled into traditional retail sales, we have analyzed total consumer expenditures that are a part of traditional retail sales as estimated for the delineated trade areas in 2021. These expenditures exclude doctor visits and health care expenses, car sales, and other non-traditional retail sales.

In an effort to examine the retail categories that dominate traditional retail expenditures within each trade area, we categorized these specific types of expenditures that fall within three main categories: a) Food, Beverage and Entertainment; b) Personal Care and Services; and c) General Merchandise. The percent of disposable personal income channeled into traditional retail sales (calculated by dividing the average traditional retail expenditure by the average disposable income) was estimated to be between 16.2% and 16.8% for households within the respective trade areas.

Of the estimated total (\$33,128) spent on average in 2022 per household on traditional retail products and services in the Primary Retail Trade Area, approximately 84.2% was spent on Food, Beverage and Entertainment, 7.6% on Personal Care & Services, and 8.2% on General Merchandise. A similar distribution carries through the Secondary and Tertiary Trade Areas. The following table summarizes these consumer expenditures that are a part of traditional retail sales for each of the trade areas, as estimated for 2022:

TABLE 97  
RETAIL SPENDING TRENDS  
SUMMARY OF CONSUMER EXPENDITURES - 2022

	Primary Town of Harvard			Secondary 15 Minute Drive Time			Tertiary 25 Minute Drive Time		
Population	6,972			85,099			437,519		
Households	2,142			31,651			164,953		
Avg. HH Income	\$251,589			\$160,832			\$146,176		
Median HH Income	\$167,509			\$111,207			\$104,657		
Total Avg. HH Budget Expenditures	\$203,928			\$134,452			\$122,760		
Total HH Budget Expenditures in Area	\$436,813,053			\$4,255,546,715			\$20,249,688,974		
Traditional Retail Expenditure Category	S P I	Avg. \$ Exp.	% HH Tot.	S P I	Avg. \$ Exp.	% HH Tot.	S P I	Avg. \$ Exp.	% HH Tot.
<b>Food, Beverage &amp; Entertainment</b>									
Food at Home	211	\$13,043	6.4%	146	\$9,017	6.7%	134	\$8,309	6.8%
Food Away from Home	215	\$9,278	4.5%	148	\$6,371	4.7%	135	\$5,838	4.8%
Alcoholic Beverages	244	\$1,736	0.9%	156	\$1,108	0.8%	142	\$1,011	0.8%
Entertainment & Recreation	259	\$3,835	1.9%	167	\$2,387	1.8%	159	\$2,156	1.8%
<b>Personal Care &amp; Services</b>									
Nonprescription Drugs	190	\$334	0.2%	135	\$237	0.2%	123	\$217	0.2%
Prescription Drugs	195	\$741	0.4%	134	\$508	0.4%	122	\$463	0.4%
Eyeglasses & Contact Lenses	225	\$247	0.1%	147	\$162	0.1%	134	\$147	0.1%
Personal Care Products	210	\$1,188	0.6%	145	\$820	0.6%	133	\$752	0.6%
<b>General Merchandise</b>									
Pets	215	\$1,777	0.9%	142	\$1,175	0.9%	129	\$1,070	0.9%
School Books & Supplies	214	\$317	0.2%	146	\$216	0.2%	133	\$197	0.2%
Smoking Products	145	\$632	0.3%	125	\$544	0.4%	118	\$514	0.4%
<b>TOTAL TRADITIONAL RETAIL EXPENDITURES</b>	<b>218</b>	<b>\$33,128</b>	<b>16.2%</b>	<b>148</b>	<b>\$22,544</b>	<b>16.8%</b>	<b>136</b>	<b>\$20,673</b>	<b>16.8%</b>
Food, Beverage & Entertainment	221	\$27,892	84.2%	150	\$18,883	83.8%	138	\$17,313	83.7%
Personal Care & Services	204	\$2,510	7.6%	141	\$1,726	7.7%	128	\$1,579	7.6%
General Merchandise	199	\$2,726	8.2%	138	\$1,935	8.6%	126	\$1,780	8.6%

1) The Spending Potential Index (SPI) is household-based, and represents the amount spent for a product or service relative to a national average of 100

2) 2022 Esri forecasts for Consumer Spending data are derived from the 2018 and 2019 Consumer Expenditure Surveys, Bureau of Labor Statistics

Source: ESRI Business Analyst; Bureau of Labor Statistics; compiled by Weitzman Associates, LLC

Projected Total Retail Sales Potential of Trade Areas- This is calculated by applying the percent of disposable personal income channeled into traditional sales to the total disposable personal income for the respective trade areas. The estimated retail sales potential channeled into the selected store groups, as derived from households residing within the trade areas as of 2022, are outlined in the following table:

TABLE 98  
**RETAIL SALES POTENTIAL**  
DEMAND ANALYSIS & MARKET SHARES BY MARKET AREA - 2022

Residential Base	Primary	Secondary	Tertiary
Population 2022 est.	6,972	85,099	437,519
Households 2022 est.	2,142	31,651	164,953
Average Household Income 2022 est.	\$251,589	\$160,832	\$146,176
Total Personal Income (TPI)	\$538,903,638	\$5,090,493,632	\$24,112,169,728
Diposability Factor	81.1%	83.6%	84.0%
Total Disposable Personal Income (DPI)	\$436,813,053	\$4,255,546,715	\$20,249,688,974
Percent of DPI Channeled into Traditional Retail Sales	16.2%	16.8%	16.8%
<b>Total Retail Sales Potential (RSP)</b>	<b>\$70,960,262</b>	<b>\$713,531,915</b>	<b>\$3,410,073,369</b>

Source: ESRI Business Analyst; compiled by Weitzman Associates, LLC

*C-District Study Area Capture Rates:*

A capture rate analysis indicates what portion of the retail sales potential must be captured by any proposed retail development in order to achieve sales at a level that is likely to be viable for a prospective retail tenant to be successful. Based upon the depth of consumer demand for the goods and services (or projected retail sales potential mentioned previously), we have estimated the percentage of this demand that potential retail tenants within the Harvard Commercial District would need to capture in order to achieve average sales of between \$250 and \$400 per square foot as of 2022. The target average sales of between \$250 and \$400 per square foot are based upon our research in the market, our review of typical sales, and of sales in the range of retail stores comparable to what could be built within Harvard's Commercial District.

Assuming that there is no oversupply of existing retail stores in a trade area, it is our experience and general industry practice that retail developments across the United States must capture approximately seven percent or less of total trade area demand (i.e. potentially available retail sales) in order for their tenants to achieve easy market entry, and thus be expected to be reasonably financially safe and successful from a market penetration standpoint.

The table on the following page illustrates our demand analysis for retail ranging in size from 15,000 square feet to 150,000 square feet at the targeted average retail sales per square foot in the Primary, Secondary, and Tertiary trade areas as of 2022. As shown in the demand analysis, the Harvard Commercial District could support up to 150,000 square feet of retail space (at \$325 sales per square foot) if relying solely on the purchasing power of households living within the Primary and Secondary Trade Areas based on capture rates that fall below the 7% threshold. Retailers that require sales per square foot higher than \$400 would need support from the Tertiary trade area. Capture rates based on demand from the Tertiary trade area reaches a maximum of 1.8% based on our parameters, suggesting that there could be potential for destination retail as well. We also emphasize that there is no consideration in this analysis of the workforce in Harvard, seasonal visitors, or future households who would add additional spending potential to the market.

TABLE 99

**RETAIL SALES POTENTIAL**

DEMAND ANALYSIS &amp; MARKET SHARES BY MARKET AREA - 2022

	Primary	Secondary	Tertiary
<b>Total Retail Sales Potential (RSP)</b>	<b>\$70,960,262</b>	<b>\$713,531,915</b>	<b>\$3,410,073,369</b>
<u>Subject Region Market Share:</u>			
150,000 square feet @ \$250 per sq. ft.	\$37,500,000	in aggregate annual retail sales	
55,000 square feet @ \$250 per sq. ft.	\$13,750,000	in aggregate annual retail sales	
45,000 square feet @ \$250 per sq. ft.	\$11,250,000	in aggregate annual retail sales	
35,000 square feet @ \$250 per sq. ft.	\$8,750,000	in aggregate annual retail sales	
25,000 square feet @ \$250 per sq. ft.	\$6,250,000	in aggregate annual retail sales	
15,000 square feet @ \$250 per sq. ft.	\$3,750,000	in aggregate annual retail sales	
	Primary	Secondary	Tertiary
Market Share Percentage at 150,000 square feet	52.8%	5.3%	1.1%
Market Share Percentage at 55,000 square feet	19.4%	1.9%	0.4%
Market Share Percentage at 45,000 square feet	15.9%	1.6%	0.3%
Market Share Percentage at 35,000 square feet	12.3%	1.2%	0.3%
Market Share Percentage at 25,000 square feet	8.8%	0.9%	0.2%
Market Share Percentage at 15,000 square feet	5.3%	0.5%	0.1%
150,000 square feet @ \$325 per sq. ft.	\$48,750,000	in aggregate annual retail sales	
55,000 square feet @ \$325 per sq. ft.	\$17,875,000	in aggregate annual retail sales	
45,000 square feet @ \$325 per sq. ft.	\$14,625,000	in aggregate annual retail sales	
35,000 square feet @ \$325 per sq. ft.	\$11,375,000	in aggregate annual retail sales	
25,000 square feet @ \$325 per sq. ft.	\$8,125,000	in aggregate annual retail sales	
15,000 square feet @ \$325 per sq. ft.	\$4,875,000	in aggregate annual retail sales	
	Primary	Secondary	Tertiary
Market Share Percentage at 150,000 square feet	68.7%	6.8%	1.4%
Market Share Percentage at 55,000 square feet	25.2%	2.5%	0.5%
Market Share Percentage at 45,000 square feet	20.6%	2.0%	0.4%
Market Share Percentage at 35,000 square feet	16.0%	1.6%	0.3%
Market Share Percentage at 25,000 square feet	11.5%	1.1%	0.2%
Market Share Percentage at 15,000 square feet	6.9%	0.7%	0.1%
150,000 square feet @ \$400 per sq. ft.	\$60,000,000	in aggregate annual retail sales	
55,000 square feet @ \$400 per sq. ft.	\$22,000,000	in aggregate annual retail sales	
45,000 square feet @ \$400 per sq. ft.	\$18,000,000	in aggregate annual retail sales	
35,000 square feet @ \$400 per sq. ft.	\$14,000,000	in aggregate annual retail sales	
25,000 square feet @ \$400 per sq. ft.	\$10,000,000	in aggregate annual retail sales	
15,000 square feet @ \$400 per sq. ft.	\$6,000,000	in aggregate annual retail sales	
	Primary	Secondary	Tertiary
Market Share Percentage at 150,000 square feet	84.6%	8.4%	1.8%
Market Share Percentage at 55,000 square feet	31.0%	3.1%	0.6%
Market Share Percentage at 45,000 square feet	25.4%	2.5%	0.5%
Market Share Percentage at 35,000 square feet	19.7%	2.0%	0.4%
Market Share Percentage at 25,000 square feet	14.1%	1.4%	0.3%
Market Share Percentage at 15,000 square feet	8.5%	0.8%	0.2%

1) Notes: 'Disposable Personal Income = Total Personal Income x Disposability Factor

Source: ESRI Business Analyst; compiled by Weitzman Associates, LLC



As stated, the capture rate analysis conducted above is based on current demographic trends in the retail Trade Areas and household spending patterns. However, demographics change over time, as we expect will happen once the Commercial District is activated and additional residential units are introduced to the region. As such, we extend our analysis to 2027 based on growth projections from ESRI Business Analyst. Any positive changes to local household demographics would add a great deal of spending potential to the local retail market. By 2027, we expect the total number of local households in the Primary Trade Area will grow to 2,182, and their average household income will increase by approximately \$34,000 to \$285,814. Similar trends would take place in the Secondary and Tertiary Trade Areas.

Growth projections coupled with new residential construction in the Commercial District should bolster the retail sales potential in the Trade Areas substantially. By 2027, we project that the total sales potential for select retail groups will grow to over \$82.1 million, \$816.8 million, and \$3.94 billion in the Primary, Secondary, and Tertiary Trade Areas, respectively. The resultant capture rates, based on the same parameters set forth above, safely suggest that up to 150,000 square feet of new retail space could be supported within the Commercial District if relying on the Primary and Secondary Trade Areas. If including household spending from the Tertiary Trade Area, we believe more square feet could be easily supported. Nonetheless, our analysis extending to 150,000 square feet is purely illustrative: not meant as a literal recommendation of how much to build, but rather as a measure to the considerable depth of retail demand the region can support. Given our smaller recommendations for retail organized in “village clusters,” this depth of demand evidences that the Town of Harvard can be quite selective when selecting their preferred retail tenants for the Commercial District. The following tables outline the findings of the retail demand analysis based on ESRI growth projections:

TABLE 100  
**RETAIL SALES POTENTIAL**  
DEMAND ANALYSIS & MARKET SHARES BY MARKET AREA - 2027

Residential Base	Primary	Secondary	Tertiary
Population 2027 est.	7,082	84,895	438,060
Households 2027 est.	2,182	31,572	165,173
Average Household Income 2027 est.	\$285,814	\$184,580	\$168,533
Total Personal Income (TPI)	\$623,646,148	\$5,827,559,760	\$27,837,101,209
Diposability Factor	81.1%	83.6%	84.0%
Total Disposable Personal Income (DPI)	\$505,501,835	\$4,871,718,656	\$23,377,931,052
Percent of DPI Channeled into Traditional Retail Sales	16.2%	16.8%	16.8%
<b>Total Retail Sales Potential (RSP)</b>	<b>\$82,118,751</b>	<b>\$816,846,101</b>	<b>\$3,936,873,312</b>

Source: ESRI Business Analyst; compiled by Weitzman Associates, LLC

TABLE 101

**RETAIL SALES POTENTIAL**

DEMAND ANALYSIS &amp; MARKET SHARES BY MARKET AREA - 2027

	Primary	Secondary	Tertiary
<b>Total Retail Sales Potential (RSP)</b>	<b>\$82,118,751</b>	<b>\$816,846,101</b>	<b>\$3,936,873,312</b>
<u>Subject Region Market Share:</u>			
150,000 square feet @ \$250 per sq. ft.	\$37,500,000	in aggregate annual retail sales	
---	---		
55,000 square feet @ \$250 per sq. ft.	\$13,750,000	in aggregate annual retail sales	
45,000 square feet @ \$250 per sq. ft.	\$11,250,000	in aggregate annual retail sales	
35,000 square feet @ \$250 per sq. ft.	\$8,750,000	in aggregate annual retail sales	
25,000 square feet @ \$250 per sq. ft.	\$6,250,000	in aggregate annual retail sales	
15,000 square feet @ \$250 per sq. ft.	\$3,750,000	in aggregate annual retail sales	
	Primary	Secondary	Tertiary
Market Share Percentage at 150,000 square feet	45.7%	4.6%	1.0%
Market Share Percentage at 55,000 square feet	16.7%	1.7%	0.3%
Market Share Percentage at 45,000 square feet	13.7%	1.4%	0.3%
Market Share Percentage at 35,000 square feet	10.7%	1.1%	0.2%
Market Share Percentage at 25,000 square feet	7.6%	0.8%	0.2%
Market Share Percentage at 15,000 square feet	4.6%	0.5%	0.1%
150,000 square feet @ \$325 per sq. ft.	\$48,750,000	in aggregate annual retail sales	
---	---		
55,000 square feet @ \$325 per sq. ft.	\$17,875,000	in aggregate annual retail sales	
45,000 square feet @ \$325 per sq. ft.	\$14,625,000	in aggregate annual retail sales	
35,000 square feet @ \$325 per sq. ft.	\$11,375,000	in aggregate annual retail sales	
25,000 square feet @ \$325 per sq. ft.	\$8,125,000	in aggregate annual retail sales	
15,000 square feet @ \$325 per sq. ft.	\$4,875,000	in aggregate annual retail sales	
	Primary	Secondary	Tertiary
Market Share Percentage at 150,000 square feet	59.4%	6.0%	1.2%
Market Share Percentage at 55,000 square feet	21.8%	2.2%	0.5%
Market Share Percentage at 45,000 square feet	17.8%	1.8%	0.4%
Market Share Percentage at 35,000 square feet	13.9%	1.4%	0.3%
Market Share Percentage at 25,000 square feet	9.9%	1.0%	0.2%
Market Share Percentage at 15,000 square feet	5.9%	0.6%	0.1%
150,000 square feet @ \$400 per sq. ft.	\$60,000,000	in aggregate annual retail sales	
---	---		
55,000 square feet @ \$400 per sq. ft.	\$22,000,000	in aggregate annual retail sales	
45,000 square feet @ \$400 per sq. ft.	\$18,000,000	in aggregate annual retail sales	
35,000 square feet @ \$400 per sq. ft.	\$14,000,000	in aggregate annual retail sales	
25,000 square feet @ \$400 per sq. ft.	\$10,000,000	in aggregate annual retail sales	
15,000 square feet @ \$400 per sq. ft.	\$6,000,000	in aggregate annual retail sales	
	Primary	Secondary	Tertiary
Market Share Percentage at 150,000 square feet	73.1%	7.3%	1.5%
Market Share Percentage at 55,000 square feet	26.8%	2.7%	0.6%
Market Share Percentage at 45,000 square feet	21.9%	2.2%	0.5%
Market Share Percentage at 35,000 square feet	17.0%	1.7%	0.4%
Market Share Percentage at 25,000 square feet	12.2%	1.2%	0.3%
Market Share Percentage at 15,000 square feet	7.3%	0.7%	0.2%

1) Notes: \*Disposable Personal Income = Total Personal Income x Disposability Factor

Source: ESRI Business Analyst; compiled by Weitzman Associates, LLC

## RETAIL MARKET CONCLUSION

Retail and service space in Harvard is limited and not commensurate with the needs of its resident population. While Harvard does not have a verifiable inventory of local businesses, the 2016 Master Plan indicates that retail and entertainment space constitute only approximately 9% of the Commercial District's businesses. Such low numbers are confirmed by our field survey by which we have identified the presence of only a few fast-food restaurants (pizza parlor and Thai food), a donut and a coffee shop (Dunkin Donut). This low inventory is complemented by a range of services (such as fitness, pilate clubs, and banks among others) in properties which could further benefit from more direct street-front exposure. Of the 28 commercial properties within the subject district, nine are primarily retail properties and four are mixed-use. Excluding the mixed-use properties, these retail spaces comprise a total of 79,874 square feet in building area (among the properties for which square footage data was available), or 1.2% of the submarket's total retail inventory.

While the overall retail market has been negatively impacted by the continued rise of e-commerce and the COVID-19 pandemic, we expect that any new street retail space built within the Commercial District would be community- and/or neighborhood-oriented, catering to the needs of current and future Harvard residents. Tenants such as pharmacies, clinics, and grocery stores can be described as "necessity retail," as there are no easy replacements for them, and they require a brick-and-mortar presence in any circumstance.

Despite overall vacancy increasing by 2.8%—to an average vacancy rate of 4.7% as of July 2022—retail rents in the Fitchburg/Leominster submarket have surged 4.0% over the past year, currently averaging \$14.66 per square foot. Based on current market metrics, we expect that retail built in the context of mixed-use, village clusters along Ayer Road in the Commercial district could likely achieve rental rates between \$14 to \$18 per square foot on a triple net or modified gross basis, depending on the type of retailer, the size of the space leased, and the tenant improvement package offered.

We conducted a retail trade area demand analysis for households residing within the aforementioned Primary, Secondary, and Tertiary trade areas. As stated on the preceding pages, we believe that the Harvard Commercial District could accommodate up to 55,000 square feet of retail space based on sales per square foot of \$250 to \$400, as supported by low capture rates below 7%. Based on our experience, the results of this analysis demonstrate that potential retailers who may lease will likely experience easy market entry.

At virtually 100%, retail and small-business revenue leakage to nearby towns is exceptionally high in Harvard. The town notably lacks general and service retail of the quantity and quality typical of a municipality Harvard's size. Such missing retail and services include a grocery store, a fuller range of food and beverage establishments, a pharmacy, a liquor store, a dry cleaner, and an emergency care clinic, among others. In addition to a general weakness in food and beverage offerings, the lack of other visitor-oriented businesses manifests in the absence of small lodging facilities, local brewery, farm-to-table venues, bicycle shop, bookstore and antique shops or local artisan stores that would further support tourism amid other conventional retail offerings.

Our recommendations would not be to maximize the development of Harvard's retail potential. We would rather recommend the incremental development of street-oriented retail as part of small-scale, mixed-use

commercial and residential projects in clusters designed around the sustainable and smart growth principles of a village-center arrangement. With respect to the tenant profile that Harvard's Commercial District could likely attract, we recommend the following:

- Basic neighborhood retail of highest need, such as a pharmacy, emergency clinic, and grocery store
- Food and beverage (F&B) establishments, preferably white cloth
- Personal care and general merchandise retail
- Within a small inn, may also incorporate farm-to-table F&B

## HOTEL MARKET ANALYSIS

## HOTEL MARKET ANALYSIS

Weitzman Associates has researched the Greater Boston hotel market, and its Woburn/Tewksbury Northwest submarket, to better understand the depth of demand for a small inn within Harvard's C-District. The Town of Harvard sits in the northwest corner of Greater Boston's hotel market, in the Woburn/Tewksbury Northwest submarket along its southwest edge.

Based on our research of the hotel market, our findings are summarized as follows:

- **Strong National Hotel Market Recovery.** Prior to the COVID-19 pandemic, the national hotel market had been performing relatively well. While the pandemic, particularly in its early stage, had a devastating impact on hotel markets across the nation, markets are, to varying degrees, nearing full recovery. Recent national hotel market forecasts published by Costar—based on STR data—reflect ADR and RevPAR have both surpassed 2019 levels as of August 2022, higher than 2019 averages by 12.5% and 7.1%, respectively.
- **Steady Regional Hotel Submarket Recovery.** In the Woburn/Tewksbury Northwest hotel submarket, RevPAR has steadily grown each month since January 2022 compared to the corresponding pandemic months in 2020 and 2021, supported primarily by similar growth in average daily rate (ADR). Per Costar's forecast, the Woburn/Tewksbury Northwest submarket's RevPAR is projected to recover to 99.5% of the pre-pandemic 2019 level on an annual basis for this year in 2022, increasing to approximately 102.3% next year in 2023.
- **Limited Independent Hotel Segment.** Based on STR data from CoStar, the independent class hotel segment within the Woburn/Tewksbury Northwest submarket is comprised of 16 hotels with a total of 1,257 rooms, accounting for 18.0% of the submarket's total hotel inventory. Of these hotels, 50.0% are lower-end properties (economy or midscale) and 68.8% are properties built or renovated before 2000. However, the three most recently opened and/or renovated projects are all upper upscale hotels; these include the Chateau Merrimack Resort and Spa (renovated in 2022), Archer Hotel Burlington (opened in 2018), and The Groton Inn (opened in 2018). While these recent hotels share 237 rooms between them, we believe there is ample, still unmet demand that a potential 20-key inn within the Commercial District could easily serve.
- **Lack of Visitor-Oriented Businesses.** The deficiency in commercial activity geared towards visitors and additional fiscal benefits from “outside money” is notable. In addition to a general weakness in food and beverage offerings, the lack of other visitor-oriented businesses manifests in the absence of small lodging facilities, local brewery, farm-to-table venues, bicycle shop, bookstore and antique shops or local artisan stores that would further support tourism amid other conventional retail offerings.
- **Stalled Hotel Development Pipeline.** Of the nine hotel properties under construction within the Boston metro, none are within Harvard's submarket (Woburn/Tewksbury Northwest), with no future projects planned in the pipeline. Therefore, new construction in the submarket—particularly within the Commercial District—would face little comparable competition.

## NATIONAL HOTEL MARKET OVERVIEW

According to data from STR provided by CoStar, following a fairly significant decline in 2008-2009 during the Great Recession, the national lodging industry continued to improve over the years thereafter from 2010 to 2019. The national hotel occupancy rate recovered with continued occupancy growth from 61.4% in 2012 to a high of 66.1% reached in 2018, followed by a similar occupancy rate at 65.9% in 2019. There was continued ADR (average daily rate) growth over the years from 2012 to 2019, although the rate of growth slowed in later years and notably decelerated in 2019. Primarily driven by growth in ADR, annual RevPAR (revenue per available room, calculated as occupancy x ADR) increased by 3.1% in 2016, 2.3% in 2017, 2.5% in 2018, and 1.1% in 2019. In 2019, the national lodging market posted an average occupancy of 65.9%, ADR of \$131.09, and RevPAR of \$86.42. Over the seven years from 2007 to 2019, occupancy, ADR, and RevPAR had grown at average annual compounded rates of 1.0%, 3.1%, and 4.2%, respectively.

Prior to the negative impact from the COVID-19 pandemic, the year 2020 started relatively strong with continued year-over-year growth in January and February. However, with the rising pandemic in the U.S. and consequent decline in travel, RevPAR significantly declined soon thereafter. Significant declines in both occupancy and ADR contributed to the negative impact on RevPAR. Overall, in 2020, the national hotel occupancy rate averaged 43.9%, ADR averaged \$103.48, and RevPAR averaged \$45.47, reflecting declines of -33.4%, -21.1%, and -47.4%, respectively, compared to 2019.

In 2021, the average occupancy of the national hotel market rose extensively to 57.5%, contributing to a significant boost in RevPAR, rising to \$71.90. However, compared to pre-pandemic market conditions two years earlier in 2019, occupancy remained down by -8.4%, with ADR and RevPAR also still down by \$6.14 and \$14.52, respectively. By August 2022, average occupancy rose further to 62.7%, or by 12.1% year-over-year. While occupancy remains below pre-pandemic averages, ADR and RevPAR both surpassed 2019 levels. Respectively rising by 25.4% and 40.5% from 2020 averages, year-to-date ADR is \$147.46 (\$16.37 above 2019) and year-to-date RevPAR is \$92.53 (\$6.11 above 2019).

Projections through 2026 show averages in occupancy, ADR, and RevPAR surpassing pre-pandemic levels, suggesting strong and full market recovery in the coming years. Over the next five years, average occupancy is expected to range between 63.3% and 68.3%, closing 2026 at 68.0%. Likewise, ADR is expected to range from \$151.11 in 2022 to \$173.75 by 2026, averaging 24.4% higher compared to 2019 levels. RevPAR projections follow similarly. Ranging from \$95.67 in 2022 to \$118.17 by 2026, RevPAR over the next five years is expected to average 26.4% higher compared to 2019 levels.



TABLE 102  
NATIONAL HOTEL MARKET PERFORMANCE  
ALL SEGMENTS

Year	Supply (in Thousands)				Demand (in Thousands)			Occupancy		ADR		RevPAR	
	Daily Rooms	Total Rooms	Change	% Chg	Occupied Rooms	Change	% Chg	Percent	% Chg	Per Room	% Chg	Per Room	% Chg
2012	4,963,131	1,811,542,986	5,807,702	0.3%	1,111,770,986	29,661,280	2.7%	61.4%	2.4%	\$105.58	4.2%	\$64.80	6.7%
2013	4,987,112	1,820,296,054	8,753,068	0.5%	1,132,131,139	20,360,153	1.8%	62.2%	1.3%	\$109.59	3.8%	\$68.16	5.2%
2014	5,014,962	1,830,461,270	10,165,216	0.6%	1,176,913,478	44,782,339	4.0%	64.3%	3.4%	\$114.75	4.7%	\$73.78	8.2%
2015	5,058,075	1,846,197,440	15,736,170	0.9%	1,205,170,699	28,257,221	2.4%	65.3%	1.6%	\$119.99	4.6%	\$78.33	6.2%
2016	5,124,053	1,870,279,423	24,081,983	1.3%	1,222,392,448	17,221,749	1.4%	65.4%	0.2%	\$123.67	3.1%	\$80.83	3.2%
2017	5,204,814	1,899,757,139	29,477,716	1.6%	1,249,858,547	27,466,099	2.2%	65.8%	0.6%	\$126.47	2.3%	\$83.21	2.9%
2018	5,299,443	1,934,296,602	34,539,463	1.8%	1,277,884,627	28,026,080	2.2%	66.1%	0.5%	\$129.65	2.5%	\$85.66	2.9%
2019	5,395,423	1,969,329,342	35,032,740	1.8%	1,298,223,155	20,338,528	1.6%	65.9%	-0.3%	\$131.09	1.1%	\$86.42	0.9%
2020	5,182,342	1,891,554,896	(77,774,446)	-3.9%	831,093,418	(467,129,737)	-36.0%	43.9%	-33.4%	\$103.48	-21.1%	\$45.47	-47.4%
2021	5,440,467	1,985,770,310	94,215,414	5.0%	1,142,716,421	311,623,003	37.5%	57.5%	31.0%	\$124.95	20.7%	\$71.90	58.1%
YTD	3,861,113	1,173,778,212	31,829,682	2.8%	736,506,163	97,190,254	15.2%	62.7%	12.1%	\$147.46	25.4%	\$92.53	40.5%
2022	5,652,919	2,063,315,594	77,545,284	3.9%	1,306,341,227	163,624,806	14.3%	63.3%	10.1%	\$151.11	20.9%	\$95.67	33.1%
2023	5,869,945	2,142,529,877	79,214,283	3.8%	1,430,928,341	124,587,114	9.5%	66.8%	5.5%	\$157.92	4.5%	\$105.47	10.2%
2024	5,902,412	2,154,380,453	11,850,576	0.6%	1,468,213,372	37,285,031	2.6%	68.2%	2.1%	\$163.52	3.5%	\$111.44	5.7%
2025	5,908,707	2,156,678,224	2,297,771	0.1%	1,473,487,750	5,274,378	0.4%	68.3%	0.1%	\$168.80	3.2%	\$115.33	3.5%
2026	5,909,754	2,157,060,297	382,073	0.0%	1,467,080,018	(6,407,732)	-0.4%	68.0%	-0.4%	\$173.75	2.9%	\$118.17	2.5%

1) Shaded values are projected as of August 2022

Source: CoStar, based on STR Data; compiled by Weitzman Associates, LLC

Also tracking the national hotel market by class, Costar identifies 21.3% of the nation's total hotel inventory (5.6 million rooms) is classified as luxury and upper upscale, 42.9% is classified as upscale and upper midscale, and 35.8% is classified as midscale and economy. Over the past 12 months through August 2022, average occupancy rates by class category ranged from 58.9% for midscale and economy class hotels to 64.5% for upscale and upper midscale class hotels, with an overall weighted average of 61.5%. The corresponding RevPARs ranged from \$52.91 for midscale and economy class hotels to \$145.37 for luxury and upper upscale class hotels, with an overall weighted average of \$87.32. Over the past 12 months, the upscale and upper midscale class category has had the most room deliveries over the past 12 months (47,315 rooms), and the most rooms currently under construction (87,027 rooms).

TABLE 103  
**NATIONAL HOTEL MARKET OVERVIEW**  
BY CLASS

Class	Rooms	Room Mix %	12 Months (through August 2022)					% of Market
			Occ.	ADR	RevPAR	Room Deliveries	Rooms U/C	
Luxury & Upper Upscale	1,197,701	21.3%	59.6%	\$243.88	\$145.37	18,674	35,779	3.0%
Upscale & Upper Midscale	2,412,637	42.9%	64.5%	\$136.19	\$87.90	47,315	87,027	3.6%
Midscale & Economy	2,016,666	35.8%	58.9%	\$89.84	\$52.91	10,254	26,398	1.3%
Total	5,627,004	100%	61.5%	\$142.09	\$87.32	76,243	155,209 *	2.8%

\* Includes 6,005 rooms under construction that are not affiliated with any class

Source: CoStar (August 2022); compiled by Weitzman Associates, LLC

### GREATER BOSTON HOTEL MARKET OVERVIEW

We reviewed historical and projected hotel statistics for the Greater Boston market, as derived from CoStar (which owns STR). Between 2012 and 2019, in the years prior to the COVID-19 pandemic, the average occupancy percentage of the Greater Boston hotel market ranged from the low- to mid-70s. Over this period, hotel supply increased by 15.5%. With a relatively modest impact on occupancy, most of this supply growth was readily absorbed. The supply growth peaked in the most recent pre-pandemic years in 2019 and 2018, with annual growth of 3.7% and 2.8%, respectively. As supply growth outweighed demand growth, the average occupancy declined slightly from 75.6% in 2018 to 73.9% in 2019. Meanwhile, RevPAR declined by -2.1% to \$147.33, while ADR increased slightly by 0.1% to \$199.40. This decline in 2019 marked the first year that RevPAR declined notably over the historical period since 2012; 2016 was the only other year within which RevPAR declined, though by -0.7%.

Reflecting the impact from the COVID-19 pandemic, the performance recorded for 2020 reflected further declines of -53.0% in occupancy (to 34.7%), -38.7% in ADR (to \$122.17), and -71.2% in RevPAR (to \$42.41). In comparing annual 2020 to annual 2019, Greater Boston's year-over-year ADR and RevPAR declines were both significant and higher than the national averages. Greater Boston's higher annual decline may in part be

attributed to smaller markets being more volatile and Massachusetts's tourism industry being one of the hardest hit during the pandemic.

However, by 2021, Greater Boston rebounded much quicker than the nation, with year-over-year increases averaging much higher. Between 2020 and 2021, Greater Boston's year-over-year growth in occupancy, ADR, and RevPAR averaged 16.0%, 7.6%, and 30.5% higher, respectively, than national averages. In addition to greater growth, Greater Boston also achieved \$31.77 higher in ADR and \$8.10 higher in RevPAR. By year-end 2021, Greater Boston averaged 51.0% occupancy, \$156.72 ADR, and \$80.00 RevPAR.

Growth in the metro hotel market accelerated much faster moving through 2022. As of August 2022, compared to 2021, year-to-date averages reflect 56.2% higher occupancy, 65.2% higher ADR, and 158.1% higher RevPAR, at 61.8%, \$196.98, and \$121.69, respectively. By year-end, Greater Boston is expected to close 2022 even higher, growing to 65.7% in occupancy, \$204.71 in ADR, and \$134.59 in RevPAR.

By 2026 per Costar's forecast, the Greater Boston hotel market is projected to reach an average occupancy of 72.9%, ADR of \$231.92, and RevPAR of \$169.14. Compared to pre-pandemic levels, 2026 projections in average about 16.3% higher in ADR and 14.8% higher in RevPAR.

TABLE 104  
GREATER BOSTON HOTEL MARKET PERFORMANCE  
ALL SEGMENTS

Year	Supply				Demand			Occupancy		ADR		RevPAR	
	Daily Rooms	Total Rooms	Change	% Chg	Occupied Rooms	Change	% Chg	Percent	% Chg	Per Room	% Chg	Per Room	% Chg
2012	50,883	18,572,256	116,182	0.6%	13,309,673	193,853	1.5%	71.7%	0.8%	\$158.47	7.4%	\$113.57	8.3%
2013	51,267	18,712,359	140,103	0.8%	13,679,345	369,672	2.8%	73.1%	2.0%	\$164.18	3.6%	\$120.02	5.7%
2014	51,263	18,710,888	(1,471)	0.0%	14,082,865	403,520	2.9%	75.3%	3.0%	\$176.95	7.8%	\$133.18	11.0%
2015	51,930	18,954,508	243,620	1.3%	14,479,996	397,131	2.8%	76.4%	1.5%	\$187.92	6.2%	\$143.55	7.8%
2016	53,683	19,594,440	639,932	3.4%	14,516,656	36,660	0.3%	74.1%	-3.0%	\$192.38	2.4%	\$142.53	-0.7%
2017	55,151	20,130,277	535,837	2.7%	14,889,500	372,844	2.6%	74.0%	-0.1%	\$195.70	1.7%	\$144.75	1.6%
2018	57,196	20,876,530	746,253	3.7%	15,783,371	893,871	6.0%	75.6%	2.2%	\$199.12	1.7%	\$150.54	4.0%
2019	58,792	21,459,150	582,620	2.8%	15,855,343	71,972	0.5%	73.9%	-2.2%	\$199.40	0.1%	\$147.33	-2.1%
2020	52,609	19,202,224	(2,256,926)	-10.5%	6,665,829	(9,189,514)	-58.0%	34.7%	-53.0%	\$122.17	-38.7%	\$42.41	-71.2%
2021	59,352	21,663,451	2,461,227	12.8%	11,058,784	4,392,955	65.9%	51.0%	47.0%	\$156.72	28.3%	\$80.00	88.6%
YTD	37,128	11,287,033	993,128	9.6%	6,973,090	2,901,066	71.2%	61.8%	56.2%	\$196.98	65.2%	\$121.69	158.1%
2022	63,665	23,237,801	1,574,350	7.3%	15,278,422	4,219,638	38.2%	65.7%	28.8%	\$204.71	30.6%	\$134.59	68.2%
2023	65,180	23,790,764	552,963	2.4%	16,159,907	881,485	5.8%	67.9%	3.3%	\$209.74	2.5%	\$142.46	5.8%
2024	65,293	23,832,033	41,269	0.2%	16,857,322	697,415	4.3%	70.7%	4.1%	\$213.18	1.6%	\$150.79	5.8%
2025	65,370	23,860,231	28,198	0.1%	17,248,265	390,943	2.3%	72.3%	2.3%	\$222.89	4.6%	\$161.12	6.9%
2026	65,370	23,860,231	0	0.0%	17,401,444	153,179	0.9%	72.9%	0.8%	\$231.92	4.1%	\$169.14	5.0%

1) Shaded values are projected as of August 2022

Source: CoStar, based on STR Data; compiled by Weitzman Associates, LLC



TABLE 105  
GREATER BOSTON HOTEL MARKET PERFORMANCE  
MONTHLY OCCUPANCY + ADR + REVPAR  
ALL SEGMENTS / 2019 - JUNE 2022

	2020			2021			2022		
	Occ	ADR	RevPAR	Occ	ADR	RevPAR	Occ	ADR	RevPAR
Jan	56.3%	\$144.11	\$81.14	27.6%	\$95.86	\$26.49	40.3%	\$128.80	\$51.92
Feb	62.2%	\$147.55	\$91.78	31.9%	\$98.00	\$31.25	49.0%	\$138.15	\$67.70
Mar	31.1%	\$147.29	\$46.12	35.4%	\$101.00	\$35.71	60.1%	\$168.68	\$101.38
Apr	17.9%	\$93.89	\$16.76	40.4%	\$111.36	\$44.96	68.6%	\$207.29	\$142.15
May	22.8%	\$89.55	\$20.40	45.8%	\$133.23	\$61.04	73.2%	\$235.45	\$172.25
Jun	25.5%	\$102.66	\$26.18	54.2%	\$145.93	\$79.07	78.6%	\$242.50	\$190.53
Jul	30.1%	\$111.16	\$33.41	64.3%	\$166.37	\$106.93	---	---	---
Aug	34.2%	\$115.94	\$39.63	65.1%	\$177.60	\$115.64	---	---	---
Sep	33.8%	\$111.94	\$37.78	62.4%	\$191.73	\$119.71	---	---	---
Oct	37.8%	\$113.85	\$43.03	70.6%	\$215.16	\$151.94	---	---	---
Nov	28.3%	\$101.16	\$28.65	57.0%	\$163.72	\$93.32	---	---	---
Dec	25.9%	\$97.41	\$25.21	49.2%	\$143.09	\$70.41	---	---	---
Year Average	34.7%	\$122.17	\$42.41	51.0%	\$156.72	\$80.00	65.7%	\$204.71	\$134.59

	Percent Change 2020 - 2021			Percent Change 2021 - 2022			Compounded Annual Percent Change 2020 - 2022		
	Occ	ADR	RevPAR	Occ	ADR	RevPAR	Occ	ADR	RevPAR
Jan	-51%	-33%	-67%	46%	34%	96%	-15%	-5%	-20%
Feb	-49%	-34%	-66%	54%	41%	117%	-11%	-3%	-14%
Mar	14%	-31%	-23%	70%	67%	184%	39%	7%	48%
Apr	126%	19%	168%	70%	86%	216%	96%	49%	191%
May	101%	49%	199%	60%	77%	182%	79%	62%	191%
Jun	113%	42%	202%	45%	66%	141%	76%	54%	170%
Jul	114%	50%	220%	---	---	---	---	---	---
Aug	90%	53%	192%	---	---	---	---	---	---
Sep	85%	71%	217%	---	---	---	---	---	---
Oct	87%	89%	253%	---	---	---	---	---	---
Nov	101%	62%	226%	---	---	---	---	---	---
Dec	90%	47%	179%	---	---	---	---	---	---
Year Average	47.0%	28.3%	88.6%	28.8%	30.6%	68.2%	37.6%	29.4%	78.1%

1) 2022 yearly averages are based on Costar projections, provided as available  
Source: CoStar (August 2022), based on STR Data; compiled by Weitzman Associates, LLC

Of the 63,326 hotel rooms in the Greater Boston market, 40.4% are classified as luxury and upper upscale, 48.4% are classified as upscale and upper midscale, and 11.1% are classified as midscale and economy. Over the past 12 months through August 2022, average occupancy rates by class category ranged from 58.6% for luxury and upper upscale class hotels to 65.5% for midscale and economy class hotels, with an overall weighted average of 61.6%. The corresponding RevPARs ranged from \$68.09 for midscale and economy class hotels to \$149.26 for luxury and upper upscale class hotels, with an overall weighted average of \$115.70. The luxury and upper upscale class category has had the most room deliveries over the past 12 months (1,266 rooms), while the upscale and upper midscale class category has the most rooms currently under construction (695 rooms).

TABLE 106  
GREATER BOSTON HOTEL MARKET OVERVIEW  
BY CLASS

Class	Rooms	Room Mix %	12 Months (through August 2022)					% of Market
			Occ.	ADR	RevPAR	Room Deliveries	Rooms U/C	
Luxury & Upper Upscale	25,613	40.4%	58.6%	\$254.83	\$149.26	1,266	147	0.6%
Upscale & Upper Midscale	30,671	48.4%	63.2%	\$156.27	\$98.84	331	695	2.3%
Midscale & Economy	7,042	11.1%	65.5%	\$103.98	\$68.09	0	329	4.7%
Total	63,326	100%	61.6%	\$187.77	\$115.70	1,597	1,371 *	2.2%

\* Includes 200 rooms under construction that are not affiliated with any class

Source: CoStar (August 2022), based on STR Data; compiled by Weitzman Associates, LLC

Per CoStar, the Greater Boston hotel market is broken out into six submarkets. The largest submarket in terms of hotel room inventory is Boston CBD/Airport (with 40.1% of the metro's inventory), followed by Cambridge/Waltham (15.0%), Dedham/Marlborough (12.9%), and Woburn/Tewksbury Northwest (11.0%). (in which Harvard and the subject district are located).

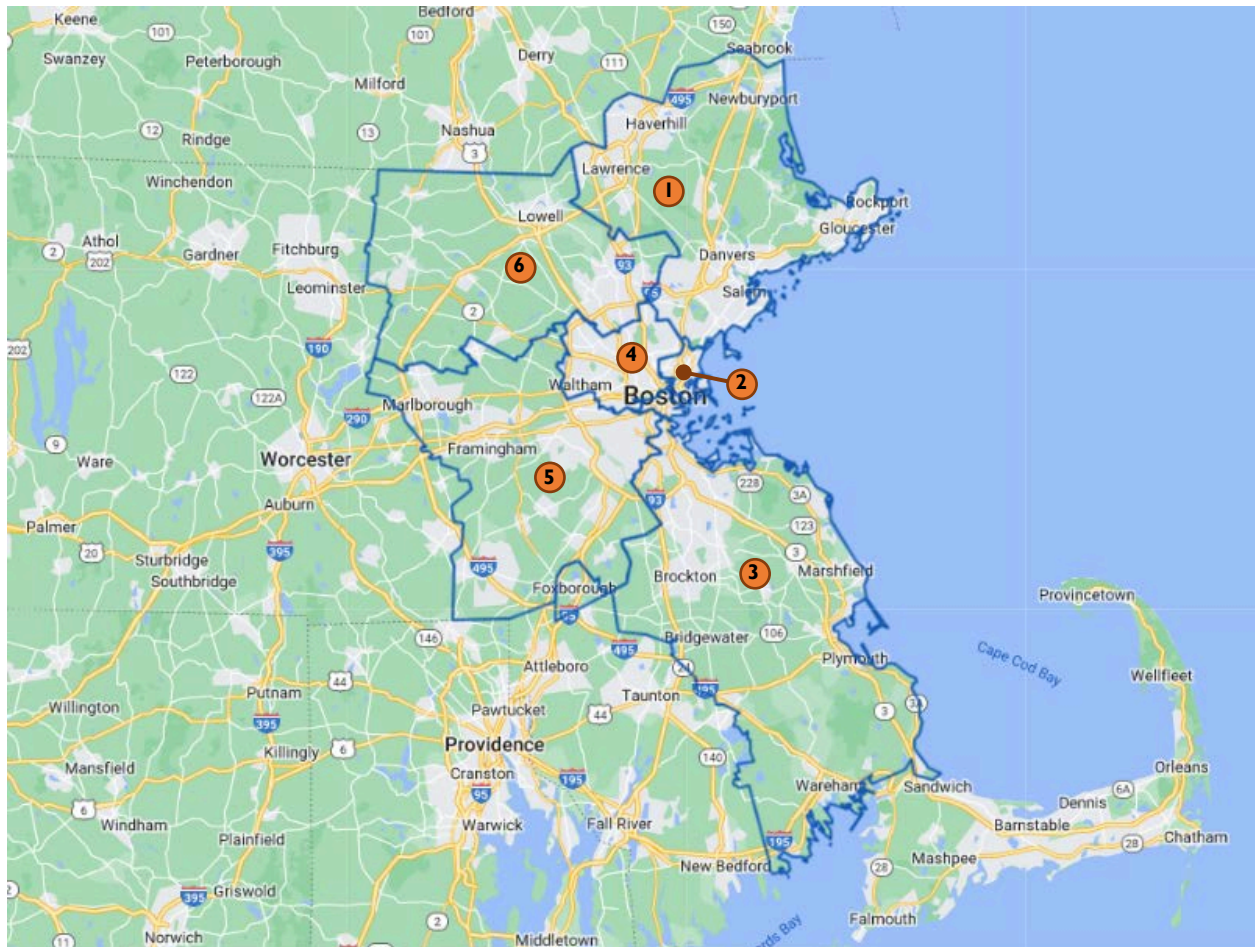
Over the past 12 months through August 2022, the occupancy rates by submarket ranged from a low of 57.2% in the Dedham/Marlborough submarket to a high of 63.7% in the Boston CBD/Airport submarket. The Woburn/Tewksbury Northwest submarket follows closely behind with the second-highest occupancy over the past 12 months, at 63.5%, however with the lowest ADR and one of the lowest RevPAR. ADR by submarket ranged from a low of \$123.74 in the Woburn/Tewksbury Northwest submarket to a high of \$248.75 in the Boston CBD/Airport submarket. Similarly, RevPAR ranged from a low of \$77.98 in the Dedham/Marlborough submarket to a high of \$158.50 in the Boston CBD/Airport submarket.

TABLE 107  
GREATER BOSTON HOTEL MARKET OVERVIEW  
BY SUBMARKET

Map #	Submarket	Bldgs	Rooms	Market Mix %	12 Months (through August 2022)				Rooms U/C	% of Market
					Occ.	ADR	RevPAR	Room Deliveries		
1	Andover/Danvers Northeast	82	6,455	10.2%	60.6%	\$130.15	\$78.92	0	0	0.0%
2	Boston CBD/Airport	104	25,386	40.1%	63.7%	\$248.75	\$158.50	1,434	801	3.2%
3	Boston Southshore	75	6,810	10.8%	62.4%	\$139.72	\$87.18	0	101	1.5%
4	Cambridge/Waltham	67	9,525	15.0%	58.6%	\$185.73	\$108.90	163	369	3.9%
5	Dedham/Marlborough	64	8,180	12.9%	57.2%	\$136.44	\$77.98	0	100	1.2%
6	Woburn/Tewksbury Northwest	53	6,970	11.0%	63.5%	\$123.74	\$78.63	0	0	0.0%
Total		445	63,326	100%	61.6%	\$187.77	\$115.70	1,597	1,371	2.2%

Source: CoStar (August 2022), based on STR Data; compiled by Weitzman Associates, LLC

GREATER BOSTON HOTEL SUBMARKET MAP



According to CoStar, there are nine hotel properties with a total of 1,371 rooms currently under construction throughout the Greater Boston hotel market, as detailed in the following table. This level equates to 2.2% of existing supply, which is below the national average of 2.8%.



TABLE 108  
HOTEL DEVELOPMENT PIPELINE - UNDER CONSTRUCTION  
GREATER BOSTON

Property	Property Address	Rooms	Class	Scale	Delivery	Stories	Developer Name
1 citizenM Boston Back Bay	1001 Boylston St	390	Upscale	Upscale	Sep 2023	13	Samuels & Associates
2 105 1st Ave Hotel	105 1st Ave	230	Midscale	Independent	Dec 2022	5	Chain Forge Hotel
3 Phase 4	1 Congress St	200	-	Independent	Dec 2022	23	McClellan Highway Dev.
4 Raffles Boston Back Bay	40 Trinity Pl	147	Luxury	Luxury	Apr 2023	35	Trinity Stuart
5 AC Hotels by Marriott East Cambridge	23 Water St	104	Upscale	Upscale	Sep 2023	3	-
6 Home2 Suites by Hilton Plymouth	Lot 8B Colony Pl	101	Upper Midscale	Upper Midscale	Jan 2030	5	Pioneer Management
7 Home2 Suites by Hilton Boston Franklin	725 Union St	100	Upper Midscale	Upper Midscale	Jul 2023	4	4 SQ Development
8 Unnamed Hotel @ Washington St	88 N Washington St	64	Economy	Independent	Dec 2022	14	LIMAC
9 The Beason Street Hotel	371 Beason St	35	Midscale	Independent	Sep 2022	4	Hay Creek Hotels
<b>Total Under Construction</b>	<b>9 Properties</b>	<b>1,371</b>					

Source: CoStar (August 2022); compiled by Weitzman Associates, LLC

Of the nine hotel properties under construction within the Boston metro, none are within Harvard's submarket (Woburn/Tewksbury Northwest), with no future projects planned in the pipeline. Therefore, new construction in the submarket—particularly within the Commercial District—would face little comparable competition.

#### WOBURN / TEWKSBURY NORTHWEST HOTEL SUBMARKET OVERVIEW (SUBJECT'S SUBMARKET)

The subject property is located within the Woburn/Tewksbury Northwest submarket, which comprises 11.0% of the Greater Boston hotel inventory. In part impacted by the removal of supply, the average hotel occupancy of the Woburn/Tewksbury Northwest submarket increased from 66.1% in 2012 to 73.0% in 2015. With renewed supply increases, occupancy fell again slightly in the following years through 2017, during which occupancy averaged 68.6% in 2016 and 67.8% in 2017. Despite record supply growth in 2018 (4.0%), demand surged much higher (12.4%), allowing average occupancy to rebound to a record-high of 73.3%.

In 2019, the Woburn/Tewksbury Northwest hotel submarket had an average occupancy rate of 69.2%. Similar to the overall Greater Boston metro market, following continual positive growth from 2011 to 2018, ADR growth slowed considerably, declining in 2019 by -4.6% to \$133.17, contributing to an overall RevPAR decline of -9.8% to \$92.22.

Reflecting the significant negative impact from the COVID-19 pandemic, the performance recorded for the Woburn/Tewksbury Northwest submarket for 2020 reflected declines of -42.2% in occupancy (to 40.0%), -31.4% in ADR (to \$91.38), and -60.3% in RevPAR (to \$36.58). The decline in RevPAR was notably lesser than that of the overall Boston metro (at -71.2%), as the Greater Boston hotel market witnessed a greater decline in occupancy.

Following regional trends, the hotel performance of the Woburn/Tewksbury Northwest submarket has continued to improve through 2021 and 2022, with particularly strong performance this past summer in June and July. As reflected in Table 110, the most recent available monthly statistics for June 2022 reflect an occupancy rate of 77.3%, an ADR of \$148.73, and RevPAR of \$114.92, reflecting compounded annual growth 47.1% in occupancy, 33.5% in ADR, and 96.5% in RevPAR compared to pandemic levels two years earlier in October 2020. This comparison highlights the recent trend of hotels in this market being able to drive ADR growth, which has resulted in relatively strong RevPAR levels in addition to occupancies which have also surpassed pre-pandemic levels.

TABLE 109  
WOBURN / TEWKSBURY NORTHWEST HOTEL SUBMARKET PERFORMANCE  
ALL SEGMENTS

Year	Supply				Demand			Occupancy		ADR		RevPAR	
	Daily Rooms	Total Rooms	Change	% Chg	Occupied Rooms	Change	% Chg	Percent	% Chg	Per Room	% Chg	Per Room	% Chg
2012	6,286	2,294,240	18,927	0.8%	1,516,448	(33,555)	-2.2%	66.1%	-3.0%	\$105.58	8.1%	\$69.79	4.9%
2013	6,252	2,281,900	(12,340)	-0.5%	1,547,781	31,333	2.1%	67.8%	2.6%	\$109.01	3.2%	\$73.94	5.9%
2014	6,223	2,271,400	(10,500)	-0.5%	1,629,219	81,438	5.3%	71.7%	5.8%	\$116.11	6.5%	\$83.28	12.6%
2015	6,216	2,268,913	(2,487)	-0.1%	1,656,020	26,801	1.6%	73.0%	1.8%	\$123.37	6.3%	\$90.05	8.1%
2016	6,321	2,307,060	38,147	1.7%	1,582,754	(73,266)	-4.4%	68.6%	-6.0%	\$129.53	5.0%	\$88.87	-1.3%
2017	6,428	2,346,257	39,197	1.7%	1,591,679	8,925	0.6%	67.8%	-1.2%	\$131.45	1.5%	\$89.18	0.3%
2018	6,688	2,440,965	94,708	4.0%	1,789,674	197,995	12.4%	73.3%	8.1%	\$139.52	6.1%	\$102.29	14.7%
2019	6,833	2,494,108	53,143	2.2%	1,727,141	(62,533)	-3.5%	69.2%	-5.6%	\$133.17	-4.6%	\$92.22	-9.8%
2020	6,503	2,373,624	(120,484)	-4.8%	950,152	(776,989)	-45.0%	40.0%	-42.2%	\$91.38	-31.4%	\$36.58	-60.3%
2021	6,850	2,500,318	126,694	5.3%	1,396,561	446,409	47.0%	55.9%	39.8%	\$106.29	16.3%	\$59.37	62.3%
YTD	4,062	1,234,878	16,859	1.4%	792,756	202,931	34.4%	64.2%	32.6%	\$127.68	45.6%	\$81.97	93.0%
2022	7,039	2,569,062	68,744	2.7%	1,759,511	362,950	26.0%	68.5%	22.5%	\$133.93	26.0%	\$91.72	54.5%
2023	7,258	2,649,020	79,958	3.1%	1,788,252	28,741	1.6%	67.5%	-1.5%	\$139.78	4.4%	\$94.36	2.9%
2024	7,258	2,649,020	0	0.0%	1,800,672	12,420	0.7%	68.0%	0.7%	\$139.32	-0.3%	\$94.71	0.4%
2025	7,258	2,649,020	0	0.0%	1,842,830	42,158	2.3%	69.6%	2.4%	\$145.69	4.6%	\$101.35	7.0%
2026	7,258	2,649,020	0	0.0%	1,863,289	20,459	1.1%	70.3%	1.0%	\$151.82	4.2%	\$106.79	5.4%

1) Shaded values are projected as of August 2022

Source: CoStar, based on STR Data; compiled by Weitzman Associates, LLC

TABLE 110  
WOBURN / TEWKSBURY NORTHWEST HOTEL SUBMARKET PERFORMANCE  
MONTHLY OCCUPANCY + ADR + REVPAR  
ALL SEGMENTS / 2019 - JUNE 2022

	2020			2021			2022		
	Occ	ADR	RevPAR	Occ	ADR	RevPAR	Occ	ADR	RevPAR
Jan	51.9%	\$116.49	\$60.50	37.3%	\$75.91	\$28.33	45.5%	\$104.89	\$47.69
Feb	56.2%	\$116.02	\$65.20	42.9%	\$78.43	\$33.61	52.9%	\$108.46	\$57.42
Mar	34.1%	\$106.51	\$36.27	46.1%	\$78.98	\$36.44	63.9%	\$116.37	\$74.41
Apr	24.4%	\$85.06	\$20.79	48.3%	\$83.62	\$40.38	73.0%	\$126.50	\$92.38
May	31.0%	\$80.37	\$24.95	52.4%	\$93.96	\$49.26	72.7%	\$144.31	\$104.91
Jun	35.7%	\$83.41	\$29.75	62.0%	\$103.91	\$64.44	77.3%	\$148.73	\$114.92
Jul	36.4%	\$83.78	\$30.48	66.5%	\$112.05	\$74.47	---	---	---
Aug	42.5%	\$83.69	\$35.59	66.1%	\$120.48	\$79.62	---	---	---
Sep	43.5%	\$80.60	\$35.04	64.0%	\$123.49	\$79.08	---	---	---
Oct	47.5%	\$81.82	\$38.86	72.0%	\$136.67	\$98.38	---	---	---
Nov	37.4%	\$77.34	\$28.95	58.5%	\$113.75	\$66.58	---	---	---
Dec	35.8%	\$75.81	\$27.11	50.1%	\$108.00	\$54.08	---	---	---
Year Average	40.0%	\$91.38	\$36.58	55.9%	\$106.29	\$59.37	68.5%	\$133.93	\$91.72
	Percent Change 2020 - 2021			Percent Change 2021 - 2022			Compounded Annual Percent Change 2020 - 2022		
	Occ	ADR	RevPAR	Occ	ADR	RevPAR	Occ	ADR	RevPAR
Jan	-28%	-35%	-53%	22%	38%	68%	-6%	-5%	-11%
Feb	-24%	-32%	-48%	23%	38%	71%	-3%	-3%	-6%
Mar	35%	-26%	0%	39%	47%	104%	37%	5%	43%
Apr	98%	-2%	94%	51%	51%	129%	73%	22%	111%
May	69%	17%	97%	39%	54%	113%	53%	34%	105%
Jun	74%	25%	117%	25%	43%	78%	47%	34%	97%
Jul	83%	34%	144%	---	---	---	---	---	---
Aug	56%	44%	124%	---	---	---	---	---	---
Sep	47%	53%	126%	---	---	---	---	---	---
Oct	52%	67%	153%	---	---	---	---	---	---
Nov	56%	47%	130%	---	---	---	---	---	---
Dec	40%	42%	99%	---	---	---	---	---	---
Year Average	39.8%	16.3%	62.3%	22.5%	26.0%	54.5%	30.9%	21.1%	58.3%

1) 2022 yearly averages are based on Costar projections, provided as available

Source: CoStar (August 2022), based on STR Data; compiled by Weitzman Associates, LLC

Of the 6,970 hotel rooms in the Woburn / Tewksbury Northwest submarket, 14.3% are classified as luxury and upper upscale, 64.9% are classified as upscale and upper midscale (compared to 48.4% metro-wide), and 20.8% are classified as midscale and economy. Over the past 12 months through August 2022, the average occupancy rates by class category ranged from 53.5% for luxury and upper upscale class hotels to 66.8% for midscale and economy class hotels, with an overall average of 63.5%. The corresponding ADRs ranged from \$99.23 for midscale and economy class hotels to \$171.64 for luxury and upper upscale class hotels, with an overall average of \$123.74. Notably, there are no rooms currently under construction within the entire submarket, nor have there been any recent deliveries over the past 12 months.

TABLE III  
WOBURN / TEWKSBURY NORTHWEST HOTEL SUBMARKET OVERVIEW  
BY CLASS

Class	Rooms	Room Mix %	12 Months (through August 2022)				Rooms U/C	% of Market
			Occ.	ADR	RevPAR	Room Deliveries		
Luxury & Upper Upscale	999	14.3%	53.5%	\$171.64	\$91.87	0	0	0.0%
Upscale & Upper Midscale	4,524	64.9%	64.6%	\$123.30	\$79.71	0	0	0.0%
Midscale & Economy	1,447	20.8%	66.8%	\$99.23	\$66.32	0	0	0.0%
Total	6,970	100%	63.5%	\$123.74	\$78.63	0	0	0.0%

Source: CoStar (August 2022), based on STR Data; compiled by Weitzman Associates, LLC

#### COMPETITIVE MARKET ANALYSIS:

##### *Woburn / Tewksbury Northwest – Independent Class and Upscale/Upper Midscale Segments:*

We project upscale and upper midscale hotel classes are most appropriate for a new development in Harvard, especially considering the small scale we'd recommend for such a development (about 20 keys) and the high performance of such hotels within the region. Based upon data from CoStar, the independent class hotel segment within the Woburn / Tewksbury Northwest submarket is comprised of 16 hotels with a total of 1,257 rooms, accounting for 18.0% of the total Woburn / Tewksbury Northwest submarket hotel inventory. These 16 independent class hotels are listed in the following table and illustrated in the accompanying map.

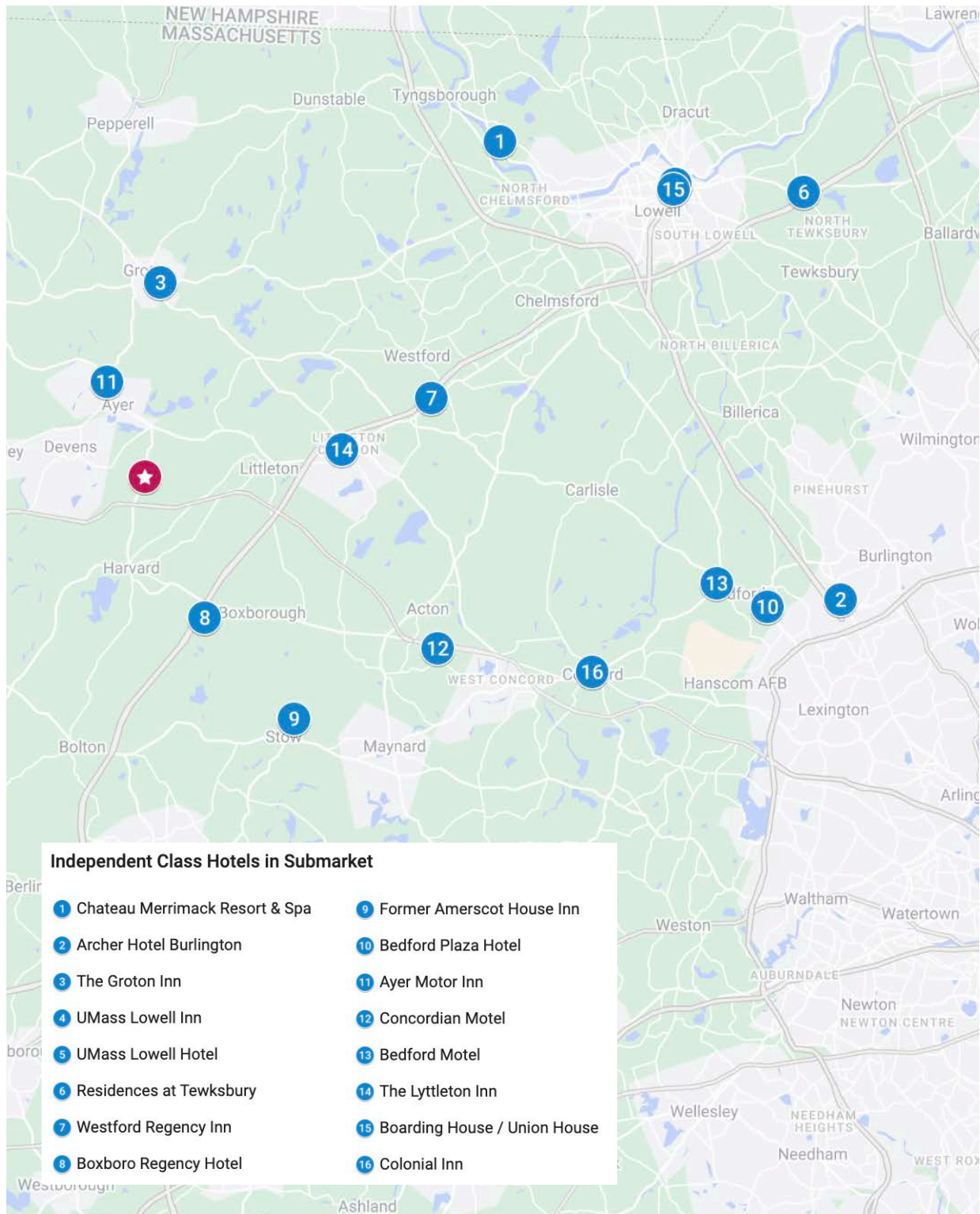
**TABLE 112**  
**INDEPENDENT CLASS HOTELS**  
WOBURN / TEWKSBURY NORTHWEST SUBMARKET

Property	Address	Zip Code	Class	Rooms	Stories	Year Opened (Renovated)
1 Chateau Merrimack Resort & Spa	160 Pawtucket Blvd	01879	Upper Upscale	30	1	(2022) 1988
2 Archer Hotel Burlington	18 3rd Ave	01803-4414	Upper Upscale	147	4	2018
3 The Groton Inn	128 Main St	01450	Upper Upscale	60	3	2018
4 UMass Lowell Inn & Conference Center	50 Warren St	01852-2250	Midscale	31	2	(2012) 2010
5 UMass Lowell Hotel	50 Warren St	01852-2250	Upscale	250	9	(2012) 1984
6 The Residences at Tewksbury	20 International Pl	01876	Upper Midscale	93	3	1999
7 Westford Regency Inn & Conference Center	219 Littleton Rd	01886	Midscale	193	3	1985
8 Boxboro Regency Hotel & Conference Center	242 Adams Pl	01719	Midscale	143	2	1975
9 Former Amerscot House Inn	61 W Acton Rd	01775-2112	Economy	5	2	1973
10 Bedford Plaza Hotel	340 Great Rd	01730	Midscale	99	3	1964
11 Ayer Motor Inn	18 Fitchburg Rd	01432	Economy	42	2	1960
12 Concordian Motel	71 Hosmer St	01720	Economy	32	1	1954
13 Bedford Motel	30 North Rd	01730	Economy	42	1	1954
14 The Lyttleton Inn	423 King St	01460-1247	Upscale	5	2	1860
15 Mrs. Hildreth's Boarding House / Union House	278 Central St	01852-2204	Economy	29	4	1824
16 Colonial Inn	48 Monument Sq	01742-1875	Upscale	56	2	1800
<b>Total</b>	<b>16 Properties</b>			<b>1,257</b>		

Source: CoStar (August 2022), based on STR Data; compiled by Weitzman Associates, LLC

Based on STR data from CoStar, the independent class hotel segment within the Woburn/Tewksbury Northwest submarket is comprised of 16 hotels with a total of 1,257 rooms, accounting for 18.0% of the submarket's total hotel inventory. Of these hotels, 50.0% are lower-end properties (economy or midscale) and 68.8% are properties built or renovated before 2000. However, the three most recently opened and/or renovated projects are all upper upscale hotels; these include the Chateau Merrimack Resort and Spa (renovated in 2022), Archer Hotel Burlington (opened in 2018), and The Groton Inn (opened in 2018). For what we envision in Harvard's Commercial District, The Groton Inn and Chateau Merrimack are the most comparable. While these recent hotels share 237 rooms between them, we believe there is ample, still-unmet demand that a potential 20-key inn within the Commercial District could easily serve.

MAP OF INDEPENDENT CLASS HOTELS – WOBURN / TEWSKBURY NORTHWEST SUBMARKET





The independent class hotels within the Woburn/Tewksbury Northwest submarket range in size from 5 rooms at The Lyttleton Inn to 250 rooms at the UMass Lowell Hotel. The newest of these independent class hotels are the Archer Hotel Burlington and The Groton Inn, both of which opened in 2018. The second newest hotel, the UMass Lowell Inn and Conference Center, opened more than a decade ago in 2010 and was later renovated in 2012. Though originally built in 1988, the Chateau Merrimack Resort and Spa experienced the most recent property improvements, recently renovated in 2022.

Similar to the overall submarket, this upscale and upper midscale hotel segment set saw its annual occupancy decline from a high of 74.0% in 2015, to a range of roughly high-60s over the following two years, to then rebound to a record-high in 2018. With the exception of the overall submarket's record supply growth in 2018 (4.0%), this upscale and upper midscale hotel segment has had greater supply growth on a percentage basis, with supply in most years growing within the 2% range. As the upscale and upper midscale segment continued to recover, from 2017 to 2018, the average occupancy increased by 7.0% to 74.5% and ADR increased by 5.3% to \$143.67, for overall RevPAR growth of 12.8% to \$107.06. It is noted that this growth soon retracted slightly moving into 2019—as with the overall submarket—witnessing occupancy, ADR, and RevPAR slightly decline by -5.2%, -5.3%, and -10.3%, respectively.

In 2020, reflecting the sharp downturn caused by the COVID-19 pandemic, the upscale and upper midscale hotel segment of the Woburn/Tewksbury Northwest submarket registered an occupancy decline of -46.3% (to 37.9%) coupled an ADR decline of -30.0% (to \$95.28), for an overall RevPAR decline of -62.4% (to \$36.14). The decline in RevPAR in 2020 was slightly greater than that of the overall Woburn/Tewksbury Northwest submarket (at -60.3%), but slightly less than that of the overall Boston metro (at -71.2%).

By 2021, the upscale and upper midscale hotel segment rebounded quicker than the overall Woburn/Tewksbury Northwest submarket. Year-over-year increases averaged 11.7% higher in occupancy and 7.3% higher in RevPAR, though ADR in the segment trailed the overall submarket by 4.2%. In 2021, the upscale and upper midscale hotel segment averaged an occupancy of 57.4%, ADR of \$106.82, and RevPAR of \$61.29—each of which were higher than the overall submarket.

Growth continued moving through 2022, accelerating significantly in ADR and RevPAR. As of August 2022, compared to 2021, year-to-date averages within the upscale and upper midscale segment reflect 29.7% higher occupancy, 41.8% higher ADR, and 83.9% higher RevPAR, at 64.4%, \$127.24, and \$81.94, respectively. By year-end, the segment is expected to close 2022 even higher, growing to 65.7% in occupancy, \$204.71 in ADR, and \$134.59 in RevPAR.

By 2026 per Costar's forecast, the upscale and upper midscale hotel segment of the Woburn/Tewksbury Northwest submarket is projected to reach an average occupancy of 70.3%, ADR of \$149.32, and RevPAR of \$105.05. Compared to pre-pandemic levels, 2026 projections in average about 9.8% higher in ADR and 9.3% higher in RevPAR.

TABLE 113  
WOBURN / TEWKSBURY NORTHWEST HOTEL SUBMARKET PERFORMANCE  
UPSCALE & UPPER MIDSACLE SEGMENT

Year	Supply				Demand			Occupancy		ADR		RevPAR	
	Daily Rooms	Total Rooms	Change	% Chg	Occupied Rooms	Change	% Chg	Percent	% Chg	Per Room	% Chg	Per Room	% Chg
2012	3,996	1,458,456	36,148	2.5%	984,011	14,502	1.5%	67.5%	-1.0%	\$108.54	6.1%	\$73.23	5.0%
2013	3,997	1,459,061	605	0.0%	1,009,185	25,174	2.6%	69.2%	2.5%	\$111.91	3.1%	\$77.41	5.7%
2014	3,993	1,457,351	(1,710)	-0.1%	1,052,905	43,720	4.3%	72.2%	4.3%	\$119.83	7.1%	\$86.58	11.8%
2015	3,986	1,454,895	(2,456)	-0.2%	1,076,843	23,938	2.3%	74.0%	2.5%	\$127.40	6.3%	\$94.29	8.9%
2016	4,100	1,496,642	41,747	2.9%	1,027,327	(49,516)	-4.6%	68.6%	-7.3%	\$133.76	5.0%	\$91.81	-2.6%
2017	4,197	1,531,905	35,263	2.4%	1,065,824	38,497	3.7%	69.6%	1.5%	\$136.41	2.0%	\$94.91	3.4%
2018	4,282	1,562,935	31,030	2.0%	1,164,748	98,924	9.3%	74.5%	7.0%	\$143.67	5.3%	\$107.06	12.8%
2019	4,395	1,604,170	41,235	2.6%	1,132,931	(31,817)	-2.7%	70.6%	-5.2%	\$136.04	-5.3%	\$96.08	-10.3%
2020	4,524	1,651,380	47,210	2.9%	626,407	(506,524)	-44.7%	37.9%	-46.3%	\$95.28	-30.0%	\$36.14	-62.4%
2021	4,537	1,656,010	4,630	0.3%	950,112	323,705	51.7%	57.4%	51.5%	\$106.82	12.1%	\$61.29	69.6%
YTD	2,630	799,473	(17,821)	-2.2%	514,827	108,957	26.8%	64.4%	29.7%	\$127.24	41.8%	\$81.94	83.9%
2022	4,613	1,683,593	27,583	1.7%	1,162,035	211,923	22.3%	69.0%	20.2%	\$133.65	25.1%	\$92.25	50.5%
2023	4,809	1,755,419	71,826	4.3%	1,183,396	21,361	1.8%	67.4%	-2.3%	\$138.18	3.4%	\$93.15	1.0%
2024	4,809	1,755,419	0	0.0%	1,188,813	5,417	0.5%	67.7%	0.4%	\$136.97	-0.9%	\$92.76	-0.4%
2025	4,809	1,755,419	0	0.0%	1,217,926	29,113	2.4%	69.4%	2.5%	\$143.25	4.6%	\$99.39	7.1%
2026	4,809	1,755,419	0	0.0%	1,234,909	16,983	1.4%	70.3%	1.3%	\$149.32	4.2%	\$105.05	5.7%

1) Shaded values are projected as of August 2022

Source: CoStar, based on STR Data; compiled by Weitzman Associates, LLC

## HOTEL MARKET CONCLUSION

Prior to the COVID-19 pandemic, the national hotel market had been performing relatively well. While the pandemic, particularly in its early stage, had a devastating impact on hotel markets across the nation, markets are, to varying degrees, nearing full recovery.

Based on our hotel analysis, recent national hotel market forecasts published by Costar (utilizing STR data) reflect ADR and RevPAR have both surpassed 2019 levels as of August 2022. In the Woburn/Tewksbury Northwest submarket, growth in average daily rate (ADR) has similarly led to steady growth in RevPAR, projected to recover to 102.3% of the pre-pandemic 2019 level by year-end 2023. However, in Harvard, the deficiency in commercial activity geared towards visitors and additional fiscal benefits from “outside money” is notable. In addition to a general weakness in food and beverage offerings, the lack of other visitor-oriented businesses also manifests in the absence of small lodging facilities. If incorporated, a small inn (of approximately 20 keys) could support an agro-tourism industry within Harvard and significantly expand the town’s revenue base.

Of the nine hotel properties under construction within the Boston metro, none are within Harvard’s submarket (Woburn/Tewksbury Northwest), with no future projects planned in the pipeline. Furthermore, of the 16 hotels within the submarket comparable in class (independent) to our district recommendations, 50.0% are lower-end properties (economy or midscale) and 68.8% are properties built or renovated before 2000. Therefore, new construction in the submarket—particularly within the Commercial District—would face little comparable competition.

## SWOT ANALYSIS, PROGRAM RECOMMENDATIONS & CONCLUSIONS

## SWOT ANALYSIS, PROGRAM RECOMMENDATIONS & CONCLUSIONS

Based on our market research, our assessment of the subject area's competition position, discussions with stakeholders and SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis throughout this report and as part of a Summary Memorandum submitted on June 17, 2022, we have outlined recommendations for the development of small-scale prototypical mixed-use projects which would take place incrementally in Harvard's Commercial District over the short and longer terms.

As illustrated in the previous sections of our report, the Commercial District in Harvard offers a rich potential for guided growth and diversification of the town's tax base through the enabling of an appropriately scaled mixed-use town center in a setting that offers many attractive features. Advantages include strong pending local demand and complementary demand from outlying areas for a wider range of housing options and for retail, small businesses and services. Given Harvard's unique natural and architectural heritage as well as its strong farming tradition, there is also untapped demand for agrotourism and eco-tourism that could further consolidate a quintessential small town New England experience.

Among the main weaknesses and threats reported and analyzed, impediments to sustainable growth in the Commercial District include the current lack of public water and sewer services as well as deficient zoning and bylaws which, if left unchanged, can only lead to more spotty unattractive uses and undesirable development. While the development of new zoning tools has been planned for Phase II and Phase III of a three-phase strategy to guide the future development of Harvard's Commercial District, the lack of public water and sewer services has already been identified as the most important impediment to growth in Harvard's Commercial District.

Deciding who would be connected to Devens' water and sewer infrastructure and how it would be paid for will need to be tightly debated given the resistance displayed by residents for additional expenses and the difficulty to fully grasp the fiscal implication associated with these new services. Where there will need to be a critical mass of development to pay for a new water and sewer system, options include the creation of a sewer district, a business improvement district (BID), a special assessment area, a revenue bond, access to MassWorks grants, and private developer funding.

Miscommunication and information gaps will also need to be controlled in the face of on-going resistance to change and anti-growth sentiment. Given the difficulty of explaining the costs and benefits of new growth and services, this includes managing the perceived threat of new businesses to existing ones, as well as strategic consensus building in promoting optimal economic diversity and long-term fiscal sustainability.

### *Three Scenarios:*

We have outlined development programs along three prototypical scenarios which could be implemented at a number of locations along Harvard's Commercial District. Per request from the Client and pending projected

additional Phase II and Phase III studies and recommendations<sup>13</sup>, our analysis has avoided identifying any specific sites for the development of these scenarios.

Rather, these scenarios are envisioned as examples of how growth could evolve in the Commercial District over similar characteristics at a number of potential sites including vacant land and underutilized improved properties. As such, these scenarios are based on the following shared concept and features:

- Recommended growth assumes the incremental development of small-scale mixed-use projects.
- Each scenario proposes a mix of uses based on the synergy between specific commercial and residential uses which would accelerate the revitalization of the Commercial District.
- Each residential component assumes a portion of affordable units.
- Each scenario proposes a low-intensity grouping of either superimposed or adjacent uses envisioned to either reinforce connections with existing properties in the Commercial District, or envisioned to create additional clusters in the spirit of a small-town center which fosters street-oriented and pedestrian interaction.
- We envision that these scenarios to be further supported by existing or new community uses.
- Mixed-use development is proposed at a small scale and in character compatible with Harvard's historic New England small town fabric as well as in balance with Harvard's equally pristine rural character and tradition to optimize the preservation and enjoyment of open space.
- Proposed residential uses in all scenarios address ample demand for a wider range of residential options than the prevalent pattern of single-family homes, address the needs of downsizing households and of older residents as well as those of younger residents and of service-industry households seeking either/or smaller size, entry-level and, in many cases, more affordable housing.
- Proposed commercial uses in all scenarios would provide many basic service and entertainment retail as well as small-business uses currently lacking in Harvard and which would help retain local residents, attract newcomers and visitors, create new jobs and help diversify Harvard's fiscal base.

The three proposed development scenarios are designed along different levels of intensity ranging from lower (Scenario 1) to higher intensity (Scenario 3). Proposed residential uses range from six units in Scenario 1 to a total of 30 to 50 units in Scenario 3, while proposed commercial uses range from approximately 12,000 to 15,000 square feet in Scenario 1 to a total of 20,000 to 40,000 square feet in Scenario 3 which would also include the construction of a small 20-key inn.

While public infrastructure requirements for small-scale street-oriented commercial development need to be further validated, the residential component of Scenario 1 assumes no additional public and infrastructure improvements. A summary of proposed uses and sizes for each scenario is indicated in Table 114 on the following page.

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<sup>13</sup> Our market analysis and fiscal impact analysis is the first phase of a three-phase strategy to guide the future development of Harvard's Commercial District. Phase II will be a district vision plan based on the market data gathered in Phase I, as well as on analysis of infrastructure, transportation network, land use, existing zoning and environmental issues while Phase III will be the development of a set of new zoning tools to facilitate and realize the vision.

TABLE 114

WEITZMAN DEVELOPMENT RECOMMENDATIONS  
REVIEW OF RESIDENTIAL AND COMMERCIAL DEVELOPMENT SCENARIOS  
Town of Harvard - Commercial District

Scenario Type	Residential Use	Commercial Use	Total
1) Low Intensity	<p><u>Scenario 1:</u> 6 Units x 2 Bedrooms Total: 7,800 - 13,200 sqft Total 12 BRs Average Per Unit: 1,300 - 2,200 sqft Max 24 People (Rental) (Condo) (2 People x Bedroom)</p> <p><u>Conditions:</u> Per existing conditions, assumes no infrastructure improvements Based on 25 People per 1 Well Use of well/septic systems Rental or For-Sale (Condominiums/Townhomes) May include Residential above Retail</p>	<p><u>Scenario 1:</u> Scenario 1 Options: Total Retail: 12,000 - 15,000 sqft Grocery (~15k) Pharmacy (~4.5k - 7k) Emergency Clinic</p> <p><u>Conditions:</u> Basic Retail of Highest Need Near Senior Living to Promote Walkability Infrastructure Needs to be Determined</p>	19,800 - 28,200 sqft
2) Mid Intensity	<p><u>Scenario 2:</u> 20-30 Units x 2 Bedrooms Total: 26,000 - 66,000 sqft Max 60 Bedrooms Average Per Unit: 1,300 - 2,200 sqft Max 120 People (Rental) (Condo) (2 People x Bedroom)</p> <p><u>Conditions:</u> Public Infrastructure Provided Costly alternative without public access Rental or For-Sale (Condominiums/Townhomes) Includes Rental above Retail</p>	<p><u>Scenario 2:</u> Scenario 1 + Food &amp; Beverage Total Retail: 15,000 - 30,000 sqft F &amp; B: About 2,500 - 6,000 sqft F &amp; B: White Cloth Preferred May also include Personal Care &amp; General Merchandise Retail</p> <p><u>Conditions:</u> Public Infrastructure Provided May Reserve 10,000 - 15,000 sqft for Local Developers May Reserve 15,000 - 30,000 sqft for Regional Developers</p>	41,000 - 96,000 sqft
3) Higher Intensity	<p><u>Scenario 3:</u> 30-50 Units x 2 Bedrooms Total: 39,000 - 110,000 sqft Max 100 Bedrooms Average Per Unit: 1,300 - 2,200 sqft Max 200 People (Rental) (Condo) (2 People x Bedroom)</p> <p><u>Conditions:</u> Public Utilities and Infrastructure Provided Mix of Rental and For-Sale (Condominiums/Townhomes) Includes Residential above Retail</p>	<p><u>Scenario 3:</u> Scenario 2 + Small Inn Total Retail: 20,000 - 40,000 sqft Small Inn: About 20 Keys Small Inn: 20,000 sqft Small Inn: May include Farm-to-Table F&amp;B May also include Professional Space @ Grade</p> <p><u>Conditions:</u> Public Infrastructure Provided</p>	79,000 - 170,000 sqft (Inclusive of Small Inn)

(1) We do not propose specific development sites, but rather templates for development clusters that may be reproduced and repositioned per the Town's discretion

(2) Two-bedroom units are included as the average unit type. Ranges are based on average two-bedroom unit sizes.

(3) Unit mix may vary beyond two-bedrooms, though units should remain limited to three bedrooms or less.

Source: Weitzman Associates, LLC



## SCENARIO 1:

### *Residential Use*

The residential component of our lowest-intensity scenario is based on the Commercial District's existing conditions, assuming no infrastructure improvements. Given the currently standard use of water and septic well systems, our recommendations within this scenario adhere to the maximum capacity serviceable by one well, which is approximately 25 people per our conversations with local experts. Further, by assuming two people per room, this first scenario recommends a total of 12 bedrooms in six units averaging two bedrooms per unit. These may be rental or for-sale units and may sit above retail. Assuming average units range between 1,300 (rental) and 2,200 (for-sale condo or townhome) square feet in size, the total size of a residential development within this scenario may range between 7,800 and 13,200 square feet.

### *Commercial Use*

The commercial component of our lowest-intensity scenario proposes basic retail that we believe is of highest need in Harvard. Options within this scenario may include, among others, a grocery store, pharmacy, personal care venue, and emergency clinic for a total size ranging between 12,000 and 15,000 square feet. The infrastructure requirements of this scenario still need to be determined based on the type of retail developed. We also suggest placing this primary retail near senior living residential communities to alleviate accessibility issues with this population segment identified by stakeholders and promote walkability within the Commercial District.

## SCENARIO 2:

### *Residential Use*

This mid-intensity scenario assumes access to public water and sewer infrastructure given their costly (and non-feasible per local developers) alternatives. The following assumptions carry over from the first low-intensity scenario: Average unit sizes (1,300 to 2,200 square feet), people per bedroom (two), and average bedrooms per unit (two). We propose this scenario to include between 20 and 30 units, for a maximum total of 60 bedrooms and 120 people. While our scenarios are based on average two-bedroom unit configurations, unit types may begin to vary within this scenario to include one- and/or three-bedroom units—though still within the constraints of the aforementioned maximum totals. The total size of the residential component in this scenario ranges from 26,000 to 66,000 square feet. As with the first scenario, proposed residential units may also sit above retail, and may exist as either rental or for-sale units.

### *Commercial Use*

As with its residential element, the commercial component of the proposed mid-intensity scenario builds on Scenario One and assumes that public infrastructure is provided. Scenario Two expands the retail options of the first scenario to include a neighborhood-centric general merchandise store, and additionally recommends a food and beverage (F&B) establishment, white cloth preferred. With the F&B element spanning approximately 2,500 to 6,000 square feet, the total size of Scenario Two's commercial component could be

approximately between 15,000 and 30,000 square feet. To prioritize local development, this scenario may reserve a certain portion of developable square feet for local developers and another for broader, regional developers.

### SCENARIO 3:

#### *Residential Use*

At a bigger scale, Scenario Three builds upon the same unit sizes than Scenario One and Two and also assumes the provision of public water and sewer infrastructure. The residential component of Scenario Three would include 30 to 50 units, for a total of 100 bedrooms and 200 people based on an average unit size of two bedrooms per unit.

Ranging between 39,000 and 110,000 square feet in total size, we recommend the residential component of this scenario to include a mix of both rental and for-sale units, with a designated portion placed above village-center retail.

#### *Commercial Use*

The commercial share of this higher-intensity scenario builds on the recommendations of the previous one, and advises the addition of a small inn (approximately 20 keys) coupled with a farm-to-table restaurant to further capitalize on the town's potential for eco and agro-tourism. This scenario may also include client-facing professional space at grade. Overall, this higher-intensity commercial component may range between 20,000 and 40,000 square feet in total size, with the small inn contributing an additional 20,000 square feet.

### PRICING AND ABSORPTION

#### *Residential Pricing:*

Regarding the for-sale condominium and townhome units, we recommend average unit pricing between \$260 and \$300 per square foot (excluding an affordable component) for average one- to three-bedroom units. Overall, we envision the unit mix within these for-sale residential developments to comprise mostly two-bedroom units with a smaller selection of one- and three-bedroom units. This recommended pricing is affordable for households earning approximately \$70,000 or more per year. These prices are in September 2022 dollars. We recommend underwriting pricing increases of 2.0% annually beginning in 2023. Considering a range of typologies inclusive of townhomes, small cottages, and condominiums, we conservatively recommend underwriting an absorption pace between four and six units per month for in the Study Area which could mean that all units in the proposed development would typically be sold-out before delivery.

For the rental apartment units, we recommend rental rents average between \$27 and \$32 annually per square foot among average one- to three-bedroom units, also excluding pricing of an affordable component. As with the for-sale units, we envision the unit mix within these rental developments to comprise mostly two-bedroom units, though there may be a larger appetite among renters for smaller studio/junior one-bedroom

and regular one-bedroom units. Based on our affordability analysis, this recommended pricing is affordable for households earning approximately \$90,000 or more per year, though this affordability threshold may be lower for efficiently sized apartments. Because we have communicated our rent recommendations in September 2022 dollars, we recommend underwriting quarterly rent increases beginning in the first quarter of occupancy at the rate of 0.75% per quarter through stabilization and continuing at 0.75% per quarter thereafter. While we also recommend, to be conservative, assuming a lease-up incentive equivalent to one-month free rent, we note that it may be possible to avoid offering this at all or only on some units that prove to be more challenging to lease. We believe that the Harvard Commercial District could accommodate absorption between five and seven market-rate rental units per month.

These recommended rents and prices are well-positioned in the market, and supported by our demographic analysis, as well as the success of comparable residential communities in the market. We believe these rents and prices are achievable and very marketable given new multi-family product in the region would face very little competition from the dated, already-limited supply and minimal development pipeline. Projects renting and selling at these levels should be well-received by the market as a good value option, accessibly priced while still providing a new and quality housing option. Our demand analysis indicates that the rents and prices are supportable with the income levels that exist in the market. Furthermore, the units can be efficiently designed to present the best value to the market.

#### *Retail Commercial Rents:*

CoStar reports average retail rent in Fitchburg/Leominster (Harvard's submarket) is approximately \$14.66 per square foot, with regional leasing activity is achieving retail rents notably higher, averaging \$16.00 per square foot among recent leases and \$21.00 per square foot among available leases. Averages are notably higher among newer properties. Based on current market metrics, we expect that retail built in the context of mixed-use, village clusters along Ayer Road in the Commercial district could likely achieve rental rates between \$18.00 to \$24.00 per square foot on a triple net or modified gross basis, depending on the type of retailer, the size of the space leased, and the tenant improvement package offered.

### TARGETED MARKETS

#### *Residential Target Markets (For-Sale and Rental):*

Weitzman Associates believes demand will come from a broad array of demographic profiles, many of which will primarily be drawn to the quality and location of new developments along Harvard's Commercial District, including its retail offerings and cultural assets. We anticipate that new residential developments will primarily attract empty-nesters and seniors as well as younger singles and couples households— most household types that would be attracted to the promise of a burgeoning, village-center styled mixed-use Commercial District nestled in a historic location undergoing a renaissance.

We expect there will be a wide range in age among the residents of any housing development in the Commercial District, with both prospective renters and homebuyers of all backgrounds viewing the proposed development as a quality housing option at a good value. However, we believe that the vast

majority of demand for the proposed development will come from households presently living in Harvard and within a 15-minute drive of the district, as those most likely to choose the housing location are homeowners who already live within the region.

Our demand analysis concludes that a reasonable lease-up timeline for new residential projects, based on households earning at least \$75,000 per year, will require future projects to attract buyers and renters from both the Primary A (Harvard) and B (15-minute drive of the district) markets, due to the modest population that currently exists in Harvard. Given the necessity of car-based commutes in this area of Massachusetts, we believe it is reasonable to expect that future residents will accept potentially longer drive times to their places of work in exchange for the amenities and environment created by a series of developments along this portion of Ayer Road. Older residents may also find the proposition of moving into the subject district appealing in order to “downsize” and live in a more walkable environment.

Because we view the residential developments within the Commercial District as being able to attract residents of all ages, we believe the main difference between the target markets for rental apartments versus for-sale product will be the ability to make a down payment and the ability to obtain mortgage financing. We note that we believe that households earning higher incomes will also choose to rent in the district due to the fact that rental housing provides a low-commitment and low-responsibility residential experience for households who believe this lifestyle may be attractive to them, which is an increasingly popular trend nationwide. In summary, we believe the design and location of the future residential developments will attract households of all kinds looking for a well-located, quality housing option at a good value.

#### *Commercial Retail Target Markets:*

The most likely retailers that would be interested in opening a location in future developments within the Commercial District include those servicing the new and existing residential populations, nearby employees, those that are destinations in and of themselves to attract visitors, and those that are seeking new, top-of-market space that does not currently exist within Harvard and the surrounding region. It is critical that the retail components of future projects in Harvard's Commercial District fill current gaps in the local market while creating a thriving mixed-use small town experience centered on street-oriented and pedestrian connections. Examples of needed retail in Harvard include service establishments (small grocery store, specialty food, pharmacy, dry cleaner, bicycle repair shop) as well as lifestyle and entertainment types (food and beverage venues, small artisan shops, bookstores).

In our prior experience with retail space that serves both a daytime worker population as well as an evening / daytime residential population, the nature of the retail can be more diverse because it serves a broader array of wants and needs within the market. We believe there are several distinct types of demand for retail in the district:

- Evening, daytime, and weekend demand from nearby residents – with hundreds of households residing in Harvard, as well as the residents living in nearby areas, the evening and weekend demand for retail goods and services will be for all of the previously mentioned uses, but also for retail that takes a longer amount of time to patronize. Certainly, grocery and personal care shopping, fitness,

and dining options will be in demand for customers who have both limited and unlimited time available. However, full-service restaurants and bars, with outdoor seating, will be in greater demand in the evening and weekend periods. There is also potential support for client-facing professional space, emergency clinics, pet supply, and pharmacies. Furthermore, we note the importance of catering to families with children.

- Daytime demand from local employees – these workers will seek fast casual dining options in the Commercial District, suitable for a quick lunch in close proximity to their employment. They will also seek out convenience retail, such as a drug store, grocery store, hair salons, dry cleaning, and general merchandise retailers. Many workers will seek to run errands, go to the gym, or visit medical professionals during their breaks from work, and future projects will be capable of meeting these needs.
- Residents of nearby neighborhoods and municipalities – given the location of the Commercial District, there is an opportunity to integrate destination retail, restaurants, and cultural amenities that will draw interest from outside of Harvard. For example, households residing within a 30-minute drive of Harvard may journey to the Commercial District for a destination dining experience, or to bring their children to a museum.

Future projects within the Commercial District will benefit from a very strong on-site residential population that can walk from their homes into the retail environment, and from nearby residential enclaves for which the district will be the most conveniently accessible retail node in the area.

While we do not recommend a robust office component to be included in future development projects in the subject district, a small portion of the retail space could be demised as office space (as within our third scenario) catering to medical tenants and local entrepreneurs who desire a coworking environment or “maker space” at grade. Again, office space should be limited, but it could lend additional marketability to the residential spaces built within Harvard’s Commercial District. Additional “maker” and “flex space” could also be provided to accommodate incubator and accelerator space in support of the town’s agricultural economy and as a bridge with eco-agrotourism business venues.

Eco- and Agro-tourism and Compatibility with existing Farm Produce Offerings: We recommend that specifications for food-related service retail (such as grocery stores and food-specialty shops) and food and beverage venues be designed to be complementary rather than in competition with existing local farm produce vending businesses through non-compete clauses and mutually beneficial local partnerships.

*Fiscal Impact Analysis and Next Steps:*

A fiscal impact analysis associated with the development of our proposed three prototypical scenarios is presented in Exhibit A of the addenda to our report. This analysis is limited to recurring direct tax benefits to the Town of Harvard and excludes the important multiplier effect of these developments on the local economy.

Assuming access to public sewer and water infrastructure—the lack of which has long been holding back commercial development in Harvard’s Commercial District—additional incremental small-scale mixed-use development will contribute to the funding of the Town’s expenditures and have a strong positive impact on the diversification of Harvard’s fiscal base. We note that precise costs estimates for providing public access to water and sewer services in the Commercial District have yet to be determined pending more detailed engineering studies.

Our market study and fiscal impact analysis is the first phase of a three-phase strategy to guide the future development of Harvard’s Commercial District. Phase II will be a district vision plan based on the market data gathered in Phase I, as well as on analysis of infrastructure, transportation network, land use, existing zoning and environmental issues while Phase III will be the development of a set of new zoning tools to facilitate and realize the vision.



## ADDENDA



**EXHIBIT A**

**FISCAL IMPACT STUDY**

January 5, 2023

Ms. Marie Sobalvarro  
Assistant Town Administrator and Chief Procurement Officer  
Town of Harvard  
13 Ayer Road  
Harvard, MA 01451

Cc: Frank O'Connor, Jr. Director of Planning

Re: Fiscal Impact Analysis - Harvard, MA  
DRAFT

Dear Ms. Sobalvarro:

At your request, Weitzman Associates, LLC is pleased to submit our analysis of the fiscal impact to the Town of Harvard associated with the potential development of the prototypical small-scale mixed-use residential and commercial projects identified in our market study for Harvard's Commercial District as of September 26, 2022.

As documented in the Market Analysis section of our report, we have outlined development programs along three scenarios which could be implemented at a number of locations along Harvard's Commercial District. Per the Client's request, our analysis has avoided identifying any specific sites for the development of these scenarios. Rather, these scenarios are envisioned as examples of how growth could evolve in the Commercial District over similar characteristics at a number of potential sites including vacant land and underutilized improved properties. These scenarios are summarized in Table I 15 at the end of this section.

Our analysis focuses on the recurring direct fiscal impact of developing these scenarios to the Town of Harvard. The important and numerous indirect benefits to the town of developing these scenarios have been excluded from this analysis and would need to be assessed in a further study.

In preparation of our fiscal impact analysis, Weitzman Associates has completed the following tasks:

- Interviewed the following Town of Harvard officials:
  - Frank O'Connor Jr., Director of Planning
  - Liz Allard, Land Use Administrator and Conservation Agent
  - Jared Mullane, Town Accountant
  - Richard Cabelus, Planning Board Chair

- Reviewed the history of property tax rates since 2006 and obtained the current 2022 rates for real estate and personal property.
- Reviewed the following documents issued by the Town of Harvard:
  - Town of Harvard Revenue Forecast for FY 2024 to FY 2027<sup>14</sup>
  - Town of Harvard Valuation and Tax Summary Fiscal Year 2022
  - Town of Harvard-Town Assessor FY2021
  - Town of Harvard-Town Assessor FY 2020
  - Town of Harvard-Finance Department, Accountant, Assessors, Treasures/Collector. January 3, 2022 guidelines and "Form of List" for declaration of Personal Property
- Estimated reasonable real estate property values based upon a cursory review of the current competitive residential, retail, office and hotel markets.
- Estimated reasonable business personal property value per commercial property for the retail, office, and hotel businesses that may be developed in the Commercial District per the three outlined prototypical scenarios.

The completion of these tasks provided the information and context for the estimates included in this report, and our estimates are subject to further refinement pursuant to changes in local, county or state policy, or adopted taxation methods, and the performance of the regional and national economy and real estate markets.

Our analysis is also subject to the Basic Assumptions and Limiting Conditions contained in the Addenda.

## **SUMMARY OF PROPOSED DEVELOPMENT SCENARIOS**

See Table I 15 on the next page.

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<sup>14</sup> Mullane, J., Sobalvarro, M. and Bragan, T. Town of Harvard: Revenue Forecast for FY 2024 to FY 2027.

TABLE 115  
SUMMARY OF RECOMMENDED DEVELOPMENT SCENARIOS IN HARVARD'S COMMERCIAL DISTRICT

WEITZMAN DEVELOPMENT RECOMMENDATIONS  
REVIEW OF RESIDENTIAL AND COMMERCIAL DEVELOPMENT SCENARIOS  
Town of Harvard - Commercial District

Scenario Type	Residential Use	Commercial Use	Total
1) Low Intensity	<p><u>Scenario 1:</u> 6 Units x 2 Bedrooms Total: 7,800 - 13,200 sqft Total 12 BRs Average Per Unit 1,300 - 2,200 sqft Max 24 People (Rental) (Condo) (2 People x Bedroom)</p> <p><u>Conditions:</u> Per existing conditions, assumes no infrastructure improvements Based on 25 People per 1 Well Use of well/septic systems Rental or For-Sale (Condominiums/Townhomes) May include Residential above Retail</p>	<p><u>Scenario 1:</u> Scenario 1 Options: Total Retail: 12,000 - 15,000 sqft Grocery (~15k) Pharmacy (~4.5k - 7k) Emergency Clinic</p> <p><u>Conditions:</u> Basic Retail of Highest Need Near Senior Living to Promote Walkability Infrastructure Needs to be Determined</p>	19,800 - 28,200 sqft
2) Mid Intensity	<p><u>Scenario 2:</u> 20-30 Units x 2 Bedrooms Total: 26,000 - 66,000 sqft Max 60 Bedrooms Average Per Unit 1,300 - 2,200 sqft Max 120 People (Rental) (Condo) (2 People x Bedroom)</p> <p><u>Conditions:</u> Public Infrastructure Provided Costly alternative without public access Rental or For-Sale (Condominiums/Townhomes) Includes Rental above Retail</p>	<p><u>Scenario 2:</u> Scenario 1 + Food &amp; Beverage Total Retail: 15,000 - 30,000 sqft F &amp; B: About 2,500 - 6,000 sqft F &amp; B: White Cloth Preferred May also include Personal Care &amp; General Merchandise Retail</p> <p><u>Conditions:</u> Public Infrastructure Provided May Reserve 10,000 - 15,000 sqft for Local Developers May Reserve 15,000 - 30,000 sqft for Regional Developers</p>	41,000 - 96,000 sqft
3) Higher Intensity	<p><u>Scenario 3:</u> 30-50 Units x 2 Bedrooms Total: 39,000 - 110,000 sqft Max 100 Bedrooms Average Per Unit 1,300 - 2,200 sqft Max 200 People (Rental) (Condo) (2 People x Bedroom)</p> <p><u>Conditions:</u> Public Utilities and Infrastructure Provided Mix of Rental and For-Sale (Condominiums/Townhomes) Includes Residential above Retail</p>	<p><u>Scenario 3:</u> Scenario 2 + Small Inn Total Retail: 20,000 - 40,000 sqft Small Inn: About 20 Keys Small Inn: 20,000 sqft Small Inn: May include Farm-to-Table F&amp;B May also include Professional Space @ Grade</p> <p><u>Conditions:</u> Public Infrastructure Provided</p>	79,000 - 170,000 sqft (Inclusive of Small Inn)

(1) We do not propose specific development sites, but rather templates for development clusters that may be reproduced and repositioned per the Town's discretion.

(2) Two-bedroom units are included as the average unit type. Ranges are based on average two-bedroom unit sizes.

(3) Unit mix may vary beyond two-bedrooms, though units should remain limited to three bedrooms or less.

Source: Weitzman Associates, LLC



## ASSUMPTIONS- REVENUES

### Assessed Value and Taxable Value

The Town Assessor is responsible for the valuation of real estate and personal property subject to taxation. Assessed values are based on “full and fair cash value” as of the January 1<sup>st</sup> preceding each fiscal year. The Registry of Motor Vehicles is responsible for motor vehicle valuations and supplies the data for excise bills.

### Real Estate Property Taxes

Tax rates for 2022 are as follows: \$17.91 per \$1,000 of assessed value for residential uses and \$17.89 per \$1,000 of assessed value for commercial and industrial uses as well as for personal property.

Table 116 below indicates the history of tax rates in the Town of Harvard since 2006. Tax rates for residential, commercial and industrial uses, as well as for personal property decreased by 4.6% in 2022 as compared to the year prior but were approximately 2.8% and 2.7% above tax rates for 2019. Generally, tax rates go down when property values go up and vice versa to allow for the stable and reasonable growth of the tax levy which represents the amount of revenue that a community can raise through real estate and property taxes net of allowances for abatement.

TABLE 116

#### HISTORY OF TAX RATES, TOWN OF HARVARD, MA

Fiscal Year	Tax Rates Per \$1,000 of Assessed Value			
	<u>Residential</u>		<u>Commercial / Industrial / Property</u>	
	Rate	% Annual Change	Rate	% Annual Change
2006	\$10.89	n.a.	\$10.89	n.a.
2007	\$11.62	6.7%	\$11.62	6.7%
2008	\$12.68	9.1%	\$12.68	9.1%
2009	\$13.43	5.9%	\$13.43	5.9%
2010	\$14.33	6.7%	\$14.33	6.7%
2011	\$15.47	8.0%	\$15.47	8.0%
2012	\$16.24	5.0%	\$16.24	5.0%
2013	\$16.68	2.7%	\$16.68	2.7%
2014	\$17.09	2.5%	\$17.09	2.5%
2015	\$17.79	4.1%	\$17.79	4.1%
2016	\$18.05	1.5%	\$18.05	1.5%
2017	\$18.10	0.3%	\$18.10	0.3%
2018	\$17.15	-5.2%	\$17.15	-5.2%
2019	\$17.42	1.6%	\$17.42	1.6%
2020	\$18.47	6.0%	\$18.44	5.9%
2021	\$18.78	1.7%	\$18.75	1.7%
2022	\$17.91	-4.6%	\$17.89	-4.6%

Source: Town of Harvard Valuation and Tax Summary Fiscal Year 2022; Compiled by Weitzman Associates, LLC



Our property tax revenues projections on new development assume a 2.5% growth rate over the long-term. This growth rate is consistent with the Town of Harvard's projected tax revenues.<sup>15</sup> This assumption is also consistent with State law ("Proposition 2 ½") which limits increases over a town's prior year's levy.

Per discussions with the Town of Harvard, we have assumed that potential exemptions for property taxes on the proposed prototypical scenarios envisioned for the Commercial District such as for seniors, veterans, widows and widowers among others would have no material impact on our analysis. As such, tax exemptions have not been included in our analysis.

Assessed and taxable property values for the recommended three development scenarios are based on an analysis of comparables, and on our review of the market value for each residential and commercial component in the three recommended scenarios.

As indicated in our market analysis, the three proposed development scenarios are designed along different levels of intensity ranging from lower (Scenario 1) to higher intensity (Scenario 3). Proposed residential uses range from six units in Scenario 1 to a total of 30 to 50 units in Scenario 3, while proposed commercial uses range from approximately 12,000 to 15,000 square feet in Scenario 1 to a total of 20,000 to 40,000 square feet in Scenario 3. Scenario 3 would also include the construction of a small 20-key inn.

Our fiscal analysis has examined a few development options inherent to each scenario. These include for-sale or rental residential components as well as various shares of affordable units in each scenario. The sensitivity analysis performed on the commercial components in each scenario is based on a range of sizes of the projected retail and professional office components, as well as to the share of food and beverage space allocated to each commercial component.

### Personal Property Taxes

Personal property subject to taxation by the Town of Harvard includes furniture, fixtures, equipment and machinery used in the conduct of business.

Individuals and sole proprietors are generally subject to taxation on all business assets and inventory in total value equal or exceeding \$5,000.

Corporate filers are subject to local personal property taxes on assets not used in an accounting, administrative, or marketing function. Generally, corporations are exempt from personal property taxes on items declared and assessed as a State corporate excise tax.

The personal property tax rate in 2022 is \$17.89 per \$1,000 of assessed value.

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<sup>15</sup> Mullane, J., Sobalvarro, M. and Bragan, T. Town of Harvard: Revenue Forecast for FY 2024 to FY 2027.



The Town of Harvard could not provide detailed personal property comparables except for its overall valuation for Fiscal Year 2021. Overall assessed value of personal property for fiscal year 2021 in Harvard for businesses with personal property valuation equal or greater than \$5,000 represented \$19,232,114 for 54 parcels for an average of \$356,150 in value per parcel.

After adjusting this blended average value for the new businesses projected in our development scenarios, and except for hotel use, our analysis assumes an average assessed value of personal property of \$400,000 per parcel used for business (i.e. for retail and office uses), corresponding to annual personal property taxes of \$7,156 per parcel.

Our assumptions about the number of parcels in our analysis is as follows: We have assumed one business parcel in Scenario 1 for a total of 12,000 to 15,000 square feet of retail and four to five tenants; we have estimated that there would be one to three business parcels in Scenario 2 for a total of 15,000 to 30,000 square feet of retail and/or professional offices including five to seven tenants; our Scenario 3 assumes two to four business parcels for a total of 20,000 to 40,000 square feet of retail which includes a range of six to eight tenants. On average, and except for hotel uses, personal property taxes for all proposed scenarios range from \$0.48 to \$0.72 per square foot of retail or professional office space.

We have assumed a taxable assessed value in personal property of \$25,000 per key for the hotel for a total taxable value of \$500,000 in personal property in 2022. Our assumption of \$25,000 in personal property value per key is inclusive of FF&E in the guestrooms, common areas and back of the house.

#### Vehicle Excise Tax

The vehicle excise tax rate for 2022 in Harvard is \$25 per \$1,000 of a vehicle's value billed where vehicles are garaged. Taxable vehicles include cars, motorcycle and trailers.

Our analysis uses an average number of 3.35 vehicles per household and an average value in 2022 of \$6,000 per vehicle for a total vehicle tax of \$150 per vehicle.

Our vehicle excise tax assumptions are based on data provided by the Town of Harvard which indicated \$955,542 in taxable vehicle valuation in FY 2019 for 6,442 vehicles for an average taxable value of \$5,864.80 per vehicle. Our assumption of an average number of 3.35 vehicles per household is also based on data provided by the Town of Harvard on an estimate of 1,925 households for Fiscal Year 2019. The Town of Harvard does not report any material increase in the average value of vehicles since 2019.

Our projection of the vehicle excise tax is based on historical data provided by the Town of Harvard and excludes any assumption about vehicles owned and garaged in Harvard by business entities. Although imperfect, we believe our methodology for assessing vehicle excise tax to be valid given the small number of businesses in Harvard relative to the number of households, and also given that the historical data provided accounts for all vehicles taxed in Harvard.



### Transfer Station Fee

Our analysis uses an annual fee of \$150 per new household. The number of new households in our analysis corresponds to the number of new residential units developed in each recommended scenario. The transfer station in Harvard is for the exclusive use of residential users and is not accessible to commercial users.

### Meals Tax

The current 0.75% meals tax in Harvard has been applied to projected gross food and beverage annual revenues of \$400 per square foot allocated where applicable in the proposed mixed-use scenarios. Food and beverage space has been estimated at 15% to 20% of projected retail space for Scenario 2 (2,250 to 6,000 square feet), and 25% to 30% of projected retail space in Scenario 3 (5,000 to 12,000 square feet).

Scenario 1 which assumes minimal additional public water-sewer infrastructure improvement, if any, does not include restaurant or food and beverage space.

### Hotel/Lodging Tax

There is currently no lodging tax in Harvard, but we have assumed that one would be voted by the Town of Harvard upon new hotel development.

Our analysis assumes a 5.0% lodging tax to be calculated on gross revenues generated by the 20-key inn which is a part of our recommended Scenario 3. Other assumptions in the calculation of the lodging tax for the proposed 20-key inn include an ADR of \$175 per room per night and an overall annual occupancy rate of 70%.

### Licenses and Permits

Non-recurring license and permit fees associated with the construction of the proposed scenarios have been excluded from our analysis. As a one-time benefit, such potential revenue would need to be assessed separately upon confirmation by the Town of Harvard of its schedule fee for the various recommended development scenarios.

## ASSUMPTIONS- EXPENSES

Our fiscal impact analysis focuses on the tax revenues and benefits associated with the implementation of the three proposed prototypical scenarios in the Commercial District. An estimate of the expenses associated with the development of these scenarios would however also need to be conducted pending the provision of more data than currently available by the Town of Harvard.

### Water and Sewer Infrastructure / Public Works

As indicated in our market analysis, while public infrastructure requirements for small-scale street-oriented commercial development need to be further validated, the residential component of Scenario 1 assumes no additional public and infrastructure improvements. We have also assumed that Scenario 1 would not include any food and beverage business to keep the requirements for public infrastructure improvements minimal or at 0 along this scenario.

Scenario 2 and 3: As indicated in our market analysis, both scenarios assume provision of public water and sewer infrastructure as a pre-requisite to any significant future growth.

As provided by Harvard's Planning Department, preliminary budget estimates for bringing water and sewer service from Devens to the closest point in the Commercial District range from eight to ten million dollars. This estimate assumes a single trench which would most likely run from Old Mill Road to Ayer Road. This estimate and in particular the costs of pressuring pumping waste will be further refined upon completion of a detailed engineering plan for the envisioned infrastructure improvements.

### Education

The Town of Harvard reports gross expenses of \$21,000 per public school pupil for 2022 but is unable to provide net costs associated with public education as some of this expense is financed by lump reimbursements and other non-disaggregated sources of revenues from the State of Massachusetts. As such, our analysis of the net costs per public school pupil to the Town of Harvard remains inconclusive.

Our attempt to correlate residential growth with public school attendance is also inconclusive. As indicated in Table 117 on the following page, the latest public school attendance records for the Town of Harvard shows a decline in student attendance over the 2021-2022 school year, and virtually no change in overall attendance over the past two years (-0.3%) in spite of a reported change of 30 new households created over this time period. The 30 new households correspond to the completion of 25 condominium units and five single-family homes as reported by the Town of Harvard. Unknown is the family structure of each new household as well as the number of school age children in these new homes that might be attending other schools (such as the local charter school or out-of-town private schools) than the Town of Harvard public schools.

TABLE 117  
TOWN OF HARVARD PUBLIC SCHOOL ENROLLMENT BY HARVARD RESIDENTS

Grade	2021-2022			2020-2021		2019-2020	
	Student Count	Annual Change	Change past 2 years	Student Count	Annual Change	Student Count	Annual Change
Pre-K to 5	401	3.9%	7.8%	386	3.8%	372	n.a.
Hight School	<u>465</u>	<u>-10.7%</u>	<u>-6.4%</u>	<u>521</u>	<u>4.8%</u>	<u>497</u>	n.a.
TOTAL	866	-4.5%	-0.3%	907	4.4%	869	n.a.

Note: Excludes Devens and Choice Students

Source: Town of Harvard; Compiled by Weitzman Associates, LLC

Because they would mostly target empty nesters and senior residents, we have assumed that the relative low number of households created by three development scenarios recommended in our market study would not translate into a significant increase in the number of school-age children. As such, and in spite of the lack of concluding evidence to support the correlation between residential growth and public-school attendance, we have estimated that the impact of each proposed residential development considered individually would not further burden Harvard's public school system or the education budget of the Town of Harvard.

#### Other Services

An analysis of the direct fiscal impact of new development in the Commercial District would also consider the potential additional costs to the Town of Harvard associated with the creation of new households on its public safety, culture/recreation, health and human services as well as general government expense budgets.

Given the relatively small number of projected households associated with each scenario, we have assumed that the impact of the three recommended prototypical mixed-use projects for Harvard's Commercial District considered individually would be minimal to Harvard's operations and on these expenses' categories. The long-term impact of building multiple new projects on the Town's budget would also be mitigated by the incremental annual absorption of a relatively small share of additional residents to the town's total population.

The Town of Harvard's budget in 2022 for these services was \$2.1 million for public safety, \$852,151 for culture and recreation, \$303,547 for health and human services and \$1.65 million for general government services. These amounts are gross expenses and do account for any reimbursement or cross-financing from other sources such as the State of Massachusetts amount others.

**SUMMARY OF FINDINGS- DIRECT FISCAL IMPACT BENEFITS**

Table 118 on the next page summarizes the fiscal impact in terms of recurring tax revenues to the Town of Harvard of developing the three proposed prototypical scenarios discussed earlier. Where applicable this table includes projected annual tax revenues for each scenario including real estate property taxes, personal property taxes, vehicle excise taxes, transfer station fees, meals taxes, and hospitality taxes.

We note that a future more in-depth analysis of the fiscal impact of developing specific sites in Harvard's Commercial District would also require, where applicable, the deduction from our estimates of the current taxes on vacant land, or of taxes on underimproved properties in the case where development would involve the rehabilitation or demolition of existing improvements.

Scenario 1- Depending on the for-sale or rental tenure of the proposed six residential units, the share of affordable housing in these units (ranging from 17% to 50%), and the size of the commercial component (which could range from 12,000 to 15,000 square feet), the more modest Scenario 1 could generate approximately \$100,000 to \$147,000 of annual tax revenues in 2022 dollars.

Scenario 2- The mixed-use Scenario 2 shows direct annual tax revenues in 2022 dollars ranging from \$276,000 to \$532,000 depending on the share of affordable housing for the 30-unit residential component (possibly ranging from 10% to 33% of the total), the for-sale or rental tenure of the residential units, the size of the commercial component envisioned at 15,000 to 30,000 square feet, and the share of food and beverage space (15% to 30% of the total commercial component).

Scenario 3- The mixed-use Scenario 3 shows direct annual tax revenues in 2022 dollars ranging from \$533,000 to \$930,000 depending on the share of affordable housing for the 50-unit residential component (possibly ranging from 10% to 34% of the total), the for-sale or rental tenure of the residential units, the size of the commercial component envisioned at 20,000 to 40,000 square feet, as well as the share of food and beverage space (25% to 30% of the total commercial component) in addition to the proposed 20-key inn.

In each scenario, the largest share of tax revenue is derived from real estate property taxes. Per our analysis the share of real estate property tax revenues is as follows: Within a range of 90% to 92% of the total in Scenario 1; within a range of 85% to 91% of the total in Scenario 2, and within a range of 78% to 83% of the total in Scenario 3.

The share of other taxes than real estate property taxes to the total in each scenario is relatively small. In Scenario 1 personal property taxes range from 6% to 7% of the total, vehicle excise taxes amount to 3% of the total and transfer station fees amount to approximately 1% of the total annual taxes. In Scenario 2 personal property taxes range from 2% to 3% of the total, vehicle excise taxes represent 4% to 5% of the total, transfer station fees amount to 1% to 2% of the total while meals taxes represent 2% of the total annual projected taxes. In Scenario 3 personal property taxes range from 3% to 4% of the total projected taxes, vehicle excise taxes represent approximately 4% to 5% of the total, transfer station fees amount to 1% of the total while

meals taxes represent 3% of the total and the proposed hospitality tax would generate 6% to 8% of the total projected taxes under this scenario.

As indicated earlier, we have assumed that these taxes would grow at an average rate of 2.5% per year.

TABLE 118  
SUMMARY OF FISCAL IMPACT ANALYSIS: THREE SCENARIOS

SUMMARY	SCENARIO 1- MIXED-USE RESIDENTIAL & COMMERCIAL: 6 UNITS, 12,000-15,000 SQ. FT. COMMERCIAL							
	FOR SALE RESIDENTIAL COMPONENT				FOR RENT RESIDENTIAL COMPONENT			
	LOW		HIGH		LOW		HIGH	
		% Total		% Total		% Total		% Total
1 REAL ESTATE PROPERTY TAXES	\$ 105,728	91%	\$ 135,854	92%	\$ 88,723	89%	\$ 111,631	91%
2 PERSONAL PROPERTY TAX	\$ 7,156	6%	\$ 7,156	5%	\$ 7,156	7%	\$ 7,156	6%
3 VEHICLE EXCISE TAX	\$ 3,015	3%	\$ 3,015	2%	\$ 3,015	3%	\$ 3,015	2%
4 TRANSFER STATION FEE	\$ 900	1%	\$ 900	1%	\$ 900	1%	\$ 900	1%
5 MEALS TAX	\$ -	0%	\$ -	0%	\$ -	0%	\$ -	0%
6 HOSPITALITY TAX	\$ -	0%	\$ -	0%	\$ -	0%	\$ -	0%
TOTAL	\$ 116,799	100%	\$ 146,925	100%	\$ 99,794	100%	\$ 122,702	100%

SUMMARY	SCENARIO 2- MIXED-USE RESIDENTIAL & COMMERCIAL: 30 UNITS, 15,000-30,000 SQ. FT. COMMERCIAL							
	FOR SALE RESIDENTIAL COMPONENT				FOR RENT RESIDENTIAL COMPONENT			
	LOW		HIGH		LOW		HIGH	
		% Total		% Total		% Total		% Total
1 REAL ESTATE PROPERTY TAXES	\$ 345,670	91%	\$ 473,250	89%	\$ 242,598	88%	\$ 344,916	85%
2 PERSONAL PROPERTY TAX	\$ 7,156	2%	\$ 21,468	4%	\$ 7,156	3%	\$ 21,468	5%
3 VEHICLE EXCISE TAX	\$ 15,075	4%	\$ 15,075	3%	\$ 15,075	5%	\$ 15,075	4%
4 TRANSFER STATION FEE	\$ 4,500	1%	\$ 4,500	1%	\$ 4,500	2%	\$ 4,500	1%
5 MEALS TAX	\$ 6,750	2%	\$ 18,000	3%	\$ 6,750	2%	\$ 18,000	4%
6 HOSPITALITY TAX	\$ -	0%	\$ -	0%	\$ -	0%	\$ -	0%
TOTAL	\$ 379,151	100%	\$ 532,293	100%	\$ 276,079	100%	\$ 403,959	100%

SUMMARY	SCENARIO 3- MIXED-USE RESIDENTIAL & COMMERCIAL: 50-UNITS, 20,000-40,000 SQ. FT. COMMERCIAL, 20-KEY INN							
	FOR SALE RESIDENTIAL COMPONENT				FOR RENT RESIDENTIAL COMPONENT			
	LOW		HIGH		LOW		HIGH	
		% Total		% Total		% Total		% Total
1 REAL ESTATE PROPERTY TAXES	\$ 584,737	83%	\$ 775,333	83%	\$ 414,153	78%	\$ 561,442	78%
2 PERSONAL PROPERTY TAX	\$ 23,257	3%	\$ 37,569	4%	\$ 23,257	4%	\$ 37,569	5%
3 VEHICLE EXCISE TAX	\$ 25,125	4%	\$ 25,125	3%	\$ 25,125	5%	\$ 25,125	4%
4 TRANSFER STATION FEE	\$ 7,500	1%	\$ 7,500	1%	\$ 7,500	1%	\$ 7,500	1%
5 MEALS TAX	\$ 18,600	3%	\$ 39,600	4%	\$ 18,600	3%	\$ 39,600	6%
6 HOSPITALITY TAX	\$ 44,713	6%	\$ 44,713	5%	\$ 44,713	8%	\$ 44,713	6%
TOTAL	\$ 703,931	100%	\$ 929,839	100%	\$ 533,348	100%	\$ 715,949	100%

Source: Weitzman Associates, LLC



*Detailed Analyses*

Tables I 19, I 20, I 21, I 22, I 23, and I 24 on the following pages detail the valuation assumptions and projected taxes for tax and use component of the proposed prototypical three scenarios.

## CONCLUSION

We cannot overemphasize the effect that the economic and market conditions will have on the ultimate net fiscal impact to the Town of Harvard and cannot speculate at this time on future value of real estate due to a significant level of market uncertainty.

Assuming access to public sewer and water infrastructure, the lack of which has long been holding back commercial development in Harvard's Commercial District, and given pending demand in Harvard for small-scale multi-family development and street-oriented retail, additional incremental small-scale mixed-use development will contribute to the funding of the Town's expenditures and have a strong positive impact on the diversification of Harvard's fiscal base. We note that a precise cost estimate for providing access to public water and sewer services in the Commercial District has yet to be determined pending more detailed engineering studies. Financing options for providing this service would typically include developer participation.

Our analysis is subject to the Basic Assumptions and Limiting Conditions contained in the Addenda of our main report which also includes our Market Analysis for Harvard's Commercial District. It has been a pleasure to be of service on this assignment. Please call us if you have any questions or comments regarding this study.

Very truly yours,  
Weitzman Associates, LLC

Dr. Marie-Danielle Faucher  
MAI, MRICS, Assoc. AIA, OAQ  
Senior Vice President

Brandon Nolasco  
Associate Consultant



TABLE 119  
SCENARIO 1- DETAILED PROJECTED TAXES

SCENARIO 1														
FOR-SALE SCENARIO							FOR-RENT SCENARIO						COMMERCIAL	
	RESIDENTIAL 17% AFFORDABLE UNITS		TOTAL	RESIDENTIAL 50% AFFORDABLE UNITS		TOTAL	RESIDENTIAL 17% AFFORDABLE UNITS		TOTAL	RESIDENTIAL 50% AFFORDABLE UNITS		TOTAL	COMMERCIAL RETAIL	
	Market-Rate	Affordable		Market-Rate	Affordable		Market-Rate	Affordable		Market-Rate	Affordable		Low	High
# Units	5	1	6	3	3	6	5	1	6	3	3	6	n.a.	n.a.
% Units	83%	17%	100%	50%	50%	100%	83%	17%	100%	50%	50%	100%	n.a.	n.a.
Sq.ft. / Unit	2,200	2,200	2,200	2,200	2,200	2,200	1,300	1,300	0	1,300	1,300	2,200	n.a.	n.a.
Total Sq.Ft.	11,000	2,200	13,200	6,600	6,600	13,200	6,500	1,300	7,800	3,900	3,900	7,800	12,000	15,000
# Households / Businesses	5	1	6	3	3	6	5	1	6	3	3	6	4	5
# Parcels	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	1
TOTAL ANNUAL TAXES														
1 REAL ESTATE PROPERTY TAXES	\$58,118	\$3,940	\$62,058	\$34,871	\$11,821	\$46,691	\$34,925	\$2,910	\$37,835	\$20,955	\$8,731	\$29,686	\$59,037	\$73,796
2 PERSONAL PROPERTY TAX			\$0			\$0			\$0			\$0	\$7,156	\$7,156
3 VEHICLE EXCISE TAX			\$3,015			\$3,015			\$3,015			\$3,015	\$0	\$0
4 TRANSFER STATION FEE			\$900			\$900			\$900			\$900	\$0	\$0
5 MEALS TAX			\$0			\$0			\$0			\$0	\$0	\$0
6 HOSPITALITY TAX			\$0			\$0			\$0			\$0	\$0	\$0
TOTAL			\$65,973			\$50,606			\$41,750			\$33,601	\$66,193	\$80,952

SUMMARY- SCENARIO 1, FOR-SALE RESIDENTIAL

	RESIDENTIAL		COMMERCIAL		TOTAL	
	LOW	HIGH	LOW	HIGH	LOW	HIGH
Size-Square Feet	13,200	13,200	12,000	15,000		
# Units	6	6	n.a.	n.a.		
% Affordable	50% Affordable	17% affordable	n.a.	n.a.		
1 REAL ESTATE PROPERTY TAXES	\$46,691	\$62,058	\$59,037	\$73,796	\$105,728	\$135,854
2 PERSONAL PROPERTY TAX	\$0	\$0	\$7,156	\$7,156	\$7,156	\$7,156
3 VEHICLE EXCISE TAX	\$3,015	\$3,015	\$0	\$0	\$3,015	\$3,015
4 TRANSFER STATION FEE	\$900	\$900	\$0	\$0	\$900	\$900
5 MEALS TAX	\$0	\$0	\$0	\$0	\$0	\$0
6 HOSPITALITY TAX	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	\$50,606	\$65,973	\$66,193	\$80,952	\$116,799	\$146,925

SUMMARY- SCENARIO 1, FOR-RENT RESIDENTIAL

	RESIDENTIAL		COMMERCIAL		TOTAL	
	LOW	HIGH	LOW	HIGH	LOW	HIGH
Size-Square Feet	7,800	7,800	12,000	15,000		
# Units	6	6	n.a.	n.a.		
% Affordable	50% Affordable	17% affordable	n.a.	n.a.		
1 REAL ESTATE PROPERTY TAXES	\$29,686	\$37,835	\$59,037	\$73,796	\$88,723	\$111,631
2 PERSONAL PROPERTY TAX	\$0	\$0	\$7,156	\$7,156	\$7,156	\$7,156
3 VEHICLE EXCISE TAX	\$3,015	\$3,015	\$0	\$0	\$3,015	\$3,015
4 TRANSFER STATION FEE	\$900	\$900	\$0	\$0	\$900	\$900
5 MEALS TAX	\$0	\$0	\$0	\$0	\$0	\$0
6 HOSPITALITY TAX	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	\$33,601	\$41,750	\$66,193	\$80,952	\$99,794	\$122,702

Source: Weitzman Associates, LLC





TABLE 120  
SCENARIO 1- VALUATION ASSUMPTIONS AND DETAILED PROJECTED TAXES

SCENARIO 1																
	FOR-SALE SCENARIO						FOR-RENT SCENARIO						COMMERCIAL			
	RESIDENTIAL 17% AFFORDABLE UNITS			RESIDENTIAL 50% AFFORDABLE UNITS			RESIDENTIAL 17% AFFORDABLE UNITS			RESIDENTIAL 50% AFFORDABLE UNITS			COMMERCIAL RETAIL			
	Market-Rate	Affordable	TOTAL	Market-Rate	Affordable	TOTAL	Market-Rate	Affordable	TOTAL	Market-Rate	Affordable	TOTAL	Low	High		
	# Units	5	1	6	3	3	6	5	1	6	3	3	6			
	% Units	83%	17%	100%	50%	50%	100%	83%	17%	100%	50%	50%	100%			
	Sq.ft. / Unit	2,200	2,200	2,200	2,200	2,200	2,200	1,300	1,300	0	1,300	1,300	2,200			
	Total Sq.Ft.	11,000	2,200	13,200	6,600	6,600	13,200	6,500	1,300	7,800	3,900	3,900	7,800	12,000	15,000	
	# Households / Businesses	5	1	6	3	3	6	5	1	6	3	3	6	4	5	
	# Parcels	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	1	
1	REAL ESTATE PROPERTY TAXES															
	Estimated Value	Average Value / Sq.Ft.	\$295	\$100	\$263	\$295	\$100	\$198	\$300	\$125	\$271	\$300	\$125	\$213	\$275	\$275
		Average Value / Unit	\$649,000	\$220,000	\$577,500	\$649,000	\$220,000	\$434,500	\$390,000	\$162,500	\$352,083	\$390,000	\$162,500	\$276,250	n.a.	n.a.
		Average Value Total	\$3,245,000	\$220,000	\$3,465,000	\$1,947,000	\$660,000	\$2,607,000	\$1,950,000	\$162,500	\$2,112,500	\$1,170,000	\$487,500	\$1,657,500	\$3,300,000	\$4,125,000
	Taxable Value		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Tax Rate / \$1,000		\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.89	\$17.89
	Aggregate Annual Taxes		\$58,118	\$3,940	\$62,058	\$34,871	\$11,821	\$46,691	\$34,925	\$2,910	\$37,835	\$20,955	\$8,731	\$29,686	\$59,037	\$73,796
	Aggregate Annual Taxes / sq.ft.		\$5.28	\$1.79	\$4.70	\$5.28	\$1.79	\$3.54	\$5.37	\$2.24	\$4.85	\$5.37	\$2.24	\$3.81	\$4.92	\$4.92
2	PERSONAL PROPERTY TAX															
	Personal Property Taxable Value	\$400,000	/ parcel												\$400,000	\$400,000
	Personal Property Taxable Value / Sq.Ft.														\$33	\$27
	Tax Rate	\$17.89	/ \$1,000												\$17.89	\$17.89
	# Parcels														1	1
	Aggregate Annual Taxes														\$7,156.00	\$7,156.00
	Aggregate Annual Taxes / sq.ft.														\$0.60	\$0.48
3	VEHICLE EXCISE TAX															
	# Households	5	1	6												
	# Cars / Households	3.35	3.35	3.35												
	Total Vehicles	16.75	3.35	20.1												
	Estimated Value / Vehicle	\$6,000	\$6,000	\$6,000												
	Estimated Aggregate Value	\$100,500	\$20,100	\$120,600												
	Tax Rate / \$1,000	\$25	\$25	\$25												
	Aggregate Annual Taxes	\$2,513	\$503	\$3,015												
	Aggregate Annual Taxes / Vehicle	\$150	\$150	\$150												
4	TRANSFER STATION FEE															
	# Households	5	1	6												
	Estimated Fee / Household	\$150	\$150	\$150												
	Estimated Annual Revenues	\$750	\$150	\$900												
5	MEALS TAX															
	Retail Sq. Ft.														12,000	15,000
	Potential Annual Retail Sales/ Sq.Ft.														\$400	\$400
	% F&B														0%	0%
	Estimated F&B Annual Revenues														\$0	\$0
	Meals Tax	0.75%													\$0	\$0
	Source: Weitzman Associates, LLC															



TABLE 121  
SCENARIO 2- DETAILED PROJECTED TAXES

SCENARIO 2														
FOR-RENT SCENARIO														
COMMERCIAL														
RESIDENTIAL 10% AFFORDABLE UNITS														
RESIDENTIAL 33% AFFORDABLE UNITS														
RESIDENTIAL 10% AFFORDABLE UNITS														
RESIDENTIAL 33% AFFORDABLE UNITS														
COMMERCIAL RETAIL														
Low														
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Source: Weitzman Associates, LLC



TABLE 122  
SCENARIO 2- VALUATION ASSUMPTIONS AND DETAILED PROJECTED TAXES

			SCENARIO 2														
			FOR-SALE SCENARIO						FOR-RENT SCENARIO			COMMERCIAL					
			RESIDENTIAL 10% AFFORDABLE UNITS		TOTAL	RESIDENTIAL 33% AFFORDABLE UNITS		TOTAL	RESIDENTIAL 10% AFFORDABLE UNITS		TOTAL	RESIDENTIAL 33% AFFORDABLE UNITS		TOTAL	COMMERCIAL RETAIL		
			Market-Rate	Affordable		Market-Rate	Affordable		Market-Rate	Affordable		Market-Rate	Affordable		Low	High	
			# Units	27	3	30	20	10	30	27	3	30	20	10	30		
			% Units	90%	10%	100%	67%	33%	100%	90%	10%	100%	67%	33%	100%		
			Sq.ft. / Unit	2,200	2,200	2,200	2,200	2,200	2,200	1,300	1,300	0	1,300	1,300	2,200		
			Total Sq.Ft.	59,400	6,600	66,000	44,000	22,000	66,000	35,100	3,900	39,000	26,000	13,000	39,000	15,000	30,000
			# Households / Businesses	27	3	30	20	10	30	27	3	30	20	10	30	5	7
			# Parcels	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1	3
1	REAL ESTATE PROPERTY TAXES 2022																
	Estimated Value		Average Value / Sq.Ft.	\$295	\$100	\$276	\$295	\$100	\$230	\$300	\$125	\$283	\$300	\$125	\$242	\$275	\$275
			Average Value / Unit	\$649,000	\$220,000	\$606,100	\$649,000	\$220,000	\$506,000	\$390,000	\$162,500	\$367,250	\$390,000	\$162,500	\$314,167	n.a.	n.a.
			Average Value Total	\$17,523,000	\$660,000	\$18,183,000	\$12,980,000	\$2,200,000	\$15,180,000	\$10,530,000	\$487,500	\$11,017,500	\$7,800,000	\$1,625,000	\$9,425,000	\$4,125,000	\$8,250,000
	Taxable Value			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Tax Rate / \$1,000			\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.91	\$17.89	\$17.89
	Aggregate Annual Taxes			\$313,837	\$11,821	\$325,658	\$232,472	\$39,402	\$271,874	\$188,592	\$8,731	\$197,323	\$139,698	\$29,104	\$168,802	\$73,796	\$147,593
	Aggregate Annual Taxes / sq.ft.			\$5.28	\$1.79	\$4.93	\$5.28	\$1.79	\$4.12	\$5.37	\$2.24	\$5.06	\$5.37	\$2.24	\$4.33	\$4.92	\$4.92
2	PERSONAL PROPERTY TAX																
	Personal Property Taxable Value		\$400,000													\$400,000	\$400,000
	Personal Property Taxable Value / Sq.Ft.															\$27	\$40
	Tax Rate		\$17.89													\$17.89	\$17.89
	# Parcels															1	3
	Aggregate Annual Taxes															\$7,156.00	\$21,468.00
Aggregate Annual Taxes / sq. ft.																\$0.48	\$0.72
3	Vehicle Excise Tax																
	# Households		27	3	30												
	# Cars / Households		3.35	3.35	3.35												
	Total Vehicles		90.45	10.05	100.5												
	Estimated Value / Vehicle		\$6,000	\$6,000	\$6,000												
	Estimated Aggregate Value		\$542,700	\$60,300	\$603,000												
Tax Rate / \$1,000		\$25	\$25	\$25													
Aggregate Annual Taxes		\$13,568	\$1,508	\$15,075													
Aggregate Annual Taxes / Vehicle		\$150	\$150	\$150													
4	TRANSFER STATION FEE																
	# Households		27	3	30												
	Estimated Fee / Household or Business		\$150	\$150	\$150												
	Estimated Annual Revenues		\$4,050	\$450	\$4,500												
5	MEALS TAX																
	Retail Sq. Ft.															15,000	30,000
	Potential Annual Retail Sales/ Sq.Ft.															\$400	\$400
	% F&B															15%	20%
	Estimated F&B Annual Revenues															\$900,000	\$2,400,000
	Meals Tax		0.75%													\$6,750	\$18,000
Source: Weitzman Associates, LLC																	



TABLE 123  
SCENARIO 3- DETAILED PROJECTED TAXES

	SCENARIO 3														
	FOR-SALE SCENARIO						FOR-RENT SCENARIO						COMMERCIAL		INN
	RESIDENTIAL 10% AFFORDABLE			RESIDENTIAL 34% AFFORDABLE			RESIDENTIAL 10% AFFORDABLE			RESIDENTIAL 34% AFFORDABLE			COMMERCIAL RETAIL		
	UNITS			UNITS			UNITS			UNITS			Low High		
	Market-Rate	Affordable	TOTAL	Market-Rate	Affordable	TOTAL	Market-Rate	Affordable	TOTAL	Market-Rate	Affordable	TOTAL			keys
# Units	45	5	50	33	17	50	45	5	50	33	17	50			20 keys
% Units	90%	10%	100%	66%	34%	100%	90%	10%	100%	66%	34%	100%			
Sq. ft. / Unit	2,200	2,200	2,200	2,200	2,200	2,200	1,300	1,300	0	1,300	1,300	2,200			
Total Sq. Ft.	99,000	11,000	110,000	72,600	37,400	110,000	58,500	6,500	65,000	42,900	22,100	65,000	20,000	40,000	20,000
# Households / Businesses	45	5	50	33	17	50	45	5	50	33	17	50	6	8	20 keys
# Parcels	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2	4	1
TOTAL ANNUAL TAXES															
1 REAL ESTATE PROPERTY TAXES	\$523,062	\$19,701	\$542,763	\$383,578	\$66,983	\$450,562	\$314,321	\$14,552	\$328,872	\$230,502	\$49,476	\$279,978	\$98,395	\$196,790	\$35,780
2 PERSONAL PROPERTY TAX			\$0			\$0			\$0			\$0	\$14,312	\$28,624	\$8,945
3 VEHICLE EXCISE TAX			\$25,125			\$25,125			\$25,125			\$25,125	\$0	\$0	\$0
4 TRANSFER STATION FEE			\$7,500			\$7,500			\$7,500			\$7,500	\$0	\$0	\$0
5 MEALS TAX			\$0			\$0			\$0			\$0	\$15,000	\$36,000	\$3,600
6 HOSPITALITY TAX			\$0			\$0			\$0			\$0	\$0	\$0	\$44,713
TOTAL			\$575,388			\$483,187			\$361,497			\$312,603	\$127,707	\$261,414	\$93,038

SUMMARY- SCENARIO 3, FOR-SALE RESIDENTIAL		RESIDENTIAL		COMMERCIAL		INN	TOTAL	
		LOW	HIGH	LOW	HIGH		LOW	HIGH
Size-Square Feet		110,000	110,000	20,000	40,000	20,000		
# Units		50	50	n.a.	n.a.	20		
% Affordable		34% Affordable	10% affordable	n.a.	n.a.	n.a.		
1 REAL ESTATE PROPERTY TAXES	\$450,562	\$542,763	\$98,395	\$196,790	\$35,780	\$584,737	\$775,333	
2 PERSONAL PROPERTY TAX	\$0	\$0	\$14,312	\$28,624	\$8,945	\$23,257	\$37,569	
3 VEHICLE EXCISE TAX	\$25,125	\$25,125	\$0	\$0	\$0	\$25,125	\$25,125	
4 TRANSFER STATION FEE	\$7,500	\$7,500	\$0	\$0	\$0	\$7,500	\$7,500	
5 MEALS TAX	\$0	\$0	\$15,000	\$36,000	\$3,600	\$18,600	\$39,600	
6 HOSPITALITY TAX	\$0	\$0	\$0	\$0	\$44,713	\$44,713	\$44,713	
TOTAL	\$483,187	\$575,388	\$127,707	\$261,414	\$93,038	\$703,931	\$929,839	

SUMMARY- SCENARIO 3, FOR-RENT RESIDENTIAL		RESIDENTIAL		COMMERCIAL		INN	TOTAL	
		LOW	HIGH	LOW	HIGH		LOW	HIGH
Size-Square Feet		65,000	65,000	20,000	40,000	20,000		
# Units		0	0	n.a.	n.a.	20		
% Affordable		34% Affordable	10% affordable	n.a.	n.a.	n.a.		
1 REAL ESTATE PROPERTY TAXES	\$279,978	\$328,872	\$98,395	\$196,790	\$35,780	\$414,153	\$561,442	
2 PERSONAL PROPERTY TAX	\$0	\$0	\$14,312	\$28,624	\$8,945	\$23,257	\$37,569	
3 VEHICLE EXCISE TAX	\$25,125	\$25,125	\$0	\$0	\$0	\$25,125	\$25,125	
4 TRANSFER STATION FEE	\$7,500	\$7,500	\$0	\$0	\$0	\$7,500	\$7,500	
5 MEALS TAX	\$0	\$0	\$15,000	\$36,000	\$3,600	\$18,600	\$39,600	
6 HOSPITALITY TAX	\$0	\$0	\$0	\$0	\$44,713	\$44,713	\$44,713	
TOTAL	\$312,603	\$361,497	\$127,707	\$261,414	\$48,325	\$533,348	\$715,949	

Source: Weitzman Associates, LLC

TABLE 124  
SCENARIO 3- VALUATION ASSUMPTIONS AND DETAILED PROJECTED TAXES

[illegible]

Source: Weitzman Associates, LLC

## **EXHIBIT B**

### **PHOTOGRAPHS OF PROPERTIES IN THE COMMERCIAL DISTRICT**













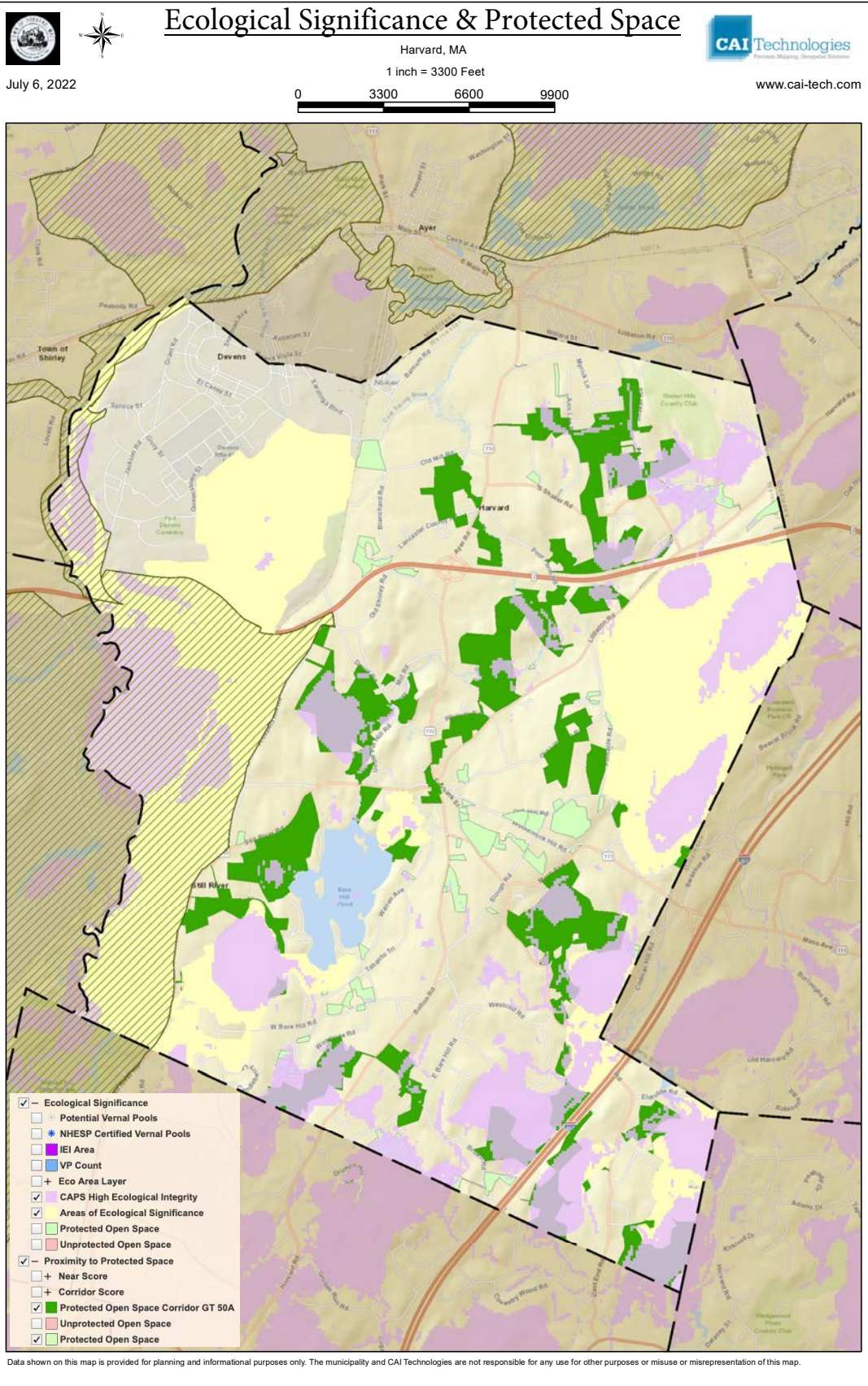




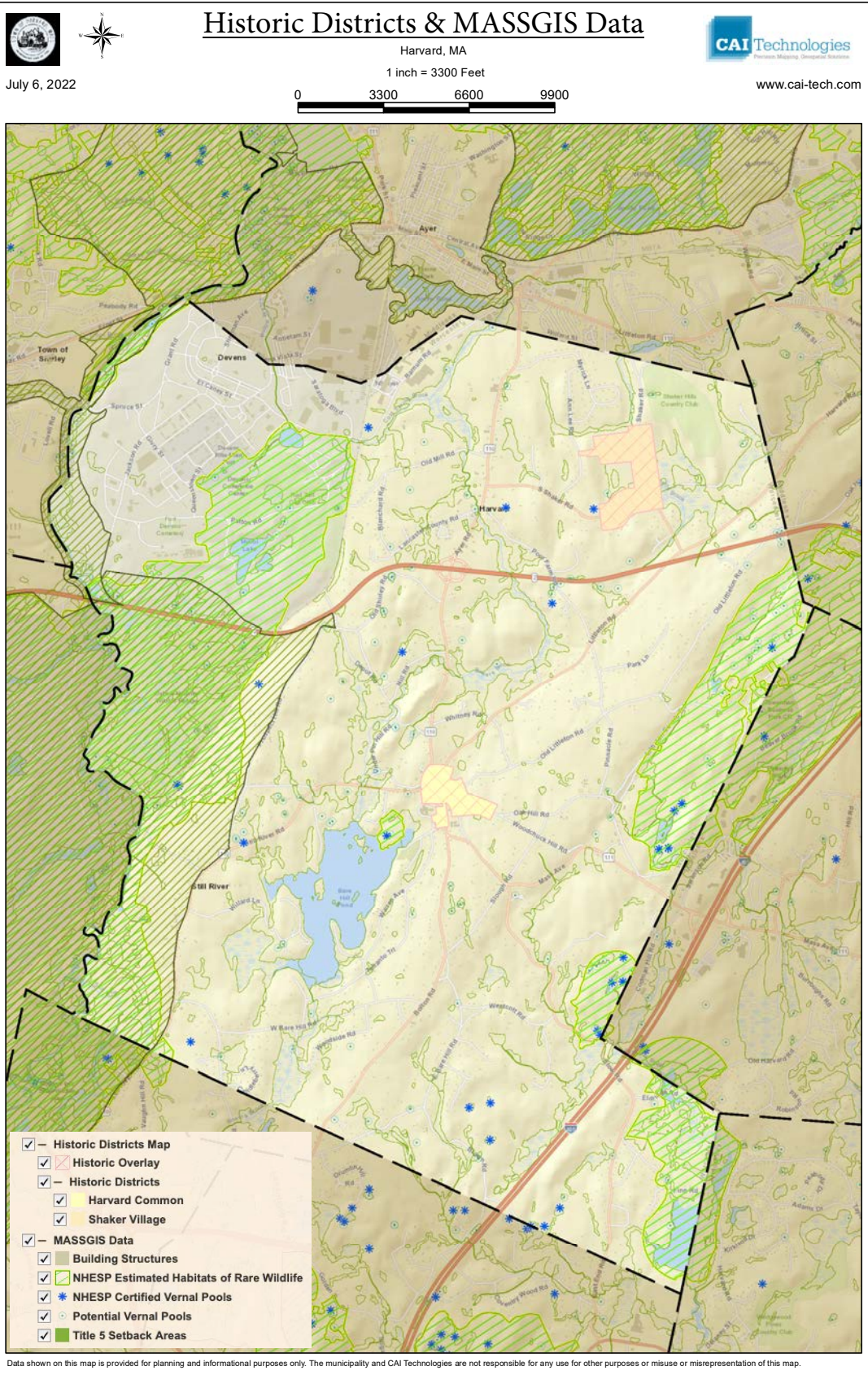


## EXHIBIT C

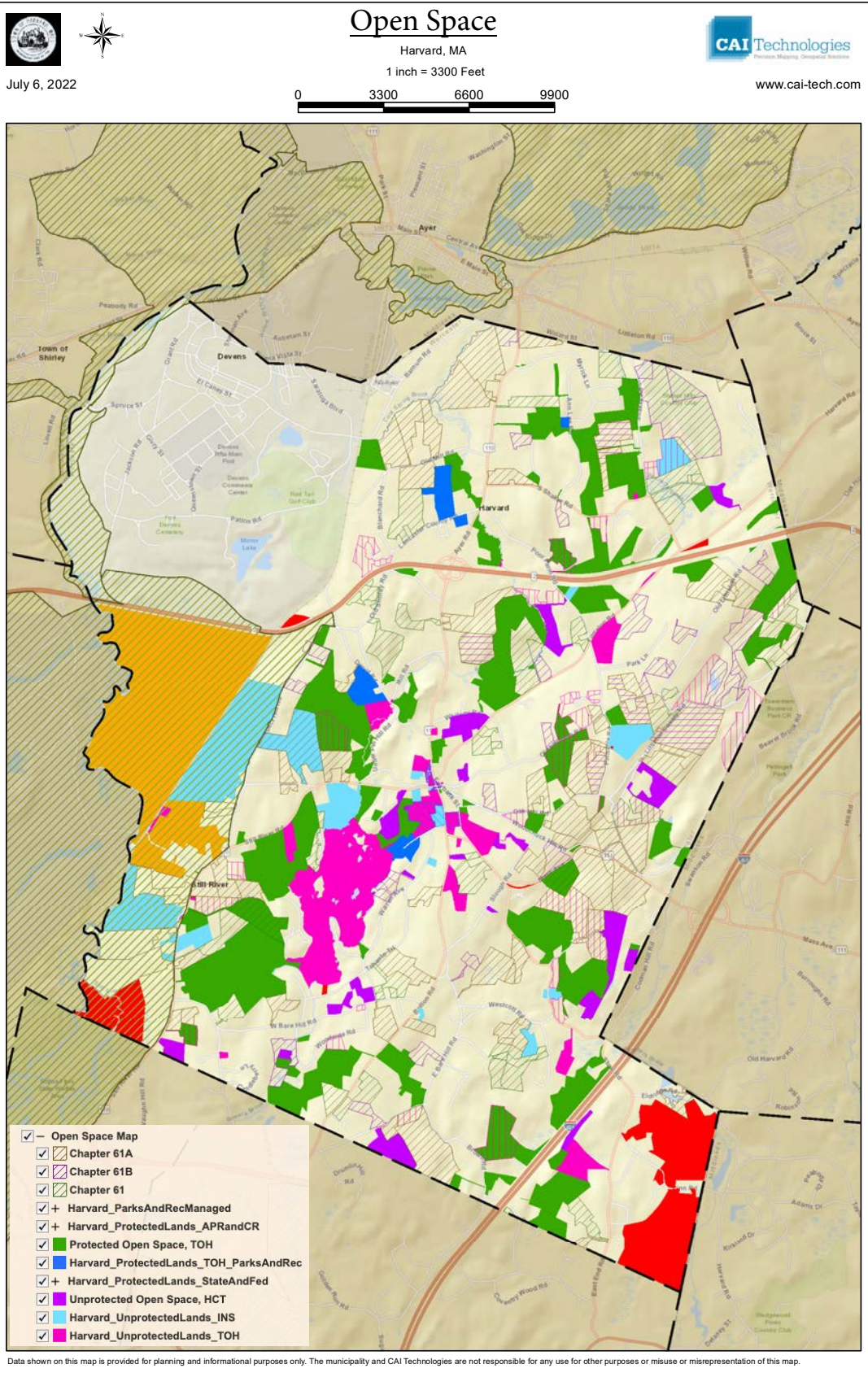
### GIS MAPS OF HARVARD



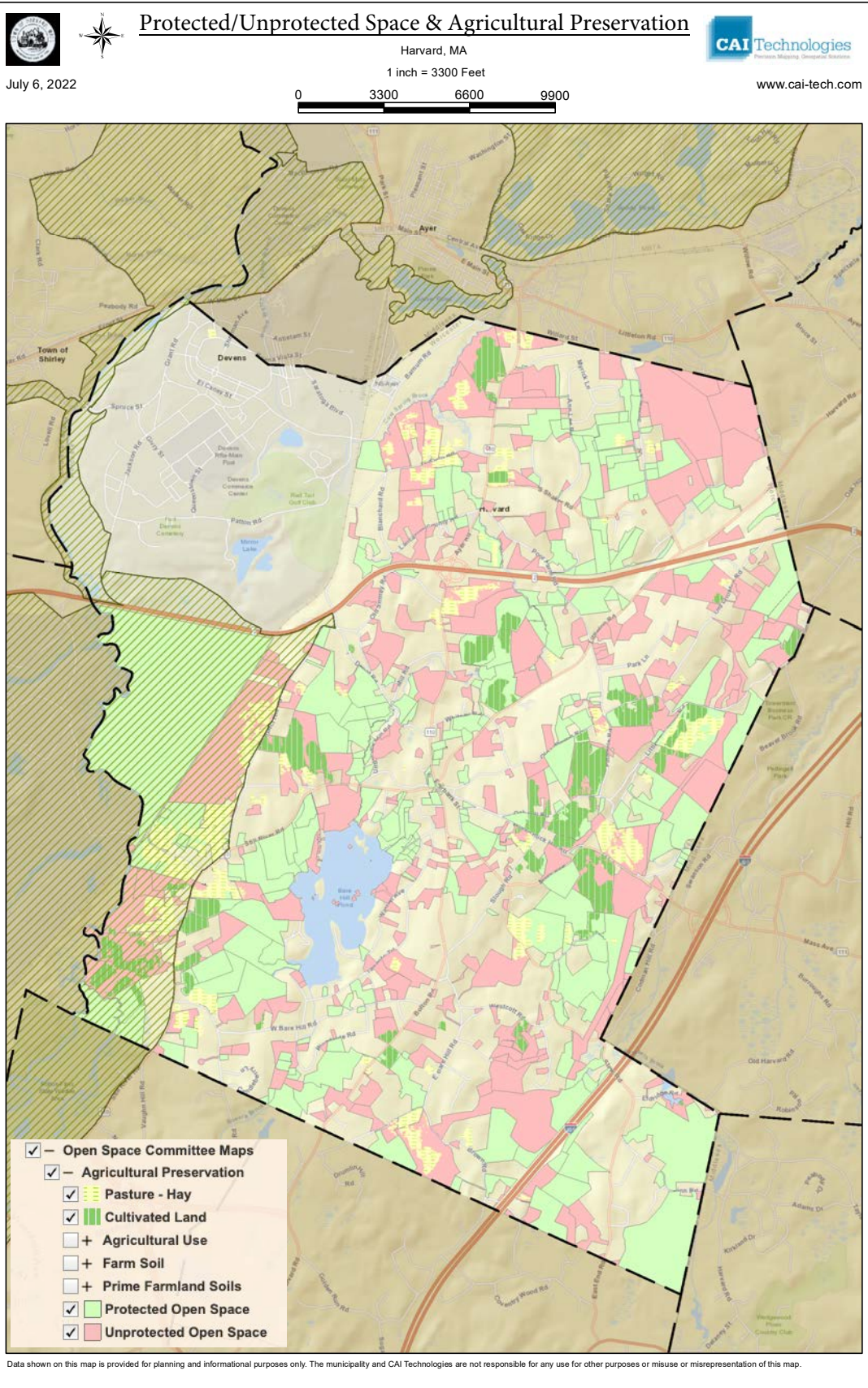




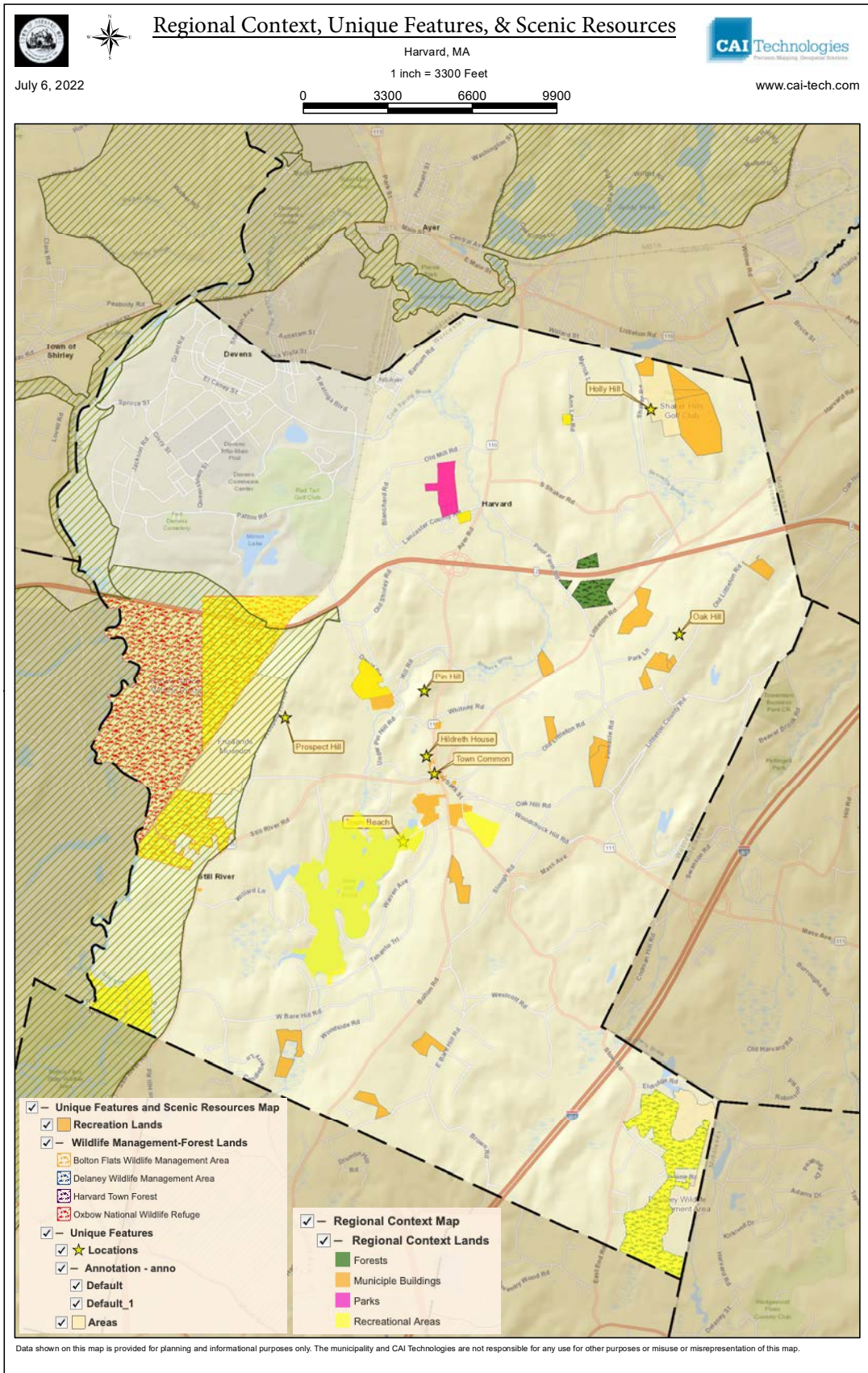




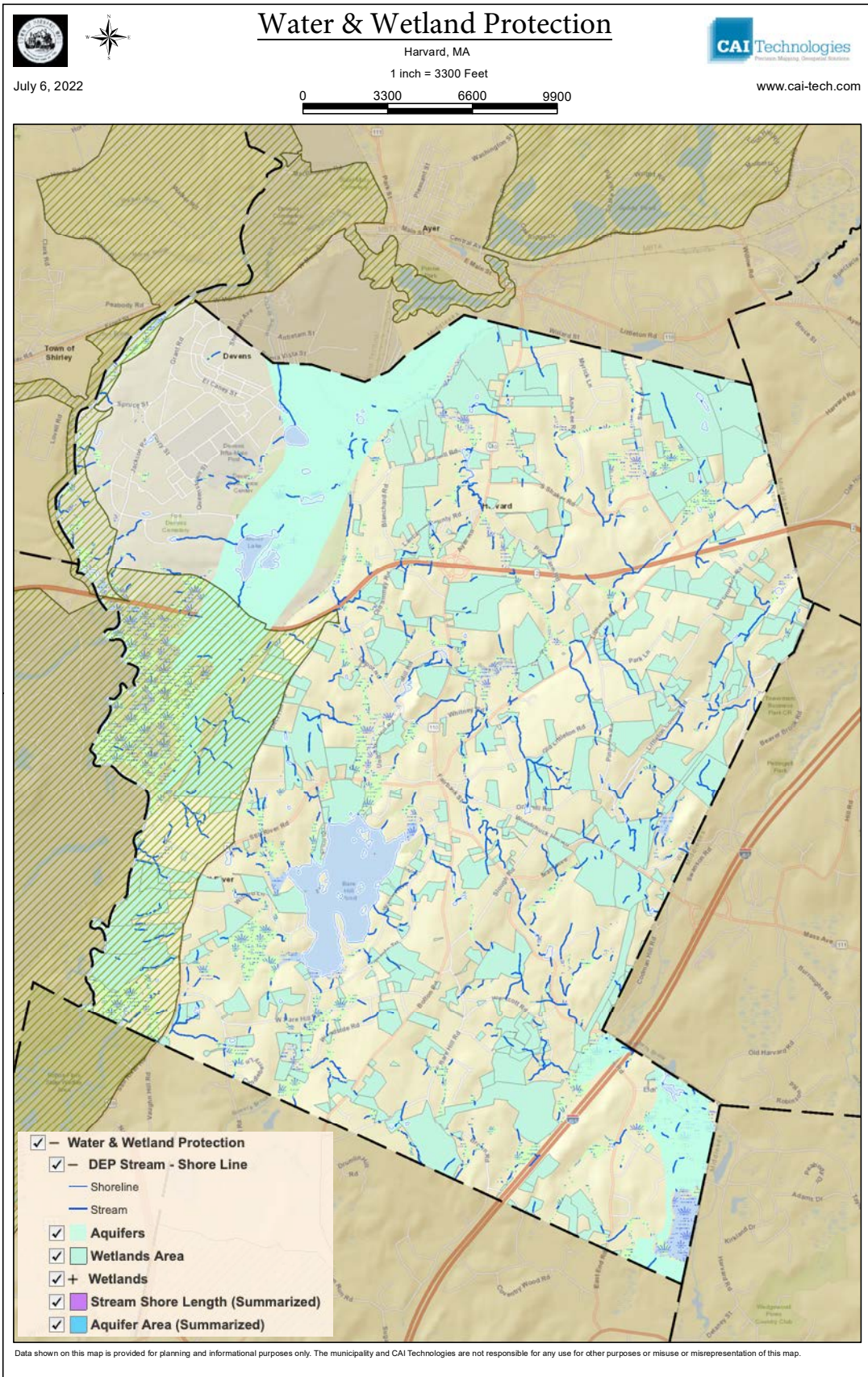




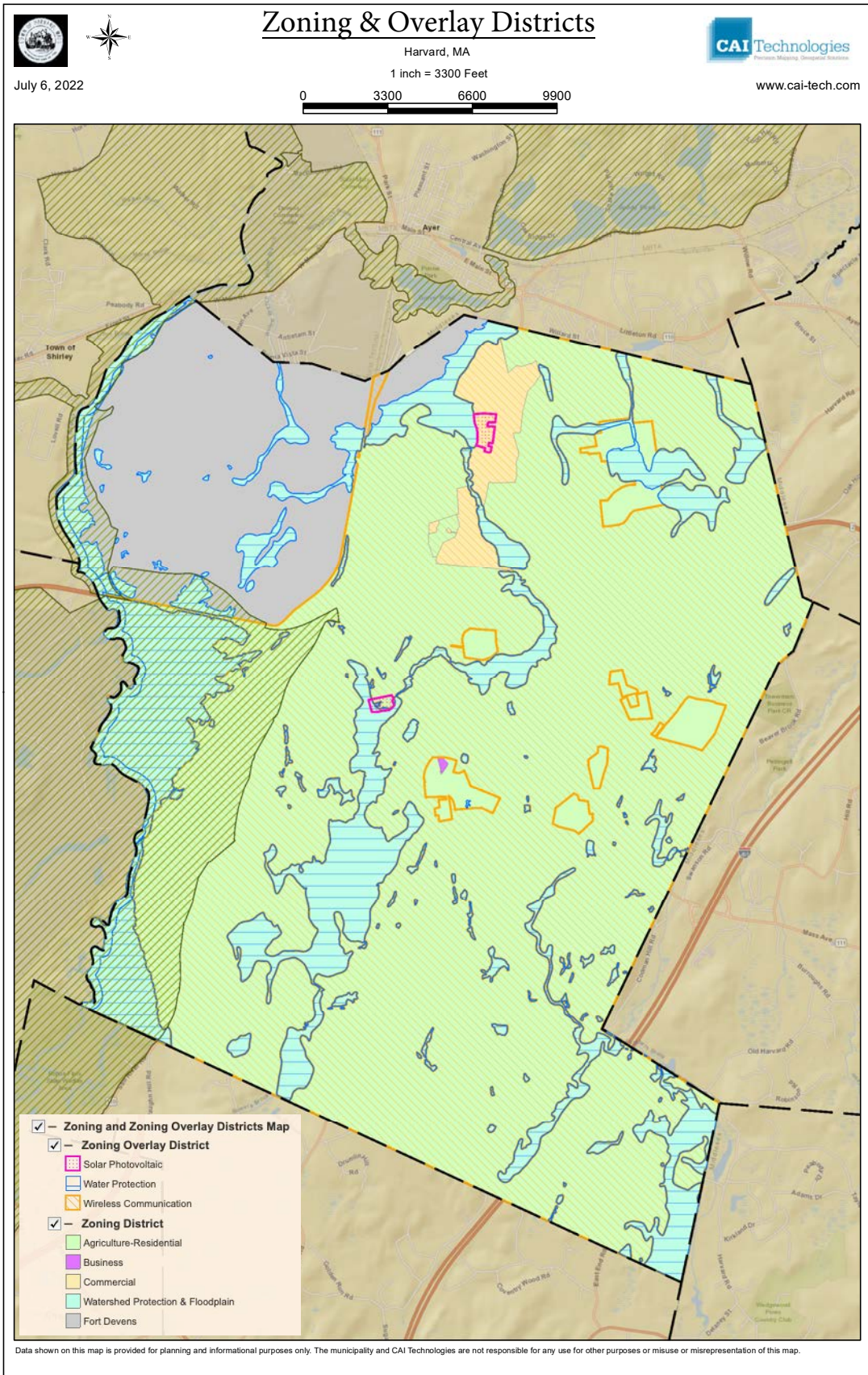












## EXHIBIT D

### EMPLOYMENT TRENDS – TOWN OF HARVARD



EMPLOYMENT TRENDS: TOWN OF HARVARD

TABLE 125  
**EMPLOYED POPULATION 16+ BY OCCUPATION**  
TOWN OF HARVARD

	2022 Estimate	%
<b>White Collar</b>	<b>2,521</b>	<b>85.1%</b>
Management/Business/Financial	834	33.1%
Professional	915	36.3%
Sales	234	9.3%
Administrative Support	164	6.5%
<b>Blue Collar</b>	<b>308</b>	<b>10.4%</b>
Farming/Forestry/Fishing	1	0.4%
Construction/Extraction	13	4.3%
Installation/Maintenance/Repair	3	1.1%
Production	2	0.8%
Transportation/Material Moving	12	3.8%
<b>Services</b>	<b>133</b>	<b>4.5%</b>
<b>Total</b>	<b>2,962</b>	<b>100.0%</b>

1) Esri forecasts for 2022 and 2027. U.S. Census Bureau 2000 and 2010 decennial Census data converted by Esri into 2020 geography.

Source: ESRI Business Analyst; U.S. Census Bureau; compiled by Weitzman Associates, LLC

TABLE 126  
CIVILIAN EMPLOYED POPULATION 16+ BY OCCUPATION  
TOWN OF HARVARD

	2020 Estimate	%	MOE(±)
Management	720	25.5%	178
Business and Financial Operations	306	10.9%	143
Computer and Mathematical	156	5.5%	74
Architecture and Engineering	167	5.9%	98
Life, Physical, and Social Science	64	2.3%	50
Community And Social Services	52	1.8%	44
Legal	34	1.2%	31
Education, Training, and Library	269	9.5%	249
Arts, Design, Entertainment, Sports, and Media	46	1.6%	34
Healthcare Practitioner, Technologists, and Technicians	112	4.0%	65
Healthcare Support	53	1.9%	56
Protective Service	25	0.9%	30
Food Preparation and Serving Related	20	0.7%	27
Building, Grounds Cleaning, and Maintenance	25	0.9%	30
Personal Care and Service	131	4.6%	89
Sales and Related	177	6.3%	86
Office and Administrative Support	326	11.6%	140
Farming, Fishing, and Forestry	0	0.0%	19
Construction and Extraction	59	2.1%	48
Installation, Maintenance, and Repair	27	1.0%	30
Production	21	0.7%	26
Transportation and Material Moving	29	1.0%	44
<b>Total</b>	<b>2,819</b>	<b>100.0%</b>	<b>390</b>

1) 2016-2020 ACS Estimate: The American Community Survey's (ACS) 2020 estimates use five-year period data collected monthly from January 1, 2016 through December 31, 2020.

2) Margin of error (MOE): A measure of estimate variability due to sampling error, measured with 90% confidence. Called the confidence interval, the range of uncertainty is the estimate +/- the MOE.

Source: ESRI Business Analyst; U.S. Census Bureau; 2016-2020 American Community Survey; compiled by Weitzman Associates, LLC

TABLE 127  
CIVILIAN EMPLOYED POPULATION 16+ BY INDUSTRY  
TOWN OF HARVARD

	2020 Estimate	%	MOE(±)
Agriculture, Forestry, Fishing, and Hunting	25	0.9%	36
Mining, Quarrying, and Oil & Gas Extraction	0	0.0%	19
Construction	131	4.6%	69
Manufacturing	362	12.8%	119
Wholesale Trade	114	4.0%	77
Retail Trade	284	10.1%	131
Transportation and Warehousing	0	0.0%	19
Utilities	29	1.0%	30
Information	73	2.6%	52
Finance and Insurance	153	5.4%	83
Real Estate, Rental, and Leasing	45	1.6%	39
Professional, Scientific, and Technical Services	333	11.8%	109
Management of Companies and Enterprises	0	0.0%	19
Administrative, Support, and Waste Management Services	86	3.1%	53
Educational Services	415	14.7%	277
Health Care and Social Assistance	301	10.7%	138
Arts, Entertainment, and Recreation	128	4.5%	79
Accommodation and Food Services	137	4.9%	103
Other Services, Except Public Administration	138	4.9%	92
Public Administration	65	2.3%	45
<b>Total</b>	<b>2,819</b>	<b>100.0%</b>	<b>390</b>

1) 2016-2020 ACS Estimate: The American Community Survey's (ACS) 2020 estimates use five-year period data collected monthly from January 1, 2016 through December 31, 2020.

2) Margin of error (MOE): A measure of estimate variability due to sampling error, measured with 90% confidence. Called the confidence interval, the range of uncertainty is the estimate +/- the MOE.

Source: ESRI Business Analyst; U.S. Census Bureau; 2016-2020 American Community Survey; compiled by Weitzman Associates, LLC

TABLE 128  
**WORKERS AGE 16+ YEARS**  
TOWN OF HARVARD

<b>By Place of Work</b>	2020 Estimate	%	MOE(±)
Worked in state and in county of residence	1,278	46.7%	362
Worked in state and outside county of residence	1,396	51.0%	298
Worked outside state of residence	62	2.3%	32
<b>Total</b>	<b>2,736</b>	<b>100.0%</b>	<b>391</b>
<b>By Means of Transportation to Work</b>	2020 Estimate	%	MOE(±)
Drove alone	1,775	64.9%	289
Carpooled	140	5.1%	111
Public transportation (excluding taxicab)	153	5.6%	84
Bus or trolley bus	0	0.0%	19
Light rail, streetcar or trolley	0	0.0%	19
Subway or elevated	5	0.2%	8
Long-distance/Commuter Train	148	5.4%	83
Ferryboat	0	0.0%	19
Taxicab	0	0.0%	19
Motorcycle	0	0.0%	19
Bicycle	0	0.0%	19
Walked	46	1.7%	39
Other means	0	0.0%	19
Worked at home	622	22.7%	276
<b>Total</b>	<b>2,736</b>	<b>100.0%</b>	<b>391</b>
<b>By Travel Time to Work (3)</b>	2020 Estimate	%	MOE(±)
Less than 5 minutes	106	5.0%	76
5 to 9 minutes	142	6.7%	68
10 to 14 minutes	264	12.5%	134
15 to 19 minutes	142	6.7%	76
20 to 24 minutes	210	9.9%	92
25 to 29 minutes	163	7.7%	76
30 to 34 minutes	110	5.2%	58
35 to 39 minutes	37	1.8%	32
40 to 44 minutes	157	7.4%	66
45 to 59 minutes	355	16.8%	148
60 to 89 minutes	280	13.2%	107
90 or more minutes	148	7.0%	79
<b>Total</b>	<b>2,114</b>	<b>100.0%</b>	<b>346</b>
Average Travel Time to Work (in minutes)	36	-	9

1) 2016-2020 ACS Estimate: The American Community Survey's (ACS) 2020 estimates use five-year period data collected monthly from January 1, 2016 through December 31, 2020.

2) Margin of error (MOE): A measure of estimate variability due to sampling error, measured with 90% confidence. Called the confidence interval, the range of uncertainty is the estimate +/- the MOE.

3) Excluding those who work from home

Source: ESRI Business Analyst; U.S. Census Bureau; 2016-2020 American Community Survey; compiled by Weitzman Associates, LLC

## EXHIBIT E

### EXTENDED FOR-SALE MARKET TRENDS

# EXTENDED FOR-SALE MARKET TRENDS

TABLE 129

EXTENDED FOR-SALE MARKET TRENDS  
TOWN OF HARVARD

	Homes Sold			Median Sale Price			Avg. Sale to List Ratio		
	Single	MF	Townhomes	Single	MF	Townhomes	Single	MF	Townhomes
Jan-17	7		1	\$560,000		\$480,000	100%		97%
Feb-17	2			\$628,831			115%		
Mar-17	5	1		\$650,000	\$406,655		102%	101%	
Apr-17	4			\$649,500			98%		
May-17	5			\$637,500			96%		
Jun-17	5	1		\$675,000	\$373,990		96%	101%	
Jul-17	10		1	\$682,500		\$195,000	97%		100%
Aug-17	6	1	2	\$589,500	\$630,000	\$328,500	96%	103%	101%
Sep-17	7	1		\$515,500	\$250,500		98%	100%	
Oct-17	5		1	\$580,000		\$209,900	97%		100%
Nov-17	4	1	1	\$692,500	\$364,000	\$212,000	100%	100%	96%
Dec-17	5	1		\$604,000	\$453,585		98%	102%	
Jan-18	4		1	\$642,000		\$437,500	97%		97%
Feb-18	3	1	1	\$424,500	\$422,000	\$223,500	99%	98%	99%
Mar-18	2	1		\$800,000	\$459,000		98%	100%	
Apr-18	6	1	2	\$612,500	\$459,000	\$441,450	99%	100%	99%
May-18	3			\$889,500			97%		
Jun-18	11	1	1	\$675,000	\$448,175	\$229,000	98%	101%	102%
Jul-18	12	1	3	\$592,500	\$526,280	\$299,000	96%	115%	99%
Aug-18	5	3	2	\$500,000	\$448,315	\$221,750	92%	100%	103%
Sep-18	5	1	4	\$420,000	\$490,000	\$223,000	97%	107%	98%
Oct-18	9	1	2	\$560,000	\$473,800	\$249,000	98%	101%	98%
Nov-18	12	1	3	\$677,500	\$477,080	\$228,000	97%	102%	99%
Dec-18	5	1	1	\$480,000	\$450,000	\$230,000	96%	100%	98%
Jan-19	2			\$712,500			97%		
Feb-19	2		1	\$422,500		\$274,000	97%		100%
Mar-19	6		1	\$602,500		\$279,000	96%		100%
Apr-19	5			\$620,000			99%		
May-19	4		3	\$534,875		\$314,000	100%		97%
Jun-19	8		2	\$662,500		\$240,000	99%		102%
Jul-19	13		1	\$630,000		\$234,150	97%		100%
Aug-19	7		4	\$565,000		\$264,950	97%		101%
Sep-19	6		1	\$586,000		\$250,000	97%		104%
Oct-19	6			\$622,500			96%		
Nov-19	6	2		\$551,015	\$454,318		98%	99%	
Dec-19	6			\$550,750			101%		
Jan-20	5	1	1	\$485,000	\$573,970	\$285,000	92%	109%	98%
Feb-20	3	1	1	\$541,950	\$265,000	\$234,900	99%	100%	100%
Mar-20	7		1	\$614,000		\$423,000	97%		98%
Apr-20	6			\$586,655			97%		
May-20	7	2		\$604,418	\$427,765		99%	101%	
Jun-20	4	1		\$572,138	\$403,420		98%	101%	
Jul-20	17		2	\$805,000		\$265,000	100%		100%
Aug-20	12	2		\$706,250	\$450,000		100%	100%	
Sep-20	11	1	2	\$609,000	\$515,000	\$280,000	99%	98%	102%
Oct-20	11	2	2	\$685,000	\$464,833	\$367,500	101%	102%	102%
Nov-20	5	1	1	\$675,000	\$530,000	\$505,000	101%	106%	101%
Dec-20	12	1	4	\$711,750	\$525,000	\$481,301	96%	95%	101%
Jan-21	7	2	2	\$580,000	\$433,250	\$374,250	100%	101%	103%
Feb-21	4			\$818,000			98%		
Mar-21	2		2	\$712,787		\$385,000	115%		107%
Apr-21	7			\$625,000			106%		
May-21	8	2	6	\$681,000	\$296,747	\$484,950	111%	79%	104%
Jun-21	14	1	2	\$790,000	\$525,000	\$504,950	106%	95%	100%
Jul-21	8	3	2	\$691,000	\$508,100	\$350,600	106%	102%	102%
Aug-21	17	1		\$775,000	\$340,000		108%	98%	
Sep-21	13	1		\$800,000	\$1,350,000		104%	97%	
Oct-21	4			\$965,000			101%		
Nov-21	8		2	\$718,009		\$318,500	109%		106%
Dec-21	5		1	\$699,000		\$300,000	102%		100%
Jan-22	7		2	\$649,000		\$310,000	102%		100%
Feb-22			1			\$625,000			114%
Mar-22	1	1		\$849,000	\$475,000		100%	100%	
Apr-22	2		1	\$1,228,500		\$703,000	101%		108%
May-22	3		8	\$950,000		\$612,907	112%		105%

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC



TABLE 130

EXTENDED FOR-SALE MARKET TRENDS  
CENTRAL MIDDLESEX REGION (SUBREGION OF BOSTON MSA)

	Homes sold		Median Sale Price		Avg PPSF		Avg Sale to List		Avg Months Supply	
	Single	MF	Single	MF	Single	MF	Single	MF	Single	MF
Jan-17	114	29	\$677,500	\$352,000	\$302	\$240	94.1%	96.5%	3.1	3.3
Feb-17	60	22	\$740,000	\$243,100	\$298	\$196	94.5%	95.9%	6.7	4.6
Mar-17	119	46	\$722,000	\$341,400	\$301	\$242	96.2%	96.8%	4.4	2.4
Apr-17	106	40	\$742,500	\$402,000	\$306	\$250	98.9%	98.9%	5.9	3.0
May-17	191	68	\$803,000	\$387,700	\$318	\$260	98.6%	99.1%	3.5	1.7
Jun-17	252	70	\$820,750	\$382,100	\$315	\$262	99.3%	99.1%	2.8	1.7
Jul-17	243	74	\$740,000	\$404,000	\$300	\$283	98.4%	99.1%	2.6	1.6
Aug-17	271	81	\$820,000	\$395,000	\$311	\$279	97.3%	98.5%	2.2	1.5
Sep-17	151	44	\$750,000	\$375,000	\$317	\$253	95.4%	98.9%	4.1	2.5
Oct-17	132	56	\$661,500	\$387,450	\$282	\$280	97.0%	97.0%	4.2	1.8
Nov-17	168	41	\$696,000	\$447,500	\$303	\$287	97.2%	97.7%	2.6	2.5
Dec-17	166	31	\$799,950	\$405,000	\$315	\$257	96.2%	97.5%	1.9	2.6
Jan-18	92	31	\$761,500	\$320,000	\$325	\$252	94.8%	95.0%	3.5	3.0
Feb-18	64	15	\$765,037	\$344,000	\$307	\$220	94.2%	100.3%	5.7	7.6
Mar-18	105	26	\$785,000	\$605,000	\$311	\$297	96.7%	99.7%	4.2	4.7
Apr-18	113	52	\$787,000	\$479,300	\$307	\$290	98.9%	99.4%	4.6	2.5
May-18	194	55	\$825,000	\$357,888	\$322	\$255	99.6%	101.3%	3.1	2.3
Jun-18	297	63	\$780,000	\$307,900	\$336	\$248	100.0%	100.2%	2.0	2.3
Jul-18	254	80	\$800,000	\$426,000	\$329	\$264	99.3%	100.1%	2.2	1.4
Aug-18	247	63	\$850,000	\$404,500	\$325	\$259	98.4%	98.1%	2.1	1.9
Sep-18	129	40	\$730,000	\$412,500	\$307	\$291	96.6%	98.0%	4.7	3.6
Oct-18	121	46	\$815,000	\$322,000	\$325	\$266	97.4%	98.1%	4.6	3.2
Nov-18	178	40	\$778,863	\$438,950	\$328	\$288	96.8%	98.6%	2.5	3.2
Dec-18	121	41	\$801,000	\$466,500	\$322	\$292	95.4%	99.8%	2.8	2.3
Jan-19	77	32	\$757,000	\$408,750	\$327	\$251	95.1%	96.5%	5.1	3.5
Feb-19	66	24	\$617,500	\$306,000	\$294	\$261	95.3%	98.8%	6.1	4.8
Mar-19	99	41	\$690,000	\$397,725	\$283	\$255	96.7%	99.2%	4.9	2.9
Apr-19	147	48	\$807,000	\$455,000	\$320	\$270	97.2%	99.9%	3.9	2.4
May-19	197	78	\$840,000	\$420,575	\$325	\$291	99.5%	99.7%	3.6	1.9
Jun-19	254	56	\$789,500	\$381,500	\$320	\$284	99.2%	100.5%	2.7	2.4
Jul-19	244	72	\$785,000	\$483,000	\$320	\$301	98.3%	99.4%	2.5	1.7
Aug-19	220	59	\$834,250	\$475,000	\$325	\$282	96.6%	99.2%	2.4	2.1
Sep-19	137	42	\$774,900	\$390,000	\$309	\$296	96.0%	97.9%	4.8	3.4
Oct-19	160	53	\$730,000	\$370,000	\$299	\$293	96.5%	97.2%	3.9	2.3
Nov-19	127	38	\$740,000	\$484,500	\$324	\$290	95.7%	97.4%	3.4	2.4
Dec-19	174	39	\$799,500	\$480,000	\$315	\$289	94.5%	97.4%	1.5	1.9
Jan-20	107	29	\$755,000	\$358,000	\$319	\$246	93.9%	97.4%	2.8	3.3
Feb-20	76	33	\$760,000	\$367,500	\$304	\$268	95.1%	97.9%	4.7	3.0
Mar-20	101	40	\$825,000	\$452,000	\$318	\$287	98.0%	100.1%	3.6	1.8
Apr-20	157	37	\$850,000	\$536,500	\$323	\$325	98.5%	99.4%	2.1	2.0
May-20	165	37	\$785,000	\$490,000	\$314	\$287	98.4%	98.0%	2.6	2.5
Jun-20	205	33	\$845,000	\$468,000	\$325	\$304	97.9%	98.6%	2.1	2.5
Jul-20	269	80	\$875,000	\$436,250	\$344	\$302	99.3%	98.8%	1.4	1.1
Aug-20	270	59	\$936,250	\$530,000	\$347	\$301	99.7%	99.2%	1.2	1.5
Sep-20	205	59	\$840,000	\$455,000	\$335	\$308	99.5%	99.2%	1.8	1.5
Oct-20	208	49	\$839,250	\$467,500	\$345	\$307	100.3%	100.3%	1.6	1.7
Nov-20	183	47	\$850,000	\$525,000	\$364	\$316	100.6%	99.6%	1.3	0.4
Dec-20	190	57	\$858,000	\$335,000	\$346	\$294	99.2%	98.7%	0.8	0.7
Jan-21	110	41	\$970,000	\$418,000	\$350	\$291	99.9%	98.7%	1.6	1.3
Feb-21	86	20	\$835,000	\$346,000	\$342	\$252	100.3%	99.5%	2.0	2.7
Mar-21	110	38	\$957,500	\$437,500	\$355	\$287	101.8%	102.4%	1.8	1.6
Apr-21	170	57	\$1,004,000	\$504,000	\$359	\$284	104.4%	101.9%	1.4	1.1
May-21	141	59	\$1,020,000	\$425,000	\$372	\$299	106.5%	103.3%	1.4	0.9
Jun-21	303	54	\$1,018,000	\$472,000	\$396	\$315	108.1%	104.6%	0.8	1.2
Jul-21	257	70	\$1,050,000	\$542,550	\$397	\$343	106.0%	104.8%	0.8	1.2
Aug-21	232	54	\$1,057,500	\$501,900	\$399	\$330	106.8%	102.5%	1.0	1.5
Sep-21	181	66	\$975,000	\$440,000	\$387	\$312	104.8%	102.8%	1.6	1.3
Oct-21	151	67	\$900,000	\$387,000	\$361	\$304	102.2%	101.4%	1.4	1.2
Nov-21	179	50	\$889,000	\$540,000	\$398	\$321	104.2%	102.5%	0.8	1.2
Dec-21	170	48	\$1,057,500	\$636,250	\$368	\$369	103.2%	100.8%	0.4	0.8
Jan-22	91	27	\$805,000	\$410,500	\$375	\$299	101.1%	101.4%	1.2	2.0
Feb-22	70	23	\$1,074,500	\$470,000	\$396	\$385	106.5%	104.8%	1.5	1.8
Mar-22	105	43	\$1,010,000	\$475,000	\$420	\$315	106.9%	106.0%	1.7	1.3
Apr-22	112	55	\$1,181,000	\$775,000	\$429	\$347	110.0%	105.9%	1.8	1.2
May-22	176	48	\$1,245,000	\$546,000	\$435	\$324	112.7%	107.5%	1.1	1.6

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

TABLE 131

EXTENDED FOR-SALE MARKET TRENDS  
GREATER BOSTON MSA

	Homes Sold		Median Sale Price		Avg PPSE		Avg Sale to List		Avg Months Supply	
	Single	MF	Single	MF	Single	MF	Single	MF	Single	MF
Jan-17	836	624	\$520,000	\$505,000	\$290	\$483	96.0%	97.7%	1.5	2.4
Feb-17	509	464	\$504,000	\$520,000	\$279	\$467	96.3%	99.1%	4.2	3.2
Mar-17	838	823	\$552,912	\$515,000	\$303	\$525	97.8%	100.0%	3.1	2.1
Apr-17	851	739	\$590,000	\$520,000	\$314	\$539	99.5%	101.1%	3.5	2.5
May-17	1,247	1,091	\$597,000	\$525,000	\$316	\$515	100.5%	102.0%	2.6	1.8
Jun-17	1,942	1,374	\$609,250	\$520,000	\$321	\$541	100.6%	102.5%	1.7	1.4
Jul-17	1,560	1,168	\$601,500	\$530,000	\$322	\$521	100.1%	101.7%	1.9	1.6
Aug-17	1,626	1,191	\$605,000	\$530,000	\$314	\$520	99.0%	100.7%	1.7	1.5
Sep-17	1,118	881	\$573,000	\$497,500	\$311	\$527	98.5%	100.1%	2.8	2.4
Oct-17	1,122	861	\$565,000	\$505,000	\$311	\$521	98.9%	100.3%	2.6	2.4
Nov-17	1,157	979	\$566,000	\$540,000	\$316	\$540	98.5%	99.7%	2.1	1.8
Dec-17	1,053	826	\$589,000	\$540,000	\$313	\$511	97.7%	99.0%	1.6	1.5
Jan-18	794	620	\$550,000	\$520,000	\$317	\$525	97.4%	98.1%	2.2	2.2
Feb-18	481	467	\$541,000	\$546,000	\$309	\$520	97.3%	99.1%	4.2	3.1
Mar-18	742	767	\$575,500	\$549,000	\$317	\$564	99.1%	100.7%	3.0	2.0
Apr-18	860	883	\$610,500	\$594,190	\$328	\$579	100.5%	101.8%	3.2	2.2
May-18	1,218	1,085	\$629,500	\$550,870	\$339	\$556	101.1%	102.3%	2.7	2.0
Jun-18	1,851	1,321	\$650,000	\$579,200	\$343	\$580	101.1%	101.8%	1.8	1.7
Jul-18	1,654	1,280	\$648,840	\$599,750	\$339	\$579	100.7%	101.3%	1.9	1.6
Aug-18	1,686	1,270	\$624,500	\$575,000	\$333	\$567	99.0%	100.2%	1.7	1.5
Sep-18	995	764	\$595,000	\$572,500	\$315	\$563	98.5%	99.3%	3.5	3.2
Oct-18	1,091	802	\$603,000	\$540,000	\$326	\$549	98.4%	99.4%	3.1	3.2
Nov-18	1,234	881	\$586,500	\$563,087	\$331	\$564	97.5%	99.0%	2.3	2.7
Dec-18	975	752	\$585,000	\$542,250	\$319	\$535	96.3%	98.2%	2.1	2.3
Jan-19	709	554	\$589,000	\$565,000	\$323	\$517	95.8%	97.2%	3.1	3.6
Feb-19	591	540	\$572,500	\$530,000	\$317	\$527	96.0%	97.3%	3.4	3.2
Mar-19	800	706	\$599,400	\$550,000	\$326	\$546	97.6%	98.9%	2.9	2.9
Apr-19	954	872	\$620,000	\$551,000	\$336	\$562	98.3%	99.6%	2.8	2.6
May-19	1,323	1,178	\$635,000	\$595,000	\$345	\$599	100.1%	99.8%	2.5	2.2
Jun-19	1,616	1,253	\$650,000	\$619,900	\$343	\$633	99.9%	99.8%	2.0	2.0
Jul-19	1,684	1,170	\$655,000	\$580,000	\$343	\$573	99.2%	99.5%	1.7	2.0
Aug-19	1,572	1,164	\$640,000	\$568,000	\$332	\$575	98.1%	98.9%	1.6	1.7
Sep-19	1,064	813	\$605,000	\$550,000	\$328	\$556	97.6%	98.5%	2.9	3.3
Oct-19	1,047	868	\$593,000	\$549,700	\$327	\$543	97.7%	98.2%	2.8	3.0
Nov-19	1,055	844	\$599,000	\$565,000	\$332	\$535	97.4%	98.1%	2.1	2.4
Dec-19	1,190	910	\$600,500	\$585,000	\$330	\$568	96.4%	97.4%	1.1	1.6
Jan-20	772	689	\$605,000	\$577,500	\$321	\$571	96.1%	97.0%	1.9	2.4
Feb-20	552	604	\$614,000	\$579,000	\$336	\$548	96.6%	97.7%	3.1	2.8
Mar-20	762	785	\$635,875	\$619,000	\$342	\$586	98.8%	99.3%	2.3	2.0
Apr-20	897	761	\$660,000	\$604,915	\$342	\$590	99.8%	99.9%	2.0	2.2
May-20	894	615	\$667,500	\$578,754	\$337	\$534	99.1%	99.0%	2.4	3.4
Jun-20	1,161	781	\$680,000	\$590,000	\$345	\$566	99.2%	99.1%	1.9	3.2
Jul-20	1,572	1,138	\$700,000	\$591,250	\$360	\$563	100.2%	99.2%	1.3	2.4
Aug-20	1,590	1,146	\$719,500	\$592,500	\$356	\$570	100.5%	99.3%	1.2	2.3
Sep-20	1,420	988	\$680,000	\$593,000	\$356	\$561	100.6%	98.6%	1.5	3.5
Oct-20	1,452	971	\$699,000	\$575,000	\$365	\$540	100.9%	98.7%	1.4	3.6
Nov-20	1,239	897	\$700,000	\$579,000	\$369	\$556	101.2%	98.2%	1.2	3.2
Dec-20	1,435	1,112	\$680,000	\$569,950	\$361	\$543	99.9%	97.3%	0.6	1.8
Jan-21	883	769	\$674,900	\$589,000	\$345	\$493	99.6%	96.8%	1.1	2.7
Feb-21	606	643	\$646,800	\$595,000	\$338	\$484	99.8%	96.9%	1.6	3.1
Mar-21	812	1,097	\$721,450	\$617,150	\$361	\$529	102.4%	98.9%	1.4	1.9
Apr-21	1,026	1,262	\$760,000	\$615,000	\$370	\$558	104.5%	99.8%	1.4	1.8
May-21	1,183	1,394	\$759,900	\$639,950	\$376	\$580	106.2%	101.0%	1.1	1.5
Jun-21	1,865	1,617	\$812,000	\$640,000	\$410	\$626	106.8%	101.7%	0.8	1.4
Jul-21	1,695	1,446	\$788,000	\$638,250	\$412	\$626	105.6%	101.1%	0.9	1.5
Aug-21	1,565	1,320	\$780,000	\$637,500	\$399	\$629	104.2%	99.9%	0.9	1.5
Sep-21	1,247	1,201	\$750,000	\$620,000	\$397	\$629	103.3%	99.9%	1.4	2.2
Oct-21	1,055	957	\$700,000	\$609,900	\$385	\$618	101.9%	99.7%	1.4	2.4
Nov-21	1,259	1,007	\$750,000	\$625,000	\$406	\$609	102.2%	99.6%	0.8	1.8
Dec-21	1,305	1,109	\$749,900	\$622,500	\$375	\$529	101.9%	98.8%	0.4	1.0
Jan-22	750	725	\$725,000	\$595,000	\$367	\$510	101.1%	98.0%	0.8	1.6
Feb-22	491	554	\$760,000	\$650,000	\$387	\$542	103.0%	99.4%	1.3	2.3
Mar-22	752	882	\$788,500	\$675,000	\$414	\$562	106.1%	101.9%	1.4	1.9
Apr-22	897	1,029	\$845,000	\$715,000	\$422	\$609	107.9%	102.8%	1.5	1.7
May-22	1,200	1,158	\$875,000	\$700,000	\$427	\$616	109.1%	103.3%	1.1	1.7

Source: Greater Boston Association of Realtors; compiled by Weitzman Associates, LLC

## EXHIBIT F

### EXTENDED TRAILING SALE HISTORY – SINGLE-FAMILY

## EXTENDED TRAILING SALE HISTORY (24 MONTHS) – SINGLE-FAMILY

**TABLE 132**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
1 Bedroom Units

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
37 Pine Ridge Dr	1920	\$155,000	\$310	1	1	500	11/15/21
3 Pattee Rd	1960	\$275,000	\$337	1	1	816	6/16/21
104 Still River Rd	2009	\$580,000	\$425	1	2.5	1,366	1/22/21
<b>PRIMARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	3	\$336,667	\$357	1	1.5	894	-
134 Arlington St	1951	\$537,600	\$637	1	1	844	2/28/22
312 Leominster Rd	1930	\$225,000	\$254	1	1	887	2/15/22
<b>SECONDARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	2	\$381,300	\$446	1	1.0	866	-
<b>TOTAL / AVERAGE</b>	<b>5</b>	<b>\$354,520</b>	<b>\$393</b>	<b>1</b>	<b>1.3</b>	<b>883</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 133**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
2 Bedroom Units

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
37 Peninsula Rd	2013	\$1,510,000	\$553	2	3	2,730	6/8/22
113 Old Mill Rd	1981	\$607,000	\$424	2	1	1,432	5/24/22
7 Peninsula Dr	1956	\$775,000	\$1,009	2	1	768	9/1/21
44 E Bare Hill Rd	1985	\$490,000	\$395	2	2	1,241	1/8/21
351 Ayer Rd	1940	\$291,000	\$352	2	1.5	827	12/23/20
7 Phe Hill Way	2020	\$475,000	\$474	2	1.5	1,002	N/A
<b>PRIMARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	6	\$691,333	\$535	2	1.7	1,333	-
73 Nicholas Dr	2010	\$630,000	\$324	2	2	1,946	7/15/22
164 Nicholas Dr	2009	\$650,000	\$372	2	2	1,749	7/11/22
15 Rhodenda Rd	1930	\$200,000	\$169	2	1	1,180	7/8/22
59 Emery Rd	1975	\$262,100	\$108	2	1.5	2,427	7/1/22
66 Lowell Rd	1960	\$360,000	\$337	2	1	1,067	6/21/22
37 Wallis Park	1900	\$350,000	\$352	2	1	995	6/16/22
<b>SECONDARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	24	\$416,701	\$322	2	1.4	1,368	-
<b>TOTAL / AVERAGE</b>	<b>30</b>	<b>\$471,627</b>	<b>\$365</b>	<b>2</b>	<b>1.4</b>	<b>1,361</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 134**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
2 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
243 Pleasant St	1950	\$391,500	\$240	2	1	1,629	6/13/22
5 McDowell St	1942	\$326,000	\$392	2	1	832	5/31/22
23 Charlotte St	1950	\$290,000	\$322	2	1	900	5/25/22
27 Dana St	1946	\$505,000	\$312	2	2	1,617	5/23/22
3 Collins Dr	1960	\$530,000	\$559	2	1.5	948	4/28/22
41 Sawyer Way	2008	\$645,312	\$236	2	2.5	2,736	4/21/22
380 School St	1956	\$425,000	\$263	2	1.5	1,614	4/8/22
13 Dewey St	1920	\$249,900	\$270	2	1	924	2/28/22
230 North St	1952	\$310,000	\$315	2	1	985	2/28/22
329 Main St	1938	\$575,000	\$459	2	1.5	1,253	2/24/22
5 July Rd	1930	\$525,000	\$333	2	1	1,576	2/16/22
76 Sterling St	1945	\$320,000	\$287	2	1	1,116	2/14/22
6D Tucker Park Unit 6D	1993	\$307,000	\$236	2	1.5	1,300	1/31/22
4 Alder Rd	1920	\$449,000	\$291	2	2	1,544	1/28/22
30 S Meadow Rd	1955	\$340,000	\$268	2	1	1,268	1/20/22
11 Gates Pond Rd	1960	\$350,000	\$442	2	1	792	1/20/22
173 Main St	1950	\$535,000	\$375	2	1.5	1,426	1/20/22
7 Phe HI Way	2020	\$475,000	\$474	2	1.5	1,002	N/A
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	24	\$416,701	\$322	2	1.4	1,368	-
<b>TOTAL / AVERAGE</b>	<b>30</b>	<b>\$471,627</b>	<b>\$365</b>	<b>2</b>	<b>1.4</b>	<b>1,361</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 135**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
3 Bedroom Units

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
31 Lovers Ln	1987	\$800,000	\$299	3	2.5	2,678	7/15/22
240 Still River Rd	1920	\$520,000	\$319	3	2	1,628	7/8/22
54 Massachusetts Ave	1955	\$652,000	\$221	3	2	2,945	7/8/22
67 Slough Rd	1916	\$945,000	\$389	3	2.5	2,428	6/21/22
16 Old Schoolhouse Rd	1920	\$800,000	\$343	3	2.5	2,330	6/9/22
8 Hillcrest Dr	1965	\$639,000	\$257	3	2.5	2,483	6/1/22
10 Orchard HI	1976	\$950,000	\$343	3	2	2,768	5/27/22
129 W Bare Hill Rd	1998	\$1,152,000	\$386	3	3.5	2,988	1/28/22
341 Ayer Rd	1949	\$460,000	\$278	3	2	1,656	1/18/22
2 Hillcrest Dr	1962	\$649,000	\$279	3	3	2,330	1/13/22
30 Cruft Ln	1977	\$835,000	\$791	3	1.5	1,056	1/6/22
31 Woodside Rd	1958	\$695,000	\$290	3	1.5	2,396	12/16/21
PRIMARY MARKET							
SUBTOTAL / SUBAVERAGE	69	\$683,739	\$329	3	2.3	2,179	-
<b>TOTAL / AVERAGE</b>	<b>199</b>	<b>\$635,445</b>	<b>\$334</b>	<b>3</b>	<b>2.1</b>	<b>1,969</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 136**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
3 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
204 W Bare Hill Rd	1720	\$850,000	\$284	3	2.5	2,992	12/16/21
8 Bradley Cir	2021	\$709,367	\$368	3	3	1,930	11/23/21
203 Stow Rd	1850	\$395,000	\$310	3	1	1,276	11/16/21
90 Warren Ave	1951	\$726,650	\$946	3	1.5	768	11/16/21
162 Stow Rd	1940	\$445,000	\$308	3	1	1,445	11/12/21
38 Peninsula Rd	1945	\$1,200,000	\$440	3	2.5	2,728	10/5/21
145 Depot Rd	1915	\$500,000	\$318	3	2	1,573	9/21/21
58 Bolton Rd	2008	\$1,040,000	\$448	3	2.5	2,320	9/17/21
160 Prospect Hill Rd	2006	\$2,025,000	\$381	3	5	5,316	9/15/21
281 Littleton County Rd	1982	\$735,000	\$250	3	2	2,943	9/14/21
43 Massachusetts Ave	1950	\$430,000	\$322	3	1.5	1,337	8/31/21
18 Bradley Cir	2021	\$616,580	\$311	3	2.5	1,985	8/27/21
116 Bolton Rd	1952	\$800,000	\$339	3	2.5	2,360	8/23/21
83 Ann Lees Rd	1980	\$875,000	\$268	3	3	3,264	8/18/21
22 Bradley Cir	2021	\$608,365	\$315	3	2.5	1,930	8/12/21
5 Four Acre Is	1935	\$275,000	\$430	3	1	640	8/5/21
36 Lovers Ln	1886	\$665,000	\$321	3	2	2,072	8/5/21
310 Stow Rd	1983	\$775,000	\$308	3	2.5	2,515	8/5/21
16 Bradley Cir	2021	\$611,075	\$317	3	2.5	1,930	7/30/21
107 Old Mill Rd	1970	\$652,000	\$212	3	2	3,082	7/23/21
62 E Bare Hill Rd	1962	\$620,000	\$363	3	2	1,706	7/20/21
65 Lancaster County Rd	1971	\$620,000	\$253	3	2.5	2,455	7/19/21
94 Tahanto Trl	1989	\$910,000	\$314	3	3	2,898	6/22/21
51 1/2 Old Shirley Rd	2021	\$741,939	\$369	3	2.5	2,011	6/18/21
10 Bradley Cir	2020	\$673,215	\$339	3	2.5	1,985	6/4/21
127 Slough Rd	1981	\$1,040,127	\$318	3	3.5	3,267	6/2/21
88 Old Mill Rd	1970	\$554,000	\$415	3	1.5	1,334	5/25/21
61 Ayer Rd	1900	\$600,500	\$406	3	1	1,478	5/21/21
64 Massachusetts Ave	1955	\$625,000	\$337	3	2	1,856	5/17/21
14 Bradley Cir	2021	\$624,570	\$324	3	2.5	1,930	5/10/21
206 Stow Rd	1984	\$541,000	\$264	3	3	2,048	4/30/21
12 Bradley Cir	2020	\$612,320	\$317	3	2.5	1,930	4/30/21
69 Grant Rd	2020	\$413,300	\$248	3	2.5	1,664	4/14/21
4 Bradley Cir	2020	\$591,573	\$307	3	2.5	1,930	3/26/21
250 Stow Rd	1984	\$570,000	\$167	3	2.5	3,420	1/19/21
63 Grant Rd	2020	\$602,957	\$304	3	2.5	1,985	12/15/20
61 Grant Rd	2019	\$609,185	\$316	3	2.5	1,930	12/15/20
350 Ayer Rd	1940	\$535,000	\$246	3	2.5	2,172	12/8/20
60 Bolton Rd	1954	\$665,000	\$337	3	2.5	1,972	11/20/20
38 Mill Rd	2002	\$675,000	\$272	3	2.5	2,478	11/17/20
68 Still Riv	1925	\$529,900	\$368	3	1.5	1,440	11/16/20
56 Old Mill Rd	1959	\$462,000	\$311	3	2	1,485	10/23/20
96 Old Mill Rd	1974	\$529,900	\$294	3	2	1,800	10/23/20
10 Houghton Ln	1983	\$685,000	\$267	3	2.5	2,567	10/23/20
65 Grant Rd	2020	\$581,970	\$293	3	2.5	1,985	10/22/20
67 Grant Rd	2020	\$568,990	\$295	3	2.5	1,930	10/16/20
28 Chance St	2016	\$685,000	\$336	3	3	2,040	10/2/20
39 Brown Rd	1730	\$609,000	\$191	3	2	3,196	9/30/20
102 Old Shirley Rd	1850	\$635,000	\$331	3	2.5	1,920	9/29/20
13 Saint Johns Ln	1843	\$450,000	\$375	3	2.5	1,200	9/18/20
PRIMARY MARKET							
SUBTOTAL / SUBAVERAGE	69	\$683,739	\$329	3	2.3	2,179	-
<b>TOTAL / AVERAGE</b>	<b>199</b>	<b>\$635,445</b>	<b>\$334</b>	<b>3</b>	<b>2.1</b>	<b>1,969</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC



**TABLE 137**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
3 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
288 Ayer Rd	1890	\$326,000	\$164	3	2	1,984	8/25/20
86 Ayer Rd	1961	\$565,000	\$286	3	2.5	1,976	8/14/20
232 Massachusetts Ave	1982	\$682,500	\$276	3	2.5	2,476	8/14/20
109 East Bare Hill Rd	1980	\$732,000	\$261	3	3.5	2,800	8/7/20
9 Woodside Rd	1999	\$1,090,000	\$298	3	2.5	3,653	7/30/20
14 Depot Rd	1978	\$590,000	\$300	3	3	1,966	7/27/20
252 Bolton Rd	1961	\$600,000	\$436	3	2	1,376	7/21/20
<b>PRIMARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	69	\$683,739	\$329	3	2.3	2,179	-
45 Keyes Rd	1988	\$755,000	\$335	3	2.5	2,252	7/15/22
1 Greenwood Ln	1960	\$770,000	\$430	3	3	1,789	7/15/22
11 Lynwood Ln	1987	\$1,125,000	\$379	3	2.5	2,971	7/15/22
406 Central St	1967	\$660,000	\$333	3	2	1,984	7/14/22
11 Robin Hill Rd	1966	\$750,000	\$282	3	3	2,662	7/13/22
155 Fitch Rd	2001	\$325,000	\$308	3	2	1,056	7/8/22
39 Winterberry Way	1996	\$910,000	\$396	3	3.5	2,297	7/8/22
18 Olde Surrey Dr	1967	\$882,000	\$411	3	2.5	2,145	7/7/22
14 Brown St	1918	\$490,000	\$337	3	1	1,456	7/6/22
17 Nathan Dr	2003	\$630,000	\$214	3	2.5	2,940	7/5/22
507 Burrage St	1994	\$440,000	\$291	3	1.5	1,512	7/11/22
2 Howard Rd	1961	\$575,000	\$461	3	1.5	1,248	6/30/22
23 Nate Nutting Rd	1956	\$680,000	\$340	3	1.5	2,001	6/30/22
51 Bingham Rd	1969	\$699,000	\$365	3	2	1,916	6/30/22
33 Ross St	1989	\$181,000	\$168	3	2	1,080	6/24/22
17 Pine Grove Rd	1925	\$479,000	\$315	3	2	1,522	6/21/22
6 Harrison St	1900	\$562,500	\$438	3	1.5	1,284	6/21/22
17 Clydesdale Rd	1967	\$625,000	\$362	3	2.5	1,728	6/17/22
552 Lowell Rd	1975	\$802,000	\$287	3	3	2,796	6/17/22
14 Willow Rd	1974	\$507,000	\$503	3	1	1,008	6/16/22
119 Stearns	1962	\$2,000,000	\$535	3	3.5	3,740	6/16/22
12 Haskell Rd	1968	\$450,000	\$257	3	1	1,751	6/15/22
19 Nylander Way	1994	\$775,000	\$370	3	2.5	2,097	6/15/22
611 Leominster Rd	1956	\$449,000	\$340	3	2	1,320	6/10/22
6 Betsy Ross Cir	1963	\$775,000	\$369	3	2.5	2,100	6/10/22
172 High St	1930	\$620,000	\$420	3	2.5	1,476	6/9/22
72 Manning St	1875	\$385,000	\$410	3	1	940	6/8/22
13 Ranch Rd	1966	\$640,000	\$300	3	1.5	2,135	6/8/22
11 Samoset Trl	2020	\$820,000	\$404	3	2.5	2,030	6/8/22
13 Fairview Ave	2000	\$660,000	\$251	3	2	2,625	6/7/22
908 Main St	1890	\$440,000	\$200	3	2	2,205	6/3/22
113 Townsend Rd	1975	\$461,000	\$206	3	1	2,234	6/3/22
188 Great Rd	1954	\$580,000	\$397	3	1.5	1,460	6/3/22
30 Vinal St	1982	\$485,000	\$481	3	1.5	1,008	5/31/22
19 Durant Ave	1964	\$600,000	\$417	3	2	1,440	5/25/22
43 Old North Rd	1958	\$560,000	\$405	3	2	1,382	5/20/22
14 Chestnut Rd	1935	\$599,000	\$256	3	2	2,344	5/20/22
9 Crescent Rd	2015	\$405,000	\$325	3	2	1,248	5/19/22
<b>SECONDARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	130	\$609,813	\$336	3	1.9	1,858	-
<b>TOTAL / AVERAGE</b>	<b>199</b>	<b>\$635,445</b>	<b>\$334</b>	<b>3</b>	<b>2.1</b>	<b>1,969</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

3) All data is recent as of July 2022

**TABLE 138**  
**TRAILING SALES HISTORY OF SINGLE FAMILY**  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
3 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
30 Oak Rd	1961	\$665,000	\$426	3	2	1,562	5/17/22
1608 Massachusetts Ave	1920	\$355,000	\$207	3	1	1,711	5/13/22
26 Pennymeadow Rd	1957	\$860,000	\$411	3	1.5	2,092	5/11/22
166 Ballville Rd	1965	\$875,000	\$352	3	2.5	2,485	5/10/22
50 Parkerville Rd	1973	\$615,000	\$392	3	2	1,570	5/9/22
30 Pine Ridge Dr	1965	\$371,001	\$313	3	1	1,186	5/6/22
5 Louis Ave	2002	\$840,000	\$376	3	2.5	2,234	5/5/22
114-lot 1 Great Rd	2022	\$805,000	\$280	3	2.5	2,872	5/4/22
13 Windmill Hill Rd	1900	\$362,000	\$310	3	1.5	1,168	4/29/22
3 Lamson Ave	1967	\$396,000	\$384	3	2	1,032	4/28/22
595 Leominster Rd	1949	\$630,000	\$252	3	2	2,501	4/28/22
221 Leominster Rd	1973	\$515,000	\$295	3	2	1,744	4/26/22
22 Mount Henry Rd	1999	\$575,000	\$222	3	2.5	2,592	4/22/22
10 Chatham Rd	1961	\$615,000	\$373	3	2	1,648	4/22/22
17 Munroe Pl	1940	\$1,545,000	\$892	3	2.5	1,732	4/22/22
7 Wychwood Dr	1956	\$575,000	\$333	3	2	1,729	4/21/22
1 Amory Ave	1964	\$475,000	\$313	3	2	1,518	4/19/22
4 Warwick Dr	1985	\$735,000	\$309	3	2.5	2,376	4/19/22
36 Sandy Brook Dr	1960	\$600,000	\$264	3	2	2,277	4/15/22
42 Wildflower Rd	1988	\$607,000	\$224	3	2.5	2,704	4/15/22
26 Providence Rd	1986	\$750,000	\$385	3	2	1,950	4/15/22
343 School St	1978	\$790,000	\$214	3	3.5	3,692	4/15/22
16 April Ln	1995	\$885,000	\$326	3	3.5	2,718	4/15/22
9 West Ave	1972	\$385,000	\$316	3	1	1,220	4/11/22
5 McKinley	1900	\$535,000	\$393	3	1.5	1,360	4/11/22
282 Old Farm Way	2012	\$730,000	\$405	3	2	1,804	4/11/22
7 Emerson Dr	2004	\$987,000	\$331	3	2.5	2,983	4/11/22
11 Yale Rd	1935	\$120,000	\$127	3	1	944	4/7/22
1 Kara Ln	1985	\$500,000	\$333	3	2	1,500	4/7/22
190 Chase Rd	1953	\$405,000	\$208	3	1	1,947	4/4/22
26 Gilman Rd	2009	\$742,400	\$331	3	3	2,240	4/4/22
53 Pleasant St	1830	\$739,000	\$346	3	2.5	2,137	4/1/22
22 Main St	1965	\$300,000	\$285	3	1	1,052	3/31/22
140 Sewall St	1870	\$430,000	\$287	3	1	1,498	3/31/22
19 Harvard Rd	1880	\$465,000	\$283	3	2	1,645	3/31/22
22 Oak Rd	2000	\$655,000	\$433	3	2	1,513	3/31/22
12 Colburn Ln	1996	\$852,000	\$322	3	2.5	2,645	3/31/22
155 Central Ave	2020	\$665,000	\$333	3	2.5	2,000	3/30/22
56 Riverside Ave	1904	\$900,000	\$475	3	2	1,894	3/30/22
1491 Main St	2012	\$1,000,000	\$663	3	2	1,509	3/30/22
132 Parker St	1973	\$840,000	\$241	3	2.5	3,480	3/29/22
341 Martins Pond Rd	1962	\$563,500	\$334	3	2	1,685	3/25/22
198 Groton St	1952	\$580,000	\$324	3	2	1,792	3/25/22
107 Newtown Rd	1960	\$705,000	\$450	3	2	1,568	3/25/22
42 Candice St	1970	\$280,000	\$238	3	1	1,176	3/24/22
1107 Main St	1916	\$400,000	\$221	3	1.5	1,807	3/18/22
51 Ontario Dr	1965	\$564,000	\$313	3	1.5	1,800	3/18/22
10 Draycoach Dr	1966	\$720,000	\$313	3	2	2,300	3/18/22
60 Thompson St	1920	\$485,500	\$366	3	2	1,325	3/17/22
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	130	\$609,813	\$336	3	1.9	1,858	-
<b>TOTAL / AVERAGE</b>	<b>199</b>	<b>\$635,445</b>	<b>\$334</b>	<b>3</b>	<b>2.1</b>	<b>1,969</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 139**  
**TRAILING SALES HISTORY OF SINGLE FAMILY**  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
3 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
4 Robert Rd	1963	\$440,000	\$293	3	1.5	1,500	3/16/22
279 River Rd	1920	\$425,000	\$254	3	1	1,671	3/15/22
38 Main St	1900	\$475,000	\$389	3	1.5	1,220	3/15/22
283 Concord Rd	1954	\$920,000	\$531	3	2.5	1,733	3/15/22
234 Davis Rd	1988	\$941,000	\$317	3	2.5	2,970	3/15/22
15 Camp Rd	1960	\$323,600	\$337	3	1	960	3/14/22
232 Littlefield Rd	1952	\$622,800	\$469	3	1	1,327	3/14/22
19 Brooks St	1890	\$640,000	\$249	3	2.5	2,573	3/14/22
444 Chase Rd	1946	\$207,000	\$107	3	1.5	1,932	3/11/22
211 Lincoln St	1960	\$385,000	\$316	3	1	1,218	3/11/22
229 Green St	2021	\$655,000	\$345	3	2.5	1,900	3/11/22
35-37 Brookline St	1978	\$557,000	\$330	3	2	1,686	3/9/22
6 Edith Rd	1963	\$517,500	\$344	3	2	1,505	3/7/22
11 Francis Cir	1976	\$925,000	\$402	3	3	2,300	3/7/22
18 Mark Vincent Dr	1977	\$838,888	\$321	3	2.5	2,610	3/3/22
8 McDowell St	1949	\$503,000	\$229	3	2	2,195	3/2/22
1496 Main St	1900	\$1,189,000	\$709	3	3	1,678	3/2/22
8 Olde Lantern Rd	1965	\$770,000	\$311	3	2	2,476	3/1/22
132 Plain Rd	1965	\$450,000	\$455	3	1	988	2/28/22
52 Priest St	1961	\$570,000	\$413	3	1	1,380	2/28/22
24 Porter Rd	1962	\$622,500	\$346	3	1	1,800	2/28/22
6 Kimloch St	1948	\$631,000	\$405	3	2	1,559	2/18/22
8 Cold Spring Rd	1973	\$580,000	\$373	3	2	1,554	2/17/22
17 Parmenter Rd	1964	\$530,000	\$272	3	1	1,950	2/14/22
697 Lancaster Ave	1990	\$400,000	\$344	3	2	1,164	2/10/22
19 Parkwood Dr	1975	\$379,900	\$253	3	1	1,503	2/7/22
299 Page St	1959	\$478,000	\$222	3	2	2,153	2/7/22
18 Rigby	1900	\$335,000	\$322	3	1.5	1,040	2/4/22
313 Chace St	1950	\$405,000	\$236	3	1.5	1,716	2/4/22
14 Bradford Rd	1962	\$420,000	\$337	3	1	1,248	2/4/22
987 Main St	1915	\$310,000	\$103	3	3	3,008	2/1/22
99 Leominster Rd	2015	\$565,000	\$297	3	2.5	1,900	2/1/22
18 Chadwick St	1965	\$744,000	\$400	3	2	1,860	2/1/22
85 Leominster Shirley Rd	1939	\$390,000	\$230	3	2	1,698	1/31/22
2 McKinley	1910	\$402,500	\$407	3	1	990	1/31/22
63 Adams Rd	1830	\$533,900	\$217	3	2	2,464	1/31/22
141 Forest Ave	1900	\$440,000	\$180	3	1.5	2,438	1/28/22
25 Drexel	1961	\$650,000	\$351	3	1.5	1,852	1/28/22
616 Groton St	1966	\$549,137	\$250	3	2	2,200	1/26/22
88 Dunstable Rd	1966	\$390,000	\$276	3	1	1,415	1/24/22
163 WEST St	1999	\$345,000	\$257	3	2	1,344	1/19/22
80 Piper Rd	1800	\$550,000	\$279	3	2	1,970	1/19/22
5 Samantha Way #000005	2000	\$729,000	\$414	3	2.5	1,762	N/A
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	130	\$609,813	\$336	3	1.9	1,858	-
<b>TOTAL / AVERAGE</b>	<b>199</b>	<b>\$635,445</b>	<b>\$334</b>	<b>3</b>	<b>2.1</b>	<b>1,969</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 140**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
4 Bedroom Units

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
16 Shaker Rd	1978	\$1,000,000	\$262	4	3.5	3,812	7/13/22
89 Slough Rd	1977	\$1,010,000	\$399	4	2.5	2,532	7/5/22
74 Woodside Rd	1966	\$1,100,000	\$369	4	2.5	2,980	6/22/22
212 Stow Rd	1985	\$1,025,000	\$249	4	4.5	4,109	6/15/22
21 Candleberry Ln	1993	\$1,100,000	\$239	4	2.5	4,608	6/10/22
122 Tahanto Trl	2004	\$1,850,000	\$408	4	3.5	4,530	6/10/22
18 Poor Farm Rd	1981	\$1,007,000	\$302	4	2.5	3,335	6/8/22
80 Bolton Rd	1950	\$1,470,000	\$259	4	3.5	5,668	4/26/22
218 Littleton County Rd	2004	\$987,000	\$259	4	3.5	3,818	4/5/22
0 Pinnacle Rd	2021	\$1,007,376	\$300	4	2.5	3,362	3/31/22
17 Ann Lee Rd	1972	\$849,000	\$187	4	5.5	4,532	3/3/22
17 Blanchard Rd	1988	\$642,000	\$210	4	3.5	3,062	1/27/22
16 Candleberry Ln	1981	\$950,000	\$217	4	3.5	4,375	1/7/22
128 Depot Rd	1977	\$699,000	\$351	4	3	1,992	12/15/21
15 Whitney Rd	1998	\$940,000	\$247	4	2.5	3,810	12/15/21
61 Whitney Rd	2012	\$1,515,000	\$322	4	3.5	4,709	11/17/21
83 Whitney Rd	1800	\$1,177,000	\$374	4	3	3,143	11/4/21
58 Tahanto Trl	1970	\$756,100	\$206	4	3	3,668	11/1/21
342 Stow Rd	1983	\$1,030,000	\$309	4	3.5	3,332	10/28/21
44 Myrick Ln	1974	\$605,000	\$154	4	3.5	3,930	10/19/21
114 Still River Rd	1973	\$900,000	\$248	4	4	3,628	10/4/21
62 Woodside Rd	1964	\$740,000	\$343	4	2	2,158	9/30/21
70 Massachusetts Ave	1983	\$1,050,000	\$276	4	3.5	3,800	9/27/21
82 Myrick Ln	1978	\$800,000	\$292	4	2.5	2,738	9/24/21
24 Bradley Cir	2020	\$727,550	\$318	4	2.5	2,291	9/23/21
25 Myrick Ln	1975	\$710,000	\$278	4	2.5	2,550	9/20/21
5 Withington Ln	1969	\$860,000	\$277	4	2.5	3,103	9/14/21
4 Old Meadow Ln	1992	\$1,300,000	\$268	4	3.5	4,843	9/7/21
154 Shaker Rd	2000	\$995,000	\$279	4	2.5	3,572	9/1/21
20 Bradley Cir	2020	\$691,130	\$302	4	2.5	2,291	8/31/21
108 Stow Rd	1988	\$878,000	\$314	4	2.5	2,798	8/24/21
10 Old Meadow Ln	1989	\$1,400,000	\$285	4	3.5	4,912	8/20/21
25 Fairbanks St	1890	\$899,000	\$382	4	1.5	2,354	8/16/21
15 Bennetts Xing	1995	\$595,000	\$257	4	2	2,315	8/13/21
73 Slough Rd	1967	\$689,000	\$289	4	2.5	2,384	8/9/21
115 Ayer Rd	1996	\$960,000	\$300	4	2.5	3,205	8/9/21
7 Cameron Rd	1983	\$1,086,000	\$367	4	2.5	2,956	8/5/21
353 Old Littleton Rd	1975	\$901,000	\$341	4	2.5	2,640	8/2/21
73 Bolton Rd	1962	\$730,000	\$382	4	3	1,912	7/29/21
118 West Bare Hill Rd	1988	\$1,601,500	\$337	4	4.5	4,747	7/29/21
171 E Bare Hill Rd	1961	\$815,000	\$303	4	3.5	2,688	7/19/21
180 Prospect Hill Rd	1959	\$1,610,000	\$348	4	3.5	4,629	7/15/21
148 E Bare Hill	1985	\$1,125,000	\$302	4	3.5	3,721	6/30/21
108 Littleton Rd	1977	\$697,000	\$314	4	2	2,220	6/25/21
19 Blanchard Rd	1988	\$880,000	\$291	4	2.5	3,022	6/21/21
6 Bradley Cir	2020	\$683,059	\$298	4	2.5	2,291	6/11/21
12 S Shaker Rd	1998	\$1,050,000	\$233	4	3.5	4,500	6/8/21
21 Quarry Ln	1987	\$775,000	\$172	4	2.5	4,505	6/3/21
318 Old Littleton Rd	1978	\$930,000	\$291	4	4	3,198	6/2/21
22 Ann Lee Rd	1973	\$825,000	\$310	4	2.5	2,663	5/26/21
PRIMARY MARKET							
SUBTOTAL / SUBAVERAGE	92	\$896,639	\$274	4	2.9	3,316	-
<b>TOTAL / AVERAGE</b>	<b>252</b>	<b>\$933,672</b>	<b>\$313</b>	<b>4</b>	<b>2.8</b>	<b>3,024</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 141**  
**TRAILING SALES HISTORY OF SINGLE FAMILY**  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
4 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
12 Ann Lees Rd	1972	\$737,000	\$313	4	2.5	2,352	5/20/21
359 Old Littleton Rd	1974	\$1,000,000	\$331	4	2.5	3,024	5/20/21
88 Ann Lee Rd	1976	\$760,000	\$283	4	2.5	2,686	5/14/21
301 Littleton Rd	1952	\$625,000	\$306	4	2	2,040	4/29/21
51 Westcott Rd	1995	\$1,005,000	\$301	4	2.5	3,344	4/26/21
301 Stow Rd	1980	\$900,000	\$308	4	2.5	2,926	4/15/21
258 Stow Rd	1985	\$825,000	\$275	4	2.5	2,999	2/19/21
144 Depot Rd	2002	\$707,500	\$235	4	2.5	3,017	2/8/21
32 Candleberry Ln	1984	\$970,000	\$199	4	4	4,883	1/28/21
9 Orchard HI	1977	\$651,000	\$222	4	2.5	2,928	1/25/21
47 Ann Lee Rd	1972	\$520,000	\$193	4	2	2,700	1/20/21
36 Bolton Rd	1785	\$835,000	\$309	4	2	2,700	1/13/21
5 Old Littleton Rd	1800	\$325,000	\$134	4	2.5	2,419	12/31/20
308 Stow Rd	1983	\$698,000	\$220	4	3	3,173	12/29/20
88 East Bare Hill Rd	1961	\$1,054,000	\$238	4	3.5	4,437	12/29/20
82 Shaker Rd	1791	\$822,275	\$212	4	2.5	3,875	12/15/20
10 South Shaker Rd	2013	\$1,250,000	\$246	4	4.5	5,090	12/15/20
92 Ann Lee Rd	1983	\$725,500	\$207	4	3.5	3,500	12/14/20
4 Graniteview Ln	1991	\$744,450	\$184	4	3.5	4,042	12/2/20
277 Stow Rd	2001	\$729,000	\$270	4	2.5	2,704	11/25/20
81 Woodside Rd	1966	\$720,000	\$256	4	3	2,816	10/30/20
80 Ann Lees Rd	1973	\$644,900	\$189	4	3.5	3,412	10/15/20
96 Ayer Rd	1977	\$495,000	\$194	4	2.5	2,546	9/30/20
321 Old Littleton Rd	1967	\$571,000	\$270	4	2.5	2,117	9/28/20
6 Houghton Ln	1969	\$725,000	\$283	4	3	2,560	9/25/20
110 Tahanto Trl	2007	\$1,290,000	\$340	4	4.5	3,797	9/14/20
79 Finn Rd	1930	\$475,000	\$224	4	2	2,122	9/3/20
30 Park Ln	1969	\$605,000	\$255	4	2.5	2,371	8/31/20
304 Old Littleton Rd	1989	\$867,941	\$210	4	4.5	4,130	8/31/20
171 Littleton County Rd	2003	\$1,700,000	\$281	4	5	6,058	8/31/20
40 Westcott Rd	1978	\$425,000	\$195	4	1.5	2,176	8/28/20
28 Fairbank St	1761	\$1,262,000	\$362	4	2.5	3,486	8/27/20
117 Old Mill Rd	2014	\$730,000	\$216	4	2.5	3,387	8/20/20
3 Babbitt Ln	1973	\$640,000	\$208	4	2.5	3,072	8/14/20
224 Stow Rd	2003	\$805,000	\$191	4	3	4,220	7/31/20
292 Stow Rd	1984	\$674,500	\$250	4	2.5	2,696	7/30/20
38 Finn Rd	1964	\$589,000	\$257	4	2	2,292	7/29/20
250 Old Littleton Rd	1978	\$630,000	\$225	4	2.5	2,801	7/29/20
11 Massachusetts Ave	1935	\$970,000	\$304	4	3.5	3,196	7/24/20
6 Old Meadow Ln	1994	\$1,300,000	\$272	4	3.5	4,775	7/24/20
126 W Bare Hill Rd	1979	\$1,150,000	\$413	4	2.5	2,785	7/22/20
132 Stow Rd	1974	\$715,000	\$205	4	2.5	3,492	7/20/20
PRIMARY MARKET							
SUBTOTAL / SUBAVERAGE	92	\$896,639	\$274	4	2.9	3,316	-
122 Belcher Dr	1979	\$1,300,000	\$350	4	2.5	3,710	7/15/22
4 Carriage Ln	1999	\$840,000	\$266	4	2.5	3,157	7/14/22
253 Central St	1900	\$827,000	\$329	4	3	2,511	7/13/22
24 Cold Spring Rd	1969	\$639,100	\$309	4	2.5	2,068	7/7/22
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	160	\$954,966	\$336	4	2.7	2,856	-
<b>TOTAL / AVERAGE</b>	<b>252</b>	<b>\$933,672</b>	<b>\$313</b>	<b>4</b>	<b>2.8</b>	<b>3,024</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 142**  
**TRAILING SALES HISTORY OF SINGLE FAMILY**  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
4 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
79 Castle Dr	1990	\$1,000,000	\$310	4	3	3,221	7/7/22
7 Monroe Dr	2003	\$1,657,000	\$339	4	5	4,886	7/7/22
13-R Oakwood Rd	1992	\$996,501	\$348	4	2.5	2,866	7/5/22
91 Forest St	1991	\$413,000	\$255	4	2	1,620	6/30/22
2 Shattuck St	1985	\$475,000	\$301	4	2	1,579	6/30/22
91 Bernice Ave	1990	\$620,000	\$299	4	3	2,072	6/30/22
15 Linden Rd	1955	\$795,000	\$406	4	2	1,956	6/30/22
310 Riverbend Dr	1998	\$936,000	\$296	4	2.5	3,161	6/30/22
10 Woodfield Rd	1994	\$1,203,000	\$361	4	2.5	3,333	6/30/22
46 Revolutionary Rd	1958	\$1,320,000	\$515	4	2.5	2,565	6/30/22
80 Wood Ln	1954	\$1,050,000	\$306	4	2.5	3,429	6/29/22
15 Ashley St	1996	\$735,000	\$238	4	2.5	3,092	6/28/22
47 Pratts Mill Rd	1947	\$1,300,000	\$368	4	4.5	3,532	6/28/22
2 Blueberry Path	1996	\$1,610,000	\$385	4	4	4,180	6/28/22
6 Beaver Creek Cir	2007	\$750,000	\$250	4	2.5	3,000	6/27/22
20 Throne Hill Rd	1984	\$800,000	\$245	4	2.5	3,270	6/27/22
6 Ashwood Rd	1958	\$825,000	\$346	4	1.5	2,384	6/27/22
56 Brucewood Rd	1977	\$1,010,000	\$350	4	2.5	2,885	6/27/22
136 Leominster Rd	1831	\$585,000	\$284	4	2	2,063	6/24/22
490 Concord Rd	1955	\$1,025,000	\$406	4	2	2,527	6/17/22
14 Myrtle Ave	1956	\$570,000	\$479	4	2	1,190	6/15/22
5 Morrison Ln	1999	\$940,000	\$327	4	2.5	2,871	6/15/22
39 Julians Way	1994	\$2,000,000	\$290	4	5	6,888	6/14/22
29 Powder Mill Rd	1905	\$412,000	\$271	4	1	1,520	6/10/22
921 Main St	1951	\$740,000	\$328	4	2	2,259	6/10/22
48 Plain Rd	1969	\$880,000	\$374	4	2.5	2,356	6/9/22
468 Newtown Rd	2001	\$975,000	\$292	4	3.5	3,341	6/9/22
6 Kendra Ln	1998	\$1,625,000	\$281	4	3.5	5,777	6/8/22
8 Squirrel Hill Rd #15	2005	\$1,050,000	\$410	4	2.5	2,564	6/1/22
244 School St	1997	\$1,030,000	\$416	4	2.5	2,476	5/27/22
13 Overlook Dr	1964	\$705,000	\$220	4	2.5	3,202	5/26/22
28 Duggan Rd	1976	\$750,000	\$269	4	3.5	2,787	5/26/22
36 Gilcrest St	2022	\$849,900	\$295	4	2.5	2,884	5/26/22
203 Sand Hill Rd	1965	\$846,000	\$303	4	3.5	2,795	5/24/22
142 Hager	1990	\$1,025,000	\$341	4	2.5	3,008	5/20/22
10 Phalen St	1964	\$1,070,000	\$455	4	2.5	2,350	5/17/22
507 North Rd	1965	\$831,000	\$516	4	2	1,612	5/16/22
74 Canterbury Hill Rd	2009	\$1,828,800	\$402	4	3.5	4,545	5/16/22
12 Bow St	2017	\$3,100,000	\$733	4	4.5	4,230	5/16/22
16 Richard Ave	1945	\$765,000	\$397	4	2	1,925	5/13/22
9 Fernwood Rd	1972	\$1,030,000	\$386	4	2.5	2,665	5/12/22
78 Monument St	1800	\$2,070,000	\$789	4	1.5	2,623	5/11/22
8 August Ln	2004	\$707,000	\$244	4	2.5	2,903	5/10/22
26 Cow Pond Brk	2000	\$900,000	\$364	4	3.5	2,472	5/10/22
28 Ridge Hill Rd	1969	\$1,012,000	\$533	4	2	1,898	5/10/22
3 Perry Rd	2022	\$849,900	\$304	4	2.5	2,800	5/6/22
123 Nourse Rd	1926	\$1,410,000	\$527	4	2.5	2,675	5/5/22
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	160	\$954,966	\$336	4	2.7	2,856	-
<b>TOTAL / AVERAGE</b>	<b>252</b>	<b>\$933,672</b>	<b>\$313</b>	<b>4</b>	<b>2.8</b>	<b>3,024</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022.

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 143**  
**TRAILING SALES HISTORY OF SINGLE FAMILY**  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
4 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
14 Carlton Dr	1976	\$1,150,000	\$323	4	2.5	3,556	5/3/22
6 Saxony Dr	1967	\$1,030,000	\$436	4	2.5	2,362	4/29/22
507 Sterling St	1999	\$570,000	\$254	4	2.5	2,240	4/28/22
139 School St	1869	\$627,500	\$320	4	3	1,960	4/28/22
410 Lowell Rd	1993	\$665,000	\$238	4	2.5	2,792	4/28/22
62 Sudbury Rd	1975	\$841,000	\$325	4	2.5	2,585	4/28/22
135 Sawyerhill Rd	2020	\$1,365,000	\$361	4	4.5	3,780	4/28/22
9 Wellington Dr	2021	\$1,370,000	\$303	4	4.5	4,525	4/28/22
26 Scarlett St	1969	\$515,000	\$273	4	2	1,887	4/27/22
29 Robinson Rd	1989	\$1,050,000	\$387	4	2.5	2,712	4/27/22
26 Pollard Rd Lot 3	2022	\$1,275,000	\$422	4	3.5	3,024	4/26/22
80 Bolton Rd	1950	\$1,470,000	\$259	4	3.5	5,668	4/26/22
5 Pearl St #5	2020	\$1,185,000	\$337	4	3.5	3,517	4/25/22
19 Mountain Laurel Rd	2006	\$755,000	\$229	4	3	3,300	4/22/22
4 Musket Ln	1970	\$780,000	\$320	4	2.5	2,438	4/15/22
9 Tanglewood Dr	1979	\$915,000	\$264	4	3.5	3,460	4/15/22
12 Dakota Dr	1968	\$756,100	\$377	4	2.5	2,008	4/14/22
10 Woodpecker Ct	2002	\$1,025,000	\$338	4	2.5	3,034	4/14/22
5 Partridge Ln	2000	\$1,060,000	\$346	4	3	3,066	4/14/22
10 Wadsworth Rd	1985	\$1,406,000	\$305	4	2.5	4,608	4/14/22
17 Grosvenor St	1941	\$480,000	\$357	4	1.5	1,344	4/12/22
523 Hudson Rd	1940	\$800,000	\$262	4	4	3,054	4/12/22
17 Shipley Cir	1996	\$1,200,000	\$314	4	2.5	3,826	4/11/22
57 Elsinore St	2015	\$2,750,000	\$683	4	5.5	4,026	4/11/22
13 Adams Dr	1970	\$916,000	\$250	4	3	3,658	4/8/22
30 Brucewood Rd	1961	\$1,005,000	\$409	4	2.5	2,460	4/8/22
10 Phlox Ln	1966	\$1,075,000	\$366	4	2.5	2,936	4/8/22
37 Buckmaster Dr	1982	\$1,512,000	\$388	4	3.5	3,898	4/8/22
58 Whitcomb Rd	1980	\$765,000	\$277	4	3.5	2,758	4/7/22
769 Townsend Rd	1986	\$742,000	\$315	4	2.5	2,356	4/4/22
187 Parker St	2016	\$839,000	\$304	4	2.5	2,761	4/4/22
36 Mill Rd	1905	\$750,000	\$428	4	2	1,751	4/1/22
39 High St	1900	\$301,010	\$235	4	1	1,282	3/31/22
72 Jarman Rd	1960	\$605,000	\$485	4	1.5	1,248	3/31/22
20 Sheffield	2021	\$724,071	\$273	4	2.5	2,654	3/31/22
8 Heather Hill Rd	1983	\$935,000	\$389	4	2.5	2,405	3/31/22
0 Pinnacle Rd	2021	\$1,007,376	\$300	4	2.5	3,362	3/31/22
21 High Oaks Path	1984	\$777,000	\$237	4	2.5	3,280	3/29/22
120 Powers Rd	1963	\$1,291,000	\$356	4	2.5	3,627	3/28/22
28 Brendan Rd	2008	\$540,000	\$313	4	2.5	1,728	3/25/22
42 Concord Rd	2013	\$1,000,000	\$345	4	2.5	2,898	3/25/22
331 Longley Rd	1969	\$665,000	\$349	4	2	1,906	3/21/22
19 Ontario Dr	1965	\$550,000	\$342	4	2	1,608	3/18/22
34 Minuteman Rd	1969	\$725,000	\$420	4	1.5	1,728	3/17/22
332 Longley Rd	2021	\$1,305,000	\$356	4	3	3,662	3/16/22
60 Surrey Ln	1970	\$1,300,000	\$382	4	3.5	3,400	3/15/22
810 Flat Hill Rd	1999	\$610,000	\$293	4	2.5	2,080	3/11/22
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	160	\$954,966	\$336	4	2.7	2,856	-
<b>TOTAL / AVERAGE</b>	<b>252</b>	<b>\$933,672</b>	<b>\$313</b>	<b>4</b>	<b>2.8</b>	<b>3,024</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC



**TABLE 144**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
4 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
369 Dutton Rd	1964	\$965,000	\$448	4	2.5	2,154	3/10/22
237 Commonwealth Ave	1823	\$1,660,000	\$519	4	2.5	3,199	3/9/22
26 Brooks St	2016	\$2,475,000	\$556	4	4	4,449	3/9/22
286 Woodlawn St	1900	\$236,000	\$195	4	1	1,208	3/8/22
351 North St	1916	\$360,000	\$277	4	1.5	1,300	3/8/22
233 Foster St	1955	\$740,000	\$224	4	2.5	3,308	3/8/22
34 GOOSE POND Path	2021	\$1,225,000	\$278	4	4	4,406	3/8/22
13 No Name Rd	1970	\$762,000	\$377	4	2	2,019	3/7/22
81 Farmers Clf	1964	\$1,742,000	\$392	4	2.5	4,442	3/4/22
17 Ann Lee Rd	1972	\$849,000	\$187	4	5.5	4,532	3/3/22
175 Gratuity Rd	2003	\$730,000	\$209	4	2.5	3,498	3/2/22
82 Nashoba Rd	1996	\$975,000	\$420	4	3	2,324	3/2/22
138 Littleton Rd	2019	\$720,000	\$370	4	2.5	1,944	2/28/22
7 Crusade Rd	1970	\$735,000	\$331	4	2	2,218	2/28/22
219 Commonwealth Ave	1897	\$900,000	\$623	4	1.5	1,445	2/28/22
114 Maple St	1987	\$1,300,000	\$434	4	3.5	2,994	2/28/22
8 Agawam Rd	1956	\$810,000	\$392	4	1.5	2,066	2/25/22
12 MEADOWBROOK Rd	2019	\$1,500,000	\$469	4	3	3,200	2/25/22
82 Cudworth Ln	1999	\$1,700,000	\$297	4	4.5	5,731	2/25/22
59 Rutland St	1964	\$660,000	\$255	4	2	2,593	2/23/22
94 Meadowbrook Rd	1958	\$655,000	\$328	4	3	2,000	2/22/22
57 Washington St	1880	\$425,000	\$229	4	1.5	1,859	2/18/22
16 Celestial Way	1996	\$685,000	\$189	4	2.5	3,624	2/18/22
16 Old Lowell Rd	1966	\$687,000	\$301	4	2	2,282	2/18/22
3 Magnolia Ln	2022	\$659,500	\$226	4	2.5	2,912	2/17/22
73 Guggins Ln	1972	\$950,000	\$188	4	4	5,056	2/17/22
Lot 2 Joanne Dr	2021	\$1,280,000	\$415	4	2.5	3,082	2/17/22
34 Barton Dr	2021	\$1,100,000	\$367	4	2.5	3,000	2/16/22
1 Davis Rd	1977	\$540,000	\$212	4	2	2,550	2/14/22
12 Rome Dr	2001	\$1,225,000	\$232	4	3.5	5,286	2/14/22
81 Emanuel Dr	1993	\$775,000	\$271	4	3	2,860	2/11/22
9 Hillside Rd	1994	\$800,000	\$252	4	2.5	3,178	2/11/22
23 Butterfield Ln	1998	\$1,050,000	\$306	4	3	3,433	2/11/22
80 Westford St	1953	\$715,000	\$320	4	2.5	2,234	2/8/22
137 Nashaway	2003	\$760,000	\$221	4	2.5	3,444	2/8/22
172 High St	1974	\$811,000	\$272	4	3	2,984	2/7/22
93 Park St	2021	\$775,000	\$346	4	2.5	2,240	2/4/22
87 Hammond St	1962	\$962,308	\$355	4	2.5	2,712	2/4/22
6 Walcott St	1860	\$530,000	\$346	4	2	1,533	2/3/22
41 Possum Ln	1967	\$679,000	\$307	4	2.5	2,212	2/2/22
23 Pleasant Ln	2004	\$1,010,000	\$246	4	3.5	4,112	2/2/22
11 Howard Rd	1974	\$675,000	\$191	4	3.5	3,538	2/1/22
17 Birch Ln	1974	\$430,000	\$219	4	2	1,964	1/31/22
24 Baker Rd	1972	\$550,000	\$205	4	3.5	2,680	1/31/22
27 Nass Farm Rd	2015	\$706,000	\$236	4	3.5	2,996	1/31/22
24 Wilkins St	1900	\$260,000	\$128	4	2	2,033	1/28/22
3 Edith Rd	1962	\$350,000	\$236	4	1	1,486	1/28/22
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	160	\$954,966	\$336	4	2.7	2,856	-
<b>TOTAL / AVERAGE</b>	<b>252</b>	<b>\$933,672</b>	<b>\$313</b>	<b>4</b>	<b>2.8</b>	<b>3,024</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 145**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
4 Bedroom Units (Continued)

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
6 Perham St	1900	\$485,000	\$306	4	2	1,585	1/28/22
68 Warren Ave	1950	\$525,000	\$311	4	2	1,687	1/28/22
89 Range Rd	2009	\$1,500,000	\$509	4	2.5	2,949	1/28/22
101 Page Brook Rd	1965	\$916,000	\$344	4	3	2,660	1/25/22
98 North St	1960	\$410,000	\$178	4	2	2,300	1/21/22
6 Craig Cir	1965	\$455,000	\$290	4	1.5	1,568	1/21/22
162 Great Rd	1987	\$550,000	\$275	4	2.5	2,000	1/21/22
8 Courtland Dr	1961	\$660,000	\$363	4	2	1,818	1/21/22
15 Longfellow	1955	\$503,500	\$344	4	2	1,464	1/20/22
6 Rose Ln	1993	\$955,000	\$352	4	2.5	2,711	1/20/22
22 Natalie Rd	1989	\$890,000	\$229	4	4.5	3,892	1/19/22
148 Martins Pond Rd	2021	\$1,372,923	\$355	4	3	3,870	1/19/22
38 McCallar Ln	2021	\$3,300,000	\$733	4	5.5	4,500	1/19/22
6 Orchard Dr	1990	\$570,000	\$298	4	2.5	1,914	N/A
13 Washington Dr	1985	\$950,000	\$249	4	3.5	3,814	N/A
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	160	\$954,966	\$336	4	2.7	2,856	-
<b>TOTAL / AVERAGE</b>	<b>252</b>	<b>\$933,672</b>	<b>\$313</b>	<b>4</b>	<b>2.8</b>	<b>3,024</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

**TABLE 146**  
TRAILING SALES HISTORY OF SINGLE FAMILY  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
5+ Bedroom Units

Address	Year Built	Sold Price	PPSF	Beds	Baths	SF	Sold Date
3805 Silent Water St	2016	\$650,000	\$177	5	4.5	3,672	3/29/22
45 Isaac Davis Rd	1964	\$1,810,000	\$397	5	4	4,558	3/29/22
325 Nashawtuc Rd	1927	\$5,500,000	\$846	5	6	6,502	3/22/22
82 Foster St	1960	\$585,000	\$217	5	2	2,698	3/18/22
10 Harvard Rd	1903	\$575,000	\$211	5	2	2,731	3/11/22
6 Sarah Ln	1986	\$960,000	\$320	5	3.5	3,000	2/28/22
54 Atkinson Ln	1987	\$1,650,000	\$262	5	5	6,300	2/28/22
50 Amelia Way	2015	\$987,500	\$198	5	3.5	5,000	2/23/22
475 Burroughs Rd	2007	\$936,000	\$234	5	4	4,000	2/14/22
5 Oak Hill Ave	1956	\$390,000	\$260	5	2	1,498	1/28/22
54 BARTLETT St	1885	\$680,000	\$228	5	2.5	2,976	1/20/22
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	34	\$1,543,528	\$340	5.1	3.6	4,302	-
<b>TOTAL / AVERAGE</b>	<b>57</b>	<b>\$1,386,892</b>	<b>\$308</b>	<b>5.2</b>	<b>3.7</b>	<b>4,357</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

3) All data is recent as of July 2022

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

## EXHIBIT G

### EXTENDED TRAILING SALE HISTORY – CONDOMINIUM & TOWNHOME

## EXTENDED TRAILING SALE HISTORY – CONDOMINIUM & TOWNHOME

TABLE 147

TRAILING SALES HISTORY OF COMPARABLES  
FOR-SALE MARKET SUMMARY BY BEDROOM  
1 Bedroom Units

Property	Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
Conant Commons	215	\$405,000	\$388	1	1	1,045	3/10/20
Meeting House of Stow	314	\$240,000	\$315	1	1	762	12/18/19
The Falls at Arden Mills	2206	\$210,000	\$210	1	1	1,000	8/5/21
	2106	\$167,500	\$168	1	1	1,000	8/28/20
PRIMARY MARKET							
<b>TOTAL / AVERAGE</b>	<b>4</b>	<b>\$255,625</b>	<b>\$270</b>	<b>1</b>	<b>1.0</b>	<b>952</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

2) Inclusive of condominium and townhome properties

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

3) Meeting House is a 55+ communities

4) All data is recent as of July 2022

TABLE 148

TRAILING SALES HISTORY OF COMPARABLES  
FOR-SALE MARKET SUMMARY BY BEDROOM  
2 Bedroom Units

Property	Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
Boynton Meadows	18A	\$775,000	\$386	2	2.5	2,009	6/10/22
	19A	\$675,000	\$314	2	2.5	2,148	5/23/22
	25A	\$680,000	\$310	2	2.5	2,191	6/26/18
	18A	\$649,900	\$309	2	2.5	2,100	5/4/18
	18C	\$519,900	\$274	2	2.5	1,900	3/23/18
Conant Commons	218	\$505,000	\$403	2	2	1,253	9/28/21
	320	\$550,000	\$454	2	2	1,212	9/2/21
	306	\$518,000	\$411	2	2	1,261	7/23/21
	211	\$610,000	\$435	2	2	1,401	7/19/21
	213	\$629,000	\$398	2	2	1,582	2/16/21
	313	\$625,000	\$395	2	2	1,582	1/20/21
	301	\$707,000	\$476	2	2	1,486	1/12/21
	201	\$649,000	\$437	2	2	1,486	6/23/20
	312	\$650,000	\$358	2	2	1,814	4/30/20
	311	\$500,000	\$357	2	2	1,401	1/2/20
Craftsman Village	10	\$579,900	\$305	2	2.5	1,900	5/18/22
	1	\$606,332	\$276	2	2.5	2,200	5/13/22
	2 *	\$664,791	\$291	2	2.5	2,288	-
	4 *	\$684,688	\$293	2	2.5	2,340	-
	8 *	\$669,087	\$292	2	2.5	2,288	-
	7 *	\$715,926	\$306	2	2.5	2,340	-
	9 *	\$691,591	\$302	2	2.5	2,288	-
PRIMARY MARKET							
<b>SUBTOTAL / SUBAVERAGE</b>	<b>71</b>	<b>\$482,229</b>	<b>\$278</b>	<b>2</b>	<b>2.3</b>	<b>1,752</b>	<b>-</b>
<b>TOTAL / AVERAGE</b>	<b>123</b>	<b>\$454,439</b>	<b>\$281</b>	<b>2</b>	<b>2.1</b>	<b>1,708</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

2) Secondary Market: 30-Minute Drive-Time Region from C-District

3) Properties with a " \* " represent Redfin estimates for 'Off Market' sales

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

4) Inclusive of condominium and townhome properties

5) Meeting House and Trail Ridge are a 55+ communities

6) All data is recent as of July 2022

**TABLE 149**  
**TRAILING SALES HISTORY OF COMPARABLES**  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
2 Bedroom Units (Continued)

Property	Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
Harvard Green	7C	\$665,000	\$293	2	2.5	2,271	6/30/22
	9C	\$625,000	\$234	2	2.5	2,666	2/4/22
	10A	\$510,000	\$182	2	2.5	2,808	6/30/21
	4C	\$423,000	\$249	2	2.5	1,699	3/13/20
Littleton Ridge Estates	2B	\$500,000	\$346	2	2.5	1,446	7/30/22
	2D	\$557,500	\$258	2	2.5	2,158	4/29/22
	7C	\$430,900	\$266	2	2.5	1,618	9/25/20
	8C	\$403,000	\$257	2	2.5	1,570	9/21/20
	5A	\$432,000	\$212	2	2.5	2,041	5/18/20
	5C	\$415,000	\$195	2	3.5	2,123	8/19/19
	6B	\$389,000	\$212	2	2.5	1,836	7/1/19
	4B	\$392,000	\$214	2	2.5	1,836	10/17/18
	6C	\$380,000	\$207	2	2.5	1,836	10/14/18
Meeting House of Stow	210	\$389,000	\$302	2	2	1,286	5/17/22
	108	\$335,000	\$353	2	1.5	949	4/29/22
	202	\$400,000	\$289	2	2	1,384	3/10/22
	304	\$325,000	\$303	2	2	1,074	1/12/22
	102	\$319,000	\$306	2	1.5	1,041	12/3/21
	220	\$330,000	\$281	2	2	1,175	12/2/21
	217	\$320,000	\$265	2	2	1,209	10/28/21
	219	\$310,000	\$297	2	2	1,043	9/29/21
	201	\$355,000	\$219	2	2	1,619	9/8/21
	107	\$337,000	\$262	2	2	1,285	5/21/21
	211	\$312,000	\$261	2	2	1,197	6/30/20
	321	\$290,000	\$247	2	2	1,175	4/1/20
	310	\$322,000	\$250	2	2	1,286	3/27/20
The Falls at Arden Mills	2102	\$287,000	\$232	2	2	1,237	6/24/22
	2209	\$260,000	\$210	2	2	1,240	5/13/22
	2215	\$299,900	\$227	2	2	1,320	4/28/22
	2302	\$240,000	\$200	2	2	1,200	8/31/21
	2210	\$214,000	\$173	2	2	1,240	2/17/21
	2312	\$234,900	\$193	2	2	1,220	1/22/21
	2108	\$239,000	\$181	2	2	1,320	10/23/20
	2213	\$229,000	\$185	2	2	1,240	9/25/20
	2309	\$230,000	\$192	2	2	1,200	3/13/20
	2310	\$220,000	\$183	2	2	1,200	12/16/19
	2115	\$230,000	\$174	2	2	1,321	7/25/19
Trail Ridge	15D	\$725,000	\$323	2	2.5	2,248	6/21/22
	2D	\$620,000	\$289	2	2.5	2,148	6/1/22
	5A	\$703,000	\$237	2	3	2,971	4/26/22
	15D	\$725,000	\$323	2	2.5	2,248	6/21/22
	2D	\$620,000	\$289	2	2.5	2,148	6/1/22
	5A	\$703,000	\$237	2	3	2,971	4/26/22
	10B	\$550,000	\$248	2	2.5	2,220	7/9/21
	10D	\$508,100	\$229	2	2.5	2,220	7/1/21
PRIMARY MARKET							
SUBTOTAL / SUBAVERAGE	71	\$482,229	\$278	2	2.3	1,752	-
TOTAL / AVERAGE	123	\$454,439	\$281	2	2.1	1,708	-

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

2) Secondary Market: 30-Minute Drive-Time Region from C-District

3) Properties with a " \* " represent Redfin estimates for 'Off Market' sales

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

4) Inclusive of condominium and townhome properties

5) Meeting House and Trail Ridge are a 55+ communities

6) All data is recent as of July 2022

**TABLE 150**  
**TRAILING SALES HISTORY OF COMPARABLES**  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
2 Bedroom Units (Continued)

Property	Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
	13D	\$499,900	\$210	2	2.5	2,377	5/29/21
	12A	\$525,000	\$234	2	2.5	2,245	12/1/20
	12D	\$573,970	\$243	2	2.5	2,360	1/21/20
	13A	\$480,000	\$202	2	2.5	2,377	11/22/19
<b>PRIMARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	71	\$482,229	\$278	2	2.3	1,752	-
216 Rangeway	1102	\$615,000	\$197	2	3	3,121	10/8/21
	174	\$533,250	\$178	2	3.5	3,000	3/19/21
	1103	\$495,000	\$165	2	2.5	3,000	2/1/21
	1104	\$508,000	\$169	2	2.5	3,000	12/28/20
	1104	\$508,000	\$210	2	2.5	2,421	12/28/20
	131	\$560,000	\$162	2	3	3,458	10/3/19
Ava Estates	205	\$541,000	\$295	2	2.5	1,833	4/7/22
	304	\$450,100	\$215	2	2.5	2,093	11/16/18
	207	\$430,000	\$235	2	2.5	1,833	11/15/18
	109	\$422,000	\$264	2	2.5	1,600	10/18/18
	303	\$435,100	\$237	2	2.5	1,833	9/29/18
	103	\$420,000	\$263	2	2.5	1,600	8/13/18
Barrett Farm	175	\$440,000	\$407	2	1.5	1,080	6/3/22
	434	\$437,000	\$405	2	1.5	1,078	4/15/22
	454	\$430,000	\$412	2	1.5	1,044	3/17/22
	331	\$430,100	\$422	2	1.5	1,020	3/11/22
	324	\$431,000	\$423	2	1.5	1,020	3/6/22
	481	\$420,000	\$402	2	1.5	1,044	2/25/22
	233	\$213,200	\$209	2	1.5	1,020	10/28/21
	215	\$402,000	\$394	2	1.5	1,020	7/29/21
	166	\$400,000	\$383	2	1.5	1,044	7/21/21
	314	\$406,101	\$398	2	1.5	1,020	7/14/21
	164	\$385,000	\$369	2	1.5	1,044	7/8/21
	341	\$391,000	\$383	2	1.5	1,020	6/25/21
	161	\$344,000	\$330	2	1.5	1,044	6/17/21
	332	\$224,200	\$220	2	1.5	1,020	6/14/21
	425	\$405,000	\$388	2	1.5	1,044	4/30/21
	181	\$360,000	\$345	2	1.5	1,044	3/12/21
	352	\$350,000	\$343	2	1.5	1,020	2/22/21
	183	\$360,000	\$333	2	1.5	1,080	12/22/20
	494	\$355,111	\$340	2	1.5	1,044	12/8/20
	465	\$360,000	\$345	2	1.5	1,044	11/19/20
	483	\$350,500	\$336	2	1.5	1,044	10/13/20
	436	\$330,000	\$316	2	1.5	1,044	7/29/20
	161	\$344,000	\$330	2	1.5	1,044	7/17/20
	152	\$340,000	\$326	2	1.5	1,044	7/15/20
Swanson Meadow Townhomes	242	\$645,000	\$197	2	2.5	3,280	5/16/22
	231	\$477,000	\$183	2	2.5	2,613	7/31/18
	262	\$440,000	\$142	2	2.5	3,100	1/12/18
	252	\$430,000	\$136	2	2.5	3,154	11/16/17
<b>SECONDARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	52	\$416,494	\$284	2	2.0	1,649	-
<b>TOTAL / AVERAGE</b>	<b>123</b>	<b>\$454,439</b>	<b>\$281</b>	<b>2</b>	<b>2.1</b>	<b>1,708</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

2) Secondary Market: 30-Minute Drive-Time Region from C-District

3) Properties with a " \* " represent Redfin estimates for 'Off Market' sales

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

4) Inclusive of condominium and townhome properties

5) Meeting House and Trail Ridge are a 55+ communities

6) All data is recent as of July 2022

**TABLE 151**  
TRAILING SALES HISTORY OF COMPARABLES  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
2 Bedroom Units (Continued)

Property	Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
Wayside at Chelmsford	317	\$452,500	\$259	2	2	1,745	6/15/22
	322	\$400,000	\$229	2	2	1,745	6/7/22
	236	\$450,000	\$258	2	2	1,745	4/15/22
	224	\$430,000	\$311	2	2	1,382	4/12/22
	134	\$425,000	\$280	2	2	1,517	3/29/22
	222	\$415,000	\$238	2	2	1,745	12/13/21
	213	\$430,000	\$246	2	2	1,745	11/12/21
	337	\$385,000	\$221	2	2	1,745	6/24/21
	331	\$370,000	\$249	2	2	1,484	3/12/21
	127	\$370,000	\$212	2	2	1,745	6/30/20
	137	\$368,000	\$211	2	2.5	1,745	3/20/20
	121	\$344,500	\$232	2	2	1,484	11/8/19
SECONDARY MARKET							
SUBTOTAL / SUBAVERAGE	52	\$416,494	\$284	2	2.0	1,649	-
TOTAL / AVERAGE	123	\$454,439	\$281	2	2.1	1,708	-

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

2) Secondary Market: 30-Minute Drive-Time Region from C-District

3) Properties with a " \* " represent Redfin estimates for 'Off Market' sales

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

4) Inclusive of condominium and townhome properties

5) Meeting House and Trail Ridge are a 55+ communities

6) All data is recent as of July 2022



**TABLE 152**  
**TRAILING SALES HISTORY OF COMPARABLES**  
**FOR-SALE MARKET SUMMARY BY BEDROOM**  
3 Bedroom Units

Property	Unit	Sold Price	PPSF	Beds	Baths	SF	Sold Date
Boynton Meadows	27B	\$632,500	\$213	3	3.5	2,970	1/31/19
	27A	\$632,500	\$176	3	2.5	3,590	1/31/19
	24B	\$850,000	\$347	3	3.5	2,450	1/31/18
Conant Commons	308	\$660,000	\$449	3	2	1,469	6/7/21
	405	\$655,000	\$307	3	2	2,131	6/6/20
	208	\$579,900	\$395	3	2	1,469	9/20/19
	302	\$560,000	\$376	3	2	1,488	9/18/19
Harvard Green	3A	\$604,000	\$212	3	2.5	2,850	5/28/21
	11B	\$525,000	\$184	3	2.5	2,847	12/30/20
Littleton Ridge Estates	6D	\$550,000	\$268	3	2.5	2,050	11/3/21
<b>PRIMARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	10	\$624,890	\$293	3	2.5	2,331	
216 Rangeway	1111	\$520,000	\$243	3	2.5	2,143	10/26/21
	133	\$650,000	\$195	3	3	3,326	9/9/21
	134	\$730,000	\$197	3	3	3,713	7/15/21
	123	\$650,000	\$198	3	2.5	3,277	6/15/21
Barrett Farm	241	\$418,000	\$310	3	1.5	1,350	6/2/21
Swanson Meadow Townhomes	211	\$640,000	\$201	3	2.5	3,185	7/14/21
<b>SECONDARY MARKET</b>							
SUBTOTAL / SUBAVERAGE	6	\$601,333	\$224	3	2.5	2,832	
<b>TOTAL / AVERAGE</b>	<b>16</b>	<b>\$616,056</b>	<b>\$267</b>	<b>3</b>	<b>2.5</b>	<b>2,519</b>	<b>-</b>

1) Primary Market: Town of Harvard (20-Minute Drive-Time Region from C-District)

2) Secondary Market: 30-Minute Drive-Time Region from C-District

Source: Redfin; Local Brokerage Data; compiled by Weitzman Associates, LLC

3) Inclusive of condominium and townhome properties

4) All data is recent as of July 2022

## EXHIBIT H

### GROWTH IN OFFICE-USING EMPLOYMENT SECTORS

## GROWTH IN OFFICE-USING EMPLOYMENT SECTORS

TABLE 153

INDUSTRY BY OCCUPATION FOR THE CIVILIAN EMPLOYED POPULATION 16 YEARS AND OVER  
**GROWTH IN OFFICE USING EMPLOYE SECTORS**  
 TOWN OF HARVARD

Employment Sector	Total					Management, Business, Science, and Arts Occupations				
	ESTIMATE			CAGR		ESTIMATE (2)			CAGR	
	2010	2015	2020	2010-2015	2015-2020	2010	2015	2020	2010-2015	2015-2020
Agriculture, Forestry, Fishing, Hunting, and Mining	19	21	25	2.0%	3.5%	63.2%	47.6%	100.0%	-5.5%	16.0%
Construction	171	153	131	-2.2%	-3.1%	48.0%	8.5%	27.5%	-29.3%	26.5%
Manufacturing	407	335	362	-3.8%	1.6%	81.6%	74.6%	88.7%	-1.8%	3.5%
Wholesale Trade	39	99	114	20.5%	2.9%	25.6%	22.2%	51.8%	-2.8%	18.5%
Retail Trade	183	205	284	2.3%	6.7%	14.8%	14.6%	39.4%	-0.3%	22.0%
Transportation, Warehousing, and Utilities	87	44	29	-12.7%	-8.0%	12.6%	15.9%	51.7%	4.8%	26.6%
Information	117	140	73	3.7%	-12.2%	72.6%	58.6%	65.8%	-4.2%	2.3%
Finance, Insurance, Real Estate (Rental and Leasing)	143	171	198	3.6%	3.0%	69.2%	71.3%	91.9%	0.6%	5.2%
P.S.M.A.W (3)	534	522	419	-0.5%	-4.3%	79.8%	89.3%	83.8%	2.3%	-1.3%
E.H.S (4)	658	680	716	0.7%	1.0%	86.2%	88.5%	73.0%	0.5%	-3.8%
A.E.R.A.F (5)	71	61	265	-3.0%	34.1%	46.5%	24.6%	57.0%	-12.0%	18.3%
Other Services (Except Public Administration)	157	70	138	-14.9%	14.5%	69.4%	57.1%	41.3%	-3.8%	-6.3%
Public Administration	72	97	65	6.1%	-7.7%	56.9%	45.4%	70.8%	-4.4%	9.3%
<b>Civilian Employed Population 16 Years and Over</b>	<b>2,658</b>	<b>2,598</b>	<b>2,819</b>	<b>-0.5%</b>	<b>1.6%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>(Percent of Total Employment Sector)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>69.0%</b>	<b>65.6%</b>	<b>68.3%</b>	<b>-1.0%</b>	<b>0.8%</b>

Employment Sector	Sales and Office Occupations					Service Occupations				
	ESTIMATE (2)			CAGR		ESTIMATE (2)			CAGR	
	2010	2015	2020	2010-2015	2015-2020	2010	2015	2020	2010-2015	2015-2020
Agriculture, Forestry, Fishing, Hunting, and Mining	36.8%	0.0%	0.0%	-100.0%	-	0.0%	0.0%	0.0%	-	-
Construction	17.0%	10.5%	13.0%	-9.2%	4.4%	0.0%	0.0%	0.0%	-	-
Manufacturing	16.2%	17.3%	9.4%	1.3%	-11.5%	0.0%	0.0%	0.0%	-	-
Wholesale Trade	74.4%	77.8%	48.2%	0.9%	-9.1%	0.0%	0.0%	0.0%	-	-
Retail Trade	73.2%	60.0%	53.2%	-3.9%	-2.4%	0.0%	0.0%	3.2%	-	-
Transportation, Warehousing, and Utilities	9.2%	25.0%	0.0%	22.1%	-100.0%	0.0%	0.0%	0.0%	-	-
Information	7.7%	25.7%	34.2%	27.3%	5.9%	0.0%	0.0%	0.0%	-	-
Finance, Insurance, Real Estate (Rental and Leasing)	30.8%	28.7%	8.1%	-1.4%	-22.4%	0.0%	0.0%	0.0%	-	-
P.S.M.A.W (3)	12.9%	8.4%	8.8%	-8.2%	0.9%	3.2%	2.3%	1.4%	-6.4%	-9.5%
E.H.S (4)	7.8%	3.2%	11.2%	-16.3%	28.5%	6.1%	8.2%	15.8%	6.1%	14.0%
A.E.R.A.F (5)	26.8%	0.0%	15.1%	-100.0%	-	26.8%	60.7%	27.9%	17.8%	-14.4%
Other Services (Except Public Administration)	0.0%	0.0%	34.8%	-	-	30.6%	42.9%	23.9%	7.0%	-11.0%
Public Administration	0.0%	17.5%	0.0%	-	-100.0%	43.1%	20.6%	29.2%	-13.7%	7.2%
<b>Civilian Employed Population 16 Years and Over</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>(Percent of Total Employment Sector)</b>	<b>17.5%</b>	<b>17.4%</b>	<b>17.8%</b>	<b>-0.1%</b>	<b>0.5%</b>	<b>5.8%</b>	<b>6.0%</b>	<b>9.0%</b>	<b>0.7%</b>	<b>8.4%</b>

- 1) 2016-2020 ACS Estimate: The American Community Survey's (ACS) 2020 estimates use five-year period data collected monthly from January 1, 2016 through December 31, 2020.
- 2) Percentages for the following reflect percentages of total employment sectors: Management, Business, Science, and Arts Occupations; Sales and Office Occupations; and Service Occupations
- 3) P.S.M.A.W: Professional, Scientific, Management, Administrative, and Waste Management Services
- 4) E.H.S: Educational Services, Health Care, and Social Assistance
- 5) A.E.R.A.F: Arts, Entertainment, Recreation, Accommodation, and Food Services

Source: ESRI Business Analyst; U.S. Census Bureau; 2016-2020 American Community Survey; compiled by Weitzman Associates, LLC

TABLE 154  
OFFICE-USING EMPLOYMENT TRENDS  
Worcester, MA Metropolitan Statistical Area

	<u>Total Employment in Thousands</u>											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	May 2022 (P)
Information	3.7	3.7	3.7	3.9	3.9	3.7	3.6	3.3	2.9	2.9	2.8	2.9
F.I.R.E. (1)	15.0	14.8	15.0	15.0	14.9	14.9	14.9	14.7	14.4	14.0	13.4	13.3
Professional and Business Services	26.1	25.9	26.2	26.5	27.7	28.3	29.0	29.4	28.0	30.8	32.1	33.2
Total Office-Using Employment	44.7	44.4	44.9	45.4	46.5	46.9	47.5	47.4	45.3	47.7	48.4	49.4
Annual Change		-0.6%	1.0%	1.1%	2.5%	0.9%	1.2%	-0.1%	-4.3%	5.3%	1.3%	2.2%
	<u>Compounded Annual Change</u>											
	2012- 2022	2013- 2022	2014- 2022	2015- 2022	2016- 2022	2017- 2022	2018- 2022	2019- 2022	2020- 2022	2021- 2022	2021 - May 2022	
Information	-2.5%	-2.8%	-3.3%	-4.4%	-5.0%	-5.2%	-5.6%	-5.0%	-1.5%	-2.1%	0.0%	
F.I.R.E. (1)	-1.1%	-1.1%	-1.4%	-1.6%	-1.8%	-2.2%	-2.6%	-3.1%	-3.6%	-4.6%	-5.2%	
Professional and Business Services	2.1%	2.4%	2.6%	2.8%	2.5%	2.6%	2.6%	3.0%	7.1%	4.4%	7.8%	
Total Office-Using Employment	0.8%	0.9%	0.9%	0.9%	0.7%	0.6%	0.5%	0.7%	3.3%	1.3%	3.5%	
	<u>Employment Distribution</u>											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	May 2022 (P)
Information	1.4%	1.4%	1.4%	1.4%	1.4%	1.3%	1.2%	1.1%	1.1%	1.0%	1.0%	1.0%
F.I.R.E. (1)	5.6%	5.5%	5.4%	5.4%	5.3%	5.2%	5.2%	5.1%	5.4%	5.0%	4.7%	4.6%
Professional and Business Services	9.8%	9.6%	9.5%	9.5%	9.8%	9.9%	10.1%	10.1%	10.4%	11.1%	11.4%	11.6%
Total Office-Using Employment	16.8%	16.5%	16.3%	16.3%	16.4%	16.4%	16.5%	16.3%	16.9%	17.1%	17.1%	17.2%
Annual Change		-1.9%	-0.9%	-0.2%	0.9%	-0.1%	0.4%	-0.8%	3.1%	1.6%	-0.1%	0.6%

1) Finance, Insurance, and Real Estate

2) Represents the monthly average figure for January through April. May 2022 data is preliminary.

(P) Preliminary data.

Source: The Bureau of Labor Statistics; compiled by Weitzman Associates, LLC

TABLE 155  
OFFICE-USING EMPLOYMENT TRENDS  
Boston, MA Metropolitan Statistical Area

	<u>Total Employment in Thousands</u>											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	May 2022 (P)
Information	76.7	76.4	77.4	79.3	80.3	81.9	81.5	83.1	81.0	81.7	84.1	85.8
F.I.R.E. (1)	176.6	176.9	177.4	180.5	184.2	184.8	185.1	186.4	182.6	181.9	179.0	178.4
Professional and Business Services	424.7	439.1	449.9	465.3	479.0	491.3	503.6	517.5	499.9	515.7	532.4	541.7
Total Office-Using Employment	678.1	692.5	704.7	725.0	743.5	758.0	770.2	787.0	763.5	779.3	795.5	805.9
Annual Change		2.1%	1.8%	2.9%	2.6%	1.9%	1.6%	2.2%	-3.0%	2.1%	2.1%	1.3%
	<u>Compounded Annual Change</u>											
	2012- 2022	2013- 2022	2014- 2022	2015- 2022	2016- 2022	2017- 2022	2018- 2022	2019- 2022	2020- 2022	2021- 2022	2021 - May 2022	
Information	0.9%	1.1%	1.0%	0.8%	0.8%	0.5%	0.8%	0.4%	1.9%	2.9%	5.0%	
F.I.R.E. (1)	0.1%	0.1%	0.1%	-0.1%	-0.5%	-0.6%	-0.8%	-1.3%	-1.0%	-1.6%	-1.9%	
Professional and Business Services	2.3%	2.2%	2.1%	1.9%	1.8%	1.6%	1.4%	0.9%	3.2%	3.2%	5.0%	
Total Office-Using Employment	1.6%	1.6%	1.5%	1.3%	1.1%	1.0%	0.8%	0.4%	2.1%	2.1%	3.4%	
	<u>Employment Distribution</u>											
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	May 2022 (P)
Information	3.1%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	3.1%	3.1%	3.1%	3.1%
F.I.R.E. (1)	7.1%	6.9%	6.8%	6.8%	6.8%	6.7%	6.7%	6.6%	7.1%	6.8%	6.5%	6.4%
Professional and Business Services	17.0%	17.2%	17.3%	17.6%	17.7%	17.9%	18.2%	18.4%	19.3%	19.3%	19.4%	19.5%
Total Office-Using Employment	27.1%	27.2%	27.2%	27.3%	27.5%	27.7%	27.8%	27.9%	29.5%	29.2%	29.0%	28.9%
Annual Change		0.3%	-0.1%	0.7%	0.6%	0.6%	0.4%	0.4%	5.7%	-1.0%	-0.6%	-0.4%

1) Finance, Insurance, and Real Estate

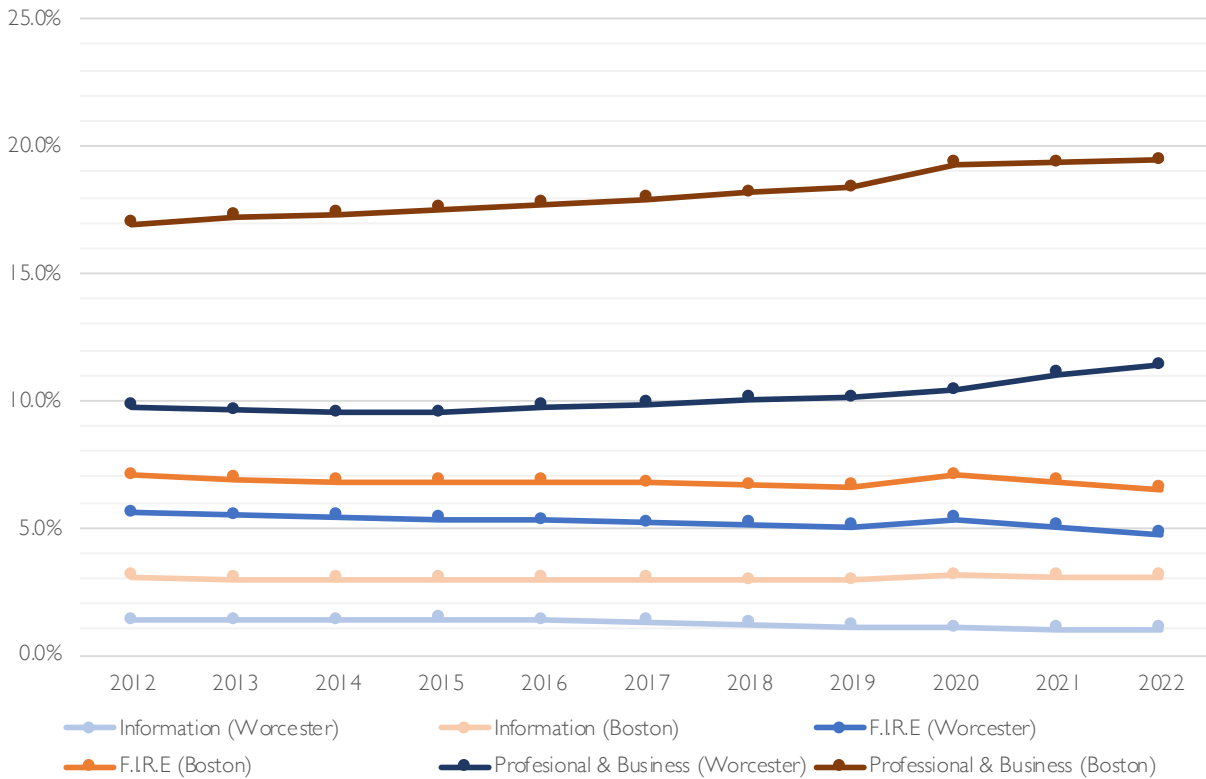
2) Represents the monthly average figure for January through April. May 2022 data is preliminary.

(P) Preliminary data.

Source: The Bureau of Labor Statistics; compiled by Weitzman Associates, LLC

GRAPH 12

### EMPLOYMENT DISTRIBUTION TRENDS WORCESTER MSA & BOSTON MSA



**EXHIBIT I**

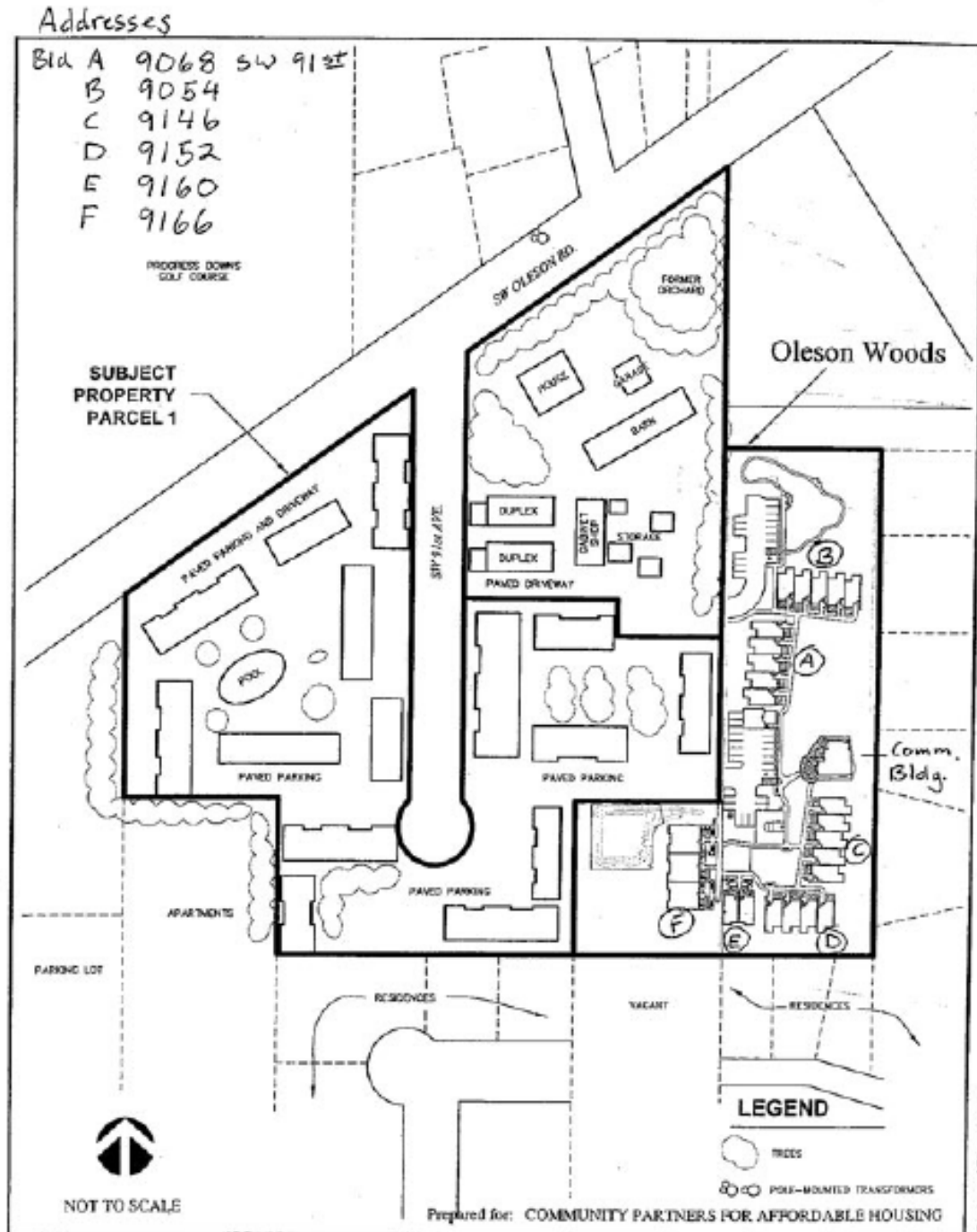
**RESIDENTIAL PRECEDENTS**



## RESIDENTIAL PRECEDENTS

### OLESEN WOODS





**The Royal Oaks and Oleson Woods Apartments Site Plan**

### *Project Highlights*

- Contributing to the project's open space is a substantial natural wetland providing protection for wildlife, including 55 identified plants and animal species, some of which are threatened.
- Located on 3.15 acres (1.27 hectares) in Tigard, Oregon—a suburb of Portland—Oleson Woods is a 32-unit apartment complex owned and developed by Community Partners for Affordable Housing, Inc., consisting of three- and four-bedroom townhouse-style units reserved for those who make less than 46 percent of area median income.
- The townhouses are oriented around public and private open spaces intended to preserve wildlife habitat and create an environment in which children can play.
- Not only does the site boast a nature-friendly environment, but the developers also incorporated many green features—such as energy-efficient appliances, low-VOC (volatile organic compound) finishes, and extra insulation and ventilation—into the construction of the buildings.
- At the center of the site, a 1,490-square-foot (138.6-square-meter) community center provides spaces for meetings, child care, and community service referral.

### *Summary*

The Oleson Woods Apartments is a community located in Tigard, Oregon, that provides an alternative to the town's high cost of housing. It is situated on a 3.15-acre parcel containing 32 affordable townhome styled units targeting households that earn less than 46 percent of the area's median income. The project also incorporates the local wetlands that it has helped to restore, in addition to providing an energy efficient design and complying with green building standards.

Located between an existing 30-year-old garden apartment development and single-family homes, the project's townhouses are clustered in an open plan that consists of a wooded natural area, a courtyard, a play area for residents, and a preserved wetland. The architectural focal point of the site is the community center, where tenants have access to services as well as meeting space.

Many features of the Oleson Woods Apartments align with our recommendations for Ayer Road in Harvard.

- Relatively dense (10 units per acre) but small-scale townhome residential development.
- Project developed to suit its surrounding environment based on a combination of smart site design and building plans that preserve natural and historic areas.
- Residential development coupled with a community center which promotes social interaction and access to services. We note the opportunity in the Harvard Commercial District for an affordable senior apartment complex located in close proximity to the soon-to-be relocated Council on Aging along Lancaster County Road.



SERENBE





















THIS IS A SITE PLAN/RECORDING BASED ON THE DEVELOPMENT CONCEPT AT THE TIME OF DESIGN. THE CONCEPT IS SUBJECT TO CHANGE WITHOUT NOTICE. NO GUARANTEE IS MADE OR IMPLIED THAT THE FACILITIES OR AMENITIES DEPICTED IN THIS SITE PLAN WILL BE BUILT, OR IF BUILT, BE OF THE SAME SIZE, SCALE, AND NATURE AS SHOWN. LAST UPDATE: 4-23-2022

CONFIDENTIAL





### *Summary*

Serenbe is a live-work-play community that provides a holistic lifestyle for its residences in the rural outskirts of Atlanta, Georgia. Although of a different scale (Serenbe has approximately 650 residents living in three new mixed-use clusters) our recommendations for the development of the Commercial District in Harvard and the development of Serenbe share similar features.

- Both our recommendations for the Commercial District in Harvard and the development of Serenbe is based on the synergy of closely located residential and commercial uses. Each of Serenbe's hamlets have complementary pedestrian-oriented mixed-use commercial centers.
- Each of Serenbe's three neighborhoods boasts a central, downtown-like area with street front retail. The idea was to create a space where multiple generations lived close together.
- The master plan for Serenbe provides for a range of housing options including townhomes and small-scale apartments on the second floor of shops below.
- The development of Serenbe and recommendations for the development of the Commercial District arise from an effort to protect beautiful rural landscapes through environmentally sustainable planning and construction practices.
- Planning features at Serenbe are inspired from New Urbanism, New Ruralism, Sustainable Urbanism, conservation communities, and English and New England village settlement patterns. To avoid cookie-cutter development, each building has its own unique character that compliments, rather than contradict each other.
- Both communities emphasize the preservation of open space. The Serenbe master plan limits the amount of disturbance and preserves 80% of the 1,000-acre community as greenspace.
- Both communities aspire to be sustainable communities. Economically, the Serenbe supports a small, but growing, number of businesses. Additionally, Serenbe has also been resilient during downturns in also supporting the arts, education, and building a sense of community.



MASONVALE





### *Project Highlights*

- Masonvale's clusters of units include one- and two-bedroom stacked flats, two- and three-bedroom townhouses, and duplexes.
- The project balances density with context-sensitive housing that blends in with nearby townhouse and single-family detached neighborhoods.
- A base range of five unit types received layered treatments of a variety of materials, details, and colors to achieve a varied streetscape. Simplifying the unit types significantly reduced construction costs.
- Masonvale is located on a previously undeveloped infill site defined by two protected riparian valleys. One of the valleys divides the development into two architecturally distinct neighborhoods—colonial and craftsman.
- Masonvale features a variety of outdoor public spaces—including a village green, rain gardens, and tot lots—to help promote community interaction.



### *Summary*

Similar to Harvard, MA, Fairfax has a high cost of housing with a shortage of affordable rental options. To address this issue, the George Mason University launched the Masonvale project that has allowed the development of below-market rental housing on ground-leased land from the county. The development is owned by Mason Housing Inc., (MHI) a non-profit established for this project.

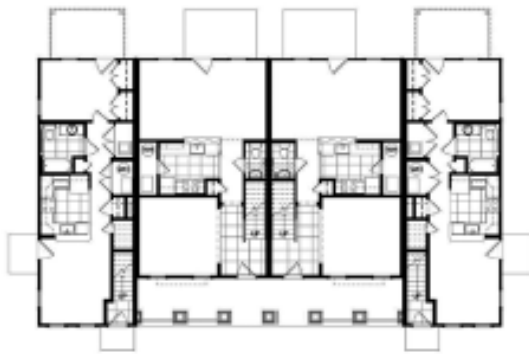
While Masonvale is specifically targeting the recruitment of new faculty for George Mason University, its model could be replicated by the Town of Harvard to target other demographics in need of affordable housing options such as senior residents.

Given the amount of conservation land in Harvard, one could assume a long-term ground lease on town-owned or county-owned land to be developed by an existing not-for-profit affordable housing organization or by a new entity to be created specifically for Harvard. By lowering site acquisition costs, such a project would allow Harvard to reach its affordable housing targets faster and would provide an alternative to the more costly mixed-income projects developed by for-profit developers.

A special-purpose nonprofit entity can offer excellent advantages in the development and management process. Public/private partnerships can offer the best of both worlds, with the development entity playing a valuable role in the project financing, development, and management while serving as a liaison with the town (or university in the case of Mason).

While the overall size of Masonvale exceeds the scale of our recommendations for Harvard, the planning and design of the individual buildings at Masonvale offers an interesting precedent for the development of rental housing in the Commercial District of Harvard.

Built on a previously undeveloped infill site, Masonvale includes 37 buildings that contain 157 units (one of which was converted to serve as the leasing office) ranging from one- and two-bedroom flats (with individual entries) and two and three-bedroom townhouses, to duplexes all on 27 gross acres. The use of stacked units helps increase the density while maintaining the overall townhouse character of the neighborhood. After accounting for the 11.3 acres that were set aside in a resource protection area, the project provided a net density of ten units per acre.



*First Floor*

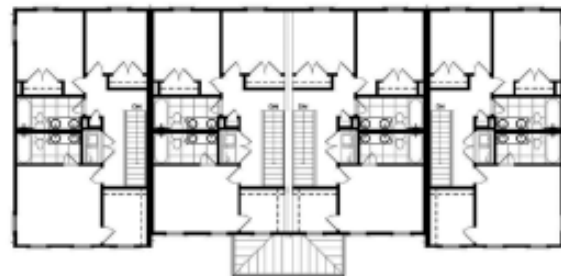


*Second Floor*

The craftsman-style townhouses mix four one-bedroom stacked flats with two three-bedroom townhouses as attached units.



*First Floor*



*Second Floor*

The four-unit colonial-style townhouse with a side porch includes a two-bedroom flat with two two-bedroom townhouse above and an adjacent three-bedroom townhouse.

BIRKDALE VILLAGE







### *Project Highlights*

- To create a welcoming place, Birkdale Village is modeled on New England villages. The architecture incorporates high-pitched roofs and buildings faced with a combination of brick and fiber cement siding.
- Clustering uses around a pedestrian-oriented open space fosters a sense of place and of community.
- The location of residential units above main street retail creates an active urban village.
- Uses are linked by the retail and residential units' orientation to the main street and the wide, grassy median.
- Open spaces contribute to the pedestrian activity in Birkdale Village. Patrons of all ages enjoy the splash fountain centrally located at the village green.
- Seasonal events such as this Christmas gathering attract residents of Birkdale Village and the surrounding area, making the village a true destination.

### *Summary*

As in the case of our proposed recommendations for Harvard, Birkdale Village has arisen out of concern for seeking alternatives to placeless single use sprawling suburban developments that have been replacing and accelerating the disappearance of farmland and of other pristine rural landscapes and environments.

Envisioned as a village-style town center serving the northern portion of Mecklenburg County in North Carolina within the Charlotte Metropolitan area, Birkdale Village is a highly efficient, planned, 52-acre (21-hectare), pedestrian-oriented mixed-use community containing 287,000 square feet of office and retail space and 320 apartments.

Although much larger as whole than what we envision for the Commercial District in the Town of Harvard, Birkdale Village has many features that are relevant to our development recommendations for the Commercial District in Harvard:

- Mixed-use development
- Housing above street-level retail where more than 81% of the units are located above ground floor commercial space
- Town center planning concept inspired by traditional New England villages
- Pedestrian connectivity within and to surrounding developments
- Tailored “new urbanism” planning codes to maximize design efficiency.

Our recommendations for small-scale pedestrian-oriented mixed-use clusters along Ayer Road in Harvard's Commercial District follow similar principles.

## EXHIBIT J

### BASIC ASSUMPTIONS AND LIMITING CONDITIONS



## BASIC ASSUMPTIONS AND LIMITING CONDITIONS

This report has been solely prepared for the client identified in the letter of transmittal and throughout the report. It is to be expressly utilized by the client for the purposes so stated, and no reliance is to be placed on this report for any other purposes. This report may not be utilized in conjunction with any securitized transaction without the express permission of Weitzman Associates, LLC. The rights to any information contained in this report, unless furnished by outside sources, are exclusively those of Weitzman Associates, LLC. This report must be read in its entirety and neither all nor portions of this report may be reproduced, published or shown to other parties without the express written authorization of Weitzman Associates, LLC.

The date to which the opinions expressed in this report apply is set forth in the letter of transmittal. The signatories assume no responsibility for economic or physical factors occurring at some later date, which may affect the opinions herein stated. Any aberrations and/or dramatic changes of prevailing economic conditions as of the date of analysis may impact our conclusions.

No opinion is intended to be expressed for legal matters or those that would require specialized investigation or knowledge beyond that ordinarily employed by the real estate profession, although such matters may be discussed in the report.

Maps, plats, graphics and exhibits if included herein, are for illustration purposes only, as an aid in visualizing matters discussed within the report. They should not be considered as surveys or relied upon for any other purpose.

The signatories of this report represent that they have no current or contemplated interest in any properties within the market study area covered by this report.

The rendering of this report does not presume the right of expert testimony or attendance in court or at any other hearing, unless financial, scheduling and other arrangements are made therefore a reasonable time in advance by mutual written agreement. All fees and costs (at the customary rates charged by Weitzman Associates, LLC for litigation and non-litigation services) for any such attendance or other participation as an expert or in court, at any hearing or in connection with any discovery related to this report or the services provided by Weitzman Associates, LLC hereunder shall be paid by the client herein identified if and to the extent same shall not be fully paid by any other person or entity.

Disclosure of the contents of this market study report and/or its use is governed by the Bylaws and Regulations of the Appraisal Institute. Neither all nor any part of the contents of this report especially any conclusions, the identity of the consultants or firm with which they are connected, or any reference to the Appraisal Institute or the MAI designation shall be disseminated to the public through advertising media, public relations media, sales media, news media, or any other public means of communication without the prior written consent and approval of the consultants. As previously mentioned, this document may not be utilized for any reporting in conjunction with a securitization transaction without the express written permission of Weitzman Associates, LLC.

This report constitutes a complete report, transmitted in summary report format and complies with The Uniform Standards of Professional Practice of The Appraisal Foundation for a complete report. This study has been prepared in conformity with and subject to the Code of Professional Ethics and Standards of Professional Practice of the Appraisal Institute. As a summary report, this report does not include full discussions of the data, reasoning, and analyses that were used in the study's process to develop the consultant's opinions. Full documentation has been retained in our files.

This market study was conducted during July, August, and September of 2022, and the fiscal impact study associated with the recommended development scenarios in the market study was completed during October, November, and December of 2022 by Dr. Marie-Danielle Faucher and Brandon Nolasco.



## EXHIBIT K

### CERTIFICATION OF CONSULTANTS

## CERTIFICATION OF CONSULTANTS

We hereby certify that Weitzman Associates, LLC was engaged to undertake a market study and a fiscal impact analysis for the Ayer Road Commercial District in Harvard, Massachusetts.

Neither Weitzman Associates, LLC nor we have any present or contemplated future interest in the real estate in any of the markets that have been analyzed in this report.

We have no personal interest or bias with respect to the subject matter of the report or the parties involved.

To the best of our knowledge and belief the statements of fact contained in this marketability study and fiscal impact analysis, upon which the analyses, opinions, and conclusions expressed herein are based, are true and correct.

This market study and fiscal impact analysis report sets forth all of the limiting conditions (imposed by the terms of our assignment or by the undersigned) affecting the analysis, opinions, and conclusions contained in this report.

The research and analysis underlying the market study were principally completed by Dr. Marie-Danielle Faucher and Brandon Nolasco during July, August, and September of 2022, and the research and analysis underlying the fiscal impact study were completed during October, November, and December of 2022 by Dr. Marie-Danielle Faucher.

Our fee for this marketability analysis and fiscal impact study is not contingent upon the conclusions reported or upon anything else other than the delivery of this report.

This market study and fiscal impact study have been made in conformity with and are subject to the requirements of The Uniform Standards of Professional Practice of The Appraisal Foundation. They are also subject to the Code of Professional Ethics and Standards of Professional Practice of the Appraisal Institute.

The Appraisal Institute conducts a program of continuing education for its designated members. Members who meet the minimum standards of this program are awarded periodic educational certification. As of the date of this report, Marie-Danielle Faucher has completed the requirements under the continuing educational program of the Appraisal Institute.



WEITZMAN ASSOCIATES, LLC

A handwritten signature in blue ink, appearing to read "m. faucher", written over a horizontal line.

Dr. Marie-Danielle Faucher  
MAI, MRICS, Assoc. AIA, OAQ  
Senior Vice President

A handwritten signature in blue ink, appearing to read "Brandon Nolasco", written over a horizontal line.

Brandon Nolasco  
Associate Consultant

**EXHIBIT L**

**QUALIFICATIONS OF THE CONSULTANT**



PROFESSIONAL QUALIFICATIONS**DR. MARIE-DANIELLE FAUCHER, MAI, MRICS, Assoc. AIA, OAQ**

EDUCATION: Harvard University Design School, Cambridge, Massachusetts  
Doctor Design, Master in Design Studies  
Major in Real Estate, Urban Planning and Development

McGill University, Montréal, Québec  
School of Architecture, Faculty of Engineering  
Bachelor of Architecture

EMPLOYMENT: WEITZMAN ASSOCIATES, LLC

(formerly known as The Weitzman Group, Inc.)  
New York, NY & Chicago, IL

*Senior Vice President*  
*Vice President*

2005 – Present  
2004 – 2005

Real estate advisors providing counsel to those engaged in evaluating, buying, selling, leasing, financing, or developing real estate. The services offered by the firm include acquisition and disposition counseling, regional economic analysis, market research, due diligence, development planning, appraisals and expert testimony.

Ms. Faucher consults on all property types, and specializes in complex mixed-use developments, special-use properties, and strategic planning for private, public, and not-for-profit clients. Ms. Faucher also provides litigation support in the acquisition of air rights, the renegotiation of master and ground leases, the valuation of easements, the valuation of leased fee and minority interests, and in the “before and after” valuation of damaged property cases

LANDAUER REALTY GROUP /GRUBB & ELLIS / CONSULTING SERVICES  
New York, NY

*Managing Director, The Consulting Group*  
*and the Public-Private Advisory Group*

2000 – 2004

Real estate services including disposition, acquisition and leasing strategies, feasibility studies, strategic planning, economic development, valuation, litigation support, development plans, solicitation documents and negotiation services.

CADEV, CAISSE DE DÉPÔT ET PLACEMENT DU QUÉBEC  
Montréal, Québec

*Project Director-Special Projects*  
*Project Director- Executive Office, Quartier international*  
*de Montréal (Montréal International Business District Redevelopment Authority)*

1997 – 2000

Analyzed investments in commercial and multi-family residential properties in North America and abroad for Canada's largest institutional investor.

Managed the pre-development of the Montréal International Business District, a public-private economic development and urban improvement investment planned in conjunction with the redevelopment of the city's main convention center. The project involved strategic planning, and the development of air rights above an existing highway and adjacent to an underground subway infrastructure.

PRAGUE INVESTMENT/ BLACK & VEATCH ENGINEERING

Prague, Czech Republic

*Assistant Project Manager*

1997

Participated in the development of the first large-scale project privately built in the Prague periphery and of a luxury hotel in the Historic District.

CECIL & RIZVI, THE CECIL GROUP

Boston, MA

*Assistant Project Manager*

1997

Prepared land-use proposals and redevelopment strategies for large-scale waterfront and downtown projects.

MEMBER: Royal Institute of Chartered Surveyors (MRICS)  
American Institute of Architects (Associate)  
Lambda Alpha Land Economics Society  
Danspace Building Committee

PROFESSIONAL LICENSES:

General Appraiser (State of New York and State of Illinois)  
Architect (Quebec Order of Architects)

PROFESSIONAL DESIGNATION:

MAI (Appraisal Institute)

TEACHING:

Managed Visiting professor at Washington University, Rensselaer Polytechnic Institute, and Université du Québec à Montréal. Guest speaker and guest critic at Harvard Graduate School of Design, Arizona State University, Ryerson University, Université de Montréal, McGill University, Parsons School of Design, and New York City Center for Architecture.

PROFESSIONAL QUALIFICATIONS**BRANDON M. NOLASCO**

EDUCATION: Cornell University  
College of Architecture and Planning  
Ithaca, New York  
Bachelor of Architecture with Minor in Real Estate

EMPLOYMENT: WEITZMAN ASSOCIATES, LLC  
(formerly known as The Weitzman Group, Inc.)  
New York, NY & Chicago, IL

*Associate Consultant*  
*Intern Consultant*

2020 – Present  
2019 – 2020

Real Estate specialists providing advice and counsel to those engaged in evaluating, buying, selling, leasing, financing, or developing real estate.

COLVIN INSTITUTE OF REAL ESTATE DEVELOPMENT  
New York, NY

*Colvin Case Study Competition*

August 2018 – December 2018

A national intercollegiate real estate case study competition requiring a post-development report and documentation of a recently completed, programmatically complex, mixed-use urban project. The Challenge is designed to hone professional skills and reveal the knowledge base and understanding of markets, project valuation, finance, urban design and sustainability, entitlement processes, and operational issues.

ROBERT A.M. STERN ARCHITECTS LLP  
New York, NY

*Drafting Associate*

June 2017 – August 2017

Global architecture firm based in New York City specializing in residential, academic, and cultural buildings. The firm's geographical scope has widened to include projects in Europe, Asia, South America, and throughout the United States.