Needham Street in Newton: Potential Additional Development and Associated Traffic Impacts Study

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Interim Report, December 2013

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TABLE OF CONTENTS

CONTENTS		PAGE
I.	Executive Summary	1
١١.	Existing Travel Patterns	3
111.	Market Analysis	5
IV.	Preferred Land Use and Buildout Analysis	27
V.	Traffic Impacts Analysis	33

I. Executive Summary

The City of Newton requested assistance with a planning process to identify the total development and associated traffic impacts that would result from the potential rezoning and redevelopment of the Needham Street Corridor. The Town's goals for the study were to assess existing traffic patterns along the corridor; to identify the market potential for a broader mix of uses including retail, office and housing; to develop a preferred land use and buildout scenario based on the market potential; and to identify the potential associated traffic impacts that would result from the development.

The products included in this interim report were completed by the Metropolitan Area Planning Council (MAPC) and Central Transportation Planning Staff (CTPS). Funding for MAPC's Market Analysis and Buildout work was provided from District Local Technical Assistance funds (DLTA) and transportation analysis from DLTA and Unified Planning Work Program Transportation Technical Assistance funding for FY13. CTPS elements were funded by the City of Newton.

A. Existing Travel Patterns

CTPS staff reviewed previous studies for Needham Street and other roadways in the vicinity, including license plate survey studies, to identify traffic profiles and likely future pattern changes from new infrastructure that is presently under design or construction.

Key findings and conclusions from this analysis suggested that traffic along Needham Street is regional in character and that the majority of traffic (70 percent) is pass-by/pass-through. It is also captive in nature, meaning the driver does not save time by switching to other routes regardless of improvements. Existing traffic is poor because of high traffic volumes, inadequate capacity to process existing traffic, and the high volume of turns into numerous business driveways. While proposed improvements will address traffic management and safety concerns, they will add little to no additional capacity along the roadway, However, future increases in traffic will likely occur as population increases regionally, and/or from trips generated by new development or redevelopment of properties along the corridor.

B. Market Analysis

MAPC conducted a market analysis for office, retail and residential uses along the Needham Street Corridor. Based on analysis of existing demographic, economic and market trends for all categories; interviews with developers, property owners and real estate brokers; and local and regional development trends, Needham Street was found to be an attractive market for future development in each category.

According to the analysis, the market could potentially support several hundred apartments and/or condos (approximately 477K sf, or 477 units) along the corridor, particularly in mixed-use (vertical or horizontal) settings. Additionally, approximately 60,000sf-100,000 sf of new retail, and up to 350,000 sf of new office space could likely be supported within the study area.

C. Buildout Analysis

Upon completion of the market analysis, MAPC performed a buildout analysis reflecting the desired mix of uses along the corridor. The buildout analysis began with a review of existing development including total developed square footage, existing use types, and current zoning for each parcel within the study area. In consultation with Town staff, a future preferred land use scenario was developed. Each parcel was assigned a preferred land use, (office, retail, residential, or a mix of uses), and then using existing as-of-right zoning parameters and parking requirements, a buildout scenario was calculated to provide total expected development by type of use.

Based on the land use assignments and build out calculations, the study area can potentially accommodate an additional 304,850 total square feet of new or repurposed development. This includes approximately 200,000 sf of additional office development, over 500,000 sf of housing (approximately 512 new multifamily housing units), a slight decrease in retail uses (-51,000sf), and a decrease of over 300,000sf of industrial space.

D. Traffic Impacts Analysis

The transportation component of this project is in its final stages of analysis and will be available in early 2014.

II. Existing Travel Patterns

CTPS staff reviewed previous studies for Needham Street and other roadways in the vicinity, including license plate survey studies, to identify traffic profiles and likely future pattern changes from new infrastructure that is presently under design or construction.

Key Findings and Conclusions

The following is a summary of the existing and future travel patterns in the Needham Street study area from CTPS. Findings are, largely drawn from a 2002 AM license plate survey conducted along the road segment and the impacts of transportation infrastructure improvements.

- 1. Traffic on Needham Street has a regional character. License plates are registered in more than 100 Massachusetts communities.
- 2. Seventy percent of the traffic on Needham Street is pass-by/pass-through and it is captive in character. This traffic does not save time by switching routes and will use Needham Street regardless of transportation infrastructure improvements.
- 3. Existing traffic conditions on Needham Street are poor because of high traffic volumes, inadequate capacity to process existing traffic, and a high volume of turns into numerous business driveways.
- 4. The improvements proposed for Needham Street primarily address traffic management and safety issues and do not add significant ability to attract trips to or through the area.
- In the analysis area, the markets for the I-95/I-93/ Transportation Improvement Project and the Kendrick Street Interchange Project comprise traffic heading to the business parks. Most of the commuter trips to and from the business parks would be via improved I-95/Route 128.
- 6. The new Kendrick Street interchange and collector-distributor roads would improve access and egress to the business parks. In addition, they would reduce congestion at the Highland Avenue interchange by shifting traffic to exit or enter I-95/Route 128 at Kendrick Street.
- The new Kendrick Street interchange would shift cut-through traffic on Greendale Avenue and Hunting Road back to I-95/Route 128 by City of Newton 13 November 8, 2013 providing direct access and egress from I-95/Route 128 to Kendrick Street.
- 8. The likely source of future traffic surges on Needham Street is secular growth based on a gradual increase in population and economic activities and/or introducing new developments or redeveloping existing properties.

In conclusion, CTPS staff investigated AM peak-period license plate surveys, existing traffic conditions and patterns, and known transportation infrastructure improvements in the Needham Street study area. These findings indicate that impact on future Needham Street traffic patterns because of transportation projects would be minor—unless new developments that increase trips to the Needham Street area are realized (i.e., constructed and occupied). This conclusion is primarily based on AM traffic patterns, impacts of known transportation improvements, and professional judgment about impacts related to PM patterns.

(See Appendix A for complete CTPS Memo.)

III. Market Study

A. Market Study Context

This market analysis is part of the ongoing planning process by the City of Newton that will culminate in the Master Plan for Needham Street. As part of this process, the corridor has been identified by the City as one of Newton's few remaining areas with significant redevelopment potential to both increase tax revenue and create a live-work-play environment that will further improve Newton's already high quality of life.

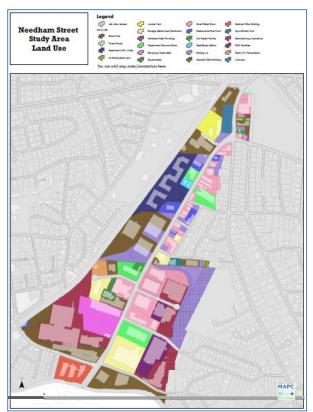
Location and Study Area

The City of Newton, an affluent inner-ring suburb, is located just west of Boston at the junction of Rte. 128 and the Massachusetts Turnpike. This central location strategically provides residents access to the region's largest job centers, and easy access to workers coming to Newton from other communities within the Boston Metro region.

Needham Street is a highly travelled connector linking Rte. 128/I-95 and MA-Rte 9, which provides added value and exposure to properties along the roadway. In many ways, Needham Street is a

hybrid corridor, serving both as a regional connector and a neighborhood shopping destination. However, given the high traffic congestion along the corridor, particularly at peak drive times, development potential is perceived to be limited given current access constraints. There is no direct MBTA train service to the study area, but all parcels are within 1mile of either the Newton Highlands or the Eliot Green line stations, and portions are within 1/2mile. The corridor is served by the MBTA 59 bus, which provides a direct connection to Green line service at the Newton Highlands station.

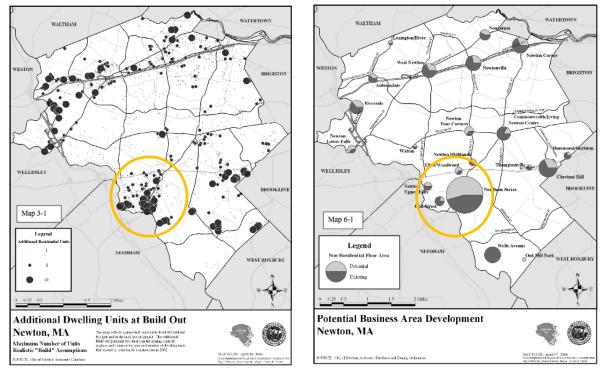
The study area itself consists of 98 parcels on either side of Needham Street from the Charles River (border with the Town of Needham) to Boylston Street (Rte. 9). The study area can be divided into two distinct subareas. The southern half of the study area consists of primarily larger parcels, some under common ownership, with multi-tenant office and retail structures, as well

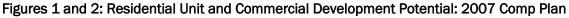


as a large condominium residential development along the Charles River. The northern section is primarily comprised of smaller parcels with a mix of stand-alone office and retail establishments, as well as a large housing complex.

Previous Planning

Previous planning initiatives have identified significant development potential and/or land use changes for the corridor. The *Needham Street Corridor: Proposals for the Future (1984)* concluded that the area would best be served by office uses, which led to the adoption of Mixed Use 1 and Mixed Use 2 zoning districts. Another project in 1994 suggested dedicating portions of newly generated tax revenues from future Needham Street development for improvements in adjacent neighborhoods. The 2007 Comprehensive Plan identified the potential for hundreds of residential units and over 3 MSF of commercial development along Needham Street (See Figures 1 and 2), based on current zoning at full build out. However, the comp plan also stated that a vision and careful planning was needed for the area, especially because recent growth has been unplanned and existing infrastructure posed serious constraints. Most recently, the *Envisioning Needham Street: Needham Street Corridor Plan* (2010) by MIT students recommended a mixed-use environment with expanded by-right land uses including retail, service and multi-family, as well as improved urban design features to promote livability and curb appeal.





Property Owners

The City of Newton has already conducted two visioning sessions and numerous interviews with business and property owners within the study area. Through these discussions, property owners indicated they are interested in and are pursuing opportunities for redeveloping some large parcels into moderate density mixed-use developments, particularly in the southern half of the study area. These would include combinations of office, retail and residential uses aimed at creating a live-work-play environment, which is increasingly a draw for employers and employees alike, as they provide a more active, engaging environment with the option to reside near work, and/or provide convenience

to workers – shopping and dining options. Additionally, Bierbrier Development will break ground on a Main Street-style retail development along Needham Street, in a manner that creates a small, horizontal mixed use area, given its location directly in front of the Avalon at Newton Highlands residential complex. Additional discussions with real estate brokers and property owners as part of this market analysis further confirm interest and potential for this type of development along the corridor.

Needham Street Traffic Congestion

Studying the potential for additional development along Needham Street must directly address the issue of automobile congestion along the corridor. However, although the congestion exists, it is equally important to note that concern over traffic has been discussed and debated along the corridor for decades. During this time, additional development has occurred, and continues to be proposed, despite the issue. Therefore, it is important to note that congestion, while inconvenient, typically correlates with economic prosperity. As highlighted in the Needham Street Briefing Book (developed as part of the larger Needham Street planning project), for congestion to exist there must be many people willing to pay the high cost in congestion-induced lost time and frustration to be in that location. Thus, when looking through this lens, Needham Street's congestion is a product of the area's attraction as a retail, office and residential destination. Additionally, it is also important to note that traffic congestion does not grow indefinitely; rather it plateaus, typically reaching a balanced point reflective of local or commuter tolerance for traffic congestion and the desirability of utilizing a specific route (or mode of transportation) for a specific destination or purpose. Simply put, when traffic congestion hits a certain level, drivers look for alternative routes that are more efficient depending on their final destination and time allotment to reach it.

Therefore, although traffic congestion must and will be addressed in the larger vision and study for the area, circulation improvements should not be limited to Needham Street alone. Options to improve movement throughout the corridor could include new internal roadways connecting adjacent parcels, future connections to existing streets, and importantly, improved pedestrian and bicycle connections throughout the study area with links to public transportation. These circulation improvements will not only lead to a more pedestrian and bicycle friendly environment, but also provided alternative automobile connections without accessing Needham Street, that would help to allow for greater development.

Market Study Goals

Given the above, this market study will look at the potential for various uses along the corridor. It will first look at general demographic and economic trends for Newton and the surrounding region. A basic housing and retail analysis will be performed, as the strength of these markets is already better understood. And most significantly, the potential for new office in the Route 128/Mass Pike subregion will be looked at, in particular the potential along Needham Street in Newton and its competitive advantages.

B.Demographics

Understanding the current and projected demographic and socioeconomic characteristics of a community is essential to any market analysis. An area's households and their incomes are the key drivers that determine its market potential for housing and retail, and the community's economic position within its larger region.

Population

Newton is a stable, inner core suburb, with low population growth between 2000 and 2010 (1,317 residents, or 1.8%). This is comparable but slightly lower than the neighboring communities of Brookline, Waltham and Wellesley, but higher than Needham or Weston, which saw decreases over the previous decade.

Municipality	2000 Pop	2010 Pop	Pop Change 2000-2010	% Change
Newton	83,829	85,146	1,317	1.8%
Brookline	57,107	58,732	1,625	2.8%
Waltham	59,226	60,632	1,406	2.4%
Weston	11,469	11,261	-208	-1.8%
Wellesley	26,613	27,982	1,369	5.1%
Needham	28,911	28,886	-25	-0.08%
Source: US Census	•	•	•	

Table 1: Population Change, 2000-2010

Age Profile

Newton's population is aging. Although there was a slight decrease in those 65+ between 2000 and 2010, the population between 55 and 64 increased by almost 43% or 3,280 persons over the decade. Conversely, there was a sharp decline in children under 19 years of age (-7.6%), a trend found nationally as Millenials grow older and young families have fewer children. Finally, young professionals (those 20-34) and middle age residents (35-54) have held steady.

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	2000	2010	Change	%
19 and Under	21,284	19,651	-1,632	-7.6%
20-34	15,904	16,085	181	1.1%
35-54	26,120	25,910	-250	-1.0%
55-64	7,670	10,590	3,280	42.7%
65 and older	12,610	12,261	-348	-2.7%
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Table 2: Population by Age

Source: US Census

Most significantly, Newton's population is expected to age significantly in the coming decades. According to MAPC's MetroFuture projections, all population growth will be in persons 55 and over, with the largest and most significant increase coming from those over 65. For Newton, MAPC projects an additional 9,300+ persons 65 and older by 2035, while younger adult populations are projected to decline, including those 35-54 (-5,020, -19%) and those 20-34 (-1,116 or -7%). These last two age cohorts are those most likely to have children and reside in larger single family structures. The aging of the population will likely have a significant impact on the type of units needed to house Newton's residents in the future, as older residents often look for smaller homes or in multi-family structures with more amenities and less upkeep.

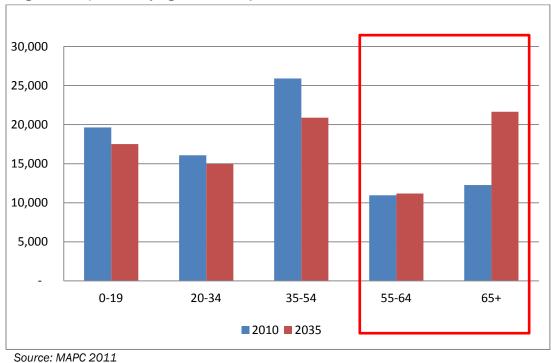


Figure 3: Population by Age: MAPC Projections 2010-2035

Households

Although population increased over the decade, the number of households actually decreased minimally in Newton – there were 33 fewer households. However, future trends indicate moderate growth in households over the next couple of decades.

		House	Household Size			
Municipality	2000	2010 Change %		2000 Avg HH size	2010 Avg HH size	
Newton	31,201	31,168	-33	-0.1%	2.51	2.50
Brookline	25,594	25,092	-502	-2.0%	2.18	2.27
Waltham	23,207	23,690	483	2.1%	2.29	2.28
Weston	3,718	3,776	58	1.6%	2.85	2.82
Wellesley	8,594	8,696	101	1.2%	2.7	2.78
Needham	10,612	10,341	-271	-2.6%	2.63	2.72

Table 3: Households and Household Size

Source: US Census

For the housing and retail market analyses, understanding household trends is more important than the overall population figures. MAPC's MetroFuture household projections were used to identify the change in households expected through 2035. As shown in the chart below, Newton is expected to gain approximately 1,974 households over the next 25 years. Given the projected change in age composition, nearly all of this household growth will be in senior households. Some household growth may occur for young professional (20-34) households, despite a projected decline in overall

population for this age group. This could occur because young professionals remain single longer, waiting to start families later than in previous decades. Additionally, should the Boston region retain more "young workers" after completing undergraduate or graduate studies, the number of households will increase. Both of these cohorts are more likely to be interested in alternatives to single-family houses, and given incomes within Newton (discussed below), both have considerable spending potential.

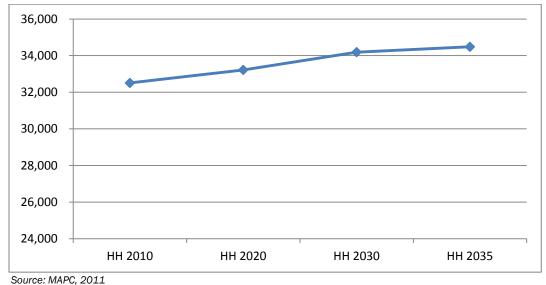


Figure 4: Household Change: MAPC Projections 2010-2035

Comparative Geographies:

Many demographic and socioeconomic indicators for Newton will be compared to MAPC's Inner Core subregion, as well as that of Middlesex County and the State as a whole.

The Inner Core communities are among the most urban and densely populated within the MAPC planning area and are faced with a host of unique challenges based on their size, density and proximity to Boston.



Household Composition

Newton has a higher percentage of family households than the average for Inner Core communities, Middlesex County and the State. However, although one may attribute this larger percentage to the quality of the school system, Newton has a higher percentage of Married Couple without Children family households than the Inner Core suburbs, and slightly more than all of Middlesex County and the State. Meanwhile, there are fewer non-family households and fewer households where people live alone.

Table 4: Household Composition:	Family vs. Non-Family
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	Newton	Inner Core	Middlesex County	State
Family HHs	67%	52%	63%	63%
Families with Children	32%	23%	29%	28%
Married Couple/No Children	30%	20%	27%	27%
Single Parent	5%	8%	6%	9%
Non-Family	33%	48%	37%	37%
Living Alone	26%	34%	28%	29%

Source: ACS 2011

Of particular interest for the retail and housing study are the nearly one-third of married households with no children. These households often prefer smaller housing units, with amenities and lower upkeep often in walkable mixed-use communities, and often have more expendable income.

Income

The median household income in Newton is nearly \$110,000, significantly higher than those of Middlesex County and the State as a whole, and higher than nearly all Inner Core communities. Specifically, over half of all households in Newton (55%) have incomes exceeding \$100,000 per year.

Table 5: Household Income, Newton vs. Comparative Areas

	Newton	Inner Core	Middlesex County	State
Median Income	\$109,724	n/a	\$79,691	\$65,981
Less than \$20,000	10%	19%	12%	16%
Between \$20,000 and \$39,999	9%	15%	13%	16%
Between \$40,000 and \$59,999	10%	14%	13%	14%
Between \$60,000 and \$74,999	7%	9%	9%	9%
Between \$75,000 and \$99,999	10%	13%	14%	13%
\$100,000 or more	55%	29%	39%	31%

Source: ACS 2011

Looking more closely at Newton households by age of householder, Newton has a large number of high-income households across all age groups. In particular, the young professional (25-44), and middle age (45-64) households are high earners, with 58% and 67%, respectively, earning more than \$100,000 annually. Even many younger households (under 25) have high incomes. Of the 458 households in this category, more than 40% earn over \$75,000 annually. This points to a community with significant expendable income and buying power, both for retail goods and services and housing expenditures.

Age	Total HHs	Less than \$20,000	\$20,000 to \$39,999	\$40,000 to \$59,999	\$60,000 to \$74,999	\$74,999 to \$99,999	\$100,000 and above
Under 25 years	458	22%	10%	5%	20%	12%	30%
25 to 44 years	9,231	5%	8%	11%	6%	11%	58%
45 to 64 years	13,089	6%	5%	7%	5%	10%	67%
65 and over	7,957	22%	16%	12%	9%	10%	31%

Table 6: Household Income by Age, Newton

Source: ACS 2011

Educational Attainment

Newton residents have a significantly higher educational attainment level than comparative geographies. Nearly 75% of residents 25 years or older have at least a Bachelors degree, and nearly half have a Masters of higher. This is not surprising given the higher incomes found in the community.

	Newton	Inner Core	Middlesex County	State
Less than High School	3%	13%	8%	1%%
High School Diploma	11%	23%	22%	26%
Some College No Degree	8%	13%	14%	16%
Associates	3%	5%	6%	8%
Bachelors	28%	23%	26%	22%
Masters of Professional	46%	22%	24%	17%
Sources ACS 2011				

Source: ACS 2011

C. Existing Housing Stock

Housing Units by Type

Currently, the City of Newton's housing stock primarily consists of single- and two-family unit structures (60% and 20%, respectively). This is a far higher percentage than what is found in other inner core communities, including neighboring Brookline, Watertown and Waltham.

Table 8: Number of Units in Structure

	Newton	Inner Core	Middlesex County	State
Single Family	60%	29%	55%	57%
Two Family	18%	18%	14%	11%
3-4 Units	5%	19%	9%	11%
5-9 Units	4%	9%	5%	5%
10-19 units	3%	6%	5%	4%
20 or more	10%	20%	12%	10%
Other (mobile homes, etc.)	0%	>1%	>1%	1%

Source: ACS 2011

Additionally, with its high population and access to public transportation in many areas, the percentage of structures with more than 10 units is considerably lower than other communities close to Boston. Further, given projections for an aging population, the current housing stock may not meet the preferences of future household growth.

Occupancy Characteristics

Nearly 70% of housing units in Newton are owner-occupied, a considerably higher percentage compared to the overall inner core subregion - where there is a higher percentage of renters - but only slightly higher than that found in Middlesex County and the State as a whole. Given the high incomes in Newton, combined with the high percentage of single and two-family units currently built in the city, this is not surprising, and may point to an untapped market for attached and multifamily housing that would appeal to smaller households such as retirees and young professionals without children who are drawn to, or wish to stay in, Newton, but are seeking a more urban or urban-light¹ lifestyle.

Table 9: Unit Tenure

	Newton	Inner Core	Middlesex County	State
Owner Occupied	69%	44%	62%	62%
Renter Occupied	31%	56%	38%	38%
Source: ACS 2011	•	•		

Source: ACS 2011

Vacant Units

Newton has a low housing vacancy rate. Only 4.5% of total housing units were vacant according to 2011 ACS estimates. This is slightly lower than the surrounding county, but considerably lower than the larger Inner Core subregion and significantly lower than the State 9.3% rate. This points to a highly competitive housing market in Newton.

	Newton	Inner Core	Middlesex County	State
Total Units	32,648	703,059	612,004	2,808,254
Vacant	1480	44077	31316	261,179
Percent Vacant	4.5%	6.3%	5.1%	9.3%

Table 10: Vacancy

Needham Street Residential Units

There are currently limited residential options along the Needham Street corridor. Most significant is the Avalon at Newton Highlands development. The project, developed in 2002 through the Chapter 40B Comprehensive Permit process, is a two-building, 294-unit luxury complex with underground and surface parking, and numerous amenities including a putting green, tot lot playground, fitness

¹ Urban-light refers to households not interested in urban living, but who prefer walkable, mixed-use communities with amenities.

center, pool, and other open space. The project includes 60 three-bedroom units, 139 two-bedroom units, 89 one-bedroom units and 6 live/work units (studios). 25% of all units are affordable (74 units), of which 11 are for low-income households earning below 50% AMI (Area Median Income), and 37 for those earning below 80% AMI. The complex houses a mix of single and family households, many of which are new to Newton, or moving within the community temporarily, or over the long term. There are also 101 children living in the Avalon who are enrolled in the Newton Public School.

The Village Falls Condominiums, a mixed use structure at 173-193 Oak Street, includes 122 residential condominiums, mostly 2-BR units, and was built in 1988. Fourteen units are affordable and are owned and managed by the Newton Housing Authority. A small medical office is also part of the development.

These two developments have both been successful. The Avalon at Newton Highlands currently has only 8 units available for rent – a low 3% vacancy rate. Units available as of September 2, 2013 included 3 one-bedroom units available with rents starting at \$2,375 per month; 4 two-bedroom units with rents starting at \$2,765 per month; and 1 three-bedroom unit renting for \$3,935 per month. The high rents achieved at the project show the area to be desirable for high income earning households looking for units with many amenities.

According to Trulia, a two-bedroom, two-bath unit for sale in the Village Falls Condominiums is currently listed for \$379,000, significantly higher than its last purchase price of \$275,000 back in 2000. Another unit in the building sold in February of this year for \$325,000 on the first floor, but is now estimated to be worth \$381,000. Although not inexpensive compared to other suburban communities, these units represent a more affordable ownership option in Newton, where the median condo price in 2012 was \$434,000, and is at approximately \$454,000 through August of this year, according to Warren Group Data.

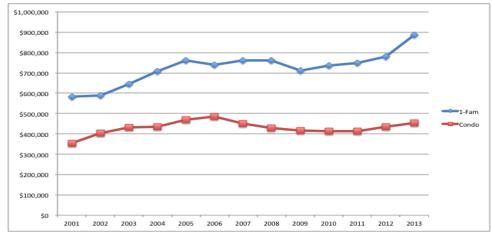


Figure 5: Median Sale Prices, Single Family and Condos, Newton, 2001-2013

Source: Warren Group, Town Stats, September 2013

As shown in Figure 5, condo sales prices have grown since the low in 2010, and are approaching peak prices. Meanwhile, single-family prices are at all time highs. In general, Warren Group data points to an extremely strong and competitive market in Newton, with room for new inventory.

Discussions with a residential broker with listings throughout Newton, including within the study area – a condo on Oak Street – suggest that the market for new rental and ownership units is strong in the area. In particular, one-bedroom and three-bedroom units are in high demand, because there are very few of these units within Newton. Single, young professionals and seniors looking to downsize, were identified as the primary buyers for such units. The one-bedrooms would be more appealing to young professionals and seniors, and the three bedroom units would be more attractive to seniors looking to downsize form larger single-family homes, but still wishing to have guest rooms for visiting friends and relatives.

Summary

Given the projected demographic changes in Newton and the region - declining household size, an aging population - housing preferences are likely to change over the next 20 years. Given these shifts, and the types of units likely needed, Needham Street represents an opportunity for Newton to develop additional housing that is attractive to a range of household types, including older households, young professionals, and small families.

D. Residential Market Analysis

Estimated Housing Unit Demand

Estimated future unit demand is not an exact science. It requires analysis of current conditions, future population and household projections, residential preference indicators, and other qualitative factors to estimate not only the number, but the type of housing that will be needed within a community.

Considering the strong housing market in Newton, the city could likely accommodate considerable new housing development, particularly ownership housing units priced for first time buyers or seniors looking to downsize, or rental units for those looking to reside in Newton, but who cannot afford an ownership unit. However, given community concerns about overdevelopment, the following housing demand projections are conservative.

MAPC's MetroFuture household analysis projects the number and type of units needed within a community to keep pace with household growth. Based on the analysis, it is projected that the majority of units needed to house Newton's future household growth would be multifamily units, either in townhouse or larger apartment and condominium structures.

Estimating the demand for new housing along the Needham Street corridor assumes the area represents one of Newton's greatest opportunities for new multi-family or mixed-use development, and the desire by both the city and existing property owners to redevelop properties in this manner. Therefore, the corridor planning area could potentially capture 40% of all multifamily development over the next 20 years. Multi-family homes and townhouses would more likely locate near existing village centers, and single-family homes would not be appropriate for this area.

	Apartment or Condo Building Units	Multifamily Homes or Townhouse Units	Single- Family Units	Accessory Units	TOTAL	Number of Units in Mixed-Use Structures
Total Number of Units Citywide	1,183	689	31	71	1,974	445
Needham Street Capture Rate ²	40%	0%	0%	0%	-	75% of new units
Needham Street Units	477	0	0	0	477	358

Table 11: Projected Housing Units by Type, MAPC MetroFuture Analysis

Source: American Community Survey, MAPC

The market analysis assumes that the majority of multi-family units would be rental properties (twothirds), with some ownership opportunities (one-third).

Unit Demand Mix

Given the larger percentage of family households, both those with and without children at home, all multi-family apartment and condominium structures should include a mix of unit types, including one, two, and three-bedroom units. For example, and as highlighted earlier, the successful Avalon at Newton Highlands 40B development includes 60 three-bedroom units, 139 two-bedroom units, 89 one-bedroom units, and 6 smaller live/work units (studios). A similar mixture would accommodate both younger and older singles and married couples, as well as small families attracted to Newton for its quality of life, proximity to job centers, and schools.

In total, the 477 units would equal approximately 477,000 sf of new residential development along the Corridor, based on an average 2-BR, 1,000 sf unit. It should be reiterated that these estimates are conservative given the low inventory of multifamily units in Newton, and the desire to reside within the community.

Affordability

Given the high rents obtained for units within the Avalon at Newton Highlands (see Chart below), it is encouraged that 20-25% of new units be affordable to low income households. This would be in line with Chapter 40B Comprehensive Permit projects and 40R Smart Growth Zoning Districts, but higher than the town's inclusionary zoning requirements. The city's Subsidized Housing Inventory currently stands at 7.58%, several percentage points below the State mandated 10% threshold. This means developers are able to develop residential projects using the Chapter 40B Comprehensive permit, which was used for the Avalon at Newton Highlands development, even if the current (or future) zoning does not specifically allow for such development. By incorporating additional affordable units into all developments along Needham Street, it would help Newton to increase its affordable housing stock, and provide low- and moderate-income households, as well as middle-income workers (since 75% of units are market rate) with quality places to reside.

² Unit type calculations derived using 2011 MetroFuture household projections and 2008 MetroFuture model percentage estimates for unit types.

E. Economic Trends

Employment and Labor Force

Newton's unemployment rate has consistently been lower than that of Middlesex County and the State since 2001. Annual unemployment in Newton was at 4.2% at the end of 2012, over two percentage points lower than the State, and more than a point lower than Middlesex County. Unemployment has also fallen since the high in 2009 of 5.6%. This points to an improving job market within Newton, the county and the state.

	Newton	Middlesex County	Massachusetts
2001	2.7	3.3	3.7
2002	3.9	5	5.3
2003	4.1	5.3	5.8
2005	3.4	4.1	4.8
2006	3.3	3.9	4.8
2007	3	3.7	4.5
2008	3.6	4.4	5.3
2009	5.6	6.9	8.2
2010	5.5	6.8	8.3
2011	4.6	5.8	7.3
2012	4.2	5.3	6.7

Table 12: Unemployment, Newton and Comparative Geographies, 2001-2012

Job and Wage Trends

Job and wage trends for different industry sectors over time help to predict future demand for jobs and the type of space that is needed – office, industrial, or retail. Where there is growth, it may indicate increased demand for space, and vice versa. To estimate space needs along the Needham Street corridor, the analysis looked at employment and wage trends for the City of Newton, Middlesex County and Massachusetts.

Jobs

Newton has seen steady job growth over the last decade. (See Table 13.) Analysis of total number of jobs by sector was performed looking at two timeframes: 2001-2008 – the boom years leading to the Great Recession; and 2008 – 2012 – the years of economic recovery. Newton employment increased 2.6% between 2001 and 2008, whereas Middlesex County and the State saw drops. More significantly, the number of jobs in Newton increased by 7.5% since 2008, or 3,672 jobs. Middlesex County jobs increased by only 0.1% and the State 0.2%. This points to a strong economy and job market in the city itself.

Newton job growth was in the office-based industries, which experienced significant increases since 2008, up 18.4% or 1,216 jobs. Retail jobs in Newton are down over the timeframe; however, several large retail sites either closed (i.e. The Atrium) or were undergoing redevelopment (e.g. The Street – formerly Chestnut Hill Shopping Center) during this timeframe, which likely skewed the numbers.

Importantly, industrial and warehousing job sectors saw significant drops, both between 2001 and 2008, and 2008 and 2012. In terms of future space demand, these findings may indicate need for more office space catering to information, finance and insurance, and management and administrative services companies.

	New	vton				Mido	dlesex Cou	nty			Massac	husetts			
	2001	2008	2001- 2008 % Change	2012*	2008- 2012 Change	2001	2008	2001- 2008 % Change	2012*	2008- 2012 Change	2001	2008	2001- 2008 % Change	2012*	2008- 2012 Change
51 - Information	2.158	1.100	-49.0%	2.414	119.5%	47.784	37.704		40.622	7.7%	117.751	95.197	-19.2%	93.757	-1.5%
52 - Finance and Insurance	1.258	1,681	33.6%		10.2%	26.021	26,187	0.6%	25.957	-0.9%	183.989	179.999	-2.2%	166.635	-7.4%
53 - Real Estate and Rental and	1,246	1,184	-5.0%		19.1%	9,925	9,357	-5.7%	9.632	2.9%	44,899	42.454	-5.4%	42,573	0.3%
Leasing	1,240	1,104	0.070	1,410	10.1/0	0,020	0,001	0.170	0,002	2.070	,000	42,404	0.470	42,010	0.070
54 - Professional and Technical	6.071	5.820	-4.1%	4.786	-17.8%	106 668	113.405	6.3%	116.041	2.3%	247.890	262.502	5.9%	270.760	3.1%
Services	0,011	0,020	4.1/0	4,100	11.0%	100,000	110,400	0.070	110,041	2.070	241,000	202,002	0.070	210,100	0.1/0
55 - Mgmt of Companies and	932	685	-26.5%	1,399	104.2%	20.916	21,387	2.3%	23,989	12.2%	71.925	61.461	-14.5%	63,543	3.4%
Enter	002	000	20.070	1,000	104.270	20,010	21,001	2.070	20,000	12.270	11,020	01,401	14.070	00,040	0.470
56 - Administrative and Waste	1.978	2.899	46.6%	6,761	133.2%	50.986	15 195	-11.4%	50,942	12.7%	170.152	168.860	-0.8%	171,163	1.4%
Services	1,970	2,099	40.0%	0,701	133.270	50,560	45,195	-11.470	50,942	12.170	170,152	108,800	-0.070	171,103	1.470
61 - Educational Services	7,390	9,367	26.8%	8,586	-8.3%	82.618	89.256	8.0%	79.715	-10.7%	294,213	318,545	8.3%	288,994	-9.3%
62 - Health Care and Social	6.389	8.161	27.7%		14.9%	83.109	97.742	17.6%		7.7%	429.761	500.348	16.4%	542.138	8.4%
Assistance	0,365	0,101	21.170	9,311	14.5%	83,109	51,142	11.0%	105,500	1.170	429,701	500,548	10.4%	542,130	0.470
	27.422	20 907	10 7%	36.586	18.4%	128 027	440.233	2.9%	452.198	2 7%	1.560.580	1 620 266	1 10/	1.639.563	0.6%
SECTORS - BUILDING TYPE	21,422	30,897	12.1/0	30,380	10.4/0	420,021	440,233	2.970	452,198	2.170	1,500,580	1,029,300	4.470	1,039,505	0.076
44-45 - Retail Trade	6,093		-13.1%		-15.3%	83,144	78,296	-5.8%	76,464	-2.3%	359,024	348,176	-3.0%	346,712	-0.4%
71 - Arts, Entertainment, and	1,050	846	-19.4%	1,038	22.7%	9,178	10,173	10.8%	12,263	20.5%	46,961	54,391	15.8%	66,868	22.9%
Rec															
72 - Accommodation and Food	3,567	4,278	19.9%	3,487	-18.5%	49,758	53,981	8.5%	57,087	5.8%	237,739	257,074	8.1%	292,407	13.7%
Services															
81 - Other Services, Ex. Public	2,619	2,177	-16.9%	2,409	10.7%	25,863	26,445	2.3%	29,066	9.9%	113,608	129,707	14.2%	143,765	10.8%
Admin															
RETAIL/COMMERCIAL & OTHER-	13,329	12,597	-5.5%	11,421	-9.3%	167,943	168,895	0.6%	174,880	3.5%	757,332	789,348	4.2%	849,752	7.7%
BUILDING TYPE															
23 - Construction	2.426	1.789	-26.3%	1.711	-4.4%	40.747	36.095	-11.4%	34.130	-5.4%	151.270	144.233	-4.7%	133.841	-7.2%
31-33 - Manufacturing	2.232	1.173	-47.4%	865	-26.3%	117,656	85,439		76,734	-10.2%	389,232	286,458	-26.4%	252,666	
42 - Wholesale Trade	1.400	1.416	1.1%		-24.5%	45.983	40.810		35.114	-14.0%	141.086	136.527	-3.2%	122,488	
48-49 - Trans and	562	563	0.2%	503	-10.7%	21.873	20.867	-4.6%	19.092	-8.5%	113.128	101.241	-10.5%	95.530	-5.6%
	202	263	0.2%	503	-10.7%	∠⊥,8/3	20,807	-4.0%	19,092	-0.5%	113,128	101,241	-10.5%	90,530	-5.6%
Warehousing INDUSTRIAL/WAREHOUSING -	6.620	1011	-25.4%	4.148	-16.0%	226 250	183.211	-19.0%	165.070	-9.9%	794.716	668.459	-15.9%	604.525	-9.6%
BUILDING TYPE	0,020	4,941	-25.4%	4,148	-10.0%	220,259	103,211	-19.0%	105,070	-9.9%	/ 94,/10	008,459	-10.9%	004,525	-9.6%
92 - Public Administration	46	48	4.3%	46	-4.2%	24,301	25,445	4.7%	25,476	0.1%	140,511	137,140	-2.4%	136,090	-0.8%
TOTAL: ALL INDUSTRY SECTORS	48,050	49,287	2.6%	52,959	7.5%	850,289	821,771	-3.4%	822,822	0.1%	3,276,103	3,245,755	-0.9%	3,253,187	0.2%
Source: Massachusetts EOLWD ES	S-202					•									

Table 14: Average Weekly Wages, Newton, Middlesex County, Massachusetts, 2001-2012

	Newton				Middlesex County				Massachusetts						
	2001	2008	2001- 2008 % Chang e	2012	2008- 2012 Chang e	2001	2008	2001- 2008 % Change	2012	2008- 2012 Change	2001	2008	2001- 2008 % Chang e	2012	2008- 2012 Change
51 - Information 52 - Finance and Insurance 53 - Real Estate and Rental and Leasing	\$1,399	\$1,685 \$2,007 \$1,798	43.5%	\$1,699 \$2,088 \$8,472		\$1,495 \$1,190 \$826		33.2%	\$2,156 \$1,594 \$2,131	9.3% 0.6% 92.2%	\$1,244 \$1,682 \$831	\$1,590 \$2,286 \$1,086	27.8% 35.9% 30.7%	\$1,698 \$1,869 \$1,345	6.8% -18.2% 23.8%
54 - Professional and Technical Services	\$1,507	\$1,677	11.3%	\$1,695	1.1%	\$1,582	\$2,073	31.0%	\$2,129	2.7%	\$1,428	\$1,855	29.9%	\$1,880	1.3%
55 – Mgmt of Companies and Ent 56 - Administrative and Waste	\$2,823 \$975	\$1,726 \$802	-38.9% -17.7%		8.3% -11.6%	\$1,401 \$602	\$2,169 \$783		\$2,305 \$816	6.3% 4.2%	\$1,280 \$585	\$1,934 \$744	51.1% 27.2%	\$1,982 \$763	2.5% 2.6%
Services 61 - Educational Services 62 - Health Care and Social Assistance		\$1,094 \$1,036		\$1,209 \$1,033	10.5% -0.3%	\$819 \$697	\$1,069 \$936		\$1,271 \$966	18.9% 3.2%	\$741 \$698	\$977 \$958	31.8% 37.2%	\$1,084 \$1,019	11.0% 6.4%
44-45 - Retail Trade 71 - Arts, Entertainment, and Rec 72 - Accommodation and Food Services	\$507 \$563 \$377	\$636 \$622 \$461		\$574 \$454	3.6% -7.7% -1.5%	\$524 \$389 \$337	\$551 \$633 \$393	16.6%	\$541 \$440 \$397	-1.8% -30.5% 1.0%	\$477 \$530 \$311	\$532 \$655 \$371	11.5% 23.6% 19.3%	\$536 \$612 \$389	0.8% -6.6% 4.9%
81 - Other Services, Ex. Public Admin	\$510	\$628	23.1%	\$622	-1.0%	\$557	\$641	15.1%	\$643	0.3%	\$477	\$542	13.6%	\$546	0.7%
23 - Construction 31-33 - Manufacturing 42 - Wholesale Trade 48-49 - Trans and Warehousing		\$1,358 \$1,706 \$1,841 \$895	62.8%	\$1,388 \$1,936 \$1,707 \$934	13.5%	\$1,039 \$1,287 \$1,451 \$736		30.9% 21.6%	\$1,238 \$1,853 \$1,656 \$904	-0.6% 10.0% -6.2% 4.5%	\$963 \$1,047 \$1,190 \$750	\$1,178 \$1,327 \$1,479 \$899	22.3% 26.7% 24.3% 19.9%	\$1,198 \$1,457 \$1,486 \$949	1.7% 9.8% 0.5% 5.6%
92 - Public Administration	\$917	\$1,171	27.7%	\$1,540	31.5%	\$907	\$1,128	24.4%	\$1,266	12.2%	\$861	\$1,108	28.7%	\$1,264	14.1%
TOTAL: ALL INDUSTRY SECTORS	\$925	\$1,114	20.4%	\$1,307	17.3%	\$995	\$1,255	26.1%	\$1,317	4.9%	\$865	\$1,092	26.2%	\$1,102	0.9%

Source: Massachusetts EOLWD ES-202

Wages

Wage growth in Newton has outpaced that of Middlesex County and the State since 2008. See Table 14. 2012 average weekly wages in Newton were \$1,307 for all sectors, up 17.3% since 2008, compared to 4.9% for the county and 0.9% for the State. The greatest increases were in Real Estate Rental and Leasing, which is expected given the ongoing economic and housing recovery within the region. Other increases were seen in Retail Trade, Management of Companies and Enterprises, Educational Services, and Manufacturing. Some sectors in Newton saw a decline, particularly those in arts and entertainment, wholesale and administration and waste services. In general, growth in Newton across most sectors outpaces the county and state.

Employment Projections

The Massachusetts Department of Labor and Workforce Development projects job growth between 2010 and 2020 (+14.4% or 132,869 jobs) for the Metro West/South subregion of which Newton is a part. When grouped together by building type category, it is projected that over 50,000 office-oriented jobs, 73,500+ retail-oriented jobs, and nearly 9,100 industrial jobs will be added. Businesses employing these workers will require additional space in currently vacant structures and in new structures, particularly for the office and retail sectors. As highlighted below in Section F, office vacancy in the Route 128/Massachusetts Turnpike submarket (Newton is part of this) is the lowest of all suburban markets.

NAICS	Industry Title	Emp	loyment	Change		
Code		2010	2020	Net	Percent	
<u>51</u>	Information	22,915	23,113	198	0.9%	
<u>52</u>	Finance and Insurance	20,107	32,208	12,101	60.2%	
<u>53</u>	Real Estate and Rental and Leasing	6654	6526	(128)	-1.9%	
<u>54</u>	Professional, Scientific, and Technical Services	60702	76166	15,464	25.5%	
<u>55</u>	Management of Companies and Enterprises	22740	24923	2,183	9.6%	
<u>56</u>	Administrative and Support and Waste Management and Remediation	29,963	37,284	7,321	24.4%	
<u>61</u>	Educational Services	54,674	58,723	4,049	7.4%	
<u>62</u>	Health Care and Social Assistance	60,889	70,446	9,557	15.7%	
OFFICE/I	INSTITUTION SECTORS - BUILDING TYPE	278,644	329,389	50,745	18.2%	
<u>44-45</u>	Retail Trade	54674	52514	(2,160)	-4.0%	
<u>71</u>	Arts, Entertainment, and Recreation	9539	11601	2,062	21.6%	
<u>72</u>	Accommodation and Food Services	35732	34790	(942)	-2.6%	
<u>81</u>	Other Services (Except Government)	16427	19351	2,924	17.8%	
RETAIL/0	COMMERCIAL & OTHER - BUILDING TYPE	540,542	614,098	73,556	13.6%	
<u>23</u>	Construction	17766	20071	2,305	13.0%	
<u>31</u>	Manufacturing	49215	53653	4,438	9.0%	
<u>42</u>	Wholesale Trade	27192	29745	2,553	9.4%	
48	Transportation and Warehousing	7338	7138	(200)	-2.7%	
INDUST	RIAL SECTORS - BUILDING TYPE	101,511	110,607	9,096	9.0%	
92	State Government, Excluding Education and Hospitals	4543	4015	(528)	-11.6%	
TOTAL: A	ALL INDUSTRY SECTORS	925,240	1,058,109	132,869	14.4%	

Table 15: Employment Projections, 2010-2010

Source: Massachusetts ELOWD, Occupational Projections, 2010-2020, March 26, 2013

Summary

Given that the unemployment rate in Newton continues to decline from the highs of 2009, recent higher growth in jobs, and projected job growth between now and 2020, particularly in office-related and retail-related industry sectors, prospects for increased office space are likely.

F. Office Market Conditions

MAPC studied the Boston regional office market to identify the study area's role both locally and within the overall region. The Needham Street study area is part of the Route 128/Massachusetts Turnpike submarket in the greater Boston region, and includes the communities of Newton, Needham, Brookline, Waltham, Wellesley, Weston, and Wayland. The office market analysis focuses on the current office supply, availability of space, proposed development, and employment projections for the area, to develop a demand estimate for office space over the next 20 years.

Current Office Market

MAPC reviewed Jones Lang LaSalle's most recent quarterly office market report, and their yearend 2012 report as part of the analysis to identify market demand and trends and how they are likely to impact the study area. Overall, the Boston office market is in a growth mode, having recovered jobs lost during the recession, and primarily benefiting from growth in innovation economy businesses such as life sciences and high tech. The Route 128/Mass Pike subarea is also on the rise, and is the most in-demand suburban subregion in the Boston area.

	128 / Mass Pike Submarket	Suburbs
Supply (M sf)	20.4 MSF	92.3 MSF
% Class A	57.5%	56.6%
Asking Direct Rent	\$27.74	\$20.72
Year-to-Year Change	+2.0%	+0.4%
Vacancy	11.5%	17.5
Year-to-Year Change	-2.8%	-0.8%
Historical Average	10.9%	13.2%
L4Q Direct Net Absorption	592,828	620,730
As percent of stock	2.9%	0.7%
Historical Average	369,602	1,131,876
Availability	17.7%	23.0%
Year-to-Year Change	-3.1%	-1.0%
Historical Average	17.1%	19.8%

Source: Jones Lang LaSalle, Office Outlook, Boston Q2, 2013

Jones Lang LaSalle provides a "property clock" to categorize office submarkets that are "falling", "stabilizing", "rising" and "peaking". The 128/Mass Pike submarket was categorized as a "rising market" given its strong net absorption in the most recent quarter, and new medium and large companies added to the area. Available space has fallen for eight consecutive quarters, and

according to the report, the subarea is benefiting from the spillover resulting from peaking markets in Boston and Cambridge. The vacancy rate in the subregion currently stands at 11.5%, the lowest of all suburban sub-districts, and far lower than the suburban average of 17.5%. Although there are still large blocks of contiguous leasable space – 19 over 30,000sf in the subregion alone – given recent absorption rates in the subregion, inventories are likely to decrease further. Additionally, none of these are located within the Needham Street corridor.

The strongest leasing activity within the subregion is Waltham, with its high concentration of hightech and life science tenants. However, the 2012 4Q report noted that Newton (and Wellesley) is attracting tenants, despite their limited office supplies. Class A spaces rents ranged from \$30 to \$37 per square foot, and proximity and access to the Mass Pike and retail amenities were cited as key draws. This is substantiated by discussions with local commercial brokers in Newton.

Needham Street Office Market

Interviews with local commercial real estate brokers and developers suggest that office space along the Needham Street corridor is highly desirable, with minimal available space at any given time. "Needham Street sells itself" said a broker. The corridor is one of the most active corridors in the State, with rents in the upper \$20s to lower \$30s per square foot, just below top rents found in Waltham (low to mid \$30s/psf). Rents along Needham Street are slightly higher than those along Highland Avenue in Needham directly across the Charles River. Even though Highland Avenue properties are closer to Route 128, one property manager stated that having a Newton address is a key driver, as is the visibility along the highly traveled corridor and the retail amenities for workers.

Needham Street office space is popular with financial consultants and companies, small healthcare providers, attorneys and accountants typically seeking 3,000-5,000sf office spaces, or smaller suites. Due to the compact nature of Needham Street properties, it does not attract the larger institutions or high tech companies that typically seek space in Waltham and Needham, where larger, spread out office campus environments are common. Trip Advisor, for example, will leave Needham Street for new build-to-suit office space in Needham off of I-95/Rte128. However, parcels closest to the intersection of Oak Street/Christina Street and Needham Street could potentially attract such tenants given the high visibility and larger parcel sizes. The current Trip Advisor parcel and adjoining parcels was also mentioned as a prime opportunity for redevelopment along the corridor, particularly for mixed-use. The smaller parcels north of Columbia Avenue hold less potential, as they would require significant parcel consolidation.

Available Office Space – Needham Street

MAPC researched office space listings within Newton and Needham using LoopNet.com, Showcase.com and the City of Newton website to better understand the available supply, both in terms of size and asking rents. Below is a summary chart of the Needham Street listings is shown below.

Address	Description	Amount of Space
130 Needham Street	Free-standing office with parking	5,760 sf
188 Needham Street	Office suite for rent – last available in 40,000sf bldg	1,683 sf
233 Needham Street	Class A office Tower with shared amenities and structures parking	4,500 sf and 6,300 sf
281 Needham Street	Office space	4,426sf, 3,033sf, 7,459sf
320 Needham Street	Office space	9,422
49-51 Winchester St	Office space in shared suite on first- floor of highly visible building	Unknown

Table 17: Available Space: Needham Street

Source: City of Newton

The above represents approximately 42,500 sf of available office space along the Needham Street Corridor. According to Assessors information, there is approximately, 682,000sf of total office space along Needham Street. This represents a 5.3% vacancy rate, significantly lower than the subregion, and an indicator that more office space is supportable.

Office Development Potential

The market for new office space in Metro Boston and the 128/Mass Pike submarket is increasing. Although most new development has been build-to-suit, including the new Trip Advisor offices in neighboring Needham, the first suburban spec building is the suburban markets is underway in Burlington, where a large mixed-use development is also currently under construction. Additionally, office space has been proposed. For example, a 225,000 sf office building is proposed in Newton (Riverside in Lower Falls could have 225,000 of office); however this would likely attract a different type of tenants seeking large floorplates, than would go to Needham Street.

Given the favorable market conditions in the submarket and the immediate corridor, brokers and property owners said the project area could support additional office space, up to double the current office footage by some accounts. However, others noted that large spaces will be vacated in coming years (e.g. Trip Advisor), and will need to be absorbed, resulting in a somewhat lower total of supportable new office space.

Other factors would further make the corridor more attractive to new office development. Research into worker preferences, and discussions with property owners along the corridor, indicated that the market for mixed-use developments with office, retail and residential would be more attractive to workers. Interest in mixed-use, urban or urban-like environments is growing, particularly among young professional workers looking for the convenience factor of amenity rich live-work-play environments. This is not only a national, but a regional trend, as evidenced by development activity (and low inventories and high rents - office and residential) not only in Boston, Cambridge and surrounding inner core cities and towns, but also in traditionally suburban areas like Dedham, Burlington and Lynnfield, where new mixed-use projects have been built, are under development, or nearing completion, that combine retail, residential and office space either in one development, or immediately adjacent to one another.

Assessor's information shows that there is currently 682,000 sf of office space along the corridor. Therefore, doubling this for a total of 1.36 million square feet, while potentially supportable along the corridor, is unlikely given the constraints discussed above (e.g. Trip Advisor space), combined with competing office concentrations in areas of Newton, and neighboring Needham and Waltham along 128, a more conservative 300,000-350,000 sf of additional office space could potentially be supported along Needham Street. Larger parcels, particularly those under common ownership, would provide the best opportunities for new office development, particularly if combined with retail and residential mixed use. Financial services, information and smaller health related office space would be the prime markets for the space, particularly those seeking the Newton address, and those interested in a short commute.

G.Retail Market Conditions

Competitive Environment

Needham Street serves as a hybrid retail corridor. It developed organically over the years from a light manufacturing area into the larger shopping destination of today that serves both regional customers traveling along Needham Street, and the surrounding residential areas that have access to the corridor through local roadways.

The corridor already boasts large retailers including TJ Maxx, Marshall's, and Modell's, several commuter-oriented and office worker lunch establishments (Starbucks, Dunkin Donuts, and Chipotle) and smaller retailers. With several large, established and successful regional retail clusters already within a 15-minute drive of the area, including Chestnut Hill (Mall at Chestnut Hill, The Street in Chestnut Hill, Chestnut Hill Square), Dedham's Legacy Place, and Natick's Natick Mall and Collection, as well as the Burlington Mall to the North, and new development underway in Waltham (the Polaroid site will include a Market Basket, Marshalls, Joe's American Grill and more) and in Westwood (Northland Westwood, formerly Westwood Station), the region is well served by the larger destination shopping locations that support large, destination and high end retailers. This is not the market for Needham Street. However, opportunities for more specialty and neighborhood oriented retail, to serve a larger employment and residential base, holds promise.

Gap Analysis

A retail gap analysis looks at the overall demand for retail goods and services within an area (the spending potential of residents), and the actual supply (estimated sales for those goods and services within the area). The difference between the demand and supply is the retail "gap". When the demand exceeds the supply, there is "leakage," meaning residents must travel outside the area to purchase those goods. When there is greater supply than demand, there is a "surplus", meaning people are coming to the area to purchase these goods and services, or that there is an oversupply (which would result in closings).

Data for four trade areas were looked at for the Needham Street corridor project – the study area itself, and 5-, 10- and 15-minute drive time areas. For purposes of this document, the study area and the 10-minute drive time were deemed the most appropriate trade areas for analysis.

Needham Corridor Parcels Trade Area

As shown in Table 18, there is a significant retail surplus within the Study Area itself – as in the parcels included in the study. This means more money is spent within the area than could be supported by its existing population. However, given the small population actually living within the study area, this is to be expected, with the surplus likely the result of the spending by local employees (e.g. food service surplus), regional shoppers seeking out the larger retail establishments (e.g. clothing and accessories, and sporting goods surpluses), and significantly, commuters passing through to other work destinations (e.g. food service and misc. store retailers surpluses). Therefore, this is not the ideal trade area to be looked at.

The 10-Minute Drive Time Trade Area

As noted earlier, Needham Street is a key connector, thus nearly all establishments are car-oriented and convenience destinations for regional and/or commuting traffic. Thus the corridor can support and has attracted several large retailers (e.g. TJ Maxx, Marshall's, Modell's) as well as specialty Furniture and Home Furnishings establishments, Building Materials and Supply Stores, and convenience Food Services and Drinking Places. For example, furniture stores include Pierre Matta Handcrafted furniture and cabinetry, a Sleepy's outpost, the baby furniture store, Baby Koo, and Kitchen Views. Within the Food Services and Drinking Places sector, most establishments are convenience chains including Papa Gino's, McDonald's, Chipotle, Dunkin Donuts, Fresh City, and Starbucks. Only Mick Morgan's pub, Farm Grill Rotisserie and the future 20vens offer sit down, table service. And the remaining food service business is the catering location for local favorite, Blue Ribbon BBQ.

Since the corridor is unique and serves both as a regional and local retail destination, the ideal gap analysis trade area would be the 10-minute drive time area. This is a distance of travel that is both convenient for nearby residential neighborhoods, but also wide enough to capture all of Newton and the general subregion including areas in Needham and Waltham.

Industry Group	NAICS	Retail Gap Study Area	Retail Gap 10-minute Drive time					
Total Retail Trade and Food & Drink	All	-\$20,702,054	\$1,242,845,726					
Total Retail	All	-\$16,220,861	\$1,188,376,396					
Total Food & Drink	All	-\$4,481,193	\$54,469,330					
Motor Vehicle & Parts Dealers	441	\$2,473,129	\$293,284,549					
Furniture & Home Furnishings	442	-\$7,759,965	-\$4,450,698					
Electronic & Appliances Stores	4431	-\$2,146,891	-\$16,722,867					
Bldg Materials, Garden Equip & Supply Stores	444	-\$4,506,869	\$61,416,843					
Food & Beverage Stores	445	-\$1,809,351	\$258,901,008					
Health & Personal Care Stores	446, 4461	\$1,116,683	\$104,055,173					
Gasoline Stations	447, 4471	\$621,483	\$167,047,358					
Clothing & Clothing Accessories Stores	448	-\$423,2415	-\$29,457,853					
Sporting Goods, Hobby, Book, & Music Stores	451	-\$1,960,616	\$28,424,221					
General Merchandise Stores	452	\$1,521,880	\$193,033,873					
Miscellaneous Store Retailers	453	-\$353,838	\$32,299,317					
Nonstore Retailers	454	\$815,909	\$100,545,482					
Food Services & Drinking Places	722	\$-4,481,193	\$54,469,330					
	-							

Table 18: Retail Gap, Study Area and 10-Minute Drive Time Trade Areas

Source: ESRI Business Analyst, 2013

As shown in the above table, there is significant leakage in nearly all sectors, with the exception of furniture, electronics and clothing within the trade area. This shows opportunity for retail growth along the corridor.

Opportunities for Growing a Retail Base

Based on the analysis, and interviews with property owners and real estate professionals, the corridor holds potential for more neighborhood-oriented retail establishments, particularly parcels with high visibility and direct access from Needham Street, and especially if new development includes a mix of uses with more office workers and residents.

In particular, the opportunity lies in convenience retail that would appeal both to residents and workers alike. This includes opportunities for food service and drinking establishments, particularly limited-service and fast-casual full-service food establishments like local and or national chains (e.g. Ruby Tuesday's, Be Good, Bolocco), specialty grocery stores, and health and personal care establishments (e.g. Walgreens, in addition to the existing CVS), particularly in locations where there is easy access to residential neighborhoods, and/or within or near existing or potential mixed-use areas with access to local residents. A good example is the Village Shops, the Bierbrier Development with plans to break ground in the coming months. The Main Street-style development will include small retail spaces (3,000-5,000sf), and likely be anchored by a fast-casual food service establishment. The location is attractive to the developer, because it is accessible to the high income residents of Newton, is close to a neighborhood access point, and directly in front of the Avalon at Newton Highlands development.

Visibility and access are crucial to retail. Therefore, any new retail or redevelopment, should face Needham Street, or have strong signage that is not intrusive. Key parcels would be those closest to neighborhood feeder streets, such as Oak Street/Christina Street, Columbia Avenue, and Winchester Street. Additionally, internal circulation (pedestrian, bicycle, vehicular) between retail and office/mixed-use development should be encouraged or required to alleviate tips between developments on Needham Street.

Rents highlight the attraction of Needham Street, and its proximity to higher incomes. New retail establishments in key locations (e.g. near neighborhood access points at either end of the corridor) can command \$60-\$75 psf (smaller footprints). Shops in the middle currently receive in the \$40 psf range. These are solid rents, particularly since much of the retail is in older buildings, some in retrofitted light industrial, which is not ideal for retail layouts, or for visibility.

Given current market trends, and the potential for new residential and office development along the corridor, an estimated 60,000 – 100,000 sf of additional retail space could be accommodated along the corridor. Similar to the residential and office analysis, this is a conservative estimate, relying mostly on potential retail demand of potential new residential households and employees in new office space along the corridor. The exact amount would be determined by the type of future development approved and built, and accessibility to regional populations.

The above retail space demand was determined as follows. Based on review of recent market analyses, we estimate that each additional household can support approximately 75sf of retail space. The estimated 477 new households could therefore potentially support 35,775 sf of

additional retail along the corridor. Additionally, should office space grow, new office workers would bring spending power to the area as well. Based on a report by ICSC, office workers spend on average \$102 per week in and around their office buildings. Groceries are a big expenditure, as are eating and drinking, and other convenience goods. Currently, as estimated by ESRI/Dun & Bradstreet Inc, 1,587 office workers are located along the corridor. Should office space increase by 350,000 sf, the additional 1,225 new workers (3.5 workers per 1,000sf office space) hold the potential to spend on average, \$4,896³ each within the immediate vicinity. This translates to approximately 13sf of supportable retail per worker, or a total of 15,938 sf of retail space. However, with workers seeking employment in mixed-use, live-work-play, environments, this figure would only play out if the area were developed in such a manner. The report detailed that proximity and walkability are key to workers spending locally.

In summary, the retail market along Needham Street holds potential for increased square footage. This is supported by gap analysis figures, which shows significant leakage within the subregion (10minute drive time). However, given the nature of the corridor, and large regional shopping destinations nearby, the area is unlikely to capture or support large big box style or department stores, but could attract some medium box discount establishments. Therefore, with the potential for new residents and office workers, and interest in mixed-use redevelopment by current land owners, the primary opportunity is for neighborhood- and office-oriented convenience retail and food establishments totaling 60K-100K of additional retail space.

H. Summary

Based on the analysis of various market condition, the Needham Street Corridor is an attractive opportunity for future development. The market could potentially support several hundred apartments and condos (approximately 477K sf, or 477 units) along the corridor, particularly in mixed-use (vertical or horizontal) settings that would include approximately 60,000sf-100,000sf of new retail, and 350,000 sf of new office space.

³ Based on \$102 spending per week, for 48 working weeks (4 weeks vacation), for a total of \$4,896 spedning for each employee per year.

IV. Preferred Land Use and Buildout Analysis

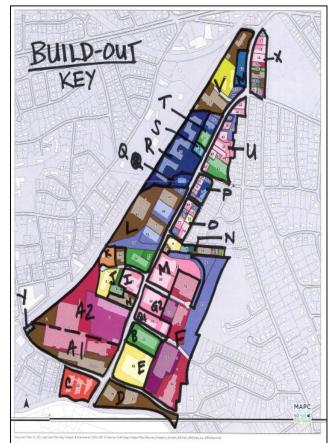
A. Introduction

Upon completion of the market analysis, a preferred future land use scenario was developed with the assistance by City of Newton staff. The purpose of the land use and associated buildout scenario was to develop a pattern of land uses that would achieve the desired mix of uses needed to create a more active, live-work-play environment in a manner that was realistic based on conditions identified in the market analysis.

B. Preferred Land Use and Buildout Analysis

MAPC worked closely with City of Newton staff throughout the preferred land use and buildout process, which included several working meetings to develop and finalize recommendations. The final preferred scenario was developed as follows:

- 1. Working with City of Newton staff, MAPC divided the study area into 28 subareas (See Buildout Key) based on criteria including shared ownership, parcel adjacency, vehicle access and road segments, recent development and other criteria.
- 2. MAPC analyzed existing conditions for each subarea. Data collected included total land square footage, total existing development square footage by use type, and total residential units.
- Working with City of Newton staff, a preferred land use - residential, retail, office, or mixed-use combination – was assigned to each subarea.
- 4. Based on the preferred land uses assigned, MAPC performed four draft buildout scenarios based on various densities, open space and parking requirements. All were possible using existing as-of-right zoning. Higher densities allowed by special permit were not calculated.
- 5. Working with City of Newton staff, the final preferred land use and buildout analysis was selected.
- Trip generation codes based on existing and future land uses were also identified and assigned for later traffic impacts analysis.



Subarea	Existing Uses	Preferred Future
A1	Office	Office, Retail
A2	Retail, Industrial	Retail, Residential
В	Retail	Office, Retail
С	Office, Residential	n/c
D	Office	n/c
E	Retail	n/c
F	Industrial	n/c
G1	Retail	Office, Retail
G2	Retail	n/c
Н	Office	n/c
I	Retail	Office, Retail
J	Office, Retail,	Retail, Residential
	Industrial	
K	Industrial	n/c
Ĺ	Office, Retail	Office, Retail,
		Residential

Subarea	Existing Uses	Proposed						
М	Retail	Office, Retail						
N	Office, Retail,	Retail						
	Industrial							
0	Retail, Industrial	Retail						
Р	Retail	Retail (smaller)						
Q	Retail	n/c						
R	Residential	n/c						
S	Industrial	n/c						
Т	Retail	Retail (smaller)						
U	Retail	Retail, Residential						
V	Office, Industrial	Office, Retail						
W	Cemetery	n/c						
Х	Office, Retail,	Office, Retail						
	Residential							
Y	Retail, Industrial	n/c						
n/c = no change								

Table 19: Preferred Land Uses Assigned by Subarea

Based on the land use assignments and buildout calculations, the study area can potentially see an additional 304,850 total square feet of new or repurposed development. Although this represents only an 11 percent increase in total development along the corridor, the preferred mix of uses would create a significantly different, more vibrant, active corridor through a greater mix of uses, with more residential and office space – and the residents and workers that would fill the space – slightly less retail, and significantly less industrial space.

More specifically, as highlighted in Table 20, the buildout scenario would result in nearly 200,000 sf of additional office space, primarily in mixed use structures with ground floor retail. Although the market analysis suggests the corridor could support more retail, the preferred scenario would result in a slight decrease in total retail square footage (-50,000sf); however, much of the future retail space would be found in new or redevelopment projects with better retail layouts than in current spaces, many of which are repurposed light industrial structures. The mixed use environment with several thousand more workers and or residents would also bring in greater buying power.

	Existing	Preferred Build Out	Change
Office	629,561	828,546	198,985
Retail	803,613	752,502	-51,111
Residential	630,047	1,130,055	500,008
Residential Units	423	935	512
Industrial/Auto	647,112	304,080	-343,032
TOTAL	2,710,333	3,015,183	304,850

Table 20: Preferred Land Use and Buildout Summary

The most significant change would be the elimination of light industrial space, which was not determined to be the best use in the future along the corridor. In its place, multifamily residential would become more prominent. Over 500,000sf of new residential would be possible, or 935 new units. The majority of units would be in mixed use environments, thus creating the more active, amenity rich environment preferred by many of today's households.

Table 21: Detailed Preferred Land Use and Buildout Scenario

FINAL SCENARIO: Increase in FAR for MU2 Parcels

Assumptions: The same as for Scenario B with an increase of 15% FAR in MU2 areas to accommodate the A+B-C parking. Parking: Residential portions: 2 per housing unit; Retail: Average of 3.33 per 1,000sf (Dffice: Average 3.5 per 1,000sf (based on the 4 for first 20K, and 3.33 for office area above 20K)

			Existing Development						TOTAL DEVELOPMENT							NEW TRIP	
		1 1							EXISTING TRIP GENERATION					Industrial	Total	Difference	GENERATION
Мар		Existing					Industrial or	Total	CODE				ResidEntial	Warehousing	Development	Existing and	CODE
Area Area Description	Lot Size	Zoning	Office	Retail	Residential	Residential Units	Auto	Development SF		Office SF	Retail SF	Residential SF	Units	Auto	SF	Buildout	
ANTICIPAED TO CHANGE																	
A1 Northland Properties - West of Needham Street: Proposed Development	402,481	MU1	150,000	-		-		150,000	714	150,000	50,000	-	-		200,000	50,000	714; 820
A2 Northland Properties - West of Needham Street. Remainder of Land	584,166	MU1		73,803			257,140	330,943	820	-	57,443	313,502	314		370,945	40,002	820; 223
B Northland Properties - East of Needham Street: Retail Discount Store	112,270	MU1	-	35,100	-	-	-	35,100	875	37,423	18,712	-	-		56,135	21,035	710; 820
G1 Retail East of Needham Street and North of Charleton	74,778	MU1	-	31,925				31,925	820	24,926	12,463	-	-		37,389	5,464	710; 820
I Vacant Former Filene's Basement w/ parking garage	70,847	MU1	-	36,988		-	-	36,988	Vacant	31,771	15,885	-	-		47,656	10,668	710; 820
J Cluster of retail and office and storage	123,070	MU1	10,000	14,457	-	-	20,000		1/4 150; 1/2 710; 1/4 850	-	24,204	48,408	48		72,611	28,154	820; 223
L Crosspoint - West of Needham Street: office (Trip Advisor)	562,433	MU1	163,624	20,850				184,474	714	156,075	31,215	127,357	127		314,648	130,174	710; 820; 223
M Crosspoint - East of Needham Street: Retail with smaller stores, but in play.	206,693	MU1		66,586				66,586	820	68,898	34,449				103,347	36,761	710; 820
N Parcels Southeast of Needham/Jaconnet	93,006	MU1	18,732	7,938	-	-	14,128	40,798	710	-	32,822	-	-		32,822	(7,976)	820
O Block east of Needham btw Jaconnet and Rockland	90,000	MU2	-	45,633	-	-	4,250	49,883	1/5 936; 4/5 820	-	39,600	-	-		39,600	(10,283)	820
P Block east of Needham btw Rockand and Columbia Ave	62,238	MU2		33,550				33,550	820		27,385				27,385	(6,165)	820
T Bierbrier Development	66,960	MU1	-	27,232			-	27,232	820	-	19,200	-	-		19,200	(8,032)	820
U Block east on Needham and North of Columbia Ave	230,925	MU2	-	88,035	-	-	-	88,035	820	-	76,755	13,093	26		89,848	1,813	820; 223
V Northwest Cluster around Cemetery	306,478	MU1	48,471	-			29,148	77,619	1/2 812; 1/2 710	102,159	51,080	-	-		153,239	75,620	710; 820
X Block East of Winchester St North of Dedham	132,149	MU2	17,120	95,906	2,352	3	18,366	133,744	1/4 710; 3/4 820	35,680	35,680	-			71,360	(62,384)	710; 820
SUBTOTAL	3,118,494		407,947	578,003	2,352	3	343,032	1,331,334		606,932	526,892	502,360	515	-	1,636,184	304,850	
UNLIKELY TO CHANGE																	
C Condo Development on Oak Street w/ Medical Office	148,104	MU1	4,500		143,260	123		147,760	232	4,500		143,260	123		147,760		232
D Bullfinch Offices along Charles	209,300	MU1	97,758	-	-			97,758	710	97,758	-	-	-	-	97,758	-	710
E Storage with ground floor retail	205,211	MU1	-	181,975	-	-	-	181,975	3/4s 150; 1/4 820	-	181,975	-	-	-	181,975	-	3/4s 150; 1/4 820
F H.C. Stark R&D/Manufactureing	816,241	MU1		-			293,902	293,902	110	-		-	-	293,902	293,902		110
G2 Retail East of Needham Street and South of ndustrial	163,520	MU1		33,600				33,600	820		33,600				33,600		820
H Office Building	42,933	MU1	119,356	-		-	-	119,356	710	119,356	-	-	-	-	119,356	-	710
K Radio Tower and Accessory Structure	42,535	MU1	-	-	-	-	4,482	4,482	170	-	-	-	-	4,482	4,482	-	170
Q McDonalds on Needham St	40,334	MU1		5,966	-			5,966	934		5,966				5,966		934
R Avalon at Newton Highlands	339,768	MU1	-	-	484,435	297	-	484,435	223	-	-	484,435	297	-	484,435	-	223
S Gas Station near Avalon residential	19,625	MU1	-	-	-	-	3,251	3,251	945	-	-	-	-	3,251	3,251	-	945
W Cemetery	60,018	SR3	-		-	-	-		Vacant	-	-		-	-	-	-	Vacant
Y Small parcels next to Northland	6,700	BU1, MAN		4,069			2,445	6,514	852		4,069	-		2,445	6,514		852
SUBTOTAL			221,614	225,610	627,695	420	304,080	1,378,999		221,614	225,610	627,695	420	304,080	1,378,999	-	
	TOTAL	- EXISTING	629,561	803,613	630,047	423	647,112	2,710,333	TOTAL	828,546	752,502	1,130,055	935	304,080	3,015,183	304,850	
						TOTAL - EXISTING	629,561	803,613	630,047	423	647,112	2,710,333					
									CHANGE (GAIN OR LOSS)	198,985	(51,111)	500,008	512	(343,032)	304,850		

V. Traffic Impacts Analysis

The transportation component of this project is in its final stages of analysis and will be available in early 2014.