



Somerville Linkage Fee Nexus Study

Final Report

to

**City of Somerville
Office of Strategic Planning and Community Development**

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March 2013

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Introduction

The City of Somerville established a development linkage fee in 1990 to address the impact of large-scale development projects on the supply and cost of affordable housing. Over the past decade, since the original linkage fee was reviewed and updated, the regional economy, commercial real estate market and Somerville's development opportunities have changed while rents and housing development costs have increased greatly in Somerville and the Boston region. New residential, mixed-use and retail development is being constructed under a new Master Plan for the Assembly Square area. Somerville has adopted a new comprehensive plan that provides for higher density development and infill development, especially around new planned MBTA transit stations. Changed economic conditions, new development plans, and continued growth in housing costs all suggest that the impact of new development on the demand of low- and moderate-income housing in Somerville is different today than in 2002, when the last nexus study and linkage fee review was conducted. Moreover, with the prospect for substantial employment growth, the Office of Strategic Planning and Community Development is also interested in policies to better connect low-income city residents to these new jobs. Consequently, this report also considers the basis for jobs linkage policy to fund employment and training services to achieve this goal.

This report provides a nexus study to quantify the impact of future commercial development on the need for affordable housing in Somerville and services to help low-income city residents benefit from job opportunities in new development projects. Based on this analysis, it recommends changes to the City's linkage fee and policies to address these needs. The report presents its analysis and recommendations in seven sections. The first section presents a likely development scenario for Somerville over the next decade, based on its development capacity, planned projects and regional economic and market conditions. The scale and type of future development determines the number and type of jobs created in Somerville, which drives new affordable housing and employment and training needs. In the second section, the job composition from the ten-year development scenario is converted into specific demand for affordable housing units based on the share of employees who will seek housing in Somerville and the likely distribution of household income among these employees. Next, data on housing market conditions and development costs are applied to determine the linkage fee level needed to fund the additional affordable housing required to address the demand generated by large development projects. The fourth section reviews the impact of new development on resident employment opportunities, particularly for low-income residents, considering gaps in the supply of city residents for employer occupational needs and employment barriers faced by low-income and less skilled workers. In the fifth section, linkage policies in other communities are reviewed to assess how Somerville's linkage fee may impact its competitiveness in attracting new development and identify established and best practices to inform Somerville's policy recommendations. A sixth section considers several policy options for Somerville's linkage fee, including varying the fee by project type and size, altering current exemptions and phasing in fees for the now exempt first 30,000 square feet of a development. This section also considers the potential impact of Somerville's linkage fees on the city's competitiveness in attracting development and tenants. The final section proposes recommendations for changes to the City's linkage fees and policies: first for the affordable housing fee and next for a new jobs linkage fee.

I. Somerville Development Potential and Future Development

Somerville has significant capacity and plans to support new retail and commercial development. Its recent comprehensive plan calls for developing 10.5 million square feet of new development over the next 20 years to house 30,000 new jobs. The bulk of this new development (9 million square feet) is envisioned through utilizing 292 acres of buildable land in five targeted transformation areas: Assembly Square, Inner Belt, Brickbottom, Boynton Yards and Union Square. As Table 1 shows, 2.6 million square feet, almost one-quarter of this new development, are currently in the planning stages or under construction. The approved Assembly Square Master Plan accounts for over 85% of this planned investment, including 1.75 million square feet of office, research and development or other business space and 512,000 square of retail and restaurant space. Moreover, three projects in Assembly Square account for 98% of the new retail, restaurant and commercial space under construction in Somerville.

Table 1. Somerville Retail and Commercial Development under Construction and Planned

Type of Development	Under Construction	Permitted or Planned	Total
Retail	152,629	194,471	347,100
Restaurant	50,376	64,384	114,760
Cinema	60,000	0	60,000
Hotel	0	99,318	99,318
Office/R&D/Other	5,000	1,980,000	1,985,000
Total	268,005	2,338,173	2,606,178

Source: Somerville OSPCD and Federal Realty Investment Trust

Market Demand and Expected Absorption

New employment and the resulting demand for housing in Somerville, however, depends on the actual absorption of new real estate space by new and expanding Somerville employers and the city's success in attracting business growth within its market area and immediate region.

Historic absorption data for the market areas that generate demand for Somerville commercial and industrial real estate indicate that demand over the next decade is likely to be below the level of planned development and full build-out.

Commercial development in Somerville is linked to demand in two real estate markets: Cambridge and the Boston North Market Area that includes Somerville, Everett, Malden, Medford and 10 other communities. Based on data from Jones Lang LaSalle, absorption of new office space for these two markets in the past decade has averaged 350,000 square feet, as follows:

- From 2002 through 2011, absorption averaged 16,077 square feet per year in Somerville, 147,023 square feet per year in Cambridge and 204,408 square feet per year in the Boston North Market Area;
- Average annual absorption was higher in Somerville and the Boston North Market Area over the past five years, at 24,833 and 251,519 square feet, respectively.

- Cambridge had lower absorption from 2007 to 2011, averaging 40,350 square feet
- For industrial research and development space, average absorption in the Boston North Market Area was negative 76,241 square feet over the 10 year period and negative 14,340 from 2007 to 2011.

These trends indicate that most of employer-based regional demand for real estate is for office space rather than industrial R & D space. Moreover, the data show that Somerville's absolute level and share of absorbed office space have grown since 2007. Average annual absorption increased from 7,321 square feet during 2003 to 2006 to 24,833 from 2007 to 2011; as a result its share of absorbed space for the combined Cambridge and Boston North Market Area grew from under 2% to over 8%.

Table 2. Real Estate Absorption and Supply in the Cambridge and North Market Areas, 2002 to 2011

Market Indicator	Somerville	Cambridge	Boston North Market Area
Average Annual Office Absorption	16,077	147,023	204,408
Average Annual R&D Absorption	NA	NA	-76,241
Total Increase in Office Supply	192,000	493,056	2,323,208
Total Increase in R&D Supply	NA	NA	44,873
Average Annual Increase in Office Supply	19,200	56,321	237,227
Average Annual Increase in R&D Supply	NA	NA	-3,616

Source: Jones Lang LaSalle Real Estate Market Data

There is a sizable supply of vacant space that remains from the recent recession, which may slow the pace of new development and absorption in the near future. Vacant office space exceeded 1.7 million square feet in the Boston North Market Area, 742,000 in Cambridge and less than 83,000 square feet in Somerville. Available space, which includes space under lease but unoccupied and thus available to sub-lease to firms, is higher at 2.175 million square feet in the Boston North Market Area, 1.4 million square feet in Cambridge and 88,000 square feet in Somerville. With a lower level of available office space, Somerville will need to develop new office space to accommodate firms seeking to locate in the city that need a large amount of space.

While Somerville's growth in supply and absorption of new class A office space has been modest over the past decade (192,000 and 206,000 square feet, respectively), the city has the potential to capture a larger share of the market demand over the next decade due to its price differential with Cambridge and Boston and the addition of a new rapid transit stop at Assembly Square within the next two years. Over a longer term, the Green Line expansion may also help attract new development and businesses to Union Square and other commercial areas.

While some developers point to declining development opportunities to add new commercial space in Cambridge, there is still a healthy pipeline of commercial projects in Cambridge that are either under construction or permitted (see Table 3). Moreover, over 75% of the new office development permitted and under construction is in East Cambridge, the area most proximate to

Somerville's key Assembly Square area. Consequently, Somerville may still face challenges in attracting high profile tenants, such large biotech, pharmaceutical and IT companies that seek proximity to Harvard, Cambridge and other firms in their industry. Moreover, Somerville will need to remain conscious of maintaining a price differential with Cambridge to grow as a competitive location, especially for more established businesses seeking a large amounts of space.

Table 3. Cambridge Office Projects Under Construction and Permitted as of June 2012

Project Status	Total Square Feet	East Cambridge Share
Under construction	371,580	29%
Permitted*	3,789,620	82%
Total	4,161,200	77%

Source: Cambridge Development Log, 2nd Quarter 2012

*Includes 1,573,703 square feet at North Point

Based on its growing market position over the past five years, the addition of a new Orange Line station, its price advantage over Cambridge and the presence of significant permitted development in Assembly Square, we estimate that Somerville can capture 12% of demand from the Cambridge market area and 8% of demand from the Boston North Market Area over the next 10 years. Based on absorption levels over the past decade, this will yield 34,000 square feet in new annual absorption. However, Jones Lang LaSalle data underestimate total absorption since they omit non-leased single-user buildings and some other buildings. Based on the assessor's records of office and mixed-use office and retail buildings, the Jones Lang LaSalle inventory accounted for 69% of the space in these buildings. To adjust for these omissions, the projected absorption of new office and research and development space is increased by 45% to 49,300 square feet. Over a 10-year period, this will result in the occupancy of 493,000 square feet of new office and/or research and development space. Although this projection is based on average annual office space absorption, the actual development and absorption of new space is likely to come in large amounts of 100,000 square feet or more as new office buildings are built.

Several factors could result in far more new development in Somerville over the next decade. First, a developer may succeed in attracting a single user that requires a large block of space. This is the focus of Federal Realty Investment Trust in its plans for office development in Assembly Square. Somerville might secure either a major biotech research and development facility or a New England or Northeast regional headquarters for an expanding engineering, software or professional services firm. Second, the new Orange line station at Assembly Square and amenities provided by the new retail development will make this location more desirable to employers and could accelerate the absorption and development of space there, similar to the effect of the Red Line station in Davis Square. Finally, an extended and accelerated economic recovery would increase Somerville's cost advantages as supply declines and rents increase, enhancing its ability to attract tenants who might otherwise locate in Cambridge or Boston, in the second half of the decade. Since the likelihood and impact of these factors is uncertain, this

report uses the development scenario based on historic absorptions and current market conditions.

In addition to the projected office absorption, Somerville is expected to gain 363,000 square feet of new retail, restaurant and cinema space through projects under construction in Assembly Square, additional retail development planned for Assembly Square and new ground floor space incorporated in future office development. The components of this expected retail development include:

- 153,000 square feet of retail space under construction at Assembly Square and 50 Middlesex Avenue
- 50,000 square feet of restaurant space under construction at Assembly Square
- 70,000 square of new retail and 30,000 square feet of new restaurant space developed in conjunction with new office development (assuming ground space floor is 20% of a four floor building)

Finally, our scenario assumes that Somerville will attract one of the new hotel developments being proposed, at an assumed size of 45,000 square feet¹.

Table 4. Summary of Expected Development, 10 Year Period

Type of Use	Projected Square Feet of Development
Office	493,000
Retail	223,000
Restaurant	80,000
Cinema	60,000
Hotel	45,000
Total	901,000

Expected Tenant Businesses

To determine the likely jobs and earnings from this new development, the industries likely to occupy the expected new office space need to be projected. Since new tenants will arise from employers and industries within the greater Somerville area, regional employment trends for industries that occupy office and research and development space were used to make these projections. For this analysis, data for both Somerville and the Metro North Service Delivery Area (SDA), a twenty-community area that includes Cambridge, Somerville and surrounding communities², were used. The SDA region was chosen since detailed economic data exists and it most closely corresponds to the Cambridge and Boston North real estate market areas. Since

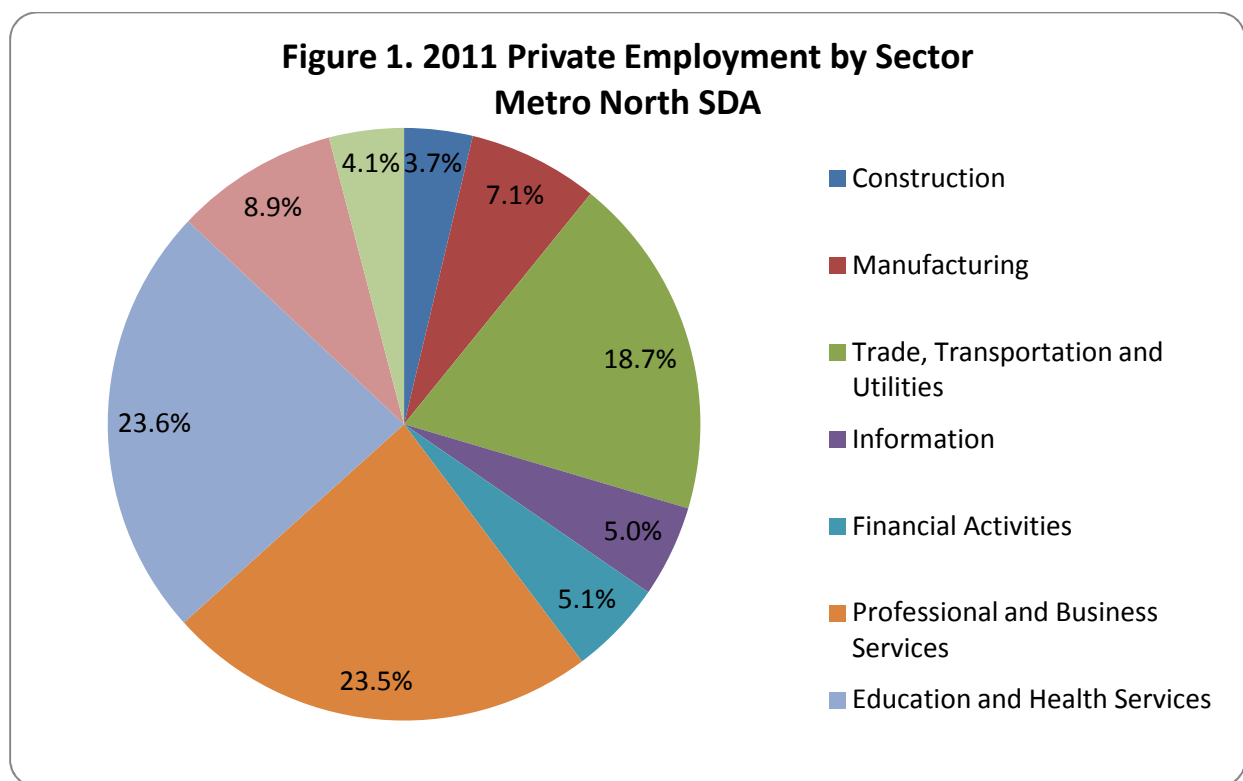
¹ Assumes 100 rooms at 350 square feet per room and rooms accounting for 80% of building space.

² The 20 communities in the Metro North region include: Arlington, Belmont, Burlington, Cambridge, Chelsea, Everett, Malden, Medford, Melrose, North Reading, Reading, Revere, Somerville, Stoneham, Wakefield, Watertown, Wilmington, Winchester, Winthrop, and Woburn

demand for new space will arise from both existing employers who may relocate and growing industries, it is important to consider both the large existing industries and fast growing ones.

Existing Employment Base

Services constitute the primary economic sector for both the Metro North SDA and Somerville, accounting for 51% and 55% of 2011 employment, respectively. (See Figure 1 for a distribution of Metro North private employment by sector). Moreover, services also were the largest engine of job growth for the region, adding over 13,400 jobs from 2002 to 2011, a period when overall private sector employment declined by 4,321. Information industries, which include software, internet services, publishing and broadcasting, were another growth sector that added 1,700 jobs in this period.



Source: Massachusetts Department of Labor and Workforce Development ES-202 Data Series

Four industries accounted for 84% of the region's service sector employment in 2011:

- Professional and Technical Services, with 51,496 jobs (including 20,583 in scientific research and development)
- Health Services, which employed 40,828;
- Educational Services, with 30,935 jobs; and
- Administrative and Waste Services, with 23,301 employees.

By contrast, the entire finance, insurance and real estate sector employed 17,591 workers in 2011, 75% of the jobs within the smallest (i.e. Administrative and Waste Services) of the four service industries. These four industries also were the majority of Somerville's service base, with 8,202 jobs or 53% of the city's service employment in 2011. Health Care and Administrative and Waste Services were by far the two largest industries within the Somerville service sector: each had over 3,000 jobs. However, Somerville's service employment growth over the last decade largely came from Health Services which added almost 1,000 jobs from 2002 to 2011 followed by Professional and Technical Services, which grew by 137 jobs (primarily in computer systems design). For the Metro North SDA, health care and scientific and technical services were the main engines of service sector growth. Each of these industries added over 8,000 jobs from 2002 to 2011. Moreover, their combined expansion exceeded the net growth in total service sector jobs by 2,932, indicating that many other services industries declined over this period.

Growth Industries

Table 5 summarizes absolute job growth from 2002 to 2011 for expanding industries in the Metro North area that are users of office space. These data show that health services, scientific and technical services and software publishers accounted for 84% of employment growth over past decade. These three industries are likely to constitute a significant portion of growth in Metro North region given the importance of major research universities, biotechnology and information technology in the local economy. The outlook for health care is more mixed. Growth may slow with increased efforts to control health care costs, on the one hand, while an aging population and expanded health coverage under federal health care reform are likely to fuel industry growth.

Table 5. Job Growth from 2002 to 2012 for Expanding Regional Industries

Industry	Job Growth	Percent of Total
Health Services	8,097	34.6%
Scientific Research and Development Services	8,250	35.3%
Software Publishers	3,315	14.2%
Management & Technical Consulting Services	825	3.5%
Administrative and Waste Services	726	3.1%
Individual and Family Services	1,656	7.1%
Membership Organizations & Associations	529	2.2%
Total , 7 industries	23,298	100%

Source: Massachusetts Department of Labor and Workforce Development ES-202 Data Series

A second factor in projecting future tenancy is developers' plans for proposed projects. The primary office space development projects are Assembly Square and North Point. Federal Realty Investment Trust is targeting large office tenants including biotechnology, financial service companies and corporate management offices. North Point is looking to attract the type

of tenants located in Kendall Square, including biotechnology, information technology and other technology-intensive firms. These targets are consistent with the importance of software and scientific and technical research industries but down play the potential importance of health care services as one of the largest and fast growing users of office space. However, commercial brokers indicate that many biotechnology firms prefer to locate close to MIT, which may reduce the share of biotechnology growth attracted to Somerville. Brokers and developers also noted that younger IT firms are facing large rent increases if they remain in Cambridge and thus are strong target tenants for new office development in Somerville which can offer a lower rent. For these reasons, the projected development is weighted more heavily toward computer and IT-related tenants than scientific research and development (biotech) firms, even the latter has a larger employment base and grew more in the past decade. Based on recent growth trends and developer plans, the distribution of tenants for the 493,000 square feet of new office development over the next decade is expected to be:

- Scientific Research and Development (including biotechnology) 25%
- Health Services 25%
- Software Publishers 25%
- Computer Systems Design and Related Services 15%
- Management & Technical Consulting Services 5%
- Financial Services 5%

The first three industries are large and growing industries. Computer Systems Design is a large IT-related industry that has been growing in recent years after declining from 2002 to 2006. Management and technical consulting services is a smaller industry but it has been growing over the past decade. Financial services are included due to its large presence in Boston and as a prospective industry by the major office developer.

Retail Tenants

Two-thirds of the new retail space consists of the retail center now under development at Assembly Square. Federal Property's plan for this retail space construction is for an outlet style mall, which will emphasize clothing and accessory stores. The other retail stores projected for the ground floor space of office buildings are a mix of a pharmacy (10,000 square feet), clothing stores (10,000 square feet), specialty food, liquor and convenience stores (10,000), miscellaneous retailers, such as florists, gift or office supply stores (15,000), personal care services (10,000), and bank branches (15,000).

Table 6 summarizes the square footage and number of jobs projected to occur in Somerville over the next 10 years by use and tenant type. These projections were used to estimate occupations and wage levels for new employees working in the expected new buildings. Employment projections assume one new employee per 225 square feet of new office space; this figure reflects a growing trend for higher employee density in office building and the observation by some developers that firms are utilizing less office space per employees in new locations. Assumptions for the retail and service tenants are: one employee per 300 square feet for the pharmacy, one employee per 500 square feet for clothing stores, one employee per 400 square

feet in other retail space, one employee per 250 square feet for the bank branches and personal care businesses, one employee per 150 square feet for restaurants and one person per 1,000 square feet for the cinema complex. Hotel employment is projected at one employee per room, which assumes a mid-price full service hotel.

Table 6. Projected New Somerville Development by Use and Tenant Type

Use/Tenant Type	Projected Square Feet	Estimated New Employment
Office: scientific R&D	123,250	548
Office: health services	123,250	548
Office: software	123,250	548
Office: computer systems design	73,950	329
Office: management & tech services	24,650	110
Office: financial services	24,650	110
Total Office	493,000	2,191
Retail: clothing	163,000	326
Retail: pharmacy	10,000	33
Retail: food, convenience	10,000	25
Retail: miscellaneous	15,000	38
Retail: personal care	10,000	40
Bank branches	15,000	60
Cinema	60,000	60
Restaurants	80,000	533
Hotel	45,000	100
Total Retail, Restaurant and Services	408,000	1,215
Total All Uses	901,000	3,406

II. Impact of Large Scale Development on Affordable Housing Demand

Using the 10-year development scenario and employment projections summarized in Table 6, this section forecasts the demand for affordable housing in Somerville that will result from this development. Since this analysis utilizes several data sources and assumptions to prepare the forecast, a full explanation of the methodology used is provided along with the final results.

Since demand for affordable housing is tied to household income, the first step projects the distribution of new jobs by earnings. Using 2010 national data for each industry's occupational distribution, the number of new jobs in 22 occupational categories was calculated for each industry. Earnings were then estimated for these occupations for each of the 15 industries expected to occupy new development. These earnings were based on the median annual earnings for the respective occupation during 2011 in the Boston North Metro labor market area. These calculations yielded the projected number of jobs at different annual earning levels by industry. Figures were then aggregated by income categories that correspond to HUD's FY2011 Boston PMSA limits for low-income households between one to five persons. Table 7 presents the resulting distribution of new jobs in large office and retail developments by income category.

Table 7. New Jobs by Income Category in New Large Retail and Office Developments

Income Range	Number of New Retail and Non-Office Jobs	Number of New Office Jobs	Total Number of New Jobs
0 to \$44,950	1,143	671	1,814
\$44,951 to \$51,400	12	21	33
\$51,401 to \$57,800	5	42	47
\$57,801 to \$64,200	0	11	11
\$64,201 to \$69,350	0	0	0
\$69,351 and up	52	1,445	1,497
Total	1,212	2,190	3,402 ³

Source: Karl F. Seidman Consulting Services

Since new employees will live in a variety of communities, it is necessary to determine what share will demand housing in Somerville. To estimate the percent of new employees who will demand housing within the city, employees in large office, industrial and retail buildings were surveyed in October and November 2012. This survey asked employees whether they moved to or sought housing in Somerville as a result of their job in Somerville and whether they planned to move to Somerville over the next five years. Based on the survey results⁴, the percentage of new employees who are expected to demand housing in Somerville is 17.5% for office workers and 6.8% for retail workers. These percentages were multiplied by the gross number of new jobs in each income group and development type to project the demand for new housing by employee earnings. Table 8 summarizes this data.

³ This total new job figure of 3,402 is slightly less than the 3,406 projection in Table 6 due to the rounding of fractional results the occupational employment projections.

⁴ 1,691 surveys were distributed to employees in 8 retail businesses, 15 office tenants and 6 industrial firms in large office buildings, industrial building and retail center with 477 surveys returned for a 28% response rate.

Table 8. Somerville Housing Demand Generated by New Large Retail and Office Developments by Income Category

Income Range	Retail and Non-Office Workers Seeking Housing in Somerville	Office Workers Seeking Housing in Somerville	Total
0 to \$44,950	78	117	195
\$44,951 to \$51,400	1	4	5
\$51,401 to \$57,800	0	7	7
\$57,801 to \$64,200	0	2	2
\$64,201 to \$69,350	0	0	0
\$69,351 and up	4	253	257
Total, All Incomes	83	383	466

The final step in projecting demand for affordable housing units among the 466 employees who are expected to seek housing in Somerville requires considering their household type. Both the number of wage-earners in the employee's household and the household size are relevant to this determination. Since the workers in Somerville's new developments will be drawn from the greater Boston area, 2006 to 2011 American Community Survey data for the Boston-Cambridge Quincy Metropolitan Area⁵ on the distribution of households by number of earners and household size was used to estimate the type of households in which these employees will live. This data provided a matrix for the distribution of household by size for single earner and multiple earners household that was applied to the new employees expected to seek housing in Somerville. Among households with workers, 48% had one wage earner, 41% had two or more wage earners, and 11% had three or more wage earners. The distribution of each type of wage-earner household by total household size is shown in Table 9.

Table 9. Household Size by Number of Wage-Earners, Boston-Cambridge Quincy Metro Area

Number of Wage Earners	Percent 1 Person	Percent 2 Persons	Percent 3 Persons	Percent 4 or More Persons
One Earner	40.5%	28.0%	13.8%	17.7%
Two Earners		45.3%	22.3%	32.4%
Three Earners			33.0%	67.0%

These percentages were applied to the number of projected new workers in each occupation to estimate their household composition. For the single earner households, the median wage for the occupation was used to estimate their household income and determine if they fell below the

⁵ The formal name of this geography is the Boston-Cambridge-Quincy New England City and Town Area Metropolitan Division

HUD low-income and very-low income thresholds. Seventy single earner households are estimated to be low-income (less than 80% of area median income), of which 57 would be very low-income (at 50% or less of the area median income). Projecting affordable housing demand among multiple-earner households is more complicated since it requires estimating the earnings from other wage earners. To simplify this analysis, all households with three or more earners were deemed to be above the low-income threshold, as the lowest median wage across occupations was \$24,656 and three times this wage would be almost \$74,000—above the low-income limit for a family of five.

Using the distribution and median income of occupations for the Boston-Cambridge-Quincy Metropolitan Area, a probability was calculated for each first employee occupation that the second earner's pay would be below the low-income threshold for a three or four person household. This probability was then applied to the number of estimated two-earner households for the respective occupation to project the number of two-earner low-income households. For example, among food preparation and service workers, 14 are estimated to seek housing in Somerville and live in a household with two employed workers. The probability that the second worker will have an occupation such that the combined household income is below \$64,200 (the low-income limit for a 4 person household) is 50%. This 50% probability was multiplied by 14 to yield an estimated 7 of these households that will be low-income. Similarly, 27 workers in office administration jobs are expected to be in two-earner households and seek housing in Somerville. However, since these workers have a higher median wage (\$39,307), the probability that household income with the second wage earner will be below \$64,500 is only 8%. Consequently, there are only two low-income households estimated for two-earner households in which the first worker holds an office administration position. Across all the occupations, the resulting number of two-earner low-income households is 19, of which 18 are projected to be very low-income. **This brings the total number of affordable housing units needed to meet the demand generated by large office and retail development to 89 units.** Table 10 summarizes the total projected demand for new affordable housing by household size and among low and very low-income households.

Table 10. New Affordable Housing Demand in Somerville from Large Office and Retail Developments by Income Type and Household Size

Income Group	One-Person	Two-Person	Three Person	Four Person	Total
Very-Low	11	1	0	19	31
Low	27	0	13	18	58
Total	38	1	13	37	89

III. Subsidy Required to Mitigate Impact of Large Scale Development

This analysis builds upon the framework established in the earlier sections to project the total subsidy required to mitigate the increased demand for affordable housing generated by large-scale developments in Somerville. Housing affordability is a function of household income⁶ and the cost of available rental and for-sale housing units in a given real estate market. The City of Somerville and the entire Metropolitan Boston region suffer from a well-known and demonstrated lack of sufficient affordable housing. This section demonstrates the need for an affordable housing mitigation of the impacts of new commercial development by comparing the total development cost of new affordable housing units to the housing prices that can be supported by low- and very-low-income households. Before calculating the subsidy required, current housing conditions in Somerville are reviewed to provide background and context.

Housing Conditions in Somerville

The basis for imposing a development impact fee is that there is a nexus between job-creating development and the increased demand for affordable housing. Before presenting the methodology used to calculate the subsidy required to mitigate the housing impact of large-scale development, this section presents a summary of current market conditions in Somerville. Detailed statistical data on Somerville's population, household, housing stock and housing market conditions appear in Appendix A.

The City of Somerville continues to experience a sustained affordable housing crisis. It was noted in the 2003 study that Somerville has a very low rental vacancy rate, is losing existing rental housing due to condominium conversions, and has limited vacant land for new construction. These trends have continued to be a factor in the availability and cost of housing in Somerville. As reported by the U.S. Census Bureau, the rental vacancy rate in Somerville increased from 1.6 percent in 2000 to 3.6 percent in 2010. Despite this increase, the rental vacancy rate is still low when compared to the rates across the Boston region and the Commonwealth of Massachusetts as whole. In 2010, the rental vacancy rates were 5.9 percent in the Boston region and 6.5 percent in the Commonwealth. Data from the Census Bureau also indicates that median gross monthly rental payments among Somerville renting households has increased 48.6 percent, from \$874 in 2000 to \$1,299 in 2010.⁷ The increase in the cost of rental housing in Somerville is increasing faster than the general rate of inflation nationally, as indicated by the Consumer Price Index (CPI). Between 2000 and 2010, CPI increased from 172.2 to 218.1, a 26.6 percent increase, which would indicate that Somerville households are devoting an increasing share of their financial resources to housing. Census data are supportive of this finding. In 1999, approximately 37 percent of renting households devoted 30 percent or more of their income to (gross) rent; in 2010, approximately 45 percent of households did so.

⁶ This analysis uses Department of Housing and Urban Development (HUD) definitions of very low income (50 percent or less of metropolitan area median family income (AMI)), low income (50 to 80 percent of AMI), and the percent of income to be devoted to shelter (30 percent).

⁷ This 2010 figure is based on the Census Bureau's American Community Survey 5-year (2006 to 2010) estimates.

According to Census housing data, Somerville had a net gain of 1,243 housing units between 2000 and 2010. However, the city lost 182 units of rental housing over the same period. The net increase in total housing units, therefore, is due to the increase in owner-occupied housing units and an increase in vacant housing units, which may be vacant for sale or for rent during the survey period. The conversion of rental units to condominiums is likely a source for much of this increase in ownership units. According to City of Somerville Assessing Department data, the number of residential condominiums increased from 1,821 units in fiscal year (FY) 2005 to a projected 4,379 units FY 2013. The annual increase has slowed somewhat in recent years, due to the economic recession. However, this ongoing trend has the effect of reducing the amount of rental housing, which is most often consumed by low-income households. The contracting supply in rental housing may also increase rent levels, thereby making more rental units unaffordable to low-income households.

The converted condominiums often sell for prices that are beyond the income levels of very-low- and low-income households. The median sales price of a condominium in Somerville between January and October of 2012 was \$385,250. Interestingly, the current low interest rate environment has had the effect of making home ownership more affordable due to the lower the level of mortgage payments required to service the loan than in past periods. A low-income family of four with an annual income of \$64,000 (80% of FY 2011 Area Median Family Income (AMI)) could support a maximum mortgage \$362,000, assuming a 3.4 percent interest rate and excellent borrower credit rating.⁸ However, many low income households may not qualify for these low interest mortgages because they do not meet down payment and credit requirements. Moreover, the above analysis does not factor property taxes that effectively lower the mortgage payment amounts. In FY 2012, the annual tax bill for a condominium based on the average assessment in the City was \$2,400, which lowers the supportable maximum mortgage supported by low-income family of four with an annual income at 80% AMI to \$317,000.⁹

As will be demonstrated later in this analysis, land and residential construction costs are too high in Somerville for market demand alone to trigger the creation of affordable housing. In fact, the high cost of housing construction in Somerville is a barrier to affordable housing even for families at 80 percent of the AMI (\$64,000). Somerville's housing crisis is most acute for very-low-income households at or below 50 percent of AMI.

The most recent in an annual series of reports on the regional housing market, the *Greater Boston Housing Report Card 2012* reviews the long term trends over the past decade that provide additional context for Somerville's housing market. The report identifies two distinct stages within the regional housing market over the past decade. The first stage that began in the late 1990's and lasted through 2005 reflected rapidly rising housing prices and relatively stable rents. The second stage beginning in 2005 and ending recently reflected declining sales and stagnating and falling housing prices, due in part to rising foreclosures and tightening credit, and escalating rents because demand exceeded the supply of available rental housing. During

⁸ Week ending December 15, 2012 via Boston Globe online and Bankrate.com.

⁹ The quarterly tax bill was \$599 for FY 2012, based on the average condominium assessment and including the residential exemption, as reported in <http://somerville.patch.com/articles/tax-rate-increases-increase-is-smaller-compared-to-previous-years>.

this second stage households that would have otherwise chosen homeownership were choosing rental housing, thereby contributing to increasing rents. Most recently, regional data has pointed to signs of recovery in the housing market. In addition, *Greater Boston Housing Report Card 2012* identifies a new paradigm in demand for housing away from single family suburban homes to more condominiums and multi-family rental housing that is due to fundamental changes in the regional economy, demographics and consumer behavior. Because the composition of housing stock in Somerville matches this latter category, this fundamental increase in demand for housing has the potential to exacerbate the affordability of housing in the City. There is a clear need to mitigate the effect of new large-scale developments on the demand for affordable housing in Somerville.

Given these market conditions and the costs to construct new housing, none of the 89 new units needed to address the impact of new developments on housing demand among low- income households will be supplied by either the current housing market or the new un-subsidized private development market. Since new subsidized housing development will be needed to supply the low-income housing demand generated by new large development projects, a development impact fee is warranted to mitigate this impact.

Methodology

The total cost of mitigating the impact of new large-scale development in Somerville is based on the number and size of new low-income and very low-income households that the development will generate, as detailed earlier in this report. The previous section projected demand for affordable housing from 89 new very-low-income and low-income households ranging in size from one person to four or more persons. This section determines the subsidy required to construct housing that is affordable for those households. Low- and very-low-income households are the focus of this analysis because the majority of state and federal programs of subsidy funding sources for affordable housing are targeted to income groups at or below 80 percent AMI. According to analysis of affordable housing projects in Massachusetts, state and federal tax credits accounted for over 70 percent of all subsidy sources between 2007 and 2012.¹⁰ Federal and state tax credits prioritize creation of units for households at 50 percent AMI and 60 percent AMI. Therefore, because of the targeting of available subsidy sources of funding, it is likely that much of the new affordable housing created in Somerville will be targeted to these income levels. Focusing on low- and very-low-income households will expand access to a broader range of sources of subsidy, making projects more feasible.

It is necessary to determine the total development cost (TDC) of constructing standard housing units of various sizes appropriate for the 89 households. For rental housing, we assume that the rental income from the households, less operating costs and vacancies, will be used to pay debt service on a permanent mortgage and provide a return to the developer. The difference between the TDC and the mortgage and private equity supported by net rents represents the affordability gap that must be subsidized to mitigate the effects of new large-scale developments in

¹⁰ Presentation “Affordable Rental Housing: Opportunities and Challenges” by Massachusetts Housing Partnership at Massachusetts Department of Housing and Community Development’s Under One Roof Conference, November 13, 2012.

Somerville. The total subsidy required to develop 89 affordable housing units is then divided by the square footage of the projected large-scale development to obtain the full mitigation fee required to offset the impact of new development.

The following key assumptions were made to calculate the housing affordability gap.

Size and Distribution of Housing Units

The size of households was derived in the previous section. The households range in size from one to four or more persons. All one-person and two-person households are assigned to one-bedroom units. Three-person households are assigned to two-bedroom units. Four or more person households are assigned to three bedroom units. Data in **Table 11** show the distribution of housing units by size and income levels.

Table 11. Affordable Housing Units by Size and Income Levels

	Households by Size				
	One Person	Two Person	Three Person	Four Person	Total
Low Income	27	0	13	18	58
Very Low Income	11	1	0	19	31
Total	38	1	13	37	89
Distribution of Units by Number of Bedrooms					
One Bedrooms	100%	100%			
Two Bedrooms			100%		
Three Bedrooms				100%	
Units by Number of Bedrooms					
Low Income					
One Bedrooms	27	0	0	0	27
Two Bedrooms	0	0	13	0	13
Three Bedrooms	0	0	0	18	18
Very Low Income					
One Bedrooms	11	1	0	0	12
Two Bedrooms	0	0	0	0	0
Three Bedrooms	0	0	0	19	19
Total (Low Income + Very Low Income)					
One Bedrooms	38	1	0	0	39
Two Bedrooms	0	0	13	0	13
Three Bedrooms	0	0	0	37	37
Total	38	1	13	37	89

Source: Karl F. Seidman Consulting Services and ConsultEcon, Inc.

Type of Housing Development

To simplify calculations, all of the housing is assumed to be developed by nonprofit housing developers. The subsidy figure obtained in this analysis assumes that 100 percent of the new units for very low income households will be constructed as rental housing. Most affordable

housing homeownership subsidies are targeted at low and moderate income households, rather than very low income households because of their limited ability to pay on-going tax, insurance and maintenance costs. The assumption for low income households is that 32 percent of the new units will be constructed for home ownership and 68 percent of the new units will be constructed as rental housing. This mix of home ownership and rental units is the same as the ratio of owner-occupied and renter-occupied units in Somerville reported in the 2010 Census. Data in **Table 12** show the distribution of rental and home ownership housing units by size and income level.

Table 12. Rental and Ownership Affordable Housing Units by Size and Income Levels

	Households by Size				
	One Person	Two Person	Three Person	Four Person	Total
<i>Homeownership Units by Income Level</i>					
Low Income	9	0	4	6	19
Very Low Income	0	0	0	0	0
<i>Units by Type of Housing</i>					
Ownership	9	0	4	6	19
Rental	29	1	9	31	70
Total	38	1	13	37	89
<i>Rental Units by Number of Bedrooms</i>					
One Bedrooms	29	1	0	0	30
Two Bedrooms	0	0	9	0	9
Three Bedrooms	0	0	0	31	31
Total	29	1	9	31	70
<i>Ownership Units by Number of Bedrooms</i>					
One Bedrooms	9	0	0	0	9
Two Bedrooms	0	0	4	0	4
Three Bedrooms	0	0	0	6	6
Total	9	0	4	6	19

Source: Karl F. Seidman Consulting Services and ConsultEcon, Inc.

Unit Size

The unit size used to calculate TDC is adapted from the actual projects analyzed as a part of this study, not including one large senior housing project that had smaller unit sizes. The unit sizes are as follows: one-bedroom units are 650 net square feet; two-bedroom units are 880 net square feet; and three-bedroom units are 1,150 net square feet.

Total Development Costs

Development costs for recent affordable housing projects in Somerville and similar, built-out neighborhoods in nearby communities were obtained through local housing authorities and nonprofit developers. The figures used in this analysis average the costs of development of the various projects, and remove outlier projects as noted in the footnotes on Table 13, which summarizes the TDC of 70 affordable rental units in Somerville. The average cost of

developing ownership units is assumed to be the same as the cost of developing rental units. Costs for the ownership projects reviewed were in the range of costs for the rental projects and did not reflect a significant variance. Data in Table 14 summarize TDC of developing 19 affordable ownership units in Somerville. Following is a discussion of key assumptions in these analyses.

Land acquisition costs are very high in Somerville and metropolitan Boston. A review of projects in Somerville and similar adjacent communities showed highly variable land prices ranging from \$0 to \$4.3 million per project or \$0 to \$134,000 per unit. This analysis uses the weighted average cost of acquiring land at \$41,000 per unit.

The construction cost is assumed to be \$155.34 per gross square foot. Rental unit construction costs were projected using a gross square footage of 80,000, which was based on a ratio of net rentable to gross square feet of 79.2%¹¹. The net rentable square footage of 63,070 square feet was based on the unit mix and sizes, as detailed in Table 13. Ownership unit construction costs were calculated using a gross square footage of 21,000, with a net saleable area of 16,270 square feet.

“Soft” costs, including architectural services, engineering, legal services and other costs, were calculated at 33.1 percent of construction costs. Total development costs also include a construction contingency reserve set at 5.8 percent of construction costs. Capital reserves, developer’s fee and developer’s overhead are calculated at 12.6 percent of the subtotal of acquisition, construction and soft costs. Based on these factors, the TDC to construct 70 affordable housing rental units is \$22.7 million and the TDC to construct 19 ownership units is \$6.0 million.

¹¹ The actual gross square footage used to calculate construction costs is slightly less than 79.2% due to rounding.

Table 13. Total Development Costs of 70 Rental Housing Units in Somerville

Project Description	Number of Units	Average Unit Size ^{1/}	Net Square Feet
One Bedroom	30	650	19,500
Two Bedroom	9	880	7,920
Three Bedroom	31	1,150	35,650
Total Units	70		63,070
Net Square Feet as a Percent of Gross Square Feet ^{2/}			79.2%
Total Gross Square Feet (GSF) (Rounded)			80,000
Calculation of Total Development Costs			
Cost	Unit	Factor	Amount (Rounded)
Acquisition Cost	\$41,000	per Unit ^{3/}	\$2,870,000
Construction Cost	\$155.34	per GSF ^{4/}	\$12,427,000
Construction Contingency	5.8%	of Construction Cost ^{5/}	\$721,000
Soft Costs	33.1%	of Construction Cost ^{5/}	\$4,113,000
Total Acquisition, Construction and Soft Costs			\$20,131,000
Capital Reserves, Developers Fee and Developers Overhead	12.6%	of Total Acquisition, Construction and Soft Costs ^{5/}	\$2,537,000
Total Development Costs (TDC)			\$22,668,000
TDC per Unit			\$323,829
TDC per GSF			\$283.35

Source: ConsultEcon, Inc.

1/ Based on the weighted average unit size of affordable units recently developed in Somerville and adjacent communities, not including one senior housing project.

2/ Based on the weighted average net to gross square feet ratio for affordable housing projects recently developed in Somerville and adjacent communities, not including one outlier project and rehab projects.

3/ Based on the weighted average per unit acquisition cost for affordable housing projects recently developed in Somerville and adjacent communities.

4/ Based on the weighted average construction cost for affordable housing projects recently developed in Somerville and adjacent communities, not including rehab projects.

5/ Based on the weighted average ratio for affordable housing projects recently developed in Somerville and adjacent communities, not including rehab projects.

Table 14. Total Development Costs of 19 Ownership Housing Units in Somerville

Project Description	Number of Units	Average Unit Size ^{1/}	Net Square Feet
One Bedroom	9	650	5,850
Two Bedroom	4	880	3,520
Three Bedroom	6	1,150	6,900
Total Units	19		16,270
Net Square Feet as a Percent of Gross Square Feet ^{2/}			79.2%
Total Gross Square Feet (GSF) (Rounded)			21,000
Calculation of Total Development Costs			
Cost	Unit	Factor	Amount (Rounded)
Acquisition Cost	\$41,000	per Unit ^{3/}	\$779,000
Construction Cost	\$155.34	per GSF ^{4/}	\$3,262,000
Construction Contingency	5.8%	of Construction Cost ^{5/}	\$189,000
Soft Costs	33.1%	of Construction Cost ^{5/}	\$1,080,000
Total Acquisition, Construction and Soft Costs			\$5,310,000
Capital Reserves, Developers Fee and Developers Overhead	12.6%	of Total Acquisition, Construction and Soft Costs ^{5/}	\$669,000
Total Development Costs (TDC)			\$5,979,000
TDC per Unit			\$314,684
TDC per GSF			\$284.71

Source: ConsultEcon, Inc.

1/ Based on the weighted average unit size of affordable units recently developed in Somerville and adjacent communities, not including one senior housing project.

2/ Based on the weighted average net to gross square feet ratio for affordable housing projects recently developed in Somerville and adjacent communities, not including one outlier project and rehab projects.

3/ Based on the weighted average per unit acquisition cost for affordable housing projects recently developed in Somerville and adjacent communities.

4/ Based on the weighted average construction cost for affordable housing projects recently developed in Somerville and adjacent communities, not including rehab projects.

5/ Based on the weighted average ratio for affordable housing projects recently developed in Somerville and adjacent communities, not including rehab projects.

Income Levels

An important step in calculating the subsidy necessary to create new affordable housing units is to define the income stream that will be used to support the development of new housing. This analysis assumes that the new rental housing will solely be supported by rental income from tenant households and ownership housing will be supported by the sales of affordable units. Income levels are defined using the U.S. Department of Housing and Urban Development's (HUD) published definitions of income levels and affordable rents. HUD definitions should be used to benchmark any analysis of affordable housing as those definitions determine eligibility for housing subsidies for prospective homeowners, tenants and developers. HUD annually publishes its calculation of Median Family Incomes by state, metropolitan statistical area and other regions. HUD calculates income levels for very- low-income and low-income households as proportions of the Area Median Family Income (AMI). A very-low-income household is defined as having income less than or equal to 50 percent of the AMI. A low-income household

is defined as having income between 50 and 80 percent of AMI. In FY 2011, the AMI for a family of four in the Boston-Cambridge-Quincy Metro Fair Market Rent Area (including Somerville) is \$96,500. Therefore, a very low income for a family of four is less than \$48,150. Low income for a family of four in the Boston MSA is defined as between \$48,150 and \$64,200.

Affordable Sales Price Levels

The average sales price of affordable units sold in Somerville is the basis for estimating the sales proceeds available to support the creation of 19 affordable ownership units in Somerville. Somerville's Affordable Housing Trust Fund tracks sales of affordable ownership units for low income (80 percent of AMI) and moderate income units (110 percent of AMI). Between 2008 and 2013 there were 4 one-bedroom units sold with an average sales price of \$126,000, 7 two-bedroom units with an average sales price of \$171,000 and 5 three-bedroom units sold with an average sales price of \$187,000.

Affordable Rent Levels

In general, HUD defines rent as affordable to a household when the total cost of shelter consumes no more than 30 percent of gross (total) income. In practice, the percent of income devoted to shelter may be significantly higher for some households than is shown in this analysis. HUD income levels for categories such as very low income and low income are set at the upper limit of the income bracket and tend to overestimate household income. For example, the low-income category includes households with incomes between 50 and 80 percent of AMI; however, the annual household income is set at 80 percent of AMI. Low-income households with income at 60 or 70 percent of AMI will pay more than 30 percent of their income for shelter.

Projected Net Rental Income

Absent a subsidy, the construction of the 70 rental units of affordable housing projected in this analysis must be supported through rental income from tenants. Households are assumed to pay 30 percent of household income in rent. Data in **Table 15** detail the assumed income levels of each household in order to derive the total gross rental income for the 70 units, based on the distribution of households by size and income. Total annual gross rental income for the units is \$1.027 million.

Table 15. Annual Rental Income by Household Income and Size of Household

Household Size	Annual Income ^{1/}	Annual Rent ^{2/}	Monthly Rent	Number of Households	Total Annual Rent
<i>Low Income Households (51% to 80% of AMI)</i>					
1 Person	\$44,950	\$13,485	\$1,124	18	\$242,730
2 Persons	\$51,400	\$15,420	\$1,285	0	\$0
3 Persons	\$57,800	\$17,340	\$1,445	9	\$156,060
4 Persons	\$64,200	\$19,260	\$1,605	12	\$231,120
<i>Very Low Income (31% to 50% of AMI)</i>					
1 Person	\$33,750	\$10,125	\$844	11	\$111,375
2 Persons	\$38,550	\$11,565	\$964	1	\$11,565
3 Persons	\$43,350	\$13,005	\$1,084	0	\$0
4 Persons	\$48,150	\$14,445	\$1,204	19	\$274,455
Total Annual Rent					\$1,027,305
<i>Total Annual Rent (Rounded)</i>					<i>\$1,027,000</i>

Source: ConsultEcon, Inc.

1/ From HUD Median Family Income and Income Limits by Household Size, FY 2011 for Boston-Cambridge-Quincy, MA-NH MSA at <http://www.huduser.org/portal/datasets/il/il11/ma.pdf> ;

2/ Assumed at 30% of annual income.

To calculate the rental income available to support the total development costs described above, the gross rents must be adjusted to reflect lost income due to periodic vacancies and the operating costs of maintaining and managing housing. Vacancy is assumed at 5 percent of gross rental income. Operating costs typically include such items as building management, janitorial services, trash removal, building maintenance, landscaping, and marketing and other administrative costs. For this analysis, the full cost of utilities is also included. Based on comparable projects in Somerville and the region, total operating costs were calculated as \$8,700 per unit or \$609,000 total. Net rental income after deducting vacancy and operating costs is \$366,650.

Rental Affordability Gap & Required Subsidy

The next step is to find the gap in project finance between the permanent mortgage and developer equity that the net rental income can support and the total development costs of the 70 rental units. In general, the amount of loan that lenders will approve is based on the income stream from the project. In this case, the annual net rental income is \$366,650. However, lenders prefer to build into their mortgage calculations a cushion between projected rents and the annual debt service needed to pay down the loan. The debt coverage ratio (ratio of income to allowable debt) reduces the effective amount of net rental income that can be used to support a mortgage. This analysis assumes a debt coverage ratio of 1.1, based on permanent financing programs offered by MassHousing. After adjusting the net rental income by the debt coverage ratio, the project has \$333,300 in annual income with which to pay the debt service on a permanent mortgage.

The total allowable permanent loan is calculated by dividing the net annual income by the mortgage constant, based on a 5.295 percent mortgage constant, assuming MassHousing financing available at current interest rates that amortizes over a 40 year period. The permanent loan supported by the households is \$6.3 million. The annual revenue not required for the mortgage is then available to support equity investment. Based on a required return of 8.0 percent, this revenue would support \$458,000 in equity investment. Given the total development costs of \$22.7 million, a total subsidy of \$15.9 million is required to mitigate the impact of new large-scale development in Somerville. Data in **Table 16** summarize the figures used to obtain the required subsidy for affordable rental units.

Table 16. Summary of Financing Gap for Affordable Rental Housing

Project Description			
Number of Units			70
Total Gross Square Footage (GSF)			80,000
Total Development Costs (TDC)			\$22,668,000
TDC per Unit			\$323,829
TDC per GSF			\$283.35
Net Rental Income	Unit	Factor	Amount
Gross Annual Rental Income			\$1,027,000
Less Vacancies	5%	of Gross Rental Income	(\$51,350)
Less Total Operating Costs	\$8,700	per Unit	(\$609,000)
Net Operating Income			\$366,650
Mortgage Calculation			
Net Operating Income (NOI)			\$366,650
Debt Coverage Ratio			1.1
Available for Debt Service			\$333,300
Mortgage Constant			5.295%
Permanent Mortgage			\$6,295,000
Equity Calculation			
Revenue Available for Return to Equity			\$36,665
Required Return on Equity			8.0%
Supportable Equity Investment			\$458,000
Financing Gap Calculation			
Total Development Costs			\$22,668,000
Less Permanent Mortgage			(\$6,295,000)
Less Supportable Equity			(\$458,000)
Financing Gap (TDC-Mortgage-Equity)			\$15,915,000

Source: ConsultEcon, Inc.

Ownership Affordability Gap & Required Subsidy

The affordability gap in project financing of ownership units is the difference between the TDC and the proceeds from the sale of the 19 ownership units. It is assumed that the sales price of the housing units is the same as the average for price of units recently sold to low income households in Somerville. Based on the mix of units and the assumed sales prices, the total estimated sales proceeds are \$2.9 million. Assuming that the TDC of \$6.0 million, the estimated financing gap for 19 affordable home ownership units is \$3.0 million. Data in Table 17 summarize the financing gap for ownership units.

Table 17. Summary of Financing Gap for Affordable Ownership Housing

Project Description			
Number of Units			19
Total Gross Square Footage (GSF)			21,000
Total Development Costs (TDC)			\$5,979,000
TDC per Unit			\$314,684
TDC per GSF			\$284.71
Unit Sales Proceeds	Unit	Average Price ^{1/}	Sales Proceeds
One Bedroom	9	\$126,000	\$1,134,000
Two Bedroom	4	\$171,000	\$684,000
Three Bedroom	6	\$187,000	\$1,122,000
Total	19		\$2,940,000
Financing Gap Calculation			
Total Development Costs			\$5,979,000
Less Sales Proceeds			(\$2,940,000)
Financing Gap			\$3,039,000

Source: ConsultEcon, Inc.

1/ Based on the affordable (at 80% AMI) unit rounded average sales price in the City of Somerville between 2008 and 2013.

Maximum Linkage Fee Level

The subsidy required to offset the affordable housing impact of new large-scale development in Somerville is \$19.0 million, the total of the subsidy required for rental and ownership units. The subsidy per square foot of development is obtained by dividing the total required subsidy by the total square feet of new large-scale commercial development calculated in previous sections.

While 901,000 square feet of new large-scale development is projected, the first 30,000 square of a project is exempt from linkage fees under the current policy. Assuming an average project size of 100,000 square feet, new commercial development would occur across 9 buildings. Therefore, the square footage subject to linkage payments would be 631,000, and the maximum warranted subsidy per square foot of commercial development is \$30.04. Alternatively, should

new commercial development would occur across 5 buildings, the square footage subject to linkage payments would be 751,000 and the maximum warranted subsidy per square foot of commercial development is \$25.24.

In setting its final linkage fee, Somerville needs to consider the potential contribution of other funding sources toward financing this required subsidy and the impact of its linkage fees on the city's competitiveness in attracting new development and firms.

Affordable Housing Subsidies

This analysis calculates the full cost of mitigating the housing impact of projected large-scale developments in the City of Somerville. Somerville has relatively high affordable housing development costs, given the scarcity of vacant land, high construction costs and, at times, problems with site remediation. The purpose of affordable housing is to limit the rental or mortgage payments of low-income households; there is a limited income stream with which to finance debt. Therefore, the City and non-profit developers are challenged to find additional sources of subsidy to fill the gap between the rents that low-income families can afford and the debt that is incurred by affordable housing developers. Since most affordable housing developers layer multiple subsidies to support the construction of new housing units, the Somerville Linkage Fee will work in conjunction with other subsidy sources to fill the \$19.0 million gap.

This section reviews other potential subsidy sources and their funding contribution to recent projects to frame the subsidy share that the Linkage Fees will need to provide. The Commonwealth of Massachusetts, in partnership with the U.S. Department of Housing and Urban Development (HUD), offers a variety of subsidies to assist in the construction and financing of affordable housing. City governments also contribute their own subsidy funds.

Our analysis revealed the use of a common set of subsidies in non-profit affordable housing developments in Somerville and adjacent communities. Following is a list of the most common subsidies, with a range of subsidy amounts in the projects reviewed.

Low-Income Housing Tax Credits. The Commonwealth of Massachusetts Department of Housing and Community Development (DHCD) administers the Commonwealth's allocation of the Federal Low-Income Housing Tax Credits (LIHTC). The tax credit program offers four percent and nine percent tax credits for the construction of affordable housing through a competitive process determined by DHCD according to HUD guidelines. Tax credits are sold through syndicators to private investors to raise funds for rental housing construction. The LIHTC projects reviewed raised between 30 and 56 percent of project costs through the sale of tax credits (between \$2.1 million and \$6.1 million per project reviewed).

HOME Funds. HUD offers block grants to states and cities to support the creation of affordable housing and community development. Commonwealth HOME funds are administered through DHCD while Somerville administers a separate pool of HOME funds. The projects reviewed covered 5 percent to 34 percent of project costs through the use of

HOME funds from either DHCD awards or municipal allocations or both. A majority of the projects reviewed received between 13 and 16 percent of projects costs from HOME funds.

Commonwealth Affordable Housing Trust Fund. The Commonwealth Affordable Housing Trust Fund (AHTF) supports the creation and preservation of affordable housing throughout the state. Commonwealth AHTF grants have supported between 9 percent and 15 percent of the total development costs of projects reviewed for this report.

Commonwealth Housing Stabilization Fund. DHCD administers the Housing Stabilization Fund, which is a state funded bond program that assists in the production and preservation of affordable housing. The projects reviewed that received this type of assistance received between 6 percent and 8 percent of project costs.

Municipal Affordable Housing Trusts. An important component of financing for most affordable housing in the Boston metropolitan region is obtained through grants from local governments. Municipal affordable housing trust funds are supported through development exactions such as housing linkage fees or were capitalized through the use of state and federal block grants. Somerville projects reviewed for this report showed that the City's affordable housing trust contributions have ranged from 1 percent to 3 percent of total project costs, with an average subsidy of \$6,400 per unit. Two projects reviewed in Boston and Cambridge received affordable housing trust contributions that represented 26 percent and 28 percent, respectively.

The above sources of funds were most often utilized in the projects reviewed. Overall, these funding programs accounted for 49 to 80 percent of total project costs. The projects reviewed also received additional funds from an array of other programs administered by DHCD and other sources. Following is a review of selected other programs used by individual projects reviewed.

Community Development Block Grants (CDBG). Like HOME Funds, CDBG are HUD grants to support community development activities, including providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons. These funds can be used for financing affordable housing when allocated to do so by the local government recipient.

Commonwealth Commercial Area Transit Node Housing Program. A state funded bond program available to municipalities, non-profit and for-profit sponsors to support rental housing production or rehabilitation.

Commonwealth Community Based Housing Program. A program that provides funding for the development of integrated housing for people with disabilities, including elders, with priority for individuals who are in institutions or nursing facilities or at risk of institutionalization.

Commonwealth Housing Innovations Fund. This program is a state funded program for non-profit developers to create and preserve affordable rental housing for special needs populations.

Commonwealth Facilities Consolidation Fund. A state funded program for non-profit developers to create and preserve affordable rental housing for clients of the Department of Mental Health and the Department of Mental Retardation.

Federal Home Loan Bank Affordable Housing Program. The Federal Home Loan Bank offers direct subsidy grants and subsidized loans through member institutions to support affordable housing development.

Somerville's future supply of affordable housing subsidies is likely to reflect the diversity of the programs utilized by projects in the past. Based on the reviewed projects, the primary funding sources available for new affordable housing development in Somerville in the future will likely be Low-Income Housing Tax Credits, Commonwealth and City Home Funds, Commonwealth Housing Stabilization Funds, and Commonwealth and City Affordable Housing Trust Funds. Since state sources are often awarded competitively, Somerville is not guaranteed funding from all of these programs. Moreover, projects do not typically receive funding from all of these sources. However, because of the array of funding programs available, it is reasonable to assume that these subsidies will continue to contribute 50 percent to 60 percent of total development costs for future rental projects. Given the total development cost of providing 70 units of affordable rental housing that is estimated at \$22.7 million, this would represent a contribution from currently available subsidy programs of between \$11.3 and \$13.6 million. Subsidies for ownership projects are assumed to range from \$125,000 to \$150,000, comprised of \$100,000 per unit from DHCD programs and \$25,000 to \$50,000 per unit from local sources, such as CDBG and HOME funds. Given that there are 19 units of affordable ownership housing units in this analysis, the assumed contribution from currently available subsidy programs for ownership units is between \$2.4 and \$2.9 million.

Based on these assumptions for affordable rental and ownership housing, the subsidy that needs to be filled with the linkage fee is between \$2.5 million and \$5.2 million. Using assumed square footage that would be subject to linkage payments of 631,000, assuming 10 new buildings at 100,000 each, the total subsidy needed to be filled by linkage fees per square foot ranges from \$3.97 to \$8.31, with a mid-range of \$6.14. If new development occurs in a smaller number of larger buildings, more square footage would be subject to linkage payments and the required fee would be smaller. For example, if the projected 901,000 of new space is developed in five buildings that average 180,000 square feet, 751,000 square feet would be assessed a linkage fee and the required linkage fee level would range from \$3.33 to \$6.98, with a mid-range of \$5.15. Data in Table 18 summarize the calculations of per square subsidy and linkage fee range.

Table 18. Calculation of Per Square Foot Subsidy Required and Linkage Fee Range

Total Development Cost Summary			
Cost of Rental Housing (from Table 13)			\$22,668,000
Cost of Ownership Housing (from Table 14)			\$5,979,000
Total Development Cost			\$28,647,000
Total Subsidy Required Summary			
Subsidy Required for Rental Housing (from Table 16)			\$15,915,000
Cost of Ownership Housing (from Table 17)			\$3,039,000
Total Subsidy Required			\$18,954,000
Subsidy Calculation			
Total Commercial Square Footage			901,000
Assumed Average Commercial Building Size			100,000
Number of Commercial Buildings			9
Square Footage Exempt from Linkage Fee under Current Policy			270,000
Commercial Square Footage Subject to Linkage Fee			631,000
Subsidy Required per SF of New Commercial Development			\$30.04
(Total Subsidy Required / Commercial SF Subject to Linkage Fee)			
Linkage Fee Calculation			
Amount from Existing Subsidy Programs	\$13,709,000		\$16,450,800
Subsidy Needed to be Filled by Linkage Fee	\$5,245,000		\$2,503,200
(Total Subsidy Required, Less Amount from Existing Subsidy Programs)			
Subsidy Needed to be Filled by Linkage Fee per Square Foot (Based on 9 new buildings at 100,000 square each)	\$8.31		\$3.97
(Subsidy Needed to be Filled by Linkage Fee / Commercial SF Subject to Linkage Fee)			
Subsidy Needed to be Filled by Linkage Fee per Square Foot (based on 5 new buildings at 180,000 square feet)	\$6.98		\$3.33

Source: ConsultEcon, Inc.

IV. New Development, Resident Employment and Jobs Linkage Fee

As Somerville attracts new development, these projects will create new jobs with the potential to benefit Somerville residents, and especially improve employment and earnings for low-income residents. A jobs linkage fee would be warranted if specialized employment and training services are needed to allow Somerville residents to gain access to these new employment opportunities so that they share in the benefits of new development. Such services may be needed either if there is a lack of Somerville workers with the specific occupational skills demanded by employers in new development or if workers have more general gaps in education, skills or experience that pose barriers to their employment. Occupational and job specific training services are warranted to address the first situation while basic education and job readiness programs address the later need. It is also possible that both services may be needed to connect Somerville residents, particularly low-income workers, to gain access to jobs created by new development.

A three part methodology was used to analyze the need for employment and job training services to link Somerville residents to the jobs created by the expected new development. First, the occupational composition of projected industries for Somerville's new development was used to estimate the number of new jobs that are likely to be created for different type of occupations¹². This data was then compared to the occupational composition of Somerville's workforce to see if any occupations exist for which the supply of among existing residents may be insufficient to meet this new demand. To provide a larger regional context for this analysis, the study also looks at projected occupational supply gaps and vacancies for the larger Boston Metro North region. The second part of the analysis considers potential employment barriers faced by Somerville residents that may impact their access to employment across occupations, drawing on American Community Survey (ACS) data and interviews with workforce and social service agencies. Finally, the analysis draws on the broader understanding of labor market trends, occupational supply needs, and the demand for education and training services gained from interviews with workforce development practitioners.

Labor Supply Gaps

Table 19 compares the expected number jobs in major occupational categories to ACS data on the number of Somerville workers in these occupations. For most occupations, the number of new jobs is a relatively small share of the current workforce. Consequently, there is likely to be a good supply of Somerville residents within these occupations to address employer needs, although mismatches may skill exist based on unique employer needs. However, in four occupational groups, Computer and Math, Health Care Support, Food Preparation and Serving and Sales, the projected new jobs account for a large share of the current workforce, ranging from 14.5% for Sales to almost 21% for Food Preparation and Serving. The large demand for workers in these skill areas relative to the city's labor supply is likely to lead to many of these positions going to non-Somerville residents. Moreover, three of these occupational groups are

¹² Some new development will involve relocation of existing employees and operations that does not create immediate new jobs. Since these positions will open up with employee turnover, the analysis is intended to address resident access to jobs from both new positions and vacancies in existing jobs that occur over time.

good sources of entry level jobs for low-income and less educated workers. Health Care Practitioners and Technicians is a fifth occupation in which the local labor may be stretched with new jobs projected at 10.5% of the city workforce. Additional analysis was conducted on several mid-level jobs that are related to the projected industries and are more accessible to low-income and non-college educated workers that include computer support and related occupations, life and other science technicians, health care technicians and non-licensed nurses. Potential supply gaps from the Somerville labor force were found for two of these occupations, computer support and non-registered nurses, for which the current Somerville work force represents 41% and 89% of the expected new jobs.

Table 19. Comparison of Expected Occupational Demand and Somerville Workforce by Major Occupational Groups

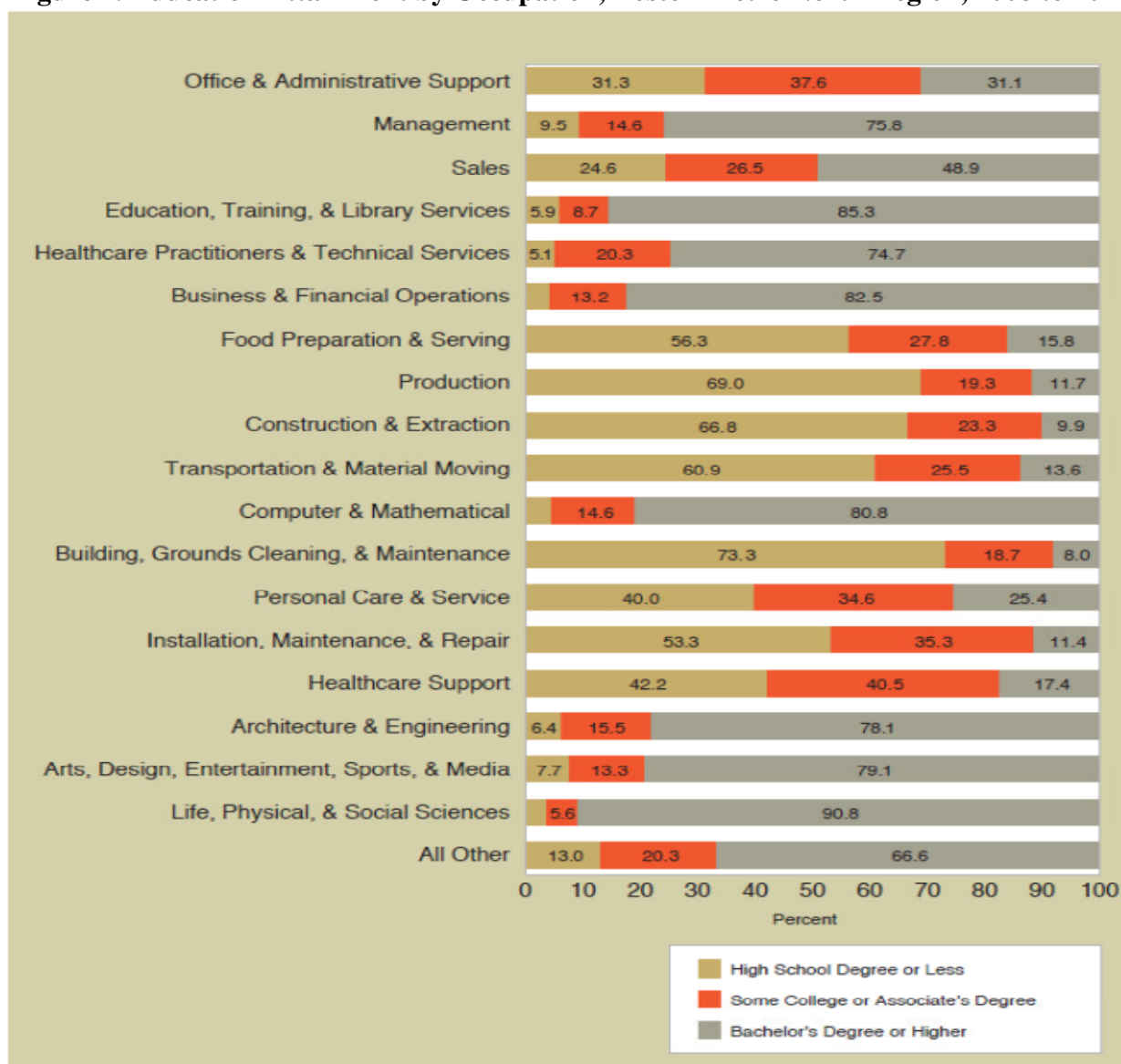
Occupational Group	Number of Expected Jobs	Number of Somerville Workers	New Jobs as Share of Somerville Labor Force
Management	229	4,648	4.9%
Business & Finance Operations	225	2,652	8.5%
Computer and Math	555	2,822	19.7%
Architecture & Engineering	109	1320	8.3%
Life, Physical and Social Sciences	148	2,461	6.0%
Community and Social Service	19	676	2.8%
Legal	8	1051	0.8%
Education, Training & Library	6	4,973	0.1%
Art. Design, Entertainment, Sports & Media	47	2,071	2.3%
Health Care Practitioners & Technical	218	2,080	10.5%
Health Care Support	132	682	19.4%
Protective Services	9	616	1.5%
Food Preparation, Serving & Related	533	2,574	20.7%
Building/Grounds Cleaning & Maintenance	42	2,415	1.7%
Personal Care and Service	85	1,677	5.1%
Sales and Related	462	3,183	14.5%
Office and Administrative Support	471	5,614	8.4%
Farming, Fishing and Forestry	1	183	0.5%
Construction and Extraction	5	1,768	0.3%
Installation, Maintenance & Repair	24	522	4.6%
Production	33	1200	2.8%
Transportation and Material Moving	28	1030	2.7%
Total	3,402	46,218	7.4%

Source: Karl F. Seidman Consulting and American Community Survey 2009-2011 3 year estimates

A recent report by CommCorp and the Federal Reserve Bank of Boston analyzed labor market trends in the Boston Metro North region that encompasses Somerville. The report found that the

region has the second highest level of college-educated workers among the state's labor market areas but had experienced a decline in workers with an Associate's Degree over the past decade.

Figure 2. Education Attainment by Occupation, Boston Metro North Region, 2008 to 2010



Source: *Labor Market Trends in the Boston Metro North Region*, October 2012

It also found a high concentration of less educated workers among the region's unemployed with 49% having a high diploma or less and 24% with some college education but no degree—a category that grew considerably between 2000 and the 2008 to 2010 period. A key finding of the report was the strong demand for highly educated workers: 10 of the 17 major industries had workforces in which 40% or more had a college degree or higher, compared to 8 industries statewide. Moreover, a majority of workers in almost all industries had at least some college education; only two industries, Accommodations and Food Service and Construction had a

majority of workers with a high school degree or less. Among occupational groups, the demand for college-educated workers increased since 2000 with 9 of the 19 major occupational categories now having a majority of workers with a college degree, including 8 at 75% or higher (see Figure 2). Moreover, the share of workers with a college degree is higher in the region than Massachusetts for all but one of the 19 occupational groups. These trends indicate that Somerville workers without a college degree or specialized occupation training are likely to face difficulty accessing jobs with employers at new development projects. These employers are increasingly seeking more highly educated and skilled workers and have access to the Boston's region's well educated labor force.

Another indicator of potential labor supply shortages is the level of job vacancies. Data on occupations with high job vacancies and vacancy rates during 2008 to 2010 for the Boston Metro Region reinforce the results of the above analysis for Somerville: the occupations that were the hardest to fill (i.e., with the highest vacancy rates) were: Sales (5.5%) Computer and Mathematical (4.6%), Business and Financial Operations (3.6%) and Health Care Support (3.6%). Other than Business and Financial Operations, these occupations are the same ones for which expected demand for new workers is likely to tax Somerville's labor force. Consequently, employers may have a need and incentive to support employment and training services that help prepare Somerville workers for jobs in these occupations.

Employment Barriers for Somerville Residents

Beyond the city-level occupational labor imbalances discussed above, Somerville workers may not have access to jobs at new development projects due to more general barriers to employment, such as lack of English language skills, poor reading and math skills, low educational attainment, limited work experience or prior criminal record. Although Somerville has a well-educated and experienced workforce, there is a sizable portion of the city's labor force that face language and educational barriers to employment and existing workforce development services are often insufficient to address these barriers. Based on ACS 5-year estimates, 10.3% of Somerville workers do not speak English very well and 25% lack post-secondary education with only a high school level education or less (see Table 20).

Table 20. Education Attainment for Somerville Workers and Residents, Age 25 and older

Education Level	Percent of Labor Force	Percent of Population
Less than high school graduate	7.3%	11.2%
High School Graduate	17.7%	21.7%
Some college or associates degree	15.0%	14.7%
Bachelor's degree or higher	60.2%	52.3%

Source: American Community Survey, 2006 to 2010 Estimates

Moreover, as shown in Table 21, these employment barriers are far more concentrated among the largely unemployed Somerville workers¹³ who were seeking services through One-Stop Career

¹³ 92% of the Metro North Regional Employment Board customers were unemployed at the time of intake.

Centers during the last 2.5 years. Over 20% of these customers did not speak English as their primary language, 15% lacked a high school diploma and another 25% had only a high school diploma or GED.

Table 21. Education Level and Non-English Speakers among Somerville Customers in Metro North Regional Employment Board System, July 2010 to December 2012

Education Level	Number of Customers	Percent of Somerville Total
Less Than HS/GED	483	15.3%
HS Diploma/GED	793	25.1%
Post-Secondary or Vocational	36	1.1%
Some College/Associates	517	16.4%
Bachelor Degree	770	24.4%
Post-Graduate Degree	487	15.4%
Other Degree	0	0.0%
Unknown	75	2.4%
Total	3,161	100.0%
Non-English Speakers	643	20.3%

Source: Metro North Regional Employment Board

Somerville Center for Adult Learning Experiences (SCALE), which provides adult basic education and English language programs, serves a population with low education and workforce skills. It currently has 379 people enrolled in its programs, with almost half (179) that are Somerville residents. The workers served by SCALE's are often limited to "behind the scenes" and seasonal low-wage jobs such as janitorial, landscaping and material moving occupations. Consequently, these workers would be ill prepared to obtain the vast majority of new jobs that would locate in Somerville as part of the expected new development, without additional education, job readiness and skills training. SCALE also reports that it is unable to address the current demand for English language training and has a large waiting list of close to 900 people for these classes.

Workforce Practitioner Interviews

Several observations about current workforce development services for low-income workers, including gaps and limitations in the current system for Somerville residents emerged from interviews with workforce development practitioners in Somerville and the Metro North Boston regions. The key findings from these interviews are:

- Training under the Workforce Investment Act (WIA) system is based on individual vouchers and choice which prevents using these funds to target training programs to specific employers or development projects.
- Due to limited and declining funds, the demand for WIA vouchers, called Individual Training Accounts or ITAs, is much greater than the available supply.

- Strict performance standards for job placement and retention rates make it more difficult to use WIA funds to serve residents and workers with some of the greatest barriers to employment.
- Somerville organizations, including SCALE and SCC, are working with the One-Stop Career Centers and community colleges to connect residents to these services but practitioners report gaps in the availability of ESL programs and job readiness and placement programs to prepare and connect recent graduates of GED graduates and ESL programs to better work opportunities.
- Effective training programs incorporate job readiness and post job-placement case management support along with their skills training component. These services improve initial employment and longer term job retention outcomes.
- The outlook for specific occupations, even those in high demand, can fluctuate with economic cycles and industry specific factors. Examples noted by interviewees included allied health programs, for which placements dropped this past year, and biotech lab technicians, which has experienced both a growth in training programs and varied demand from employers, partly influenced by their drug development cycle.
- Opportunities to improve outcomes for low-income and low-skill workers are not only tied to specific occupation or skill needs, they also depend on individual employers' commitment to hire and advance careers for these workers.

Although practitioners did not have definitive views on specific occupations facing labor supply gaps, they identified several occupations and jobs types for which strong and consistent employer demand exists:

- Health care occupations, including Certified Nursing Assistants (CNA), nursing aids, home health aides, and physical therapy assistants
- Health care office and administrative positions, including medical coding and billing, medical receptionists/intake
- Office and computer skills, with competency in using Microsoft Office essential
- Accounting and finance support, including AP, AR, and junior accounting positions
- IT positions, including help desk and computer technicians
- Retail and customer service positions

Somerville's vocational high school programs has found strong demand for several of their programs, including auto technology, culinary arts and health services, including CNA¹⁴. They are adding a new dental assistant program and considering new programs in health careers and HVAC.

Warranted Jobs Linkage Fee and Recommendations

As the above analysis noted, new non-residential development in Somerville is likely to create demand for workers in several occupational areas that cannot be adequately filled by the city's

¹⁴ Since graduates of several programs, e.g., computer principles and repair, design and communications typically go to college rather than directly into employment, there is less experience with employer demand.

existing labor force. Moreover, barriers exist that will prevent many of the city's less educated and immigrant workforce from benefiting from these jobs. Finally, current workforce development services do not adequately address these barriers and the primary federal workforce program, WIA, delivers funding to individuals, which prevents targeting programs to specific development projects and employers. For all these reasons, a Somerville jobs linkage fee is an appropriate policy response to fund services that expand resident access to employment at new development projects and mitigate the potential for these projects to disproportionately benefit workers from outside Somerville.

A jobs linkage fee is warranted to fund job training and workforce development services to address the potential occupational and skills gaps among Somerville residents to meet labor demand at the projected new development, particularly in occupations that can benefit low-income and lower skilled workers. To estimate and quantify this need, the analysis focused on those occupations in which the expected demand for labor is high relative to the existing Somerville workforce. The threshold used to quantify a need for employment and training services for these occupations is the 16.5% share of Somerville workers who hold jobs within the city. Occupations in which demand is expected to exceed this 16.5% local employment rate are ones for which additional training most likely will be needed to prepare city residents for these jobs. Moreover, the number of expected jobs beyond the 16.5% citywide local employment rate is a reasonable standard for setting the number of job training slots to fund through a linkage fee. There are three occupational groups (Computer and Math, Health Care Support and Food Preparation and Service) for which the projected number of job exceeds the 16.5% threshold and with 216 combined jobs above this threshold, as shown in Table 22.

Table 22. Projected Labor Supply Gap above Somerville Local Employment Threshold

Occupations Category	Expected New Jobs at Project Development	Positions at 16.5% of Somerville Workforce	Number of Jobs above 16.5%
Computer and Math	555	466	89
Health Care Support	132	113	19
Food Preparation, Serving & Related	533	425	108
Total	1,220	1,004	216
Adjustment for Computer and Math			-30
Adjustment for non-registered Nurses			+14
Adjusted Total			200

Two adjustments were made to these figures based on the analysis of mid-level occupations that are accessible to non-college educated workers and for which training opportunities are feasible to address. First, since most computer and math jobs require college or higher education, it is more appropriate to base the supply gap on the computer support and related occupations rather than all positions within this category. Ninety-eight jobs are projected for these mid-level occupations, of which 59 exceeds 16.5% of Somerville's workforce in these occupations.

Consequently, the supply gap for Computer and Math occupations is reduced by 30 (from 89 to 59). A second adjustment was made for non-registered nurses, which are certificate-based nursing positions that do not require a four year college degree. Although these nurses are within the Health Care Practitioners & Technical occupational group for which overall demand is not expected to exceed 16.5% of the Somerville workforce, labor demand for these positions is expected to exceed the Somerville labor force threshold by 14.

With these two adjustments, the labor supply gap to be addressed by the jobs linkage fee is 200 positions. Using a standard of \$5,000 to \$5,500 per person¹⁵ for a job training slot that includes some job readiness and post-placement support, the revenue required from a jobs linkage fee would be need to be \$1,000,000 to \$1,100,000. **When apportioned to development above 30,000 square feet for the 901,000 of project development, this represents a per square foot fee amount of \$1.59 to \$1.74, assuming nine new development building of 100,000 square feet. If the new development occurs in fewer but large projects, for example five buildings that average 180,000 square then the warranted fee amount would be \$1.33 to \$1.46.**

¹⁵ From interview with Boston Office of Community Jobs which administers Boston's Neighborhood Jobs Trust. This is slightly less than the \$6,100 cap on ITA vouchers.

V. Review of Commercial Linkage Policies and Nexus Studies

Linkage fees charged to commercial development for the purposes of funding affordable housing is a policy utilized in communities throughout the United States. They are often found in communities with high housing costs where there is a demonstrated need for affordable housing. Numerous communities in California have enacted such policies, and they are found in other states such as Washington, Colorado, Florida and New Jersey. In Massachusetts, Cambridge and Boston have linkage fee policies. This section reviews selected linkage policies and programs and nexus studies to identify the best practices associated with linkage fee programs. The key focus of this review is upon selected issues identified by and relevant to the City of Somerville as it considers an update of its linkage ordinance.

Justification for Linkage Fees

Linkage fees have been an established policy for local governments for almost three decades, with the City of Boston's policy first enacted in 1983. Since the time of the last Somerville nexus study, there has been no significant change in the legal basis and justification for linkage fees. The Nollan and Dolan Supreme Court cases continue to be the primary basis for justifying the linkage fees, as well as an impetus for communities to conduct nexus studies that establish the relationship between new jobs and housing. The U.S. Supreme Court decision in the Nollan case [Nollan v. California Coastal Commission, 483 US 825 (1987)] declared that there must be an essential nexus between the exaction or mitigation imposed on the party and a legitimate state interest. The U.S. Supreme Court decision in the Dolan case enshrined into law the proportionality test that mitigations required by municipalities must be roughly proportional to the impact that the proposed developments will create [Dolan v. City of Tigard, 512 US 687 (1994)]. Further, the Supreme Court clearly placed the burden of proof on the municipalities to prove, within reason, that the mitigation is in fact necessary.

It should be noted that California cities operate under a different set of constraints than those in Massachusetts. Mitigation measures such as development linkage fees are used for purposes beyond housing and job training. Communities impose linkage fees for parks, child care, transit, housing and schools. The widespread use of linkage fees and other exactions in California was spurred by the decline in local revenues following the adoption of the property tax limitation measure known as Proposition 13 (1978). Public concern over the use of linkage fees by municipalities led the State of California to adopt state law AB 1600 in 1987. AB 1600 requires cities to demonstrate a rational nexus between the exaction or mitigation imposed and the public interest that is threatened or affected. The law imposes an additional test of ensuring that the fee or mitigation imposed is proportional to the harm caused by the development.

Linkage Fee Program / Policy Administration

All of the housing linkage fee programs operate in essentially the same manner. Commercial developments over a defined size (number of square feet) are subject to a fee assessed per square foot of new commercial space over the threshold size of development. Linkage fee programs differ in a variety of ways. Some cities restrict the application of the linkage fee to the

development of office space, whereas other cities will apply linkage fees to all large nonresidential commercial space developed in their cities. Cities typically allow developers to either directly build the required housing or to pay an exaction into an affordable housing trust fund over a set period of years. Cambridge offers this option to build affordable units, however, it was reported that no developers had exercised this option over the past decade. Payment of the linkage fees in Cambridge must occur before the issuance of the certificate of occupancy. In Boston housing fees are paid over a 7 to 12 year period and the jobs linkage fee is paid 50 percent at building permit and 50 percent at certificate of occupancy.

Many communities adjust the fee on a regular basis, most often based on the Consumer Price Index (CPI) or a construction cost index, such as the Engineering News Record Construction Cost Index. Fees are most often adjusted annually, though in practice they may not necessarily be adjusted depending on local market conditions and operational considerations. It should be noted that adjustments based on these indices do not take into account changes in land values, which impact the costs of developing affordable housing. Major revisions to the fee structure are undertaken less frequently, requiring approval of the local legislative body and a new nexus study. Many communities have maintained the original fee structures from when the fees were first enacted, only adjusting based on an index, largely due to the cost and complexity of re-evaluating and passing new linkage legislation.

Following are in-depth reviews of linkage programs in Cambridge, Boston and other communities nearby to Somerville.

City of Cambridge

The City of Cambridge's commercial linkage fees (referred to as a Housing Contribution) in its Incentive Zoning Ordinance were first adopted in 1988. (Developers can also opt to create affordable housing units, under the "Housing Creation" Option, but this has reportedly not occurred in the past decade.) The Incentive Zoning Ordinance applies to commercial development of more than 30,000 square feet of gross floor area that seek a Special Permit, such as an increase in the density or intensity of use, waiver of parking requirements, or changes in dimensional requirements. The current housing contribution is \$4.44 per square foot over 2,500 square feet of the project authorized by the special permit granted. The fee does not vary by type of use or by size of development. The ordinance allows for annual adjustments, which have been done regularly (though not every year) according to the housing component of CPI. This last adjustment was done in May 2012. City Council approval is required to adjust the base fee calculation. The City conducted a nexus study approximately 10 years ago, but no action was taken to adjust the base fee.

The Housing Contribution is collected, generally as a lump sum payment, prior to the Certificate of Occupancy. There are no reported problems with the administration or collection of the fee. The single fee level is easily understood by developers through there is some confusion about its applicability under the Incentive Zoning Ordinance. While the city has not systematically reviewed the impact of the fee on commercial development in Cambridge, there has not been any

reported push back by developers that indicate that the fee has been a burden or a factor in decision making.

The City is seeing a growing number of commercial projects that do not trigger the Incentive Zoning Ordinance. Over time, new categories of Special Permits have been created that aren't reflected in the Incentive Zoning Ordinance. Also, certain projects that seek zoning adjustments have negotiated exemption from linkage fees for provision of other community benefits. Though no action has been taken, staff and City Council have been evaluating the range of mitigation payments because of the changing type of development (i.e. more life science space and less general office space) that has occurred, which has increased housing costs at all levels, not just those at low and very low income levels. Housing rents have reportedly been trending higher due largely to the extensive new commercial development in the city.

In addition to the Housing Contribution, Cambridge adopted a 3% property tax surcharge under the Community Preservation Act in 2001. Each year the City Manager makes recommendations to the city council on how to allocate CPA revenues with, as required by law, a minimum 10% allocation each to affordable housing, historic preservation and open space. Since FY2002, Cambridge has allocated the maximum share, 80%, to affordable housing through its Affordable Housing Trust (AHT). From FY2002 to FY2011, Cambridge allocated a total of \$43,280,000 in local CPA funds to the AHT and received an additional \$30,880,000 in state matching funds¹⁶. These funds helped to finance 34 projects that have provided 1,057 rental units and 147 homeownership units.

City of Boston

Under Article 80 of the Boston Zoning Code, any development project over 100,000 square feet of gross floor area that involves a Development Impact Use is required to pay a Housing Exaction and Jobs Contribution Exaction, referred to as linkage fees. The current Housing Exaction is \$7.87 per square foot and the Jobs Exaction is \$1.57 per square foot. Development Impact Uses are linked to specific uses under the city's zoning ordinance but generally include office, retail, services, hotel, motel, institutional and educational uses. Linkage fees are paid into a Neighborhood Housing Trust and Neighborhood Jobs Trust, respectively, and then allocated by Trustees to help fund creation of affordable housing and job training programs throughout the City of Boston. Housing fees are paid in seven equal annual installments for downtown projects and 12 years for neighborhood projects, with the first payment due the sooner of the issuance of a Certificate of Occupancy date or 24 months after the issuance of the project building permit. A lump sum amount can also be paid that discounts the 7 or 12 year payment schedule based on an average of the city and the developer's cost of capital. Jobs linkage fees are paid in two equal installments with the first due upon issuance of the building permit and the second payment due one year later.

¹⁶ City of Cambridge, *Community Preservation Act Committee FY12 Allocations and Recommendations To the City Council*

Linkage fees may be increased at three-year intervals based on changes in the consumer price index (CPI). No inflation adjustments were made until January 2002, when special legislation provided for an increase to reflect inflation between 1987 and October 1999. The most recent inflation adjustment occurred in 2006 to cover the change from 2003 to 2006, which established the current levels. There is no variation in Boston's housing or jobs linkage fees for either project size or project use. BRA staff believes the current size threshold and simplicity of a single fee has worked well. Boston has been a desirable city for development in the 25 years after the housing and job exactions were established, with considerable new development and rising commercial rents occurring during this period. BRA staff interviewed as part of the study reported that linkage fees have not served as a disincentive to development in Boston.

Other Communities with Commercial and Industrial Linkage Programs

Nearby communities, including Malden, Medford and Everett, have not enacted commercial linkage fees for affordable housing development. However, they have implemented (or are considering implementing as is the case of Everett) impact fees to support infrastructure development. The City of Malden requires mitigation for impacts to public facilities and infrastructure from commercial and industrial development over 4,999 gross square feet. Fees are \$2,000 per 5,000 gross square feet over 4,999 gross square feet. Since the 1990's the City of Medford has had office, commercial and industrial impact fees for water, sewer, roads, public safety and parks. Total development impact fees are: for office, \$959.70 per 1,000 gross square feet within Southeastern Medford and \$819.7 per 1,000 gross square feet elsewhere; for commercial, \$1,704.77 per 1,000 gross square feet within Southeastern Medford and \$904.63 per 1,000 gross square feet elsewhere; and for industrial, \$764.28 per 1,000 gross square feet within Southeastern Medford and \$702.11 per 1,000 gross square feet elsewhere. The City of Everett is currently considering an ordinance to enact impact fees for parks, streets and public recreational facilities, and has not established fee levels.

Variation in Commercial Linkage Fees by Type of Development

A majority of communities in California vary commercial linkage fees for different types of commercial development, while Boston and Cambridge have one fee for all commercial development. A recent comprehensive survey of 27 California communities¹⁷ found that 33 percent had one fee level, typically for general office and industrial uses. Approximately 19 percent had 2 or 3 fees for different types of development, 26 percent had 4 or 5 fees, and 22 percent had 6 to 10 different fees. The types of development are often determined by a community's land use or zoning categories or identified by policy leaders.

There is no discernible consistency among communities about which development type warrants higher fees. In some communities office use has the highest fee, while in others hotel or retail uses have higher fees. This is because fee levels are determined by both the local economic conditions and local policy goals related to commercial development. The key economic

¹⁷ *Jobs Housing Nexus Study*, Prepared for the City of San Diego, Prepared by Keyser Marston Associates, Inc., October 2010.

determinants of fees by development types are the density of employment (i.e. the number of jobs per square foot of development) and the occupational distribution and wage levels for different uses. California nexus studies reviewed most often identify the maximum level of fee warranted for different types of development. Ultimately, policy makers have leeway up to the fee maximum to set fees based on policy goals, local market conditions, and other in place policies that impact different types of development.

Size Thresholds and Exemptions for the Application the Linkage Fee

Communities vary in the size threshold that triggers the application of linkage fees and size of developments that are exempt from the fees. In Boston the linkage fees apply to developments over 100,000 square feet and in Cambridge over 30,000 square feet. In Cambridge, the fee applies to the portion of development over 2,500 square feet. Unlike in Massachusetts communities, the aforementioned survey of California linkage fee programs indicated that a majority of the communities had no minimum size threshold for application of commercial linkage fees. Three communities had size thresholds that ranged from 7,500 square feet in Berkeley to 25,000 square feet in San Francisco. Five communities also exempt a portion of the development, ranging from 500 square feet to 25,000 square feet. Mountain View, CA discounts the linkage fees by 50 percent if the development falls below a certain size of development for different types of development.

Very few communities vary the linkage fee by size of development and neither Boston nor Cambridge does this. In California, the City of Napa has reduced fees for larger warehouse developments and the City of Folsom, which has one fee for all commercial development types, reduces fees for larger developments. These communities, however, are the exception and not the norm.

Summary

The jobs housing nexus methodology and program administration are very similar across linkage programs. However, there are important differences that offer insights for Somerville when considering updating its linkage ordinance. Unlike Massachusetts communities, which have one fee level for different types of development, a majority of California communities vary fees for different types of commercial development. The variations are most often driven by local economic conditions and policy goals. In addition, the size threshold that triggers the linkage fees tends to be lower in California communities than in Massachusetts. Some communities offer fee exemptions, or reduced fees, for smaller developments. Another important mechanism is that linkage fees are often adjusted based on CPI or another standard construction cost index. Because of the cost and complexity of updating linkage legislation, adjusting fees based on an index makes for more straightforward administration and allows for a better reflection of the changes to the jobs housing nexus over time.

VI. Linkage Fee Policy Options

This section considers several options for changing Somerville's current linkage formula and assesses the impact of linkage fees on Somerville's competitiveness for attracting businesses and development. Four key policy changes to the current linkage are discussed:

1. Varying the linkage fee by land use or development type
2. Varying the linkage fee by development size
3. Updating applicable uses under the current policy
4. Phasing in the linkage fee for the first 30,000 square feet of development

Linkage Fees and Land Use Type

As noted in the prior section, several California communities vary their housing linkage fee for different types of development. The basis for this variation is differences in housing market impacts and the need for new affordable housing across development uses and businesses. Three factors combine to shape this development impact: the density of employment at a project (i.e., the amount of square feet per employee), wage levels at tenant firms and the share of workers expected to seek housing in Somerville. Table 23 summarizes the individual factors and their combined impact for office, industrial and a third group that includes retail, restaurant, hotel and cinema projects. The percentage of workers likely to move to Somerville is based on the employee survey, although the survey did not encompass all uses. For example, there were no cinemas or hotel respondents so the figure in this category is based on retail and restaurant workers. The far right column represents the combined impact—it estimates the demand for new affordable housing for every 10,000 square feet, assuming all workers are in single wage earner households¹⁸. Office use has the largest impact on the need for affordable housing with a higher density of employees and employees who are fairly likely to seek housing in Somerville—factors that offset the smaller share of lower wage workers. Despite the highest proportion of workers with earnings below the low-income threshold, retail, restaurant, hotel and cinema uses have the least impact on affordable housing demand with low job density and less than 7% of workers expected to seek housing in Somerville.

Based on this analysis, higher housing linkage fees could be justified for office and industrial uses at a level of 1.8 to 1.9 times the fee for retail, restaurant, hotel and cinema uses. Although a policy case for this change exists, and several developers viewed this type of variation as fair, there are potential disadvantages to this policy. First, this policy would be more complicated to explain and administer, especially for mixed use projects that combine offices with retail/restaurant uses. The policy and its administration also might require fee adjustments if a project's actual tenant mix is different than what was expected at certificate of occupancy. For example, a developer may expect ground floor retail tenants but end up with an insurance, agency, bank or medical offices. Second, this policy will set Somerville apart from its

¹⁸ No data was available on the number of wage earners and household size by a worker's industry of employment. It is reasonable to assume that these household characteristics will not be closely linked to a worker's industry sector and land use type.

neighboring cities of Cambridge and Boston that have a uniform fee across land use type, which may create some confusion among developers or misperceptions that Somerville is seeking to discourage certain types of development by charging higher linkage fees. Finally, a differential impact fee will result in higher linkage fees for large office developments—a type of use that Somerville has historically not attracted and is trying to generate under the SomerVision comprehensive plan and Assembly Square Master Plan in particular.

Since the jobs linkage fee, if enacted, will be a new policy and it is partly directed at addressing employment barriers for low-income worker across business types, it is not appropriate to vary this part of the linkage fee by land use category.

Table 23. Impact on Affordable Housing Need by Development Type

Type of Use	Square Feet (sf) per Employee	Jobs per 10,000 sf	Percentage of Jobs with Median Earnings below Low Income Threshold	Percentage of Workers Likely to Move to Somerville	Impact on Need for Affordable Housing Units
Office	225	44.4	37.3%	17.5%	2.9
Industrial	750	13.3	86.0%	24.2%	2.8
Retail, Restaurant, Hotel, Cinema	406	24.6	89.5%	6.8%	1.5

Source: Karl F. Seidman Consulting Services and ConsultEcon, Inc.

Linkage Fee and Development Size

A recent policy brief proposed extending the current linkage fee to applicable projects below 30,000 square feet via a phased fee: buildings below 20,000 square feet would pay one-third of the full linkage fee rate; and buildings between 20,000 and 30,000 square feet would pay 66% of the full rate. The argument for extending the linkage fee to smaller buildings is that new development of all sizes generate new employment opportunities and create new demand for affordable housing. Consequently, it is unfair to exclude these building from linkage payments. The sliding scale is intended to account for less intensive impacts from small projects that will have fewer and smaller tenants, and are less likely to include large employers with a high density of new workers.

Somerville assessor records on building use was used as a proxy to assess whether employment and affordable housing impacts are likely to vary by building size and are greater for large projects. As summarized in Table 24, the pattern between building size and uses that have a greater affordable housing impact is mixed. Small buildings less than 20,000 square feet are primarily retail—the use for which the affordable housing impacts are lowest. However, the mid-size building are almost equally divided between retail, office and industrial use while buildings over 30,000 square feet are 44% retail, 44% office and industrial and 12% mixed retail and office.

Table 24. Distribution of Uses by Building Size in Somerville

Building Size	Retail Use	Office Use	Industrial Use	Mixed Use Retail and Office	Total
Under 20,000	15	1	3	2	21
20,000 to 30,000	6	7	6	0	19
Above 30,000*	15	9	6	4	34

Source: Consultant Analysis of Somerville Assessor Records; *Does not include one parking garage

Based on the existing uses in Somerville buildings, there is a good rationale for excluding below 20,000 square feet from linkage fees, or applying a lower fee to these small properties. On the other hand, buildings between 20,000 and 30,000 square feet may have a larger impact than larger building since they are primarily house office and industrial firms. While, future development may not represent this existing pattern, as industrial uses are less likely to be represented in new developments, office uses, and their associated impacts on affordable housing demand, will probably constitute a large share of future mid-size developments.

Beyond the employment and affordable housing impacts, there are two other reasons why a building size threshold policy for linkage fees can be justified. First, the economics of developing small properties is less favorable than larger projects since small projects must amortize land and other fixed development costs (e.g. legal fees and project management) over a smaller amount of leasable space. Consequently, linkage fees are more likely to impact the financial feasibility of such projects. Second, small developments, with small leasable spaces, tend to attract more small, independent and start-up businesses. These tenants are less able to afford any increases in rents that may result from linkage fees than the larger and more established businesses that tend to occupy larger projects.

Finally, extending the linkage fee to all properties below 30,000 square feet will not generate a large amount of new linkage fee revenue or significantly change the incidence of linkage fee payments. Most of Somerville's permitted and proposed new non-residential development is for larger buildings; only two projects included in the planning department's list of "Potential Future Projects" are less than thirty thousand square feet. As noted above, high land costs in Somerville and substantial fixed costs make it difficult to undertake and finance small projects, which suggest that the number of new small development projects will be limited, other than for renovations of existing buildings. As shown in Table 25, 77% of existing non-residential building space in Somerville is in properties over 30,000 square feet. If the proposed phased linkage fee schedule was applied to Somerville's existing building stock, 89% of the payments would be made by large buildings.

An alternative to extending linkage payments to all non-residential development is reducing the threshold project size to 20,000 square feet. This change would extend linkage payments to almost all new development but not affect the smallest projects for which linkage fees would have the greatest impact on development costs and rents. Most importantly, these mid-size projects have attracted uses that generate a relatively high demand for affordable housing.

Table 25. Distribution of Somerville Buildings Square Footage and Hypothetical Phased Linkage Payments by Building Size

Building Size	Percent of Buildings	Percent of Square Feet	Percentage of Phased Linkage Fee
Under 20,000	28%	10%	5%
20,000 to 30,000	25%	13%	6%
Above 30,000*	47%	77%	89%

Source: Consultant Analysis of Somerville Assessor Records; *Does not include one parking garage

Applicable and Exempt Uses

Under Somerville’s existing zoning ordinance, linkage fees are applied to ten specifically referenced land use categories. While these ten categories encompass many development types with affordable housing and job training impacts, they exclude several other land use definitions that are likely to generate these impacts. Uses that are currently exempt under Somerville’s linkage ordinance include:

- Institutional Uses that include religious, educational, childcare, library, museum or gallery, hospital, and nursing home (7.11.15)
- Recreational uses that include commercial health, exercise, racquet, weight reduction, bowling or similar facilities (7.11.6.3) and theaters and cinemas (7.11.6.4)
- Several commercial and industrial uses, including laundry and dry cleaning, wholesale bakeries, industrial services and bottle redemption/recycling centers (7.11.12.1, 7.11.12.2 and 7.11.12.3)
- All industrial uses (7.11.14) and
- Accessory manufacturing to a retail or other business (7.11.16.3)

Since new construction or substantial rehabilitation of properties for these uses will generate similar impacts from new employment as the uses currently subject to linkage fees, a consistent and fair application of a housing and jobs linkage policy should encompass most of these uses. One exception could be made for uses have important civic value, e.g., religious, educational, childcare, library, museum and art galleries or studios. Moreover, with the adoption of additional land use tables in Somerville’s zoning ordinance, the language in the current linkage ordinance does not reference the new use table. To address both issues, Somerville should consider changing the structure of linkage fee provisions to apply to all non-residential uses with a listing of the specific uses that are exempt. This change would also make the linkage fee easier to understand since developers and property owners would no longer have to cross-reference a complex table of zoning uses to determine if the linkage fee applied to their project.

Phasing in Linkage Fees for Large Properties

An alternative to extending the linkage fee to smaller properties is applying the fee to the full amount of non-residential space in projects over 30,000 square feet with a phase-in of the fee for the first 30,000 square feet of space. This policy would make the first 30,000 square feet in a large development, which is now exempt from any fee subject to linkage fees on a phased basis,

with a 33% fee level applicable to the first 20,000 square feet and a 66% rate paid on the next 10,000 square feet. This policy would not change the gross warranted amount that linkage fees that need to be raised, but would change how the fee is allocated across projects. Most notably, by applying the fee to a larger amount of square footage, it would lower the nominal fee rate. It would also increase linkage payments for smaller projects relative to larger ones since the first 30,000 square feet will constitutes a larger portion of space and fees for smaller projects. Table 26 demonstrates the impact of this phase-in proposal on properties of different sizes, based on a low combined housing and jobs linkage fee of \$4.66 per square foot. This analysis shows that the phase-in policy would have a large impact on smaller properties, more than doubling the fee for a 40,000 square foot project and increasing it by 54% for a 50,000 square foot development. A phase-in would also make the fee somewhat more complicated and create the potential for confusion or miscalculation among developers.

Table 26. Comparison of Linkage Fees on Different Building Size Under Fee Phase-In

Building Size	Linkage Fee with 33%/66% Phase-In under 30,000 Square Feet	Linkage Fee with 30,000 square foot Exemption and no Phase-In	Difference
40,000	\$99,479	\$46,647	\$52,832
50,000	\$142,358	\$93,294	\$49,063
100,000	\$356,752	\$326,530	\$30,222
150,000	\$571,146	\$559,766	\$11,380
200,000	\$785,540	\$793,001	-\$7,461

Impact on Somerville's Competitiveness

An important consideration for Somerville in setting its linkage fee is the potential impact of the fee on attracting new development and tenants. A linkage fee increases development costs, which developers must offset through either paying less for land (or an existing building in the case of renovation projects), reducing their return on investment, or collecting higher rents from tenants. The last option, raising rents, impacts Somerville's competitiveness is attracting businesses to new development projects. Interviews with developers and brokers indicated that the major new developments in Somerville are primarily competing with Boston and Cambridge (with East Cambridge and the Boston Seaport emphasized) in seeking new tenants, and to a lesser extent with major suburban office centers. A developers' capacity to pass on the linkage fee to tenants and still remain competitive in attracting tenants is a function of rent differentials between Somerville and other communities. Table 27 compares office rents for Somerville and competing areas in Boston, Cambridge and the Boston North Market Area. Somerville has a large rent differential with both Cambridge and Boston, varying from almost \$17 compared with Boston's Seaport District to just under \$23 for East Cambridge. While these rents include existing buildings and new development, these large differentials are indicative of higher land costs for Cambridge and Boston and provide substantial space for Somerville to maintain a rent advantage and absorb a linkage fee. Developers and brokers indicated that Somerville needs a rent differential of 10% to 20% with Boston and Cambridge to be competitive in attracting office

tenants, or \$5 to \$9 as square foot. The warranted combined housing and jobs linkage fee discussed in this report ranges from \$4.66 to \$10.05 per square foot. If a developer passed on this fee in full to tenants, it would increase rents by \$0.38 to \$1.02 per square foot for a ten-year lease¹⁹. This would have a small impact on rent differentials—in the range of .9% to 2.5% of Cambridge and Boston rents. As such, it should not threaten developers' ability to maintain a competitive rent advantage for Somerville. The marginal impact on Somerville's current rent differential will be even less given the existing \$3.91 fee; rent increases from a linkage fee increase would range from \$0.06 to \$0.63 per square foot.

Table 27. 2012 Office Rents in Somerville, Cambridge, Boston and Suburbs

Community	Average Asking Rent Per Square Foot
Somerville	\$24.23
Cambridge	\$42.87
East Cambridge	\$47.12
Boston	\$46.30
Boston-Seaport District	\$41.06
Boston North Market Area	\$19.64

Source: Jones Lang LaSalle Office Statistics, Boston Q3, 2012

While linkage fees are unlikely to affect leasing decisions when tenants are choosing between Boston, Cambridge and Somerville, they are more likely to affect Somerville's competitiveness with suburban locations that currently have average rents below Somerville. Somerville's current \$4.59 rent premium over the Boston North Market Area would increase by over \$0.08 per square foot (or 2%) under a \$4.66 per square foot fee and \$0.63, or 14%, under the \$10.05 fee. These are not large dollar impacts but for highly cost-conscious firms leasing a large amount of space and comparing Somerville to other suburban locations, the rent differential could deter some tenants from locating in Somerville.

Interviews with developers indicate that Somerville's current linkage fee is not a deterrent to development. However, they expressed concerns that Somerville needs to be conscious of its overall development costs and ensure that it maintains a rent advantage compared to Boston and Cambridge. While developers stated that any increase in the linkage fee adds to development costs and can result in higher rents or make a project infeasible, they cited location, limited amenities and the absence of nearby firms and development as greater barriers to attracting tenants needed to finance and complete projects. Developers did not view current linkage fees as a major consideration or barrier to attracting tenants. However, there was some concern about that combined impact of development fees and costs added during the design review process on overall development costs. Several developers cited the mayor's predevelopment approach and

¹⁹ These calculations are based on the current 30,000 square foot exemption, 85% net leasable space and building sizes between 100,000 and 225,000 square feet. The low figure represents one-tenth of the total linkage fee under the \$6.74 rate paid by a 100,000 square foot building divided by 85,000 square feet of leasable space. The high figure is based on one tenth of the total fee at the \$12.68 rate for a 225,000 square foot building divided by 191,250 leasable space to yield the \$1.29

flexibility in considering incentives to attract new firms and mitigate the impact of fees as a positive influence.

VII. Recommended Linkage Fees and Policies

The analysis detailed in this report supports an increase in Somerville's current housing linkage fee and the establishment of a new jobs linkage fee. Projected new development of 901,000 square feet over the next 10 years will generate demand for 89 additional affordable housing units, all of which must be supplied through the construction of new subsidized rental housing. The required subsidy to build these units is \$18.95 million but the contribution from linkage fees is between \$2.5 million and \$5.2 million, after factoring in the availability of other funding sources. A linkage fee in the range of \$4.66 and \$10.05 per square foot is required to raise this amount, depending on the size of new development projects and share of subsidy raised from other sources. A jobs linkage fee is also warranted to address employment barriers and occupational skill gaps in the city's labor force and ensure that Somerville residents fully benefit from job opportunities in the future development projects. A jobs linkage fee in the range of \$1.33 to \$1.74 per square foot is warranted to fund the \$1.0 million to \$1.1 million in employment and training services to advance these local employment benefits. Although a jobs linkage fee is rare and Somerville would be joining Boston as the second city to adopt this fee, it will allow Somerville to fund training that reduces employment barriers for less educated workers and potentially fill skills gaps for some employers. This later use of jobs linkage funds can provide an incentive to attract firms to Somerville, especially if the labor market tightens with continued economic growth.

In light of Somerville's need to provide a development environment and occupancy cost that is competitive with other communities and the large increase from the current \$3.91 per square foot from the high end of the new warranted fee range, we recommend that Somerville adopt a mid-range linkage fee: \$5.15 per square foot for housing linkage and \$1.40 for jobs linkage for a combined fee of \$6.55. The fee level is midway between current linkage fees in Cambridge and Boston: it is \$2.11 above Cambridge's rate of \$4.44 and \$2.89 below Boston's fee of \$9.44. To the extent this fee leads to any rent increases, the impact would be in the range of \$0.22 to \$0.27 per square foot, which is unlikely to make Somerville uncompetitive in attracting firms or impact the ability to attract private equity investment to finance new development.

We also recommend that Somerville continue to apply a uniform linkage fee across land uses, and allow for the payment of the housing linkage fee over five years with the first payment due with the certificate of occupancy. Payment of the Jobs Linkage fee should occur earlier than the housing linkage fees to provide funds to train Somerville residents in advance of tenant occupancy and hiring. Consequently, it is recommended that the jobs linkage fee payment be made in two equal installments: the first with the issuance of the building permit and the second at the one year anniversary of the first payment. This fee payment replicates Boston's policy.

Somerville should also consider two other changes to its current linkage policies:

1. Provide for regular increases in the linkage fee rate to account for inflation. This change will allow the linkage fee to be increased every three years based on an inflation index, such as the Consumer Price Index alone (as is done in Boston) or a weighted combination of the CPI (to address the jobs linkage fee) and a construction cost index (to address the

housing linkage fee). Two options for a construction cost index are: (1) the producer price indexes for material and supply inputs to construction industries prepared by the U.S. Bureau of Labor Statistics; and (2) the McGraw-Hill Building Cost Index.

2. Reduce the development size threshold from 30,000 to 20,000 square feet. This would expand the fee base, slightly reduce the fee rate and ensure that mid-size projects, which often include office tenants with higher affordable housing and jobs impacts, share in paying to mitigate these impacts. This change in the project size threshold would reduce the recommended linkage fee to \$6.15 (\$4.84 for housing and \$1.31 for jobs).

Additional Jobs Linkage Recommendations

If a new jobs linkage fee is adopted, Somerville will need to adopt policies for the use and administration these new linkage funds. These policies should address the ongoing needs and trends identified in practitioner interviews and apply effective practices gained from Boston's twenty-five year history with the Neighborhood Jobs Trust. Although further consultation with a range of stakeholders is needed to set these policies, the following recommendations are offered to guide future decision-making on the uses and administration of a jobs linkage fee:

- Establish a Somerville Jobs Trust (SJT), similar to the Somerville Housing Trust, to administer and award jobs linkage payments.
- The purpose of linkage fees would be to provide education, training and related employment services to prepare and connect low-income and less educated Somerville residents to jobs and career opportunities with Somerville employers. HUD's low-income threshold at 80% of area median income can provide the basis for participant income eligibility. This threshold targets workers at a lower income level who are have the greatest need for training services to improve their earnings. It is considerably higher than low-income definition used for eligibility under federal WIA programs so it will allow Somerville to serve residents with employment barriers who fall outside WIA eligibility. Using the HUD low-income definition will also allow Somerville to combine CDBG funds with Jobs Trust Funds if it so desires. Since a higher income threshold of 100% or 110% of median income will serve more workers in the middle of the income distribution it will be less effective at improving earnings for the disadvantaged. However, this higher income limit might be applied, on a case-by-case basis for a "Project-based" program (discussed below) when it is needed to address an occupational employment gaps for specific employers in a new project.
- Allow for two broad uses of jobs linkage funds: (1) a "Project-based" job training and employment program tied to jobs with specific employers in new development projects—this would use the linkage fees paid by a developer to train workers and directly benefit employers in the new development. This form of the linkage fee could help attract new employers to Somerville by addressing their workforce and hiring needs. The training provider and specific training program would require approval by the SJT; (2) citywide training programs that can address broader employment barriers (that may be pre-requisites to skills training) and/or prepare Somerville workers for occupations and jobs that are not limited to firms in new development projects. These programs help residents

benefit from citywide job opportunities, provide a hedge against insufficient timing or tenant commitment to develop a training program, and can benefit firms in new developments by expanding the supply of local skilled workers to fill positions as they turnover.

- Incorporate outreach, job readiness and post-job placement case management support into programs funded by the SJT. Outreach will increase resident awareness of and participation in programs. Job readiness and case management components contribute to successful and sustained employment outcomes for participants.
- Award citywide funds through a competitive process that considers the job training provider's past performance, employer relationships and partnerships to recruit targeted Somerville residents. For each competitive funding round, the SJT would develop criteria and targets that reflect gaps in training services at that time, compliment existing programs and encourage innovation. Somerville may need to rely on providers from outside the city to deliver the most effective programs, but should encourage partnerships with local organizations to ensure successful outreach and recruitment.
- Contracts should be performance based with funds paid based on a program's enrollment and job placement results, although the specific standards can be customized to the specific type of workers and occupations targeted.

Appendix A. Data Tables on Somerville Housing Market

Appendix Table 1
Population and Household Trends, 2000 and 2010

	Somerville		Average Annual Change, 2000-2010	Boston MSA ^{1/}	Massachusetts		Average Annual Change, 2000-2010
	2000	2010		2010	2000	2010	
Population	77,478	75,754	-0.2%	4,552,402	6,016,425	6,547,629	0.9%
Households	31,555	32,105	0.2%	1,760,584	2,247,110	2,547,075	1.3%
Average Household Size	2.38	2.29	-0.4%	2.50	2.58	2.48	-0.4%
Household type							
Families	46.5%	41.8%	-1.0%	62.6%	67.4%	63.0%	-0.7%
Non-Families	53.5%	58.2%	0.9%	37.4%	32.6%	37.0%	1.4%
Tenure							
Owner	30.6%	32.4%	0.6%	61.5%	59.3%	62.3%	0.5%
Renter	69.4%	67.6%	-0.3%	38.5%	40.7%	37.7%	-0.7%

^{1/} 2000 data is not available for the Boston MSA due to a change in its geographic definition between 2000 and 2010.

Source: U.S. Census, 2000; U.S. Census, 2010; and ConsultEcon, Inc.

Appendix Table 2
Age Distribution of Population, 2000 and 2010

Age	2000		2010		Average Annual Change, 2000-2010
	Number	Percent	Number	Percent	
Somerville					
Under 20	13,827	17.8%	11,252	14.9%	-1.9%
20-24	9,992	12.9%	9,222	12.2%	-0.8%
25-44	32,985	42.6%	34,571	45.6%	0.5%
45-64	12,575	16.2%	13,800	18.2%	1.0%
65 and over	8,099	10.5%	6,909	9.1%	-1.5%
Total	77,478	100.0%	75,754	100.0%	-0.2%
Median Age	31.1		31.4		
Boston MSA ^{1/}					
Under 20			1,119,890	24.6%	
20-24			336,178	7.4%	
25-44			1,248,417	27.4%	
45-64			1,251,874	27.5%	
65 and over			596,043	13.1%	
Total			4,552,402	100.0%	
Median Age			38.5		
Massachusetts					
Under 20	1,675,113	26.4%	1,621,143	24.8%	-0.3%
20-24	404,279	6.4%	475,668	7.3%	1.8%
25-44	1,989,783	31.3%	1,732,290	26.5%	-1.3%
45-64	1,419,760	22.4%	1,815,804	27.7%	2.8%
65 and over	860,162	13.5%	902,724	13.8%	0.5%
Total	6,349,097	100.0%	6,547,629	100.0%	0.3%
Median Age	36.5		39.1		

^{1/} 2000 data is not available for the Boston MSA due to a change in its geographic definition between 2000 and 2010.

Source: U.S. Census, 2000; U.S. Census, 2010; and ConsultEcon, Inc.

Appendix Table 3
Household Income Distribution, in 2010 inflation adjusted dollars

	Somerville		Boston MSA		Massachusetts		Ratio of Somerville to MA
	Households	% of Total	Households	% of Total	Households	% of Total	
Less than \$10,000	2,363	7.4%	112,412	6.5%	171,690	6.8%	1.08
\$10,000 to \$14,999	1,602	5.0%	78,529	4.5%	128,839	5.1%	0.98
\$15,000 to \$24,999	2,645	8.3%	131,007	7.6%	212,765	8.5%	0.98
\$25,000 to \$34,999	2,465	7.7%	126,782	7.3%	198,325	7.9%	0.98
\$35,000 to \$49,999	4,311	13.5%	184,687	10.6%	283,914	11.3%	1.20
\$50,000 to \$74,999	5,495	17.2%	289,080	16.7%	428,839	17.1%	1.01
\$75,000 to \$99,999	4,724	14.8%	232,772	13.4%	338,488	13.5%	1.10
\$100,000 to \$149,999	5,153	16.1%	304,706	17.6%	412,161	16.4%	0.98
\$150,000 to \$199,999	1,865	5.8%	135,620	7.8%	170,308	6.8%	0.86
\$200,000 or more	1,295	4.1%	139,580	8.0%	167,223	6.7%	0.61
Total Households	31,918	100.0%	1,735,175	100.0%	2,512,552	100.0%	1.00
<i>Median Household Income</i>	<i>\$61,731</i>		<i>\$69,983</i>		<i>\$64,509</i>		
<i>Mean Household Income</i>	<i>\$74,884</i>		<i>\$93,077</i>		<i>\$85,897</i>		

Source: U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 4
Employed Residents by Occupation and Industry, 2006-2010 Estimates

	Somerville		Boston MSA		Massachusetts	
	Employed Residents	% of Total	Employed Residents	% of Total	Employed Residents	% of Total
Occupation						
Management, business, science, and arts occupations	24,326	51.2%	1,057,238	45.5%	1,400,638	42.8%
Service occupations	7,981	16.8%	365,057	15.7%	541,505	16.6%
Sales and office occupations	10,162	21.4%	561,531	24.1%	790,915	24.2%
Natural resources, construction, and maintenance occupations	2,650	5.6%	157,866	6.8%	241,318	7.4%
Production, transportation, and material moving occupations	2,360	5.0%	184,429	7.9%	297,159	9.1%
Total (Employed Civilian Population 16 Years and Older)	47,479	100.0%	2,326,121	100.0%	3,271,535	100.0%
Industry						
Agriculture, forestry, fishing and hunting, and mining	110	0.2%	7,249	0.3%	12,821	0.4%
Construction	1,917	4.0%	127,717	5.5%	191,971	5.9%
Manufacturing	3,102	6.5%	212,986	9.2%	323,351	9.9%
Wholesale trade	709	1.5%	61,370	2.6%	87,944	2.7%
Retail trade	4,037	8.5%	242,329	10.4%	350,202	10.7%
Transportation and warehousing, and utilities	1,152	2.4%	83,776	3.6%	123,187	3.8%
Information	1,719	3.6%	69,100	3.0%	88,659	2.7%
Finance and insurance, and real estate and rental and leasing	3,097	6.5%	203,445	8.7%	264,145	8.1%
Professional, scientific, and management, and administrative and waste management services	8,909	18.8%	333,403	14.3%	416,530	12.7%
Educational services, and health care and social assistance	13,853	29.2%	605,714	26.0%	872,032	26.7%
Arts, entertainment, and recreation, and accommodation and food services	4,333	9.1%	182,781	7.9%	261,420	8.0%
Other services, except public administration	2,799	5.9%	103,465	4.4%	146,731	4.5%
Public administration	1,742	3.7%	92,786	4.0%	132,542	4.1%
Total (Employed civilian Population 16 Years and Older)	47,479	100.0%	2,326,121	100.0%	3,271,535	100.0%
Population 16 years and Older	66,990		3,622,314		5,224,911	
Percent of Population 16 Years and Older Employed	70.9%		64.2%		62.6%	

Source: U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 5
Travel Time to Work, 2006-2010 Estimates

Travel Time to Work	Somerville		Boston MSA		Massachusetts	
	Employed Residents	% of Total	Employed Residents	% of Total	Employed Residents	% of Total
Less than 5 minutes	755	1.7%	54,360	2.5%	86,520	2.8%
5 to 9 minutes	2,496	5.5%	182,667	8.4%	292,262	9.5%
10 to 14 minutes	4,495	9.9%	262,637	12.1%	414,274	13.5%
15 to 19 minutes	4,887	10.8%	268,698	12.4%	411,964	13.5%
20 to 24 minutes	6,486	14.3%	290,363	13.4%	418,476	13.7%
25 to 29 minutes	2,909	6.4%	129,035	5.9%	176,934	5.8%
30 to 34 minutes	9,002	19.9%	331,525	15.3%	425,123	13.9%
35 to 39 minutes	1,756	3.9%	75,693	3.5%	98,442	3.2%
40 to 44 minutes	3,278	7.2%	114,928	5.3%	145,136	4.7%
45 to 59 minutes	5,787	12.8%	231,720	10.7%	289,143	9.4%
60 to 89 minutes	2,694	6.0%	179,197	8.2%	227,455	7.4%
90 or more minutes	720	1.6%	52,807	2.4%	74,746	2.4%
Total	45,265	100.0%	2,173,630	100.0%	3,060,475	100.0%
<i>Percent Commuting 30 Minutes or More</i>	<i>51.3%</i>		<i>45.4%</i>		<i>41.2%</i>	

Source: U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 6
Age of Housing Stock, 2006-2010 Estimates

Year Built	Somerville		Boston MSA		Massachusetts	
	Number of Units	% of Total	Number of Units	% of Total	Number of Units	% of Total
Built 2005 or later	325	1.0%	43,118	2.3%	55,903	2.0%
Built 2000 to 2004	520	1.5%	81,106	4.3%	112,908	4.1%
Built 1990 to 1999	625	1.8%	132,688	7.1%	206,407	7.4%
Built 1980 to 1989	1,382	4.1%	198,916	10.7%	304,619	10.9%
Built 1970 to 1979	1,966	5.8%	210,720	11.3%	327,885	11.8%
Built 1960 to 1969	1,342	4.0%	198,202	10.6%	291,161	10.5%
Built 1950 to 1959	1,737	5.1%	206,401	11.1%	318,820	11.4%
Built 1940 to 1949	1,848	5.5%	108,317	5.8%	170,165	6.1%
Built 1939 or earlier	24,116	71.2%	687,114	36.8%	998,209	35.8%
Total	33,861	100.0%	1,866,582	100.0%	2,786,077	100.0%

Source: U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 7
Occupied Housing Units by Unit Type and Tenure, 2006-2010 Estimates

Unit Type	Somerville		Boston MSA		Massachusetts	
	Number of Units	% of Total	Number of Units	% of Total	Number of Units	% of Total
<i>Owner-Occupied</i>						
1, detached	2,827	26.6%	805,795	73.5%	1,243,662	77.3%
1, attached	547	5.1%	66,885	6.1%	85,800	5.3%
2	4,629	43.5%	80,070	7.3%	108,524	6.7%
3 or 4	1,648	15.5%	42,926	3.9%	59,516	3.7%
5 to 9	281	2.6%	20,531	1.9%	25,464	1.6%
10 to 19	313	2.9%	17,473	1.6%	20,165	1.3%
20 to 49	292	2.7%	20,627	1.9%	22,650	1.4%
50 or more	109	1.0%	23,168	2.1%	25,174	1.6%
Mobile home	0	0.0%	17,997	1.6%	17,265	1.1%
Boat, RV, van, etc.	0	0.0%	224	0.0%	254	0.0%
Total Owner-Occupied Units	10,646	100.0%	1,095,696	100.0%	1,608,474	100.0%
<i>Renter-Occupied</i>						
1, detached	889	4.2%	51,194	8.0%	87,297	9.7%
1, attached	519	2.4%	30,003	4.7%	40,990	4.5%
2	5,705	26.8%	108,177	16.9%	153,658	17.0%
3 or 4	6,622	31.1%	137,185	21.5%	206,734	22.9%
5 to 9	2,809	13.2%	82,624	12.9%	125,031	13.8%
10 to 19	1,006	4.7%	65,686	10.3%	86,037	9.5%
20 to 49	1,931	9.1%	66,952	10.5%	79,702	8.8%
50 or more	1,791	8.4%	95,138	14.9%	121,904	13.5%
Mobile home	0	0.0%	2,420	0.4%	2,500	0.3%
Boat, RV, van, etc.	0	0.0%	100	0.0%	225	0.0%
Total Renter Occupied Units	21,272	100.0%	639,479	100.0%	904,078	100.0%
Total Occupied Units	31,918		1,735,175		2,512,552	

Source: U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 8
Housing Unit Occupancy and Vacancy Rates, 2000-2010

Tenure	Somerville				Boston MSA ^{1/}		Massachusetts			
	2000		2010		2010		2000		2010	
	Number of Units	% of Total	Number of Units	% of Total	Number of Units	% of Total	Number of Units	% of Total	Number of Units	% of Total
Owner-Occupied Housing Units	9,663	29.8%	10,395	30.8%	1,082,688	57.5%	1,508,248	57.5%	1,587,158	56.5%
Renter-Occupied Housing Units	21,892	67.4%	21,710	64.4%	677,896	36.0%	935,332	35.7%	959,917	34.2%
Vacant Housing Units	922	2.8%	1,615	4.8%	122,622	6.5%	178,409	6.8%	261,179	9.3%
Total	32,477	100.0%	33,720	100.0%	1,883,206	100.0%	2,621,989	100.0%	2,808,254	100.0%
<i>Homeowner Vacancy Rate ^{2/}</i>	<i>0.8%</i>		<i>1.3%</i>		<i>1.5%</i>		<i>0.7%</i>		<i>1.5%</i>	
<i>Rental Vacancy Rate ^{3/}</i>	<i>1.6%</i>		<i>3.6%</i>		<i>5.9%</i>		<i>3.5%</i>		<i>6.5%</i>	

^{1/} 2000 data is not available for the Boston MSA due to a change in its geographic definition between 2000 and 2010.

^{2/} The homeowner vacancy rate is the proportion of the homeowner inventory that is vacant "for sale." It is computed by dividing the total number of vacant units "for sale only" by the sum of owner-occupied units, vacant units that are "for sale only," and vacant units that have been sold but not yet occupied; and then multiplying by 100.

^{3/} The rental vacancy rate is the proportion of the rental inventory that is vacant "for rent." It is computed by dividing the total number of vacant units "for rent" by the sum of the renter-occupied units, vacant units that are "for rent," and vacant units that have been rented but not yet occupied; and then multiplying by 100.

Source: U.S. Census, 2000; U.S. Census, 2010; and ConsultEcon, Inc.

Appendix Table 9
Household Size by Household Tenure, 2000-2010

	Somerville				Boston MSA ^{1/}		Massachusetts			
	2000		2010		2010		2000		2010	
	Number of Units	% of Total	Number of Units	% of Total	Number of Units	% of Total	Number of Units	% of Total	Number of Units	% of Total
Owner occupied										
1 person	2,400	24.8%	3,164	29.7%	228,864	20.9%	297,972	19.8%	343,656	21.4%
2 persons	3,195	33.1%	3,824	35.9%	369,791	33.7%	509,562	33.8%	556,151	34.6%
3 persons	1,548	16.0%	1,831	17.2%	185,786	17.0%	269,732	17.9%	270,555	16.8%
4 persons	1,456	15.1%	1,303	12.2%	195,578	17.8%	264,278	17.5%	278,507	17.3%
5 persons	583	6.0%	367	3.4%	81,922	7.5%	117,995	7.8%	112,652	7.0%
6 persons	326	3.4%	50	0.5%	23,556	2.1%	33,408	2.2%	32,307	2.0%
7 or more persons	155	1.6%	107	1.0%	10,199	0.9%	15,301	1.0%	14,646	0.9%
Total Owner Occupied	9,663	100.0%	10,646	100.0%	1,095,696	100.0%	1,508,248	100.0%	1,608,474	100.0%
Renter occupied										
1 person	7,385	33.7%	7,206	33.9%	268,734	42.0%	386,506	41.3%	383,392	42.4%
2 persons	7,339	33.5%	7,049	33.1%	182,469	28.5%	264,702	28.3%	251,592	27.8%
3 persons	3,714	17.0%	4,082	19.2%	94,398	14.8%	130,606	14.0%	133,277	14.7%
4 persons	1,967	9.0%	2,064	9.7%	59,981	9.4%	88,766	9.5%	85,560	9.5%
5 persons	953	4.4%	566	2.7%	22,447	3.5%	41,064	4.4%	33,347	3.7%
6 persons	310	1.4%	242	1.1%	7,632	1.2%	14,994	1.6%	11,170	1.2%
7 or more persons	224	1.0%	63	0.3%	3,818	0.6%	8,694	0.9%	5,740	0.6%
Total Renter Occupied	21,892	100.0%	21,272	100.0%	639,479	100.0%	935,332	100.0%	904,078	100.0%
Total Occupied Units	31,555		31,918		1,735,175		2,443,580		2,512,552	

^{1/} 2000 data is not available for the Boston MSA due to a change in its geographic definition between 2000 and 2010.

Source: U.S. Census, 2000; U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 10
Contract Rent, 2006-2010 Estimates

Contract Rent	Somerville		Boston MSA		Massachusetts		Ratio of Somerville to Boston MSA	Ratio of Somerville to MA
	Renting Households	% of Total	Renting Households	% of Total	Renting Households	% of Total		
Less than \$250	1,108	5.2%	52,832	8.3%	81,575	9.0%	0.63	0.58
\$250 to \$499	1,190	5.6%	55,844	8.7%	100,780	11.1%	0.64	0.50
\$500 to \$749	1,749	8.2%	71,598	11.2%	158,861	17.6%	0.73	0.47
\$750 to \$999	2,985	14.0%	128,416	20.1%	186,004	20.6%	0.70	0.68
\$1,000 to \$1,249	4,943	23.2%	118,534	18.5%	138,264	15.3%	1.25	1.52
\$1,250 to \$1,499	3,999	18.8%	81,340	12.7%	87,940	9.7%	1.48	1.93
\$1,500 to \$1,999	3,535	16.6%	74,539	11.7%	80,128	8.9%	1.43	1.88
\$2,000 or more	1,491	7.0%	35,575	5.6%	37,920	4.2%	1.26	1.67
<i>No Cash Rent</i>	272	1.3%	20,801	3.3%	32,606	3.6%	0.39	0.35
Total	21,272	100.0%	639,479	100.0%	904,078	100.0%	1.00	1.00
Median Contract Rent	\$1,175		\$1,001		\$873			

Source: U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 11
Gross Rent Payments, 2006-2010 Estimates

Gross Rent Payments	Somerville		Boston MSA		Massachusetts		Ratio of Somerville to Boston MSA	Ratio of Somerville to MA
	Renting Households	% of Total	Renting Households	% of Total	Renting Households	% of Total		
Less than \$250	892	4.2%	39,060	6.1%	58,736	6.5%	0.69	0.65
\$250 to \$499	1,145	5.4%	55,281	8.6%	91,041	10.1%	0.62	0.53
\$500 to \$749	1,225	5.8%	52,760	8.3%	113,323	12.5%	0.70	0.46
\$750 to \$999	2,130	10.0%	99,731	15.6%	169,198	18.7%	0.64	0.54
\$1,000 to \$1,249	4,234	19.9%	117,529	18.4%	155,333	17.2%	1.08	1.16
\$1,250 to \$1,499	4,426	20.8%	97,712	15.3%	113,159	12.5%	1.36	1.66
\$1,500 to \$1,999	4,602	21.6%	105,335	16.5%	116,263	12.9%	1.31	1.68
\$2,000 or more	2,346	11.0%	51,270	8.0%	54,419	6.0%	1.38	1.83
<i>No Cash Rent</i>	272	1.3%	20,801	3.3%	32,606	3.6%	0.39	0.35
Total	21,272	100.0%	639,479	100.0%	904,078	100.0%	1.00	1.00
Median Gross Rent	\$1,299		\$1,133		\$1,006			

Source: U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 12
Gross Rent as a Percentage of Income in 2010 (Renter-Occupied Units Only)

Percent of Income	Somerville		Boston MSA		Massachusetts	
	Renting Households	% of Total	Renting Households	% of Total	Renting Households	% of Total
Less than 10 percent	666	3.1%	20,427	3.2%	30,123	3.3%
10 to 14 percent	1,843	8.7%	48,624	7.6%	70,485	7.8%
15 to 19 percent	2,667	12.5%	74,440	11.6%	103,333	11.4%
20 to 24 percent	3,405	16.0%	77,556	12.1%	107,442	11.9%
25 to 29 percent	2,693	12.7%	80,878	12.6%	112,098	12.4%
30 to 34 percent	2,070	9.7%	60,478	9.5%	86,472	9.6%
35 to 39 percent	1,062	5.0%	39,336	6.2%	55,533	6.1%
40 to 49 percent	1,854	8.7%	50,402	7.9%	70,931	7.8%
50 percent or more	4,546	21.4%	154,458	24.2%	219,252	24.3%
Not computed	466	2.2%	32,880	5.1%	48,409	5.4%
Total	21,272	100.0%	639,479	100.0%	904,078	100.0%

Source: U.S. Census Bureau, 2006-2010 American Community Survey; and ConsultEcon, Inc.

Appendix Table 13
Available Rental Housing in Somerville from Boston Globe Online

Apartment Size	Units by Rent Range					
	\$0 to \$999	\$1,000 to \$1,249	\$1,250 to \$1,499	\$1,500 to \$1,749	\$1,750 to \$1,999	\$2,000 to \$2,249
Studio / One Bedroom	1	4	6	14	15	0
Two Bedroom	0	3	5	10	13	13
Three Bedroom	0	0	0	1	5	5
Four Bedroom	0	0	0	0	0	0
Total	1	7	11	25	33	18
Apartment Size	Units by Rent Range					
	\$2,250 to \$2,499	\$2,500 to \$2,749	\$2,750 to \$2,999	\$3,000 to \$3,499	\$3,500 to \$3,999	\$4,000 and Above
Studio / One Bedroom	23	6	0	1	0	0
Two Bedroom	0	10	8	21	11	1
Three Bedroom	5	5	4	2	19	2
Four Bedroom	0	5	4	6	7	2
Total	28	26	16	30	37	5
Apartment Size	Total Units	Percent to Total Units	Percent of Total Units			
			\$0 to \$1,499	\$1,500 to \$1,999	\$2,000 to \$2,499	\$2,500 to \$3,000 and Above
Studio / One Bedroom	70	29.5%	15.7%	41.4%	32.9%	8.6%
Two Bedroom	95	40.1%	8.4%	24.2%	13.7%	18.9%
Three Bedroom	48	20.3%	0.0%	12.5%	20.8%	18.8%
Four Bedroom	24	10.1%	0.0%	0.0%	0.0%	37.5%
Total	237	100.0%	8.0%	24.5%	19.4%	17.7%

Source: Boston Globe Online and ConsultEcon, Inc.

Appendix Table 14
Median Sales Price of Condominiums and Single Family Homes in Somerville

Year	Condos		Single Family	
	Median Sales Price	Percent Change from Prior Year	Median Sales Price	Percent Change from Prior Year
2000	\$245,000		\$250,000	
2001	\$285,000	16.3%	\$285,000	14.0%
2002	\$311,000	9.1%	\$334,750	17.5%
2003	\$330,000	6.1%	\$372,000	11.1%
2004	\$325,000	-1.5%	\$389,900	4.8%
2005	\$360,000	10.8%	\$428,500	9.9%
2006	\$344,950	-4.2%	\$422,500	-1.4%
2007	\$352,500	2.2%	\$450,000	6.5%
2008	\$351,250	-0.4%	\$391,000	-13.1%
2009	\$360,000	2.5%	\$366,250	-6.3%
2010	\$350,000	-2.8%	\$400,000	9.2%
2011	\$358,000	2.3%	\$445,000	11.3%
2012 ^{1/}	\$382,250	6.8%	\$450,000	1.1%

1/ January through October 2012.

Source: The Warren Group.

Appendix B: Summary Data from Employee Survey

A total of 1,691 surveys were distributed to large employers and businesses in large commercial and industrial buildings over 30,000 square feet in Somerville. Responses were received from 477 employees for a 28% response rate.

Participating Businesses by Building Type, Surveys Distributed and Completed and Response Rate

Building Type	Participating Businesses	Percent to Total	Surveys Distributed				Surveys Completed	Percent to Total	Survey Response Rate
			Paper	Email	Total	Percent to Total			
Retail	8	27.6%	823	0	823	48.7%	176	36.9%	21.4%
Office	15	51.7%	67	511	578	34.2%	206	43.2%	35.6%
Industrial	6	20.7%	65	225	290	17.1%	95	19.9%	32.8%
Total	29	100.0%	955	736	1,691	100.0%	477	100.0%	28.2%

Source: Karl F. Seidman Consulting Services and ConsultEcon, Inc.

Summary Results for 477 Respondents:

- 31.4 percent live in Somerville.
- 44.2 percent own their residence and 52.6 percent rent (3.1% no response).
- 32.7 percent lived in Somerville prior to obtaining their current job.
- 57 people, or 11.9 percent, moved as a result of obtaining a job in Somerville, with 18 of these people, or 3.8 percent, moving to Somerville due to securing their job in Somerville.
- 33 people, or 7.9 percent, sought housing in Somerville but did not move to Somerville. Of these, 13 cited high cost or lack of affordable housing as a reason for why they did not move to Somerville, and 4 cited relative costs as a factor. Other reasons cited for not moving to Somerville included: Too Much Traffic; Not Child Friendly / Schools Not Good; Not Enough Vacancy / Housing Not Suited to My Needs / Found Something Elsewhere Sooner; and, Transportation Needs for Me / My Spouse Better Served Elsewhere.
- 40 people, or 8.4 percent, who are not currently living in Somerville indicated that they plan to move to Somerville over the next 5 years, of which 20 plan to rent housing, 11 plan to purchase housing, and 5 plan to either rent or purchase.

The data indicate that the share employees who will demand housing in Somerville vary by different building types, including office, industrial and retail buildings. The share of office building employees who will demand housing in Somerville is 17.5 percent, the share of industrial building employees who will demand housing in Somerville is 24.2 percent, and the share of retail building employees who will demand housing in Somerville is 6.8 percent.