

## LOCAL SERVICES AND FACILITIES

Those who participated in the Master Planning process indicated the people, the services, and the character of Boxborough are some of the elements that make the town so special. This section focuses on the role, current level of service, and existing programs of the local government, the Police (<http://www.boxborough-ma.gov/police-department>) and Fire (<http://www.boxborough-ma.gov/fire-department>) Departments, public schools (<http://www.abschools.org/>), the Department of Public Works (<http://www.boxborough-ma.gov/department-of-public-works>), public library (<http://www.boxborough-ma.gov/sargent-memorial-library>), community services, and other aspects that contribute to the safety and community fabric of Boxborough.

### **Town Hall** (<http://www.boxborough-ma.gov/>)

The Town Hall on Middle Road houses the general government operations in 8,300 square feet of space. The building has almost 2,100 square feet of meeting room space, 1,800 square feet of office space, and 335 square feet of storage/archive space. The remainder is circulation, bathroom, and common space. Town Hall contains the offices of the Town Administrator (<http://www.boxborough-ma.gov/town-administrator>), Town Clerk (<http://www.boxborough-ma.gov/town-clerk>), Building Department (<http://www.boxborough-ma.gov/building-department>), Planning Department (<http://www.boxborough-ma.gov/town-planner>), Assessor (<http://www.boxborough-ma.gov/town-assessor>), Treasurer (<http://www.boxborough-ma.gov/town-treasurer>), Accountant (<http://www.boxborough-ma.gov/town-accountant>), Tax Collector (<http://www.boxborough-ma.gov/tax-collector>), Community Services Coordinator (<http://www.boxborough-ma.gov/community-services-coordinator>), and the Council on Aging (<http://www.boxborough-ma.gov/council-on-aging>). Most of the Town's boards and committees (<http://www.boxborough-ma.gov/boards>), including the Board of Selectmen (<http://www.boxborough-ma.gov/board-of-selectmen>), Planning Board (<http://www.boxborough-ma.gov/planning-board>), Conservation Commission (<http://www.boxborough-ma.gov/conservation-commission>), Board of Health (<http://www.boxborough-ma.gov/board-of-health>), and other civic groups, use Town Hall as well.

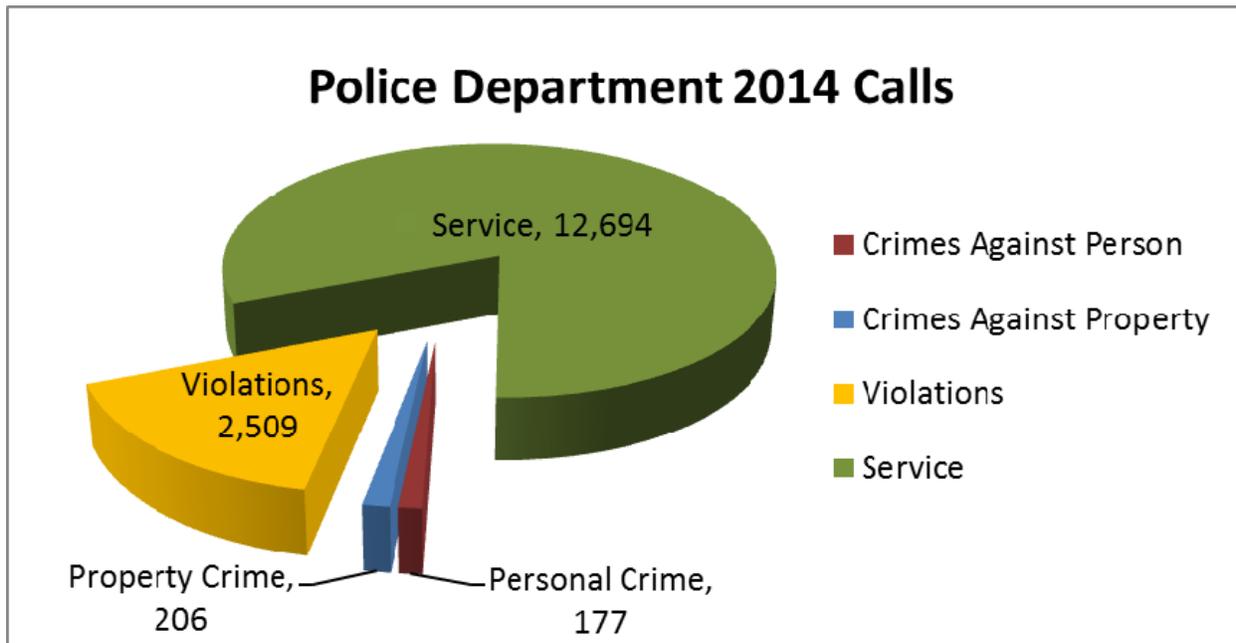
In 1990, Town Hall was expanded to include more office and meeting room space and a storage vault. At the same time, a handicapped accessible lift was installed. Even with the 3,600 square foot addition in 1990, Town Hall is cramped with inadequate space for storage, offices, and meeting rooms. The complexities of technology and requirements for reporting have also changed, increasing the need for more physical space, including record storage and staff office space.

### **Police Department**

The Boxborough Police Department (<http://www.boxborough-ma.gov/police-department>) is located on Massachusetts Avenue/Route 111, adjacent to the Fire Station and currently employs 11 full-time officers and 9 part-time officers along with 4 full-time and 4 part-time dispatchers. The Chief has one full-time Administrative Assistant. Boxborough's current staffing is consistent with national standards for police protection. The Police Station is a two-level, wood framed structure consisting of 3,000 square feet that also houses the Communications Department. The

building was constructed in 1989 and was designed to house only the Police Department and six full time employees. The Police Department owns seven vehicles, five marked and two others.

In 2014, the Boxborough Police Department responded to 15,586 calls for service and made 193 adult arrests. The need for police patrols increases proportionally with population increases.



Source: Boxborough Police Department

The Police Department provides a high level of service calls in its commitment in partnering with the community to improve the quality of life, prevent and reduce crime, and provide excellence in police service. Service related calls include all non-crime or violation related activity such as noise complaints, reported suspicious activity, alarm response, traffic problems, and assisting other Departments or citizens on other matters. In 2014 the Communications Department made 1,944 “Are you OK” calls. This is a program in which pre-registered individuals (generally seniors living alone) receive a daily phone call, originating from the dispatch center to inquire if they are doing ok. If there is a problem or no answer, a Police Officer will respond to check on the resident.

### **Fire Department**

The 4,625 square foot Fire Station in Boxborough is located on Massachusetts Avenue/Route 111. Around the clock coverage is provided by a combination of full-time, part-time, and per diem firefighters. The Fire Department (<http://www.boxborough-ma.gov/fire-department>) consists of a full time Fire Chief, two Full-Time Lieutenants, two Call Lieutenants, two Full-Time Firefighters, twenty Per Diem Firefighters/EMTs, and four Call Firefighters. The major duties of the Fire Department include responding to fires and other emergency situations, fire prevention inspections, public safety education, safety code regulation enforcement, issuing permits, smoke and carbon monoxide detector inspections, and plan review and safety inspection for new buildings. The Fire Department maintains and operates an ambulance service staffed

with EMTs for basic life support, and works in conjunction with a regional collaborative for Advanced Life Support assistance.

Since Boxborough has no municipal water supply, firefighters must bring water to where there is a fire by laying a line from a water source and/or by tanking operations. The water supply comes from a pond located next to the firehouse and from 18 fire ponds and 27 underground cisterns distributed around town to handle fire safety needs. Fire protection needs fluctuate with population changes, number of households, type of structures, and their locations. Over the past five years, the number of calls for assistance increased by 6.4% and in 2014 the Fire Department averaged 2.5 medical or fire calls per day. Alarm box maintenance (27%) and medical emergencies (18%) represent the two most frequent fire related calls. Below is a list of the ten most frequent incidents which required Fire Department assistance in 2014. For a complete incident list, please visit the Fire Department’s homepage here (<http://www.boxborough-ma.gov/fire-department/pages/run-statistics>).

<b>Ten Most Frequent Incidents Requiring Fire Department Assistance in 2014</b>	
<b>Type of Incident</b>	<b>Number (Percentage of All Incidents)</b>
Alarm Box Maintenance	419 (27.2%)
Medical Emergency	279 (18.1%)
Inspection	205 (13.3%)
Alarm Investigation	98 (6.4%)
Medical Assist	91 (5.9%)
Public Education – Car Seat Install	85 (5.5%)
Public Education	72 (4.7%)
Mutual Aid – Ambulance	66 (4.3%)
Motor Vehicle Accident	43 (2.8%)
Training	37 (2.4%)
<b>Total</b>	<b>1,395 (90.5)</b>
<b>Total (All Incidents)</b>	<b>1,541 (100.0%)</b>

Source: Boxborough Fire Department

### **Dispatch and Emergency Services**

The Police and Fire Chiefs jointly operate and manage the Boxborough Dispatch Center, which is staffed around the clock. The Town participates in a regional shared service providing Advanced Life Support capability. The Dispatchers are trained in Emergency Medical Dispatch to provide close support for medical teams and emergency responders. Plans are underway to upgrade the Dispatch radio system for improved coverage throughout town, and enhanced communication between Police and Fire. In 2015, Boxborough was the first in the state to implement the new Next-Generation 911 system (NG-911) being rolled out across Massachusetts. The NG-911 system will improve the reliability of emergency communications and operations, and support the use of social media and applications to access emergency services. Residents will be able to communicate with Dispatch via text, still and video images, and other media as well as traditional voice.

### **Department of Public Works**

The Department of Public Works (DPW) (<http://www.boxborough-ma.gov/department-of-public-works>) primary responsibilities are maintaining the local roadways, town buildings and grounds, cemeteries, conservation land, and operation of the transfer station.

### *Roads*

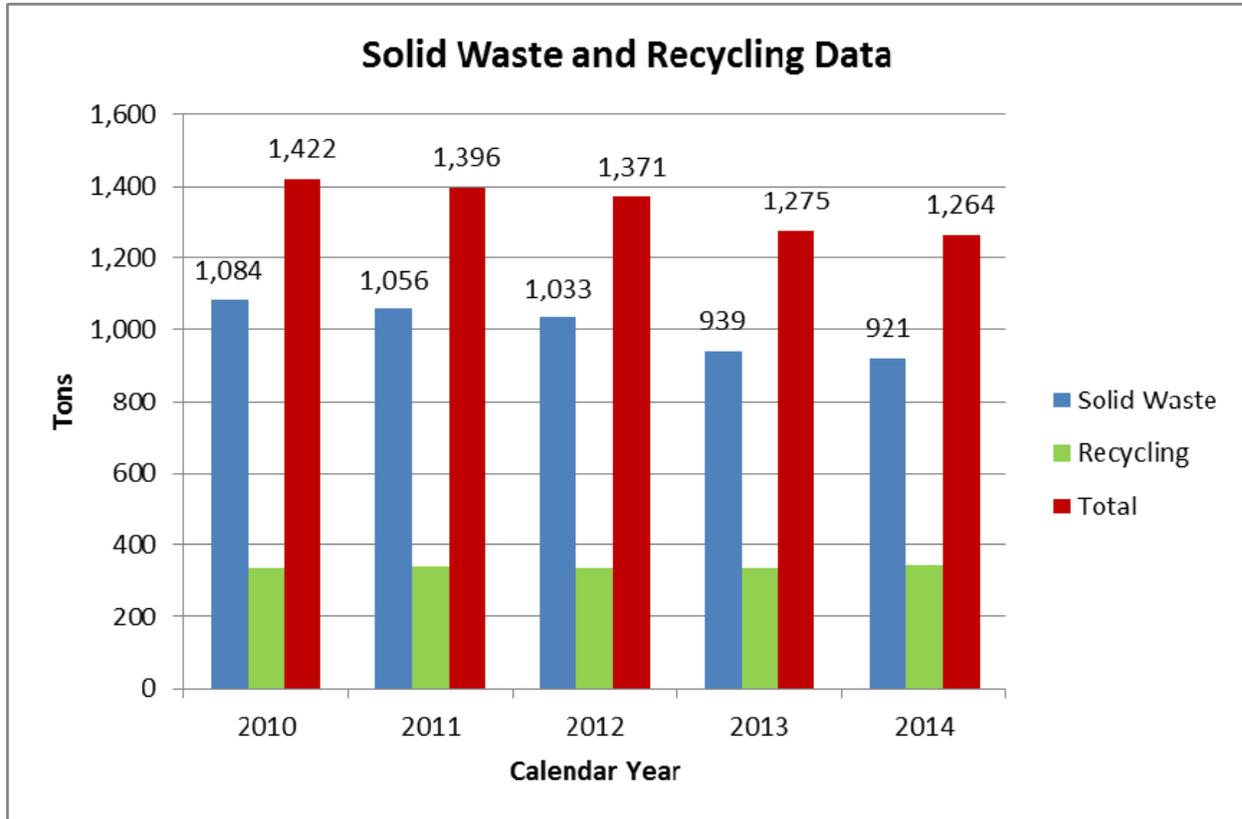
The DPW is responsible for maintaining the public roads (except for Massachusetts Avenue/Route 111, Route 2, and Interstate 495), including patching, repairing and resurfacing, through the use of Boxborough and State (MGL Chapter 90) funds. Major roadway reconstruction and resurfacing is done via commercial contract. The functional life of heavily traveled roadways is approximately 10 to 15 years, but side roads could last up to 20 to 25 years. The DPW maintains roadway guardrails and safety structures, drainage systems, and signage. The DPW is responsible for snow removal and de-icing to maintain the public roads, public building access areas, and parking lots in a safe condition.

In the 2010-2011 winter season, the DPW instituted an “all salt” winter road-treatment process, using a mix of sodium chloride and magnesium chloride, with no sand, following best practices adopted elsewhere and in accordance with Massachusetts Department of Transportation (MassDOT) (<http://www.massdot.state.ma.us/>) recommendations. The new treatment process resulted in eliminating sanding with its deleterious environmental consequences and added expense of spring cleanup. With increased melting power efficiency, the all-salt treatment is requiring lower net levels of salt application per unit of road surface, resulting in lower salt infiltration into groundwater.

The DPW is working in cramped quarters and does not have enough space to comfortably support current needs, such as indoor storage for all equipment, space for vehicle maintenance, a shop for small construction items, a break room with a kitchen area, and administrative office space. It is recognized that a space needs analysis for DPW equipment and operations should be undertaken in the near future.

### *Municipal Solid Waste*

Boxborough does not provide trash collection services for its residents, but there is a Town-operated Transfer Station (<http://www.boxborough-ma.gov/transfer-station>) with a permitted capacity of 25 tons per week. While many families make use of the Transfer Station, some have private pick-up including most apartments and condominiums. From 2010 to 2014, an average of 1,402 total tons of solid waste and recycling was collected. In 2014, 970 households of a total of 1,988 were served by the Transfer Station. Residents pay an annual fee of \$150 for a Transfer Station Sticker (<http://www.boxborough-ma.gov/transfer-station/pages/transfer-station-stickers-0>). In 2014 the total solid waste collected was 921 tons and the total recycling collected was 343 tons, for a total of 1,264 tons. As indicated in the table below, the amount of solid waste the Town generates has been decreasing over the last five years.



Source: Boxborough Department of Public Works

Single stream recycling was implemented in 2009 in an effort to make it more convenient for residents and to increase recycling numbers. The Town starting compacting the single stream in 2012 and realized a savings in hauling costs. After receiving a grant for an additional compactor, the Transfer Station underwent a reconfiguration in 2013. The placement of the four compacting containers needed to be rearranged in order to allow for safer traffic flow and to maximize access to the containers. New pads were poured and additional electrical service was installed. New traffic lanes were also designated which helped to ease the congestion at the drop off points. Since these changes have been made, the Town has seen a decrease in hauls by almost two-thirds, resulting in a savings of approximately \$31,000.

Approximately 1,400 Transfer Station stickers were purchased in FY 2015. The Town has worked with Waste Management and Wheelabrator of North Andover in the past, but is now in the process of acquiring new contracts for the trucking and disposal of its solid waste and recycling.

#### *Town Buildings and Grounds, Cemeteries, and Conservation Land*

As of 2013, the Building Inspector began acting as the Town's Facilities Manager overseeing large and small renovation projects by supplying project management and administrative support. The DPW maintains the public buildings and grounds, and is responsible for the mowing, landscaping, and tree trimming for each public building. This includes the North and South Cemeteries. The DPW Director works with the Cemetery Superintendent to carry out

interments and to ensure the grounds and buildings are properly maintained. There are approximately 10-12 burials per year and in roughly 30 to 40 years, all of the plots will be sold.

For extensive, non-routine landscape work or building maintenance, the DPW may work with appropriate department heads to contract and manage work to be carried out by outside parties. The DPW also works with the Conservation Commission to ensure that lands and selected trails are mowed and maintained on a seasonal basis.

The DPW is responsible for operating, maintaining, and monitoring the Hager Well as a public water supply serving the Blanchard Memorial Elementary School (<http://blanchard.abschools.org/>), Sargent Memorial Library (<http://www.boxborough-ma.gov/sargent-memorial-library>), and Police and Fire Stations, which includes filing required reports to the Massachusetts Department of Environmental Protection (MassDEP) (<http://www.mass.gov/eea/agencies/massdep/>). Since the inclusion and transfer of the Blanchard School into the Acton-Boxborough Regional School District (<http://www.abschools.org/>) in 2014, the Town of Boxborough now provides metered water service to the school from the Hager Well. The DPW currently contracts well technical, maintenance, and monitoring services to a state-certified agent.

## **Utilities in Town**

### *Water Supply and Wastewater Disposal/Treatment*

Boxborough does not provide municipal water supply or wastewater facilities. The Boxborough Board of Health (<http://www.boxborough-ma.gov/board-of-health>) and its agent, the Nashoba Associated Boards of Health (<http://www.nashoba.org/>), are responsible for ensuring compliance with the Massachusetts water supply and wastewater regulations that govern homeowners, condominiums, businesses, and municipal facilities (and for other public health and security programs).

The majority of single-family homes in Boxborough are served by private domestic wells. In addition, there are approximately 28 small public water systems (PWSs) serving the Town's facilities, businesses, and residential developments. Water for fire protection comes from a series of fire ponds and underground cisterns owned and maintained by the Town.

Virtually all of Boxborough's water comes from approximately 43 inches of annual rainfall. Although Boxborough does not have any lakes or ponds serving as public water supplies, there are a few ponds and six streams within its borders that provide public safety resources and wildlife habitat. Approximately 17% of the total land in Boxborough is wetlands. Boxborough has four significant sand and gravel aquifers. The Massachusetts Executive Office of Environmental Affairs (EOEEA) (<http://www.mass.gov/eea/>) estimates current water use at 122,542 gallons per day (GPD), based on 75 GPD per person and 1,000 square feet of gross floor area of commercial/industrial space.

In general, the groundwater supply in Boxborough often has high levels of iron, manganese, and sodium. Selected areas in town have experienced problems with nitrates, pathogens, MTBE, perchlorates, and radiological contaminants. Some homes and PWSs provide treatment for these contaminants. However, for some PWSs, compliance with MassDEP

(<http://www.mass.gov/eea/agencies/massdep/>) drinking water regulations is an ongoing issue. Of concern to the Town, private well owners, PWSs, and businesses are the issues of area-wide groundwater quality, potential contaminant sources, and fire protection. Among other concerns, businesses may have additional needs for processed water.

Continued reliance on watershed protection and numerous small water supply systems may not provide adequate protection for the public. In 2008, the Boxborough Water Resources Committee (WRC) completed a series of reports evaluating strategies for the town's water supply. The evaluation included identification of new water sources, recommendations for their long-term protection, and a conceptual design of a new municipal water supply system serving the western part of Boxborough. Water quality problems have been documented in this particular area, and it appears to be at greater risk for water issues due to the MassDOT (<http://www.massdot.state.ma.us/>) salt storage silo in this area, zoning, land use patterns, and a concentration of industrial, commercial, and high density residential uses. The WRC evaluation also included input from existing industrial and commercial interests. No action was initiated, as proposals by the WRC did not find public support for the identified capital plan. Over the past several years, the economic climate has not significantly improved to re-initiate a water supply plan. However, on behalf of the WRC, the Board of Health (<http://www.boxborough-ma.gov/board-of-health>) continues to identify opportunities for securing and protecting the Town's potential future water supply sites.

Boxborough does not currently have a public sewer system and all residents and businesses are served by private septic systems. There are some larger wastewater treatment facilities that are regulated by MassDEP (<http://www.mass.gov/eea/agencies/massdep/>), which include the Holiday Inn, Brook Village condominiums, Codman Hill Road condominiums, Harvard Ridge condominiums, and the Boxborough Meadows housing development, as well as Cisco Systems and the 80-90 Central Street commercial properties. In addition, the wastewater treatment facility constructed at the Library also accepts wastewater from the Blanchard Memorial Elementary School (<http://blanchard.abschools.org/>) with all effluent pumped to the groundwater disposal bed located on the Library land. The system was sized to accommodate potential future needs of the Fire Station, Police Station, and DPW, each currently served by individual septic systems.

#### *Electricity and Natural Gas*

The town's electricity needs are met by the Littleton Electric Light Department (<http://www.llewd.com/>), which services the vast majority of the town's structures, and the Hudson Light and Power Department (<http://www.hudsonlight.com/>) which services about 40 properties. There are some natural gas lines that run throughout Boxborough which are maintained by National Grid (<https://www1.nationalgridus.com/CorporateHub>), but the exact location of these lines is only known by National Grid. Residents and businesses are required to contact National Grid directly to see if a property can be serviced from the existing gas line network. According to the Town Assessor's records, as of April 2015, 838 structures in town are heated with oil, 824 with electricity, 469 with natural gas, 17 with propane, and 3 others with wood or solar power.

#### **Education**

The high quality of education in Boxborough is one of the many attributes that attracts residents to the town and keeps them invested in the community. In 2014, 97% of the children in Boxborough attended public schools, a rate higher than the state average. Boxborough is part of the Acton-Boxborough Regional School District (<http://www.abschools.org/>). Children in grades K-6 have the choice of attending one of six elementary schools in Acton and Boxborough, including the Blanchard Memorial Elementary School (<http://blanchard.abschools.org/>) which is the only school located in town. As part of the Regional School District agreement, the Blanchard School is guaranteed to remain open regardless of the elementary student enrollment in the system. Students in grades 7-12 attend the R.J. Grey Junior High (<https://sites.google.com/a/abschools.org/rjgreyjrhigh/>) and the Acton-Boxborough Regional High School (<http://abrhs.abschools.org/>), both located in Acton. High School students also have the opportunity attend Minuteman Regional High School (<http://minuteman.org/>) which is a Regional Vocational Technical School District with an emphasis on enhancing students' vocational and technical skills. Area charter schools include the Francis W. Parker Charter Essential School (<http://www.theparkerschool.org/>) in Ayer (Devens), the Murdoch Middle Charter School, and the North Central Charter Essential School (<http://www.ncces.org/content/>). In FY 2014, education comprised 58.79% of the total general fund expenditures.

The overall number of school-aged children rose from 1992 to 1999, but has been gradually decreasing since then. The number of Boxborough students in grades K-6 peaked in 1999 with 644 students, but then fell to 551 students in 2005, 440 students in 2010, and 368 students in 2014. The Blanchard School began to accept choice students in 2009, and Boxborough elementary joined the Acton-Boxborough Regional School District in 2014. As of October 1, 2014, there were a total of 394 students attending the Blanchard Memorial Elementary School – 345 from Boxborough, 29 from Acton, and 20 choice students from other communities. Twenty-three Boxborough students attend elementary school in Acton.

Blanchard Memorial Elementary School; Breakdown of Students as of October 1, 2014								
Grade	<i>K</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	Total
# of Students	42	40	52	67	59	59	75	394

Source: Acton-Boxborough Regional School District

Blanchard Memorial Elementary School Enrollment by Race/Ethnicity		
Race	Percent of District (October 1, 2014)	Percent of State (October 1, 2013)
Native American	1.52	0.23
African American	2.28	8.68
Asian	36.04	6.12
Hispanic	2.03	17.02
White	58.12	64.94
Multi-race, Non-Hispanic		2.91
Native Hawaiian, Pacific Islander		0.11

Source: Acton-Boxborough Regional School District ; [http://profiles.doe.mass.edu/state\\_report/enrollmentbyracegender.aspx](http://profiles.doe.mass.edu/state_report/enrollmentbyracegender.aspx)

<b>Boxborough Schools as of October 1, 2014</b>		
<b>School</b>	<b>Grades</b>	<b>Boxborough Enrollment</b>
Acton-Boxborough Elementary Schools	K - 6	368
R.J. Grey Junior High School	7 - 8	141
Acton-Boxborough Regional High School	9 - 12	304
Minuteman Regional High School	9 - 12	4
<b>Total</b>		<b>817</b>

Source: Mass. Department of Education Website; District Database; Minuteman Regional High School

### **Library**

The 12,000 square foot Sargent Memorial Library (<http://www.boxborough-ma.gov/sargent-memorial-library>) opened in March of 2005 and since then circulation and building usage have increased enormously. Library cards are currently held by 5,552 patrons, including 3,995 Boxborough residents. A 'people counter' installed at the front door recorded in 2014 that 95,270 people passed through. Circulation of materials that year totaled 146,256, and 1,159 museum passes were given out. The meeting rooms were used 436 times that year by groups such as the school, the Town government, and numerous community groups proving that the rooms are a wonderful resource for the community. The large meeting room has also become a popular art gallery with constantly changing exhibits, adding to and displaying to the public the culture of Boxborough. With the addition of the Garabedian Trail, linking the Blanchard Memorial Elementary School and the library, students attend library programs and classroom visits each month of the school year.

In particular, the library has benefited from the activities of two non-profit organizations. The Sargent Memorial Library Foundation, founded in 2003, is responsible for an annual fund drive to benefit the development of the library's materials collection. The Friends of the Library supports library programs and provides the popular museum passes with the help of their local business campaign fund drive.

The library strives to respond successfully to and remain flexible to the changing times and demographics of Boxborough's population. The library now provides access to digital books and media, and several online research resources. As Boxborough's population has aged, technology classes are held regularly, and the collection of large-print books has expanded. Indian and Chinese newspapers and weeklies have been added to ensure that all of Boxborough's residents are welcome at the library. In the recent difficult economic times, the library has been especially important to residents who use the public access computers and who enjoy free access to books, newspapers, magazines, CDs, DVDs, and museum passes.

### **Conservation, Recreation, and Open Space**

The Town owns over 1,250 acres of conservation and municipal land for recreation and open space purposes, accounting for roughly 20% of its 10.4 square miles. The Conservation Commission (<http://www.boxborough-ma.gov/conservation-commission>) manages approximately 934 acres of this Town property as conservation land. Many of these parcels have trails on them and the Boxborough Land Stewardship Committee (<http://www.boxborough-ma.gov/land-stewardship-committee>) (a subcommittee of the Conservation Commission)

publishes a trail guide with trail maps and information about each parcel. Well-marked trails in town provide a variety of opportunities for recreation, from hiking and mountain biking, to cross-country skiing and horseback riding. The crown jewel of the conservation and recreation lands is Flerra Meadows (<http://www.boxborough-ma.gov/conservation-commission/pages/flerra-meadows>) on Stow Road which consists of 35 acres with ponds, a brook, hayfields, meadows, and wooded areas along with soccer fields and a ball field.

Another valuable open space resource is Steele Farm (<http://www.boxborough-ma.gov/conservation-commission/pages/beaver-brook-meadowsteele-farm>) on Middle Road. Formerly held as municipal land, the Steele Farm lands, farmhouse, and barn were permanently protected in July 2013 through a Conservation and Historic Preservation Restriction held by the Boxborough Historical Society (<http://www.multimgmt.com/BHSociety/bhs1.htm>) and The Trustees of Reservations (<http://www.thetrustees.org/>). This resource is managed through the Board of Selectmen (<http://www.boxborough-ma.gov/board-of-selectmen>), in accordance with the terms of the restriction and associated management plan. The view from Steele Farm is one of the town's most beautiful scenic vistas and the site includes a large open hay field, two small ponds, a historic farmhouse and barn, and remnants of an old apple orchard.

Boxborough has three areas with recreational facilities. These include the recreational portion of Flerra Meadows (<http://www.boxborough-ma.gov/conservation-commission/pages/flerra-meadows>) (as discussed above); multiple playing surfaces and a ball field at Liberty Field; and an open playing surface at Fifer's Field. Recreation activities also are held at the Blanchard Memorial Elementary School (<http://blanchard.abschools.org/>) Gym. Future expansion plans for tennis and/or basketball courts at Liberty Field are in the planning stages.

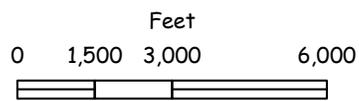
There is also an active Boxborough Conservation Trust ([http://www.bctrust.org/Boxborough\\_Conservation\\_Trust.html](http://www.bctrust.org/Boxborough_Conservation_Trust.html)) in town, a private organization that works to preserve undeveloped land in the community, coordinates with local land owners to explore opportunities for land conservation, and sponsors educational programs for town residents on the resources and benefits of land protection. Furthermore, almost 700 acres of land in Boxborough are enrolled in Chapters 61, 61A, and 61B, representing approximately 11% of the town's land area. These MGL Chapters restrict the use of land in exchange for reduced tax assessments for the property owners. Chapter 61 refers to managed forest land, Chapter 61A refers to agricultural land, and Chapter 61B refers to private recreation land. These are not permanent restrictions and must be applied for each year and for most sales of these properties, the Town holds a right of first refusal. Below is a map that displays all of the properties in town that are in Chapter 61, 61A, or 61B.

### Map 9 Lands in Chapter 61, 61A, and 61B



 Chapter Land in FY2015

December 2014  
Data Sources:  
Boxborough Planning Department  
MassGIS



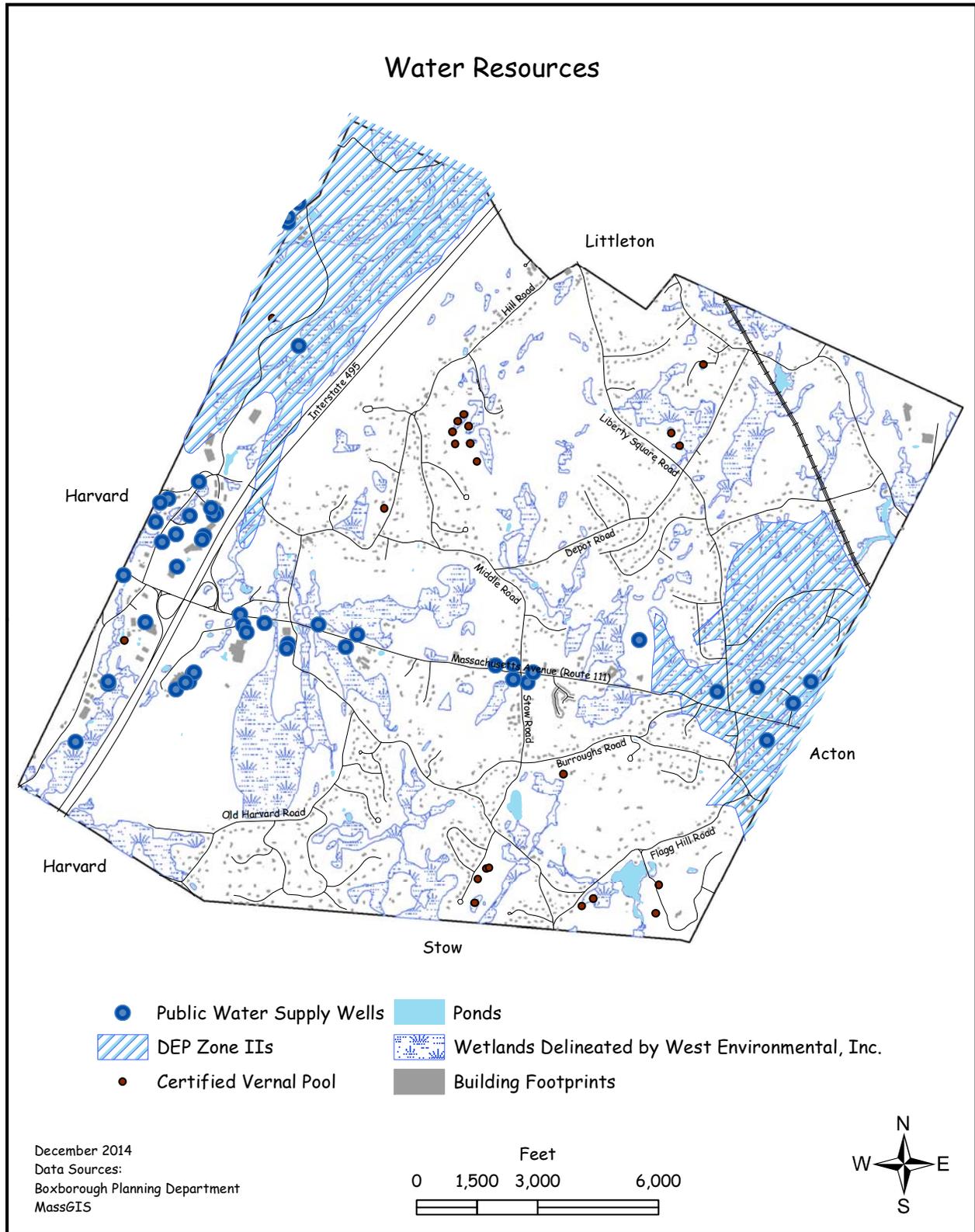
## Water Resources

Boxborough is primarily within the Sudbury, Assabet, and Concord Rivers (SuAsCo) Watershed (<http://suasco.org/>) and partially within the Merrimack Watershed. Drainage flows out of Boxborough in all directions; therefore, land use decisions in Boxborough affect water quality in Acton, Littleton, Stow, and Harvard. Both Littleton and Acton have municipal drinking water wells located nearby. The Zone II areas of the wells extend into Boxborough and must be protected. Surface water flows into Boxborough from two places: 1) land in Beaver Brook Valley receives run-off from a hill in Harvard and 2) land in Boxborough near the Littleton town line receives surface water from the Heron Rookery in Littleton. Water resources in town are depicted on the map below.

Wetlands are distributed rather evenly throughout the town and roughly 17% of the total land area in Boxborough consists of wetlands (1,100 acres of a total 6,656 acres). Larger wetlands include Wolf Swamp (<http://www.boxborough-ma.gov/conservation-commission/pages/wolf-swamp>), Heath Hen Meadows (<http://www.boxborough-ma.gov/conservation-commission/pages/heath-hen-meadows-land>), Beaver Brook wetlands (<http://www.boxborough-ma.gov/conservation-commission/pages/beaver-brook-meadowsteele-farm>), and Guggins Brook wetlands. Wetlands play an important role in the ecology of Boxborough; they filter out sediment, nutrients, and other pollutants from rainwater and road run-off. During periods of flooding and rapid rainfall, wetlands are able to store water thereby reducing flooding, but in drier weather, wetlands help regulate stream flow.

The Conservation Commission (<http://www.boxborough-ma.gov/conservation-commission>) is responsible for protecting wetlands. The Town has adopted a local Wetlands Bylaw ([http://www.boxborough-ma.gov/sites/boxboroughma/files/file/file/wetland\\_bylaw\\_w\\_cover.pdf](http://www.boxborough-ma.gov/sites/boxboroughma/files/file/file/wetland_bylaw_w_cover.pdf)) that establishes a set of criteria for working within the wetlands and the 100-foot buffer of the wetlands. Any activity which creates a land disturbance within the wetlands or within 100 feet of the wetlands requires an Applicant to receive an Order of Conditions from the Commission. The Conservation Commission (<http://www.boxborough-ma.gov/conservation-commission>) also administers the State Wetlands Regulations promulgated under the Wetlands Protection Act (<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIX/Chapter131/Section40>), as well as the Town's local Wetlands Bylaw. There is also a Wetlands and Watershed Protection Overlay Zoning District, which is administered by the Zoning Board of Appeals (<http://www.boxborough-ma.gov/zoning-board-of-appeals>). Any land disturbance within this district or within 100 feet of the district requires a Special Permit. An Aquifer Protection Overlay Zoning District Bylaw was implemented in 1984. The bylaw prohibits certain uses in the aquifer zone, limits the rate of septic discharge, and sets forth the maximum lot coverage standard.

## Water Resources



All of Boxborough's brooks drain via intermediaries into the Merrimack River. Boxborough's brooks include Elizabeth Brook, Beaver Brook, Fort Pond Brook, Guggins Brook, Heath Hen Meadow Brook, and Inches Brook. Boxborough has no lakes or ponds of significant size, however, there are several ponds that provide recreational opportunities and wildlife habitat.

Boxborough has no municipal water or sewerage systems. All developments are serviced by private wells and septic systems. Almost the entire town depends on bedrock wells for their water supply; the remaining residents draw their water from one of the town's sand and gravel aquifers. Major sand and gravel aquifers and their recharge areas were delineated by IEP in 1984. The aquifers and their recharge areas are shown in the table below.

<b>Major Surficial Aquifers and Their Recharge Areas</b>		
<b>Aquifer Name</b>	<b>Area (Sq. Miles)</b>	<b>Recharge (Million GPD)</b>
Elizabeth Brook	2.25	0.79
Beaver Brook	3.4	1.41
Heath Hen Meadow Brook	1.50	.49
Guggins Brook	4.29	1.32

Source: Geoscience (IEP)

The physical constraints of the town's varied topography and fractured bedrock would make the construction of a town-wide water system prohibitively expensive. Instead, local systems serving a region, or joining with an existing supplier, are more likely to be feasible for a regional water supply.

The Town has established a ground water monitoring program via a cooperative venture with the Littleton Water Department (<http://www.lclwd.com/>) to assess the environmental effects of commercial septic effluent on regional ground water quality. Developments submitted for Site Plan Approval are required to install ground water monitoring wells. Testing is performed twice a year. Currently, there are 29 monitoring wells being tested in Boxborough. The water quality tests measure the levels of a variety of elements, metals, pollutants, and other items.

In several instances ground water testing has detected elevated levels of sodium and nitrates, two indicators of ground water pollution. Although the concentrations did not exceed safe drinking water quality standards, the Littleton Water Department (<http://www.lclwd.com/>) is monitoring these situations closely. In addition to a regular testing program, an Applicant developing land in Boxborough is required to file a hazardous materials plan with the Fire Department (<http://www.boxborough-ma.gov/fire-department>). The plan includes a list of all hazardous materials used on the site, the quantities, and where the substances are stored. The hazardous materials plans are used to assist the Fire Department. In addition, the hazardous materials plans are compared with water quality reports to determine if chemicals used in or on the premises are being discharged into the groundwater. The Conservation Commission (<http://www.boxborough-ma.gov/conservation-commission>) also places heavy conditions on activities involving hazardous materials within the wetlands or within the 100-foot wetland buffer.

Boxborough also monitors groundwater quality at the Town's Transfer station (<http://www.boxborough-ma.gov/transfer-station>) (the site of the Town's former Municipal

Landfill which was capped and closed in 1987). The closure permit requires sampling from four on-site monitoring wells to monitor certain contaminants of concern and prohibits any changes to the site use without MassDEP (<http://www.mass.gov/eea/agencies/massdep/>) approval for a permit modification. The bi-annual sampling program conducted by the Board of Health (BOH) (<http://www.boxborough-ma.gov/board-of-health>) continues to report all results to MassDEP.

### **Environmental Challenges**

As is the case with all communities, there are a number of environmental challenges that residents, businesses, and property owners have to address. Some of these challenges in Boxborough are as follows:

*Development Impact* – Past, present, and future development all have an impact on the environment of Boxborough. Past developments may have been developed according to older zoning and environmental regulations which were less stringent than today’s development standards. The present levels of impervious development contribute to stormwater runoff issues that affect the town’s water bodies. Future development is most likely to be according to higher regulatory standards, but can also be in locations that are less desirable for development since the easily developed properties have been developed first. Development impacts include erosion and sedimentation, stormwater runoff, loss of wildlife habitat and interruption of wildlife corridors, and changes in the landscape character of the town.

*Hazardous Waste Sites* – As with most communities, Boxborough has a number of hazardous waste sites. Most of these sites are considered non-priority by DEP and are being cleaned up by the private sector under Chapter 21E (<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21E>) of the Massachusetts General Laws. There are currently 36 sites listed in the States’ database that are in Boxborough. Approximately one-third of these are oil spills associated with gas stations, apartment buildings, and other commercial properties.

*Forestry Issues* – Boxborough has approximately 3,561 acres of forested land. The majority of the forested areas in Boxborough contain mixed hardwood and softwood forests, with tree heights ranging from 20 feet to 70 feet. Non-forested areas have been cleared for mining, farming, or land development, however, much of the land used historically for farming is now forested or developed. The DPW is responsible for undertaking tree work on Town land and ways. Due to the number of storms that cause extensive tree damage, the DPW maintains a record of ailing trees and schedules work to ensure that critical tree maintenance work is done to reduce the likelihood of roadway hazards. Along Town roads, the Boxborough DPW coordinates tree maintenance with the Littleton Electric Light Department (<http://www.lelwd.com/>) which maintains the tree canopy around their power lines.

*Invasive Species* – In 2005 the Mass Audubon Society Ecological Extension Service, prepared a report titled “Land Management Plans for Grasslands and Meadows on Town-Owned Land in Boxborough, Massachusetts.” (<http://www.boxborough-ma.gov/sites/boxboroughma/files/file/file/audubongrasslandsreport.pdf>) The report included a vegetative survey at eight Town-owned properties and reed-canary grass, Purple Loosestrife, Common Buckthorn, Oriental Bittersweet, and Multiflora Rose were found in varying degrees.

The Conservation Commission's webpage (<http://www.boxborough-ma.gov/conservation-commission>) has information about the most common invasive species and how to manage them.

*Environmental Equity* – Environmental equity refers to examining the distribution of open space in the community and seeing if there is a lack of resources in any particular area of the town. The majority of protected open space in Boxborough is conservation land with trails. These areas are well distributed throughout the town. There are only three key properties that are developed as parks with recreational facilities which are Flerra Meadows (<http://www.boxborough-ma.gov/conservation-commission/pages/flerra-meadows>), Liberty Fields, and Fifer's Field. Flerra Meadows is located south of Route 111 on Stow Road, Liberty Fields is north of Route 111 on Liberty Square Road, and Fifer's Field is northwestern Boxborough on Beaver Brook Road. If additional recreational facilities are developed in the future, consideration should be given to where current and future population is anticipated.

*Chronic Flooding* – There are 100 year floodplains found throughout Boxborough along the town's waterways and extensive wetland areas. Flooding in Boxborough is occasional, usually within or near floodplain areas, and mostly due to low-lying elevations. Damage may consist of flooding of basements or street flooding. In some areas of town, flooding occurs due to beaver activity or improperly functioning drainage infrastructure. Catch basins and detention basins that need to be cleaned out, on both public and private property, have also caused localized flooding. The flooding incidents generally do not cause any significant problem as much of the flooding is "nuisance" flooding, causing inconvenience but not significant damage. However, in some areas, contamination of wells can occur if septic systems are flooded out and not functioning properly.

*Ground and Surface Water Pollution (point and non-point)* – In the 2012 Town Report, the BOH (<http://www.boxborough-ma.gov/board-of-health>) noted several water quality concerns. The BOH and the Department of Environmental Protection (<http://www.mass.gov/eea/agencies/massdep/>) are continuing to monitor ground water contamination that was caused by a variety of chemicals including MTBE and perchlorate. In addition, there are very high concentrations of sodium in the western portion of town. There are also issues related to alkalinity, hardness, and sodium in many other areas of town.

## **Transportation**

Boxborough's roads are classified as arterials, collectors, and local access roads. The primary arterials are Interstate 495, Route 2, and Route 111. Liberty Square Road, Hill Road, Old Harvard Road, Burroughs Road, Flagg Hill Road, Summer Road, Pine Hill Road, Middle Road, Picnic Street, Davidson Road, Sargent Road, and Littlefield Road are considered collector roads. The remaining roads are local access roads.

In November of 2001, three sets of traffic lights were installed in Boxborough, the first for the town. The signals are located at the Interstate 495 Northbound and Southbound ramps; and at the Codman Hill/Swanson Road intersection. The signals were installed during the development of the Beaver Brook campus of Cisco Systems, Inc. to mitigate traffic impacts associated with the approved 900,000 square foot campus off Swanson Road. In December 2001, Cisco received approval for a 500,000 square foot expansion at the Swanson Road site. Additional improvements along Route 111, including a second turning lane for the I-495 Northbound ramp

is proposed for the expansion. The widening of Route 111 in the vicinity of the Jefferson at Beaver Brook residential development along Route 111 is also proposed as mitigation for the project.

The Fitchburg Line of the MBTA Commuter Rail

([http://www.mbta.com/schedules\\_and\\_maps/rail/lines/?route=FITCHBRG](http://www.mbta.com/schedules_and_maps/rail/lines/?route=FITCHBRG)) runs through Boxborough, but does not stop in town. The closest Commuter Rail stations are on Foster Street in Littleton and Central Street in south Acton. A new station has been constructed at the Littleton location, double tracks are being installed between Littleton and Acton, and construction of new facilities at the Acton location is currently underway. As a result, Littleton is now the terminus for trains not traveling through to Fitchburg. This is expected to affect local and regional transportation patterns and possibly development patterns.

Minuteman Airport (<http://minutemanairfield.com/>) in Stow and Boxborough is a privately owned airport with facilities to land twin engine planes. Arrangements are available for transportation to and from the airport and the South Acton MBTA Commuter Rail station. The owner of the airport has completed a Master Plan to enable him to apply for federal funds for airport expansion. The owner has completed some runway and safety improvements. The airfield owns land in Boxborough located in the Heath Hen Meadows subdivision in the clear zone. The clear zone is a trapezoidal area of land recommended by the Federal Aviation Administration (FAA) to be free of all obstructions. The Boxborough Zoning Bylaw ([http://www.boxborough-ma.gov/sites/boxboroughma/files/file/file/zbl\\_2014\\_1.pdf](http://www.boxborough-ma.gov/sites/boxboroughma/files/file/file/zbl_2014_1.pdf)) prohibits the airport from expanding its facilities into Boxborough beyond the Boxborough-Stow municipal boundary. A local family is farming some of this land and a seasonal farm stand is also located on the property.

The area towns are served by different Regional Transportation Authorities. Under Executive Order 418 the Town did a conceptual plan for bicycles and pedestrians along the Route 111 corridor and completed the Route 111 Economic Development Trail Master Plan. Sidewalks constructed along Massachusetts Avenue and road improvements on Swanson Road also provide a safer walking experience. The many trails in Boxborough and the walking paths on the Cisco Systems campus provide recreational opportunity for residents. There is limited public transportation in the form of a shuttle service available to seniors (60 and older) and the disabled. A Council on Aging (COA) (<http://www.boxborough-ma.gov/council-on-aging>) van makes regular daily runs to stores, medical and dental appointments, and other venues. Using Boxborough's MBTA assessment, this van service is made available through the Montachusett Regional Transit Authority (MART) (<http://www.mrta.us/>) at no additional expense to the Town. The van is dispatched by a multi-town collaborative that plans to increase the ride and service options through sharing of regional transportation resources.

### **Community and Social Services**

In 2014 the Town created a Community Services Coordinator (<http://www.boxborough-ma.gov/community-services-coordinator>) position that provides professional social services to Boxborough residents. The Coordinator helps residents navigate the social service system by exploring available resources and advocating for residents to obtain services they qualify for. Other tasks include conducting casework interviews with clients and family members, identifying individuals/families in need of services, and providing appropriate community,

medical, emotional, economic, and social support. The Coordinator also provides confidential referrals, information and advocacy about food assistance, fuel assistance, and access to healthcare, housing, substance-abuse counseling, and domestic violence assistance, among other items.

### *Senior Services*

The Council on Aging (COA) (<http://www.boxborough-ma.gov/council-on-aging>), a department in Town government, functions mainly in an advisory and social planning capacity and is charged with overseeing, monitoring, and advising the town's seniors, working with the COA Coordinator and in conjunction with the Massachusetts Executive Office of Elder Affairs (<http://www.mass.gov/elders/>). The COA provides a voice and advocacy for the needs of seniors. In 2000, the percentage of seniors in Boxborough made up about 6.43% of the population. That number grew to 13.4% of the population in 2009. The rapid increase in the percentage of seniors in town is due in part to the increase in life expectancy, a drop in the number of families with children, the availability of world-class health care, and an increasing proportion of seniors who choose to remain in town.

With the absence of a centralized business district, the junction of Middle Road and Massachusetts Avenue/Route 111 is considered the default town center. Many seniors must travel to this heavily trafficked area in order to enjoy the activities sponsored by the COA, the Friends of the COA, the United Church of Christ, the Sargent Memorial Library (<http://www.boxborough-ma.gov/sargent-memorial-library>), and other organizations. Keeping this area as a likely place for senior recreational activities highlights a problem that will continue to grow as a greater number of the oldest, more vulnerable citizens in town are going to be further isolated due to a lack of transportation options. In 2011 the Town began leasing space for a Senior/Community Center in the UCC Fellowship Hall. Although this arrangement satisfactorily addresses the near term need for space for COA activities, providing a place for seniors to congregate and socialize, in the future, it may be desirable to acquire suitable land near the town center for the construction of a Town-owned facility to provide these services.

### *Boxborough Emergency Reserve Corps* (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>)

The Boxborough Emergency Reserve Corps (BERC) (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) is a subcommittee of the Board of Health and a member of the Massachusetts Region 4A Medical Reserve Corps (MRC) (<http://www.region4a-mrc.org/>), a group of volunteers from 33 communities around Boston (metro west). The general purpose of the MRC is to create volunteer capacity to supplement first responders in the event of local, regional, and national emergencies. The primary responsibilities of the BERC (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) are to:

- Support emergency response systems, health care, and public health partners
- Enhance the ability to respond to and recover from critical events and disasters
- Promote the health and well-being of the citizens of Boxborough

Emergency preparedness is the crucial first step in dealing with an unexpected crisis. The BERC (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) continues to educate

the public to raise awareness of emergency preparedness in the community by encouraging all Boxborough residents to develop a home/family/pet Preparedness Plan. The BERC (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) conducts outreach/education on emergency preparedness at Town events such as Fifer's Day, the Agricultural Fair, the Public Safety Open House, Council on Aging (<http://www.boxborough-ma.gov/council-on-aging>) luncheons, and presentations to various community groups.

Boxborough's emergency capability has been enhanced by:

- Shelter: Generator in-place at the Blanchard Memorial Elementary School (<http://blanchard.abschools.org/>)
- Communication:
  - Two-way radios have been purchased using emergency preparedness funds for use by BERC (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) volunteers and the Fire Department (<http://www.boxborough-ma.gov/fire-department>)
  - A repeater has been purchased for the Police Department (<http://www.boxborough-ma.gov/police-department>) to supplement radio coverage
  - Amateur HAM radio expertise within the BERC (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) volunteers

The BERC (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) relies on citizen volunteers to help it achieve its mission and exemplifies the Boxborough spirit of standing ready to help others. Volunteers are trained in the structure of emergency response as well as the skills necessary to support first responders such as the Incident Command System (ICS), sheltering, CPR, first aid, and other emergency response skills. The BERC (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) is actively seeking additional volunteers with both medical and non-medical backgrounds. The goal is that about 1% of the population or 50-60 volunteers are needed in order to serve the various needs of the community in a local emergency. A database of qualified volunteers who have had ICS training and who have obtained medical credentials has been created in an effort to use volunteers as effectively as possible. Working with the Town's first responders, the BERC (<http://www.boxborough-ma.gov/boxborough-emergency-reserve-corps>) enhances Boxborough's ability to handle unexpected emergencies.

### **Technology Infrastructure**

The Town is attempting to stay current with technological infrastructure for Town departments and operations. Electronic networks have been present for several years in Town Hall, the Police Department (<http://www.boxborough-ma.gov/police-department>), the Fire Department (<http://www.boxborough-ma.gov/fire-department>), the Sargent Memorial Library (<http://www.boxborough-ma.gov/sargent-memorial-library>), and with a small extension to the Department of Public Works (<http://www.boxborough-ma.gov/department-of-public-works>). These "Local Area Networks" (LANs) have been linked together into a "Wide Area Network" (WAN) allowing for the sharing of electronic resources and information between Town departments and buildings. Additionally, the Wide Area Network (WAN) provides connectivity

and bandwidth sufficient to allow live television transmission of committee meetings and Town Meeting, and has allowed for all Town computer systems to be made accessible by each other. The Town does not provide broadband services for residents outside of Town buildings. However, both Town Hall and the Sargent Memorial Library (<http://www.boxborough-ma.gov/sargent-memorial-library>) provide public wireless access (“Wifi”) to guests. The Library has a number of public computer terminals providing internet access for patrons.

Comcast Xfinity and Verizon FIOS both currently supply cable television, voice, and broadband data services to Town residents under licenses negotiated and issued by the Town. The licenses will be renegotiated in 2020. Each carrier offers both residential and commercial services.

Cellular voice and data services are available to residents from Verizon Wireless, AT&T, T-Mobile, and Sprint. The long standing lack of reliable cell phone coverage in parts of town is carrier-dependent, and remains a modest concern. In 2002, Town Meeting approved a Wireless Communication Facilities Overlay District amendment to the Zoning Bylaw to strengthen the regulation of cell tower siting and improve cellular coverage through co-location requirements.

In the past, the Boxborough Information Technology Committee (BITCom) (<http://www.boxborough-ma.gov/it-committee>), a group of volunteers, advised the Town on all aspects of information technology, developing and implementing technology solutions for the town, and assuming responsibility for ongoing system maintenance. The BITCom (<http://www.boxborough-ma.gov/it-committee>) also oversaw the process for broadcasting public meetings on the Town’s Public, Government and Education (PEG) cable television channels on both Comcast and Verizon.

Recognizing that technology planning and maintenance for the Town’s production business needs was placing an unfair burden on a volunteer committee, the Board of Selectmen (<http://www.boxborough-ma.gov/board-of-selectmen>) began moving to an IT outsourcing model in 2014, with planning, deployment, support and maintenance is carried out through a commercial IT partner. The Town department heads act as a technology steering committee, meeting regularly with the Town’s IT provider to review status of systems, project plans and budgets. The steering committee consists of the Town Administrator (<http://www.boxborough-ma.gov/town-administrator>), Police Chief, Fire Chief, DPW Director, Library Director, and a Board of Selectmen liaison.

### **Miscellaneous Amenities**

The private businesses that service the day-to-day needs of residents provide limited options within the town. There is one gas station, one dry-cleaning business, one bank, one convenience store, and one hair salon. There are two liquor stores in town, both located on Massachusetts Avenue/Route 111. Boxborough has neither a post office nor grocery store. The only sit-down restaurant is located in Boxborough’s only hotel, the Holiday Inn. The other options for food are a pizza parlor, a fast-casual Mexican restaurant, and a coffee shop located in the town’s only gas station. Day care centers are located on Codman Hill Road and Middle Road, and a skating center with three rinks is near the Acton Town line. Other service industries in town, most of which are located along Massachusetts Avenue/Route 111, are landscaping companies,

automotive dealerships, auto repair shops, or veterinary clinics. Many Boxborough residents travel to surrounding communities to fulfill their day-to-day service needs.

DRAFT