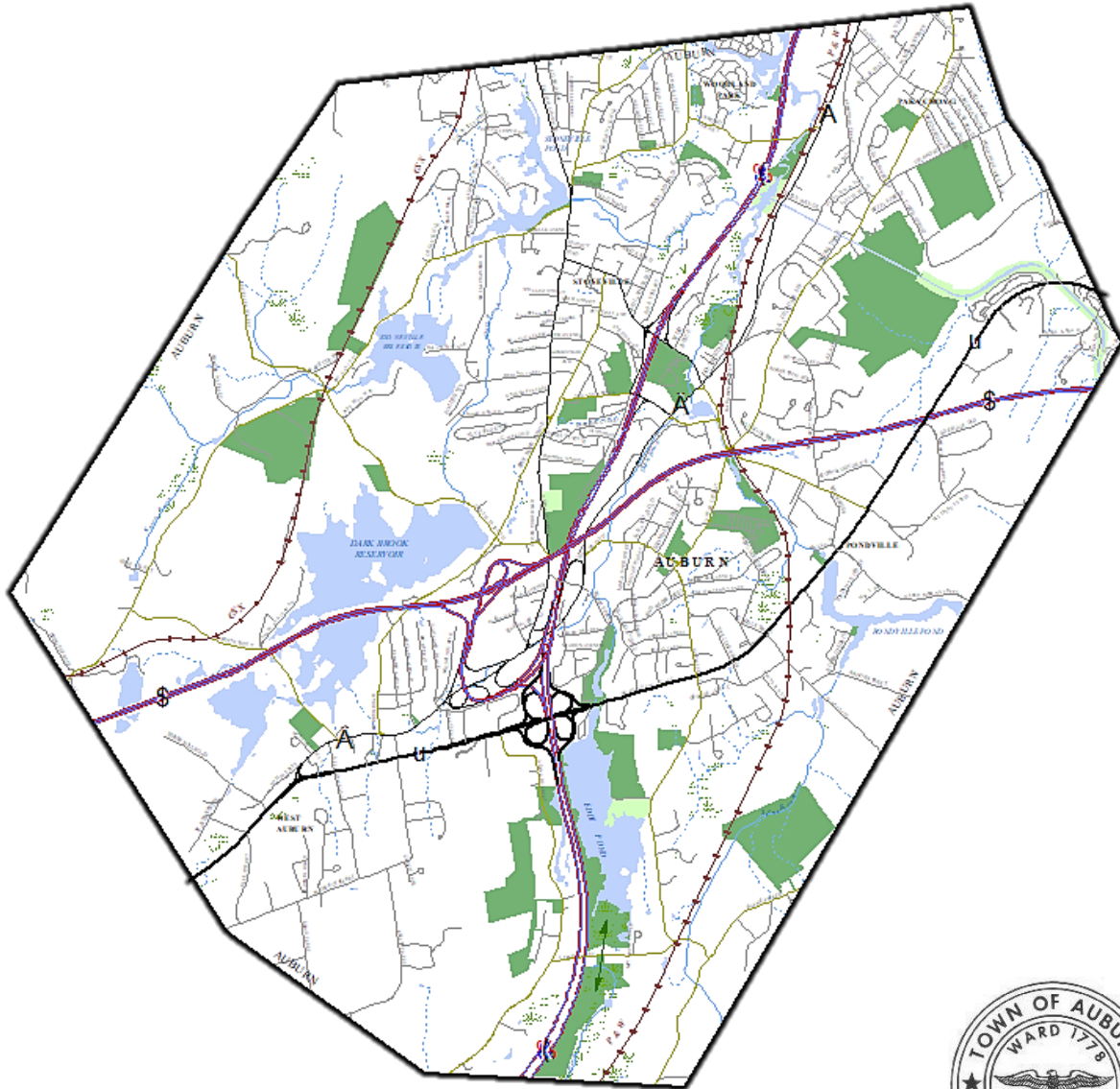


AUBURN, MASSACHUSETTS MASTER PLAN, 2019



Adopted by the Auburn Planning Board 11/12/2019

ACKNOWLEDGEMENTS

The 2019 Auburn Master Plan was completed with the support, time, and effort of many individuals. Working diligently these individuals helped make the Master Plan a success, their guidance was critical to the completion of the plan. The Town of Auburn would specifically like to acknowledge and thank the following for their contributions:

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TABLE OF CONTENTS

TABLE OF CONTENTS	3
INTRODUCTION.....	7
Introduction.....	8
Community Profile.....	8
Hindsight: Foundations for the Future	9
Foresight: Fulfilling the Vision	10
Five Overarching Goals Recur Throughout the Master Plan.	10
Create a Downtown Experience	10
Make Housing Affordable and Accessible.....	11
Preserve and Protect Natural Assets	11
Maintain a Viable Welcoming Business Environment.....	11
Connect People and Places	12
Chapters.....	12
Land Use	13
Facilities and Services	13
Housing and Population	14
Economic Development.....	15
Open Space and Recreation	15
Transportation	16
Natural, Cultural and Historic Resources	17
Community Participation	17
Master Plan Committee Meetings	17
Public Survey	18
Independence Day	17
Listening Session	Error! Bookmark not defined.
Prior Planning Efforts	19
Implementation	19
LAND USE.....	21
Introduction	22
Existing Conditions	24
Regulating Development.....	27
Residential Districts	30
Residential Office District	30
Commercial/Industrial Districts	31
Drury Square Village District.....	31
Overlay Districts.....	34
Floodplain District	36
Aquifer and Watershed Overlay District	36
Mixed Use Development Overlay District	37
Regional Mall Overlay District	38
Open Space Residential Development	39
Steps to Consider.....	39
Low Impact Development/Design-Stormwater.....	42
Planning the Future	43
Goals.....	45

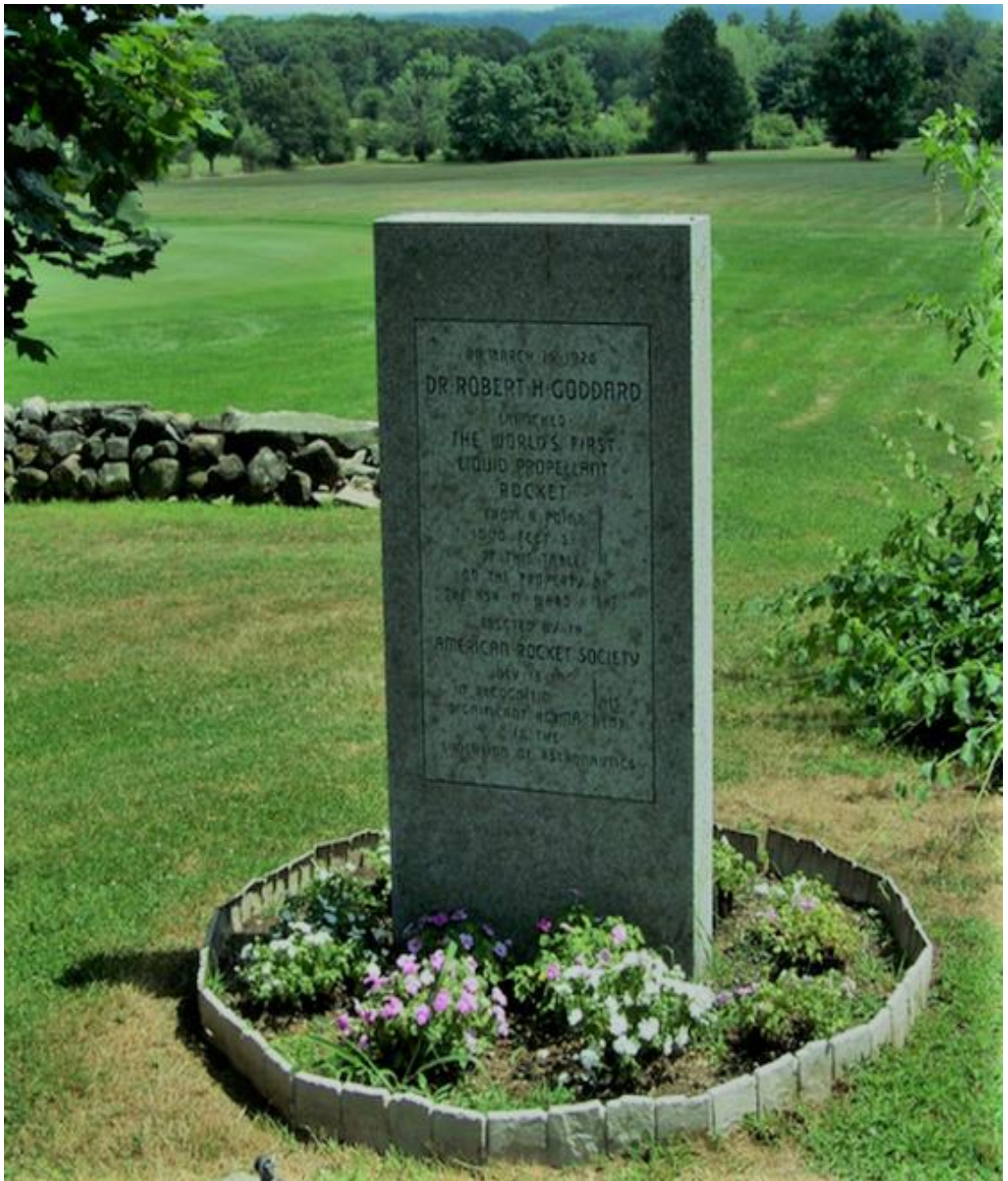
FACILITIES & SERVICES.....	47
INTRODUCTION	48
Existing Conditions	53
Pakachoag Golf Course	56
Auburn Public Library	58
Auburn Fire Department.....	60
Auburn Police Department	63
Information Technology Department	67
Department of Public Works.....	69
Engineering Division	70
Parks and Recreation Division	73
Cemetery Division	75
Sewer Division	75
Fleet Maintenance	79
Facilities Management	80
Auburn Senior Center	82
School Department.....	85
Water System.....	95
Auburn Water District.....	95
Elm Hill Water District.....	103
Energy Efficiency & Climate resiliency	104
SUMMARY OF PRINCIPAL FINDINGS	105
Goals	110
HOUSING & POPULATION	112
Introduction	113
Existing Conditions	113
Population and household trends.....	114
Age	118
Education	120
Income	121
Housing Inventory	124
Current Housing Stock	124
Housing Options	127
Smart Growth Overlay District 40R.....	130
Affordability	130
Goals	135
ECONOMIC DEVELOPMENT	138
Introduction	139
Existing Conditions	139
Education	143
Current Industry Trends.....	146
Business Certificates	148
Retail, Restaurants and Hospitality	148
Railroads	149
Traffic Pattern.....	150
Drury Square	155
Gateway Village Area.....	156
The New Economy.....	157
Challenges and Strengths	157

Goals.....	159
OPEN SPACE & RECREATION.....	160
Introduction	161
Existing Conditions	162
Levels of Protection for Land.....	163
Inventory of Recreation Facilities.....	167
Sports.....	169
Dr. Arthur and Dr. Martha Pappas Recreation Complex	170
Southold Road	172
Granger Cliffs.	172
Veterans Memorial Park Corridor	173
Farmland.....	173
Programs, Events, and Other Activities	176
Goals	176
TRANSPORTATION	179
Introduction	180
Travel Characteristics.....	180
Journey to Work.....	180
Registered Motor Vehicles.....	183
Existing Conditions	184
Road Network.....	184
Jurisdiction.....	184
Classification	185
Vehicle Volumes	187
Bicycle and Pedestrian Mobility	194
Sidewalks	194
Complete Streets	195
Bicycles.....	195
Bridges	199
Congestion Management Process.....	200
Travel Time and Delay Studies	201
Turning Movement Count.....	205
Intersections Encountered Delay	205
Regional Travel Demand Model	208
Congested Roadways.....	208
Auburn Street.....	209
US Route 20 (Washington Street)	209
Route 12 (Southbridge Street).....	209
Freight	210
Truck.....	210
Rail.....	211
Transportation Safety	214
At- Grade Highway/Rail Crossings	215
Transit	216
WRTA Fixed Route	218
WRTA Paratransit	221
WRTA Future Outlook	221
Ridesharing/Transportation Network Companies (TNCs)	222
Commuter Rail	223

Intercity/Commuter Bus	223
MassDOT Park and Ride Lot.....	224
Funding	224
Prior Planning and Engagement Efforts	225
CMMPO Transportation Improvement Program (TIP)	225
Long Range Transportation Plan (LRTP).....	225
Freight Study	225
Route 20 Corridor Profile (2009)	226
Central Thirteen-Prioritization Project.....	226
Issues and Opportunities	226
Goals	228
NATURAL, CULTURAL & HISTORIC RESOURCES.....	231
Introduction	232
Existing Conditions	232
Aquifer	233
Topography, Geology, Soils.....	235
Topography	235
Geology	235
Soils	235
Vegetation	239
Non-Forested Resources.....	239
Forest Resources.....	239
Public Shade Trees	239
Agricultural Land	239
Wetland Vegetation	240
Worcester Diversion Tunnel/Channel	240
Water Resource	242
Invasive Species	244
Non-indigenous Aquatic Plants	246
Vernal Pools.....	246
BioMap2.....	247
Core Habitat Summaries	248
Critical Natural Landscape Summaries	250
Historic and Cultural Resources	253
Civic Buildings	255
Historic and Natural Resource Planning	256
Goals	257

Appendix A Master Plan Goals
Appendix B Master Plan Survey
Appendix C List of Figures, Maps, & Tables
Appendix D Town Committees
Appendix E FY19 Facilities Improvement Plan

INTRODUCTION



Dr. Robert H. Goddard Memorial

INTRODUCTION

The Town of Auburn is a vibrant suburban community, located at a pivotal junction in Southern Worcester County. From a 17th-century agricultural settlement to a 19th-century industrial town and 20th-century commercial regional hub, Auburn has always strived to meet the changing demographic, social, and economic needs of its residents. As we advance further into the 21st—century, how will Auburn evolve to meet new challenges to improve the community and maintain a high standard of living? The intent of this introductory chapter is to help orient readers to the Master Plan process, discuss key opportunities and actions, and describe the public involvement process that informed and shaped this plan.

The Commonwealth calls for the Master Plan to develop a set of goals and recommendations to convey the community’s vision, as well as an implementation section that covers each of the chapters or elements. Auburn’s Planning Board is responsible for adopting the plan, amending and updating it over time, and advocating for the implementation of the recommendations.

The Master Plan is designed to take stock of the existing conditions of the town and to chart a series of actions or goals the town may take to improve the community as a whole. This document will help the town understand the opportunities and challenges, and then use regulations, policies, and financial resources to align outcomes with the goals of the plan.

This update comes at a time when the Town is trying to understand whether and where it should grow, how to preserve what is important, and how to provide the best facilities, infrastructure, and services for the residents and businesses in the community. The Master Plan Committee and Planning Board led this process, both groups provided feedback to help guide the Master Plan along the way.

This plan also recognizes that in order to provide the highest quality of life for all residents, Auburn must preserve its fiscal health, maintain and improve public facilities and infrastructure, and protect and sustain its inherent environment. Finally, this vision is contingent upon maintaining the adaptability that has defined and sustained Auburn for nearly 250 years.

COMMUNITY PROFILE

The Town of Auburn, Massachusetts incorporated in 1778, initially as Ward; the town was renamed Auburn in 1837. Auburn is located on I-290 5 miles south of the City of Worcester and is largely a suburban community. Much of Auburn lies within the Blackstone River Basin, except for the extreme western edge, which lies in the French River Basin. Auburn is bordered by Leicester on the west, Millbury on the east, Oxford on the south, and Worcester to the north.

The number of residents has grown from 15,005 in the 1990 US Census to 15,901 in 2000 and currently estimated to have 16,877 residents (2017). Auburn is a predominately-Caucasian community, with some 95.2 percent of residents identifying within that group. Latinos or Hispanics of all races are the largest minority group, at 3.9 percent. The age breakdown is broadly similar to Massachusetts state splits, with children under 19 (23.8 percent) and seniors 65 or over (17.6 percent) close to the state rates of 24.4 percent and 14.4 percent respectively. Median age is 43.1, somewhat above the state median of 39.3. At \$74,174, median household annual income is about the same as the state (\$74,167) and higher than the Worcester County (\$69,313) medians. Poverty is low at 4.3 percent, or less than half the state and county rates (both 11.6 percent). Housing costs are relatively low, with a median owner-occupied home valued at \$245,300, compared to \$352,600 for Massachusetts and \$260,800 for the county. More than 80 percent of occupied homes are detached or semi-detached single-family houses; the remainder are multi-unit structures. At 7.9 percent, vacancies are below the state (9.9 percent) and county (8.5 percent) numbers. Most homes are relatively new, with only 19.2 percent built before 1940, compared to nearly 34 percent for Massachusetts and almost 31 percent for Worcester County.

HINDSIGHT: FOUNDATIONS FOR THE FUTURE

Auburn's origins as a rural, agricultural community are barely visible today. There are remnants towards the south and west ends of town. Auburn experienced rapid growth starting in the 1930's and continuing to the 1970's. Population growth has been stable since the 1970's. The construction of the interstate highway system in the 1950's and 1960's split the town into essentially four quadrants. This reshaping had a long ranging effect that still impacts the town today.

Auburn became a magnet for commercial and retail development near the highway interchanges. Convenient, attractive, and centrally located in the region, large parcels of land along the highways were converted to high value developments. The growth drew thousands of workers and shoppers driving to and from their destinations. Ultimately, however, easy access and open roads diminished as congestion increased. However, as growth stabilized, Auburn enjoyed a rarity among suburban communities: a very strong commercial tax base of highway-oriented commercial uses, helping to support the services for a predominately single-family residential community.

In the early phases of its suburban growth, there were few limits on the conversion of open land and natural resources into residential or commercial development. However, as environmental regulations began to take effect, open space was preserved through public acquisitions, Auburn retained important natural land assets.

FORESIGHT: FULFILLING THE VISION

The residential neighborhoods that are at the heart of Auburn's identity need to be enhanced as places to walk and connect to the natural and civic assets of the community. Additional housing choices need to be available to existing and new residents as they change in age and lifestyle, augmenting that which is available today. Shared places and civic activities should be expanded, including those clustered with a well-defined town center at Drury Square. Thoughtful investments and town management should continue to translate the strong tax base into excellent facilities and services that the townspeople have come to expect

Auburn will need to support the private sector's adaptations to a rapidly evolving economic climate, if it is to sustain its advantageous tax and employment base over time. New commercial and residential development must be balanced against the reasonable capacity of the infrastructure and natural systems. This capacity can be enhanced through innovative investments in transportation, traffic management, and traffic calming. The capacity can be enhanced substantially through the expansion of walking and bicycling connections, providing mobility without cars. Environmental capacity can be expanded through innovative technologies and state-of-the-art practices, such as those associated with low impact development. Enhanced modern zoning will help shape the future of Auburn.

Auburn should expand its environmental stewardship through policies and actions that preserve and enhance natural resources and diminish negative impacts that affect the environment within the community and beyond. The Town should actively enhance resiliency from future storms and climate-related events in concert with emerging studies, programs, and projections.

By coordinating its municipal policies and actions through planning and foresight, Auburn should manage that which must change, and preserve that which should not. A proactive approach should be undertaken rather than a reactive approach.

FIVE OVERARCHING GOALS RECUR THROUGHOUT THE MASTER PLAN.

Create a Downtown Experience

Drury Square has long been a center of commerce, civic and cultural significance. Auburn, lacking a traditional New England downtown has been working diligently to develop Drury Square as a pedestrian friendly center. The 2006 Master Plan, as well as other more recent planning initiatives, address improving Drury Square. Specifically, residents articulated a vision for a downtown that includes a walkable, pedestrian-friendly place with a variety of retail and restaurant establishments. Work is well underway to make this vision a reality. Recent actions include a Drury Square Village District zoning bylaw, a Transportation Improvement Program (TIP) funded

reconstruction of Auburn Street, along with town funded non-participatory items including decorative lighting and landscaping, set to begin construction in 2021. In addition, the town received a grant for a wayfinding initiative and is currently working to develop a façade improvement program.

Make Housing Affordable and Accessible

Housing prices have been rising steadily in Auburn over the past decade. Much like the rest of Massachusetts, housing supply has not kept pace with demand, which has resulted in sharp increases in housing prices especially in sought after communities like Auburn. The zoning has generally favored single-family housing, this has left a gap in housing diversity, notably with a lack of smaller rental units and apartments. As the towns senior population continues to increase, the need for smaller units grows. Young professionals and single-person households are also looking for a similar product, but have difficulty finding it. The Master Plan offers several options for encouraging a variety of housing types at different price points, but these options will require land use and zoning changes, housing policy changes, and consideration of how best to provide services Auburn residents need and desire.

Preserve and Protect Natural Assets

In a well-developed suburban town, open space and large undeveloped tracts of land are a priority to the residents. These natural amenities provide beautiful views, natural corridors, passive and active recreation opportunities, and drinking water. In recent years, the town has sought to preserve open space by acquiring properties. Auburn acquired land on Southold Road in 2015 through a right of first refusal under MGL Chapter 61; there are approximately 50 acres of town owned open space from Southold Road to the Worcester Diversion Channel. Auburn, in 2012, constructed the Pappas Complex, which consists of many fields and facilities, behind the complex there is approximately 100 acres of undeveloped town land. Access to this land is by a walking trail, the entrance located at the Pappas Complex. The town should update the 2014 Open Space and Recreation Plan, due to expire in 2021, to prioritize improvements and continue the conversation around open space acquisition. Auburn should consider how policy changes and financial resources can further advance the protection of additional land and continue the conservation and management of the resources already under protection.

Maintain a Viable Welcoming Business Environment

Auburn has long been a center of industry in the region, notably the large retail environments on Washington Street/US-20 and Southbridge Street/MA-12. In the last decade, the nature of

commerce has changed rapidly. The “buy local” movement has led to an increase in small business in Auburn and throughout the region. Local business generates 70 percent more local economic activity per square foot than big box retail.¹ With the decline of the traditional retail box store and the rise of e-commerce and on-demand economy, it is imperative for Auburn to evolve to harness the changing economic drivers. Zoning changes are instrumental in attracting new and diverse business. Taking deliberate steps to update the allowed uses in the various zoning districts and update the zoning map to be more consistent and streamlined will have a dramatic impact on the diversity of business in Auburn.

Connect People and Places

The highways and byways are a distinct feature of Auburn; roadways comprise about 5 percent of the total land area. Car centric conveyance, though vital, is not the only form of transportation. Sidewalk, bike facilities, trails, railways, and public transit routes all play a part in connecting people to their destination. In the past, the development pattern tended to isolate neighborhoods from commerce and municipal facilities. The town will want to consider how land use and zoning changes could help connect more people to activity centers and what transportation improvements will be required as new development and redevelopment occurs.

CHAPTERS

The Master Plan consists of seven chapters or elements; each chapter focuses on a different aspect of community building. Massachusetts General Law Ch. 41, § 81D calls for a master plan with written text, graphics, tables, and maps to identify current and future needs, trends, and opportunities within the following chapters:

- ❖ Land Use;
- ❖ Facilities and Services;
- ❖ Housing and Population;
- ❖ Economic Development;
- ❖ Open Space and Recreation;
- ❖ Transportation;
- ❖ Natural, Cultural and Historic Resources

¹ The Andersonville Study of Retail Economics



Land Use

Use and development of land is a key factor to the character of a community. Industry, housing, and the road network and other features are spread throughout town in unique ways.

Primary goals for Land Use identified in the plan include:

1. Allow and encourage compact, well-organized development within commercial and retail areas of town.
2. Promote a broader mix of uses in areas where it will build upon and enhance the current use of land.
3. Promote sustainable land use practices. Protect the natural landscape and resources throughout town, address impacts of stormwater.
4. Actively work to update and modernize the zoning bylaw.
5. Work towards modernizing the residential zoning districts bylaw as well as the subdivision rules and regulations.



Facilities and Services

Facilities and services provided by the town are a highly visible representation of local government.

Primary goals for town facilities identified in the plan include:

1. Continue to provide a high-quality range of services and public utilities, including the continued modernization or replacement of aging facilities.
2. Care for residents of all age groups, including opportunities for recreation and community gathering.
3. Continue maintenance of roadways and as necessary roadway replacement and upgrades.
4. Maintain as necessary, high level of staff support in order to conserve and build upon current level of services provided by the town.
5. Increase energy efficiency in all town facilities.
6. Promote water quality and water resource management.
7. Improve the sustainability of town operations during emergency situations and prepare for the effects of climate related events.



Housing and Population

Housing in Auburn is predominantly single-family houses on small lots, typical of subdivision development that took place in the decades after World War II. The town will need to diversify its housing stock to attract new residents and to increase options for an aging population.

Primary goals for Housing and Population identified in the plan include:

1. Limit the construction of large tract subdivisions and encourage smaller clusters of housing with an emphasis on open space preservation.
2. Consider adopting the Community Preservation Act (CPA).
3. Continue progress to meet Affordable Housing / MGL Ch. 40B requirements.
4. Develop options for senior and age in place housing.
5. Maintain current stock and quality of houses.
6. Expand types of allowable housing stock.



Economic Development

As a center of commerce for many years, the town continues to maintain a business friendly atmosphere, though the nature of business has changed rapidly Auburn must be creative to retain business and to create improved zones for new businesses.

Primary goals for Economic Development identified in the plan include:

1. Encourage a strong, diversified tax and employee base.
2. Continue developing Drury Square as a mixed-use walkable district.
3. Provide incentives and opportunities for small businesses and other desirable business.



Open Space and Recreation

Residents crave open space and they appreciate the many recreational opportunities Auburn provides. The town should maintain and build upon the existing amenities and preserve existing passive tracts of land.

Primary goals for Open Space and Recreation identified in the plan include:

1. Expand and improve existing open space, recreational resources and facilities to meet the town's anticipated recreational needs for the benefit of all segments of Auburn's population.
2. Protect open space, sensitive environmental areas and acquire undeveloped open space land for conservation.

3. Increase public awareness of open space preservation and conservation and the many benefits attributed to these resources.
4. Promote awareness of Auburn's recreation opportunities and open space resources, from its farmlands to its conservation areas and trails, to encourage the continued preservation of the community's natural landscape.
5. Enhance the recreational and outdoor space at Drury Square.



Transportation

Auburn sits at the crossroads of southern Worcester County, 5 percent of the land area consists of roads. Maintaining and improving the transportation network is vital. Access to all forms of transportation is paramount to a well-served populace.

Primary goals for Transportation identified in the plan include:

1. Maintain and enhance the condition of Auburn's transportation network.
2. Maintain and enhance the safety of Auburn's transportation network.
3. Improve local and regional connectivity and traffic flow.
4. Enhance Drury Square and the vicinity of Auburn Mall as focal points for both the community and region.
5. Improve multimodal transportation access to provide better local and regional connectivity.



Natural, Cultural and Historic Resources

Auburn has a unique history and retains a diverse culture and has many natural resources. Preserving these resources will enhance the quality of living for the residents; the town should undertake initiatives to educate the populace of these resources.

Primary goals for Natural, Cultural and Historic Resources identified in the plan include:

1. Protect and enhance the quality of Auburn's surface and groundwater resources.
2. Protect forests, wetlands, fields, and ponds from the harmful impacts of invasive species.
3. Protect and document Auburn's historic and cultural resources.
4. Preserve, protect, and manage Auburn's natural resources.

COMMUNITY PARTICIPATION

Master Plan Committee Meetings

The Planning Board and Town Manager, in 2015, put out a call to residents to serve on a new committee to oversee the development of the Master Plan. After a thorough selection process, several residents were chosen to work closely with the Town Planner. The Committee met regularly beginning February 2016 through October 2019. Many of these meetings included discussions with town staff, to work on public engagement tasks, document reviews, and committee coordination. The Committee's primary responsibilities included providing guidance, document review, and feedback on deliverables. All Master Plan Committee meetings were open to the public throughout the process.




Independence Day

Auburn has held an Independence Day Celebration each year at the Pappas Complex since 2013. Thousands each year take part in the festivities, which include vendors, a children's carnival, a concert, and fireworks to close out the night. At the 2019 celebration, the Master Plan survey was promoted and input sought on topics such as economic development and recreation and culture. Attendees' suggestions for economic development included supermarket, family owned

restaurants, and small specialty stores. Thoughts on recreation and culture included a splash park, dog park and more walking trails.


Auburn Master Plan-Vision 2030

Your input is important to the success of the Master Plan. Help shape the future of Auburn. What Auburn do you want to see in 10 years, 20 years, and beyond. By taking the Master Plan survey you will be providing valuable information and will shape the path the town charts into the future.



Scan the code or follow the link to take the survey, or go to the Town of Auburn website and follow the link. <https://forms.gle/LmVHhw6K1NYr7hWs5>
Hard copies will also be available at the Town Clerk's Office at Town Hall. E-mail: masterplan@town.auburn.ma.us
Phone: 508-832-7704

Please complete the survey by Wednesday July 31.



Public Survey

The Master Plan public survey was developed to seek the communities' thoughts on the wide range of topics that comprise a master plan. The survey consisted of sixty-seven questions covering a range of topics including transportation, government facilities and operations, and land use. The survey was available to the community from June 25 until July 31, 2019. Notice of the survey was mailed to residents in their tax bill on July 1, 2019; with hard copies available at the Town Hall. The survey was publicized on the town website and social media. A press release was published in the Auburn News and the Auburn Mass Daily. In total 585 people completed the survey.

Several of the survey questions asked for specific comments about Auburn's strengths, challenges the town faces and its assets. Respondents were also given the opportunity to share general comments and concerns, this question garnered some of the most diverse responses and some common themes. The desire for a new grocery store was mentioned many times, residents also desire more restaurants, especially those that are not chains and smaller independents stores. There is a general concern with the amount traffic and safety on the roadways; especially the speed and motorists who are going through intersections after the lights turn red. There are many concerns about the Auburn Mall, ensuring the mall remains a thriving viable asset is a high priority. When asked about town facilities, well over 100 comments addressed improving the existing library or building a new one. The survey results greatly influenced the development of many goals in each chapter. The full results of the survey are located in Appendix B.

Master Plan Forum

The Master Plan Committee held a forum in October 2019 to present to the public a final draft of the Master Plan. The event was promoted on the Town of Auburn’s webpage and the social media pages of several municipal departments. The event was also posted in the Town Hall, Library, and Senior Center. There was a presentation outlining the above overarching goals of the Master Plan. The 207 individual goals were highlighted and there was an opportunity for comment on all aspects of the plan. A general discussion on the Master Plan took place between the Master Plan Committee and those in attendance, no substantive comments or changes were suggested. The Master Plan Committee unanimously voted to send the final draft of the Master Plan to the Planning Board for their review and recommended adoption of the Master Plan.

Prior Planning Efforts

The 2019 Master Plan was influenced by many previous planning efforts. The development of this plan was also influenced by the town bylaws and zoning bylaws. Other sources are noted throughout the Master Plan. Each of the planning efforts incorporated public input through various means, such as, meetings, workshops, forums, charrettes, and interviews.

2019-2023 Five Year Facilities Improvement Plan

2018 Natural Hazard Mitigation Plan

2017 Comprehensive Housing Plan

2017 Economic Development Strategic Plan

2017 Planning Vision and Design Guidelines for Drury Square

2015 Freight Rail Study and Feasibility Analysis

2014 Open Space and Recreation Plan, updated in 2016

2010 BioMap 2 Report

2006 Auburn Master Plan

IMPLEMENTATION

The development of a Master Plan takes a great deal of time and effort. It requires input from town staff, elected and appointed officials, residents, the business community and other stakeholders. The input and participation is important in developing a living document that will guide Auburn into the future.

Within the implementation table, found in Appendix A, there is a suggestion for who may be best suited to take responsibility for a specific goal and who may assist as a partner. While these are suggestions for leads and support, it is important to identify a responsible party to ensure there are assigned parties that can be held accountable for the plan implementation. As town government continues to evolve over time, it will be important to review these assignments periodically and revise as needed.

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LAND USE



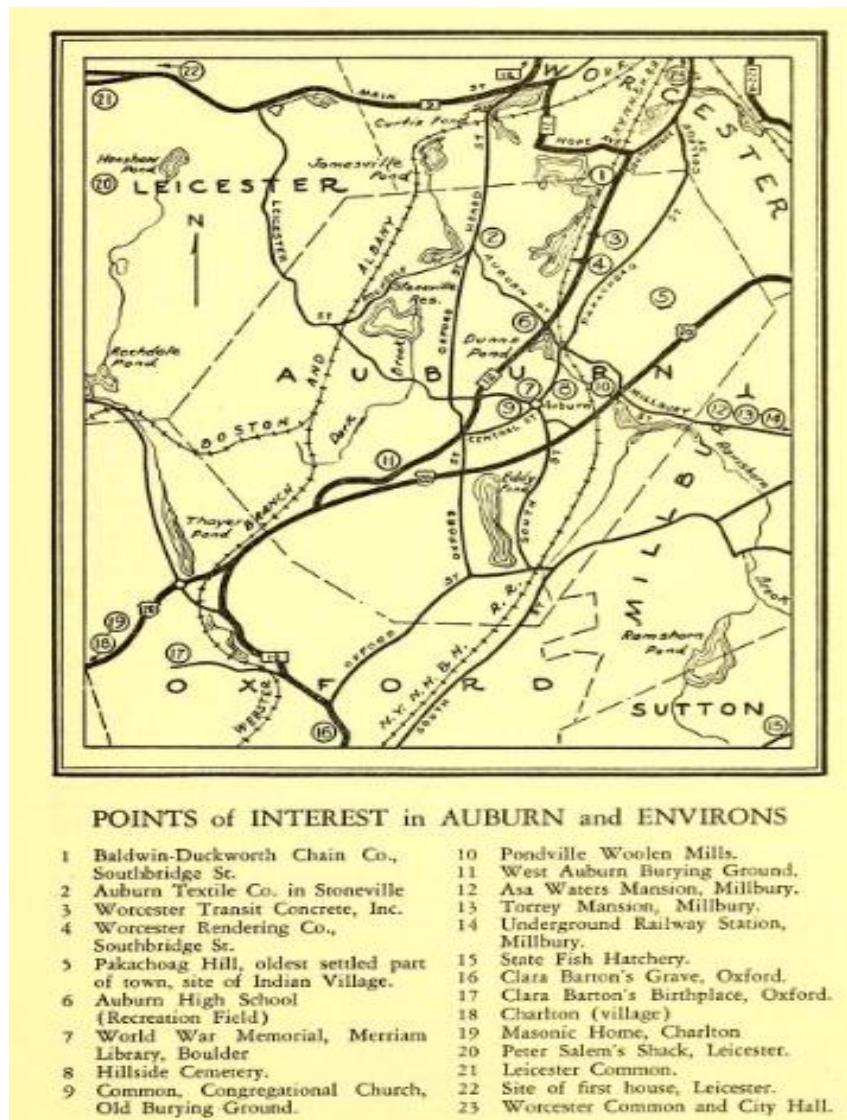
Diversion Channel and US-20

INTRODUCTION

“Situated among the softly rolling hills, the town of Auburn has a pleasant New England charm compounded of the atmosphere of the past with the very modern present. The Centre with its green Common, ancient trees and fine old church and homes has the mellowness of age, while Stoneville and Drury Square sections are distinctly of the present. It is this fusion of the old and the new without loss of harmony or proportion that gives Auburn its special distinction. It is chiefly a residential suburb of Worcester offering the commuter the quiet peace and serene beauty of a rural community of pleasant homes.”² The above section was written in 1937, 100 years after the Town renamed itself Auburn. Much is still the same and much has changed dramatically since. A Nipmuck village was located on Pakachoag Hill, the earliest record of European settlers to arrive was in 1674. The Town of Auburn first settled in 1714 and officially incorporated as the Town of Ward in 1778. Ward was established from portions of Worcester, Sutton, Oxford and Leicester. In 1837 the town changed its name to Auburn because the Post Office thought the name was too similar to Ware, MA. The town common may be gone but the “fine old church,” the Congregational Church still exists along with the neighborhoods in the area around Town Hall. Drury Square is still very much a modern area with heavy traffic flow around the retail shops, the Auburn Mall, and other business and municipal buildings in the area. The Auburn population in 1840 was 649 in 1900 there were 1,621 residents and by 1935 approximately 6,600 residents. The close proximity and easy access to Worcester was likely the prime reason for such rapid growth in population. Auburn has remained a residential suburb of Worcester but as the transportation network expanded in the 1950’s and 1960’s it became a commuter town to the Boston metro area. The transportation network also led to an expansion of the industry in Auburn, namely, distribution warehouses and light industrial facilities as well as the previously mentioned retail establishments. In the 19th Century, there were several mills located in different parts of Auburn. Since the various mills relied on water for their operation, the mills were located on Kettle Brook, Pondville Pond and Young’s Brook. There was a decline in industry in the early 20th Century, most industry was located in Worcester, workers could commute to the factories on the trolleys and eventually the advent of the automobile enabled even easier access to jobs. The interstate highway system was constructed in the 1950’s and 1960’s and Auburn was situated such that it became the crossroads of three interstates, I-90, I-290 and I-395, these roads and interchanges cross through the center of Auburn and make up 5 percent of the town’s area. Today, Auburn is one of the Commonwealth’s more densely populated and developed towns. 39 percent of Auburn is developed make it 95th in Massachusetts. The total area of open land is 827 acres, 224th in the Commonwealth. As 21st Century unfolds, planning in which manner available land is developed and current developed land redeveloped, will be vital to the character and makeup of Auburn. Zoning is a critical piece in shaping the future of Auburn. The Town must encourage investment through both zoning and

² A Historical Sketch of Auburn Massachusetts, 1937

regulatory change in order to shape the future of the town. At Town Meeting in 2018, town meeting members adopted as a prohibited use recreational marijuana. Auburn adopted a Ground Mounted Solar Energy Systems zoning bylaw at Special Town Meeting in 2018. These are prime examples of the townspeople and town management addressing where these facilities may or may not be erected and ensuring natural resources are protected.



Map 1. Town of Auburn, circa 1937³

³A historical sketch of Auburn Massachusetts from the earliest period to the present day with brief accounts of early settlers and prominent citizens, 1937 <https://archive.org/details/historicalskech00uswo/page/60>

EXISTING CONDITIONS

Land use reflects the physical characteristics of the land and the functional use of the land. How land is developed or redeveloped is a key factor in the characteristics of a community. Housing of various types, business, manufacturing, roads and other features are distributed throughout town in distinct patterns. The purpose of this chapter is to catalog existing conditions and identify certain steps to preserve the characteristics desired and encourage new growth in areas of town. In 1941, the first zoning bylaws were adopted at Town Meeting, establishing the first zoning districts. New zoning bylaws have been adopted and updated regularly since 1941. Subdivision Rules and Regulations, dating back to at least 1956, are also updated from time to time. Zoning Bylaws and Subdivision regulations is the method the Town of Auburn monitors and controls development throughout town. Auburn has had several planning initiatives over the last few years, each has influenced this chapter and others to some extent. These initiatives include the 2014 Open Space and Recreation Plan with an update completed in 2016, the 2017 Economic Development Strategic Plan, the 2017 Comprehensive Housing Plan, 2015 Freight Rail Planning Study and Feasibility Analysis, and a Chapter 61A Study completed in 2016.

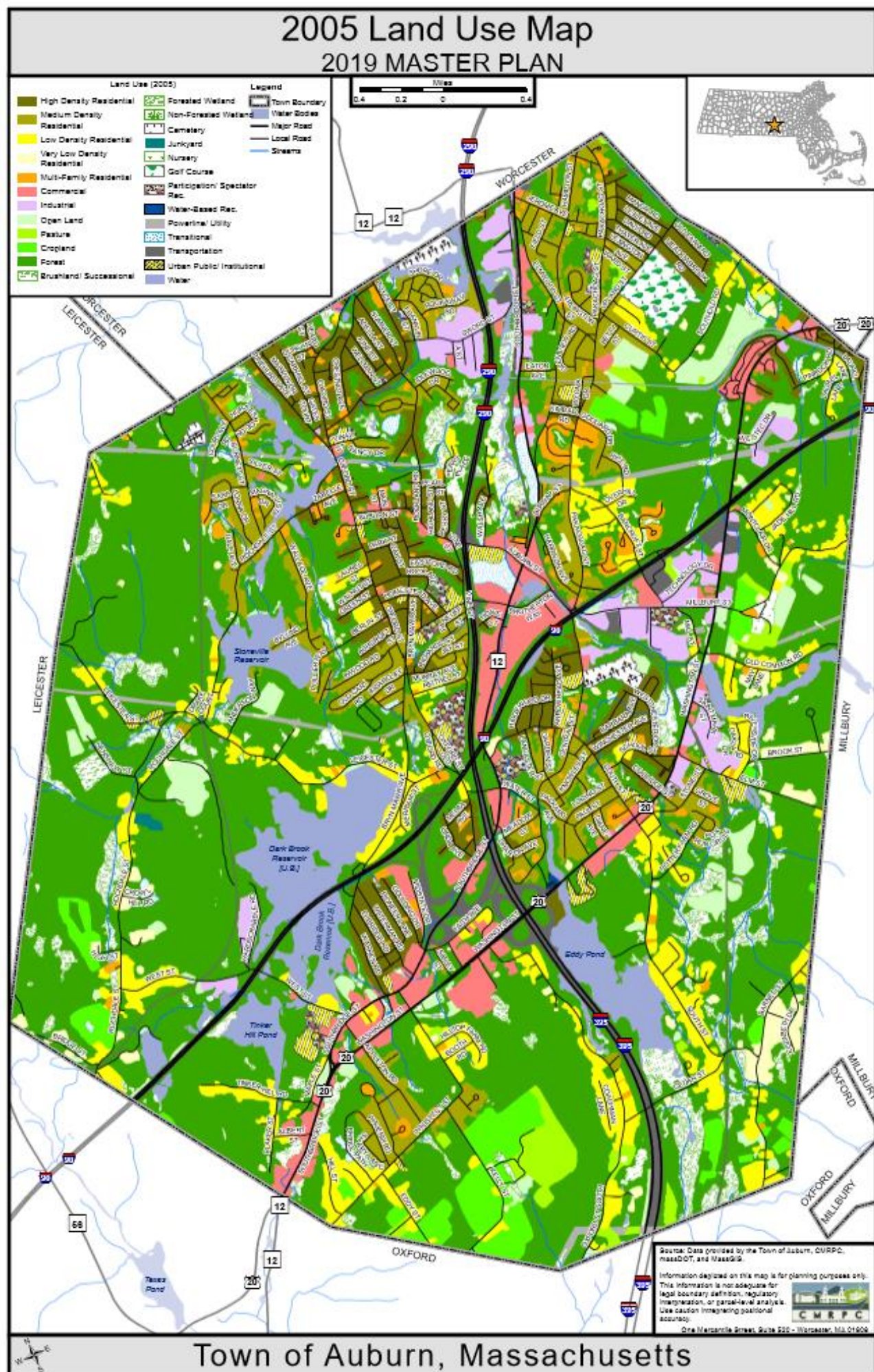


Figure 2: Housing near Stoneville Pond

Table 1

Land Use Change in Auburn 1971-1999							
Land Use Category	1971		1985		1999		% Change 1971-1999
	Acres	Percent	Acres	Percent	Acres	Percent	
Agriculture	923.80861	9%	824.24054	8%	536.46376	5%	-42%
Open Space	401.65848	4%	539.70091	5%	611.73129	6%	52%
Forest	4723.63605	45%	4412.57899	42%	4209.30215	40%	-11%
Recreation	95.28324	1%	138.13079	1%	128.02440	1%	34%
Non-Forested Wetland	137.19601	1%	130.11267	1%	127.42455	1%	-7%
Commercial	302.58452	3%	341.52324	3%	405.47846	4%	34%
Industrial/ Transportation/ Mining	682.39958	6%	811.18634	8%	791.51059	8%	16%
High Density Residential	1033.92364	10%	1143.80520	11%	1197.56345	11%	16%
Medium Density Residential	839.47623	8%	933.95896	9%	1039.50067	10%	24%
Low Density Residential	549.38541	5%	671.70096	6%	899.90928	9%	64%
Water	593.09029	6%	581.15255	6%	581.15255	6%	-2%
Total	10528.07115	100%	10528.07115	100%	10528.07115	100%	

Source: MassGIS



REGULATING DEVELOPMENT

One of the key components to a Master Plan is assessing the Town's local zoning regulations and requirements. Zoning is a tool designed to direct and control development and the pattern of uses in a community. It describes the location, set of land uses, and the relationship between the land use and the surrounding context. The Master Plan sets forth a vision and direction describing, in part, how the use of the land will evolve over time. Zoning should be consistent with that land use vision, and serve as the implementation arm of the Master Plan. In an ideal setting, a resident, property owner, town official, or developer should be able to review Auburn's zoning bylaw and understand what the community wants in the different zoning districts across the town.

Table 2, below, lists the zoning districts and the corresponding minimum lot size as well as the setbacks and height restrictions. Careful consideration to changing this table should be considered, any changes to the zoning dimensional regulations could have long lasting impacts. Height restrictions has an impact on businesses looking to come to Auburn. Office buildings, biotech, and pharmaceutical companies are generally located in structures three stories high or taller. A three-story building is generally about 45 feet tall, Auburn has a maximum of 35 feet in its industrial districts, and the rest of town is zoned for no more than 25 feet. An average two-story house is about 20 feet. Commercial structures tend to have a higher ceiling for various reasons including esthetics and utilities.⁴

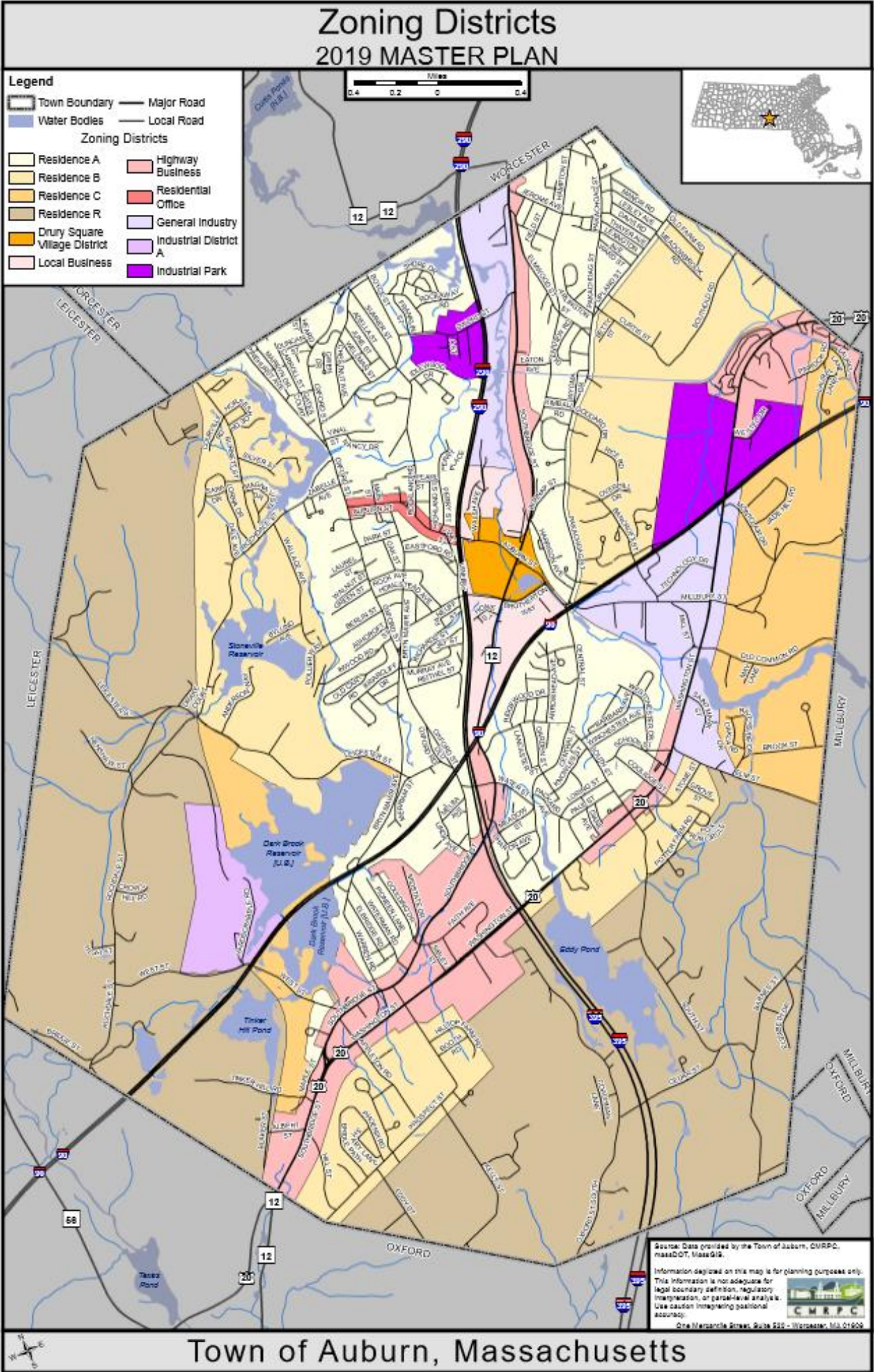
There are approximately 900 non-conforming lots with an area of less than 10,000 square feet the majority of these lots contain a residence. The vast majority of these structures are on lots between 8,000 and 10,000 square feet, about 350 houses are on parcels less than 8,000 square feet in size. The allowed lot size in Auburn was changed at town meeting at least twice; in 1947, the minimum lot area was voted at town meeting to be 7,500 square feet. In 1950, Town Meeting voted to change the minimum lot size for a house to 10,000 square feet. Today in Residential A District the minimum lot size remains 10,000 square feet, the other residential zoning districts require a larger lot size, as shown in Table 2, below. Consideration should be given to lessen the current minimum lot size in certain districts to increase density and bring hundreds of lots into conformity.

⁴ <https://www.gsa.gov/node/82314>

Table 2

Zoning Dimensional Regulations							
Zoning District	Minimum Lot Area (square feet)	Minimum Lot Frontage (square feet)	Front Setback (feet)	Minimum Side Yard (feet)	Minimum Rear Yard (feet)	Maximum Height (feet)	Notes
RA (1,5)	10,000	100	20	10 (2)	10	25	(1) Multi-family are allowed provided that SPGA criteria are met
RA 2-family	19,000	100	20	10 (2)	10	25	
RB (1,2,5)	20,000	100	30	10	10	25	(2) Garage may be placed 7' from the side edge of the lot.
RB 2-family	29,000 (5)	100	30	10	10	25	
RC (1)	40,000	160	40	20	20	25	(3) 35' with Special Permit
RD 2-family	49,000 (6)	160	40	20	20	25	
RR	60,000	180	40	20	20	25	(4) If in the Watershed and Aquifer Protection Zone A, 40,000 sq. ft.
RR 2-family	69,000	180	40	20	20	25	
RO (1)	10,000	100	20	10 (2)	10	25	(5) If unsewered, 30,000 square feet minimum lot size
RO 2-family	19,000	100	20	10 (2)	10	25	
LB	5,000	50	20	10	10	25	(6) If unsewered, 80,000 square feet minimum lot size.
HB	10,000	120	40	10	20	25 (3)	
GI	10,000	100	30	10	20	35	
IA	10,000	100	30	10	20	35	
IP	30,000	100	40	20	20	35	

Source: Auburn Zoning Bylaws



The Zoning Bylaw includes a Schedule of Uses, which establishes the types of uses allowed in particular zoning districts and the permitting requirement for each use.

RESIDENTIAL DISTRICTS

The residential zoning district in Auburn consist of RA, RB, RC, and RR. Residential zoning encompasses the majority of land in Auburn. Much of the residential development has occurred over the last 60 years. Housing is generally developed in densely settled neighborhoods and subdivisions, typical of residential development since World War II. There are comparatively few apartments or multifamily dwellings in town and two big box stores are currently utilizing the one mixed-use district. There is a need in Auburn for more diverse housing stock and more affordable housing. Current zoning limits the number of units on a parcel and height restrictions limit the ability to increase density vertically. Currently the percentage of affordable housing in Auburn is approximately 3.7 percent. The goal for the town is 10 percent. Expansion of the Mixed Use Development Overlay District should be considered as a method to increase density, diversify housing stock, and increase the commercial footprint of the town.

Affordable Housing Chapter 40B

Chapter 40B is a state statute, which enables local Zoning Boards of Appeals to approve affordable housing developments under flexible rules if at least 20-25 percent of the units have long-term affordability restrictions. Affordable housing is defined as a unit, which could be purchased or rented by a household making up to 80 percent of the median income of the area. Such housing must be subject to affordable housing restrictions to preserve affordability in the long term. The median household income in Auburn is \$74,174 per 2013-2017 ACS 5-year estimate. For a household to be eligible for affordable housing they must have an income of approximately \$59,339 or less.

RESIDENTIAL OFFICE DISTRICT

Auburn Street from the I-290 interchange to Oxford Street North is the only portion of town zoned as a residential office district. This zoning district includes many small service based businesses along with residences mixed in throughout the zoning district. Generally, these businesses are “low impact” meaning they do not attract large numbers of customers, though there are a couple exceptions. There are many side streets off Auburn Street that are densely settled with single-family residences. The intention of this zoning district is to preserve the residential nature of the area while still allowing business to operate along a road with heavy traffic, more than 10,000 vehicles a day⁵.

⁵ CMRPC Traffic Count Book, 12/2018

COMMERCIAL/INDUSTRIAL DISTRICTS

Currently Auburn zoning includes five different commercial or industrial districts. These zoning districts are mostly along the length of Southbridge Street/MA-12 and Washington Street/US-20. There is a well-developed industrial park on Sword Street and a sizable office park on Midstate Drive. The business community is very diverse and a well-recognized resource and a destination in the region. There is opportunity to make improvements to the zoning bylaws and the regulatory process. For the town to maintain its current businesses and attract new businesses, including the rapidly evolving demands of the 21st century, business adaptation must occur. Height restrictions are a challenge to some businesses; many medical/pharmaceutical companies operate in buildings taller than currently allowed in the zoning bylaws. Amending the zoning to allow greater density and allow multiple business to operate in the same building could attract diverse modern commerce. A freight rail study was conducted in 2015; one of the recommendations was to allow trucking facilities, permitting this use could allow business to harness the two railroads that cross the town. Clustered retail stores with large parking lots and direct access to arterial roadways typify regional retail centers. Pedestrian areas tend to be concentrated along store frontages. Previously, regional retail center sites were developed with limited landscaping. Newer sites may have stormwater management plans incorporating cohesive and attractive landscaping features.

Zoning district Industrial A (IA) encompasses the solid waste transfer station located off Hardscrabble Road. Public water supply does extend to this area and may serve new facilities in this district. Appropriate industrial uses in Industrial A include trucking related facilities (currently limited by the zoning bylaw) and assembly operations that do not have industrial processes that generate wastewater. Access to the site from West Street may be challenging with the residences along West Street.

Two areas of town are zoned Industrial Park (IP). Part of Sword Street and a stretch of Washington Street/US-20 including Westec Drive. Adjustments to the allowed uses in the Industrial Park district should be made to attract new and diverse business. Also, some of the parcels that are zoned IP are partially zoned residential, adjustments should be made to any parcels that are split in two zoning districts.

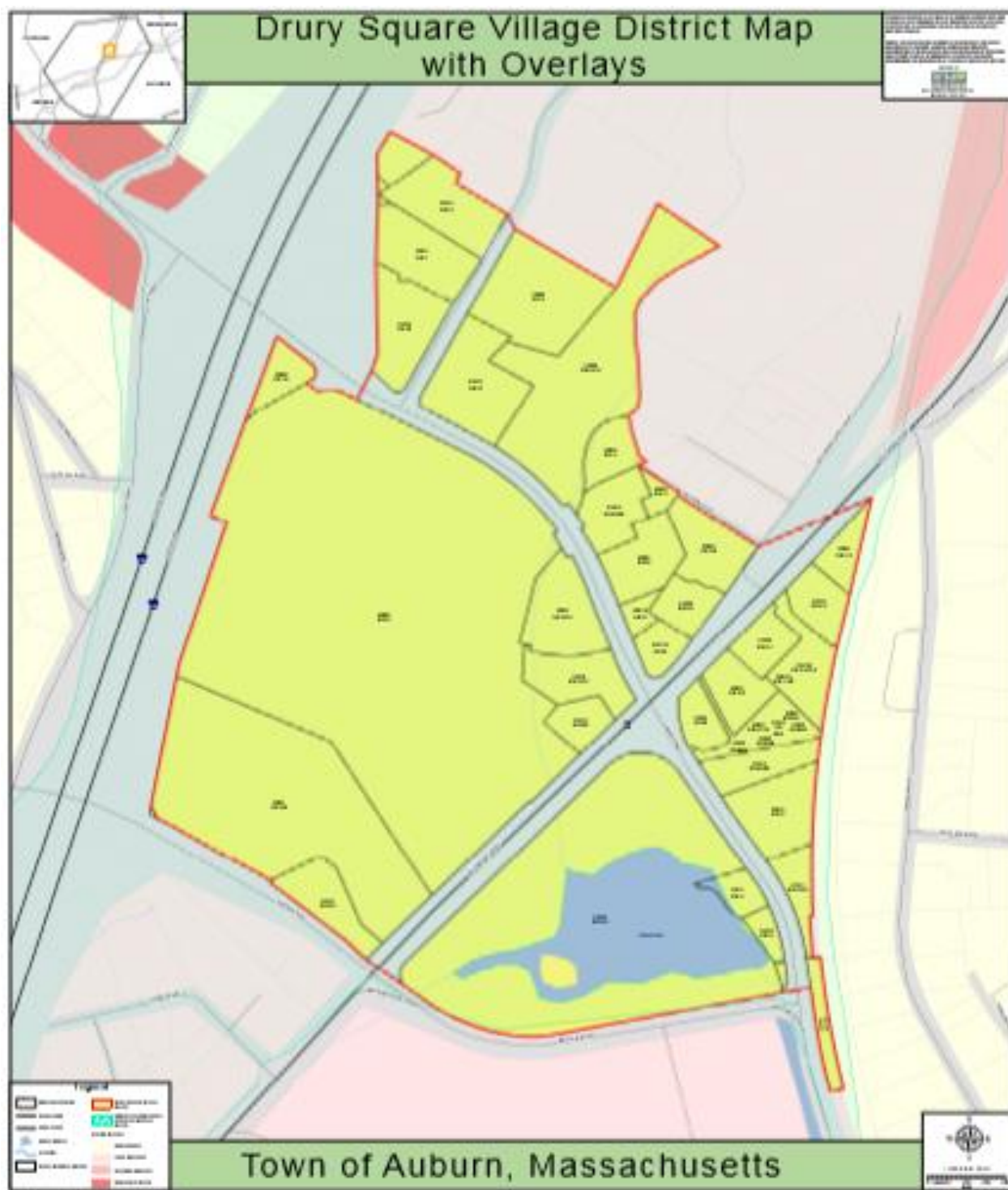
Drury Square Village District

Town administration over the past few years has worked towards the revitalization and reconditioning of Drury Square. A study, completed in 2017, called Planning Vision and Design Guidelines for Drury Square outlined several strategies to develop Drury Square into a more walkable district. Town Meeting in the spring of 2019 voted to change the zoning bylaws to create the Drury Square Village District. This new district is intended to shape the area into a pedestrian friendly mixed-use downtown area. The vision for Drury Square is to develop a sense of place and to enhance the economic value of the area as a place to shop and visit. Roadway and streetscape

improvements are currently in the design phase; construction is projected to begin in 2021. Suggested Design Guidelines for the district will be completed in 2020. These guidelines will help mold the district into a downtown that is walkable and visually pleasing. A wayfinding and place making initiative will also be completed in 2020. The town received a grant to work with a consultant to design signs and other features to create unique symbols for the district and the town.



Figure 3. Drury Square



OVERLAY DISTRICTS

Auburn has adopted four zoning overlay districts to provide additional protections and regulations on significant land use issues of concern to the community. These districts are shown on Map 5 below.

Table 3

Auburn Zoning Overlay Districts			
Code	District	Acres	% of Town
RM	Regional Mall Overlay	42.5	0.4%
AP	Aquifer Protection	3755.0	35.7%
WP	Watershed Protection	4478.5	42.5%
FP	Flood Plain	1223.7	11.6%
MD	Mixed Use	125.8	1.2%
DSVD	Drury Sq. Village	62	0.6%

Source: Auburn Zoning Bylaws

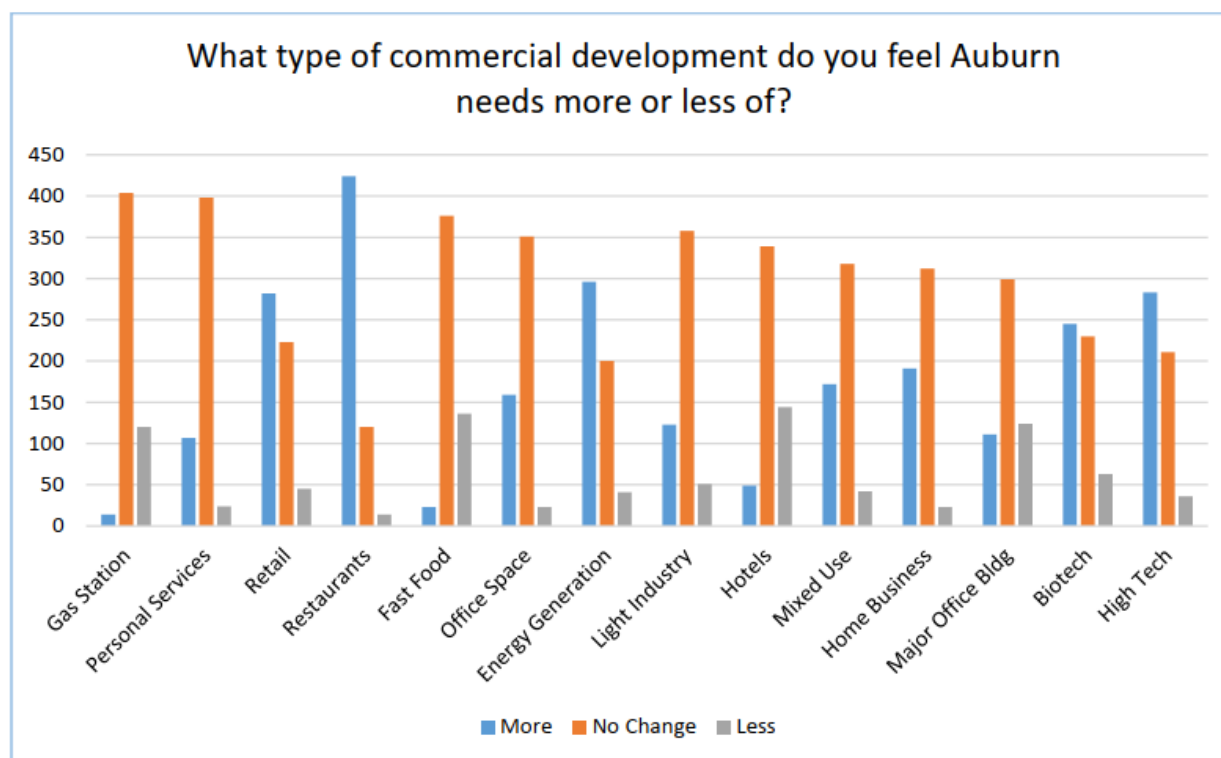
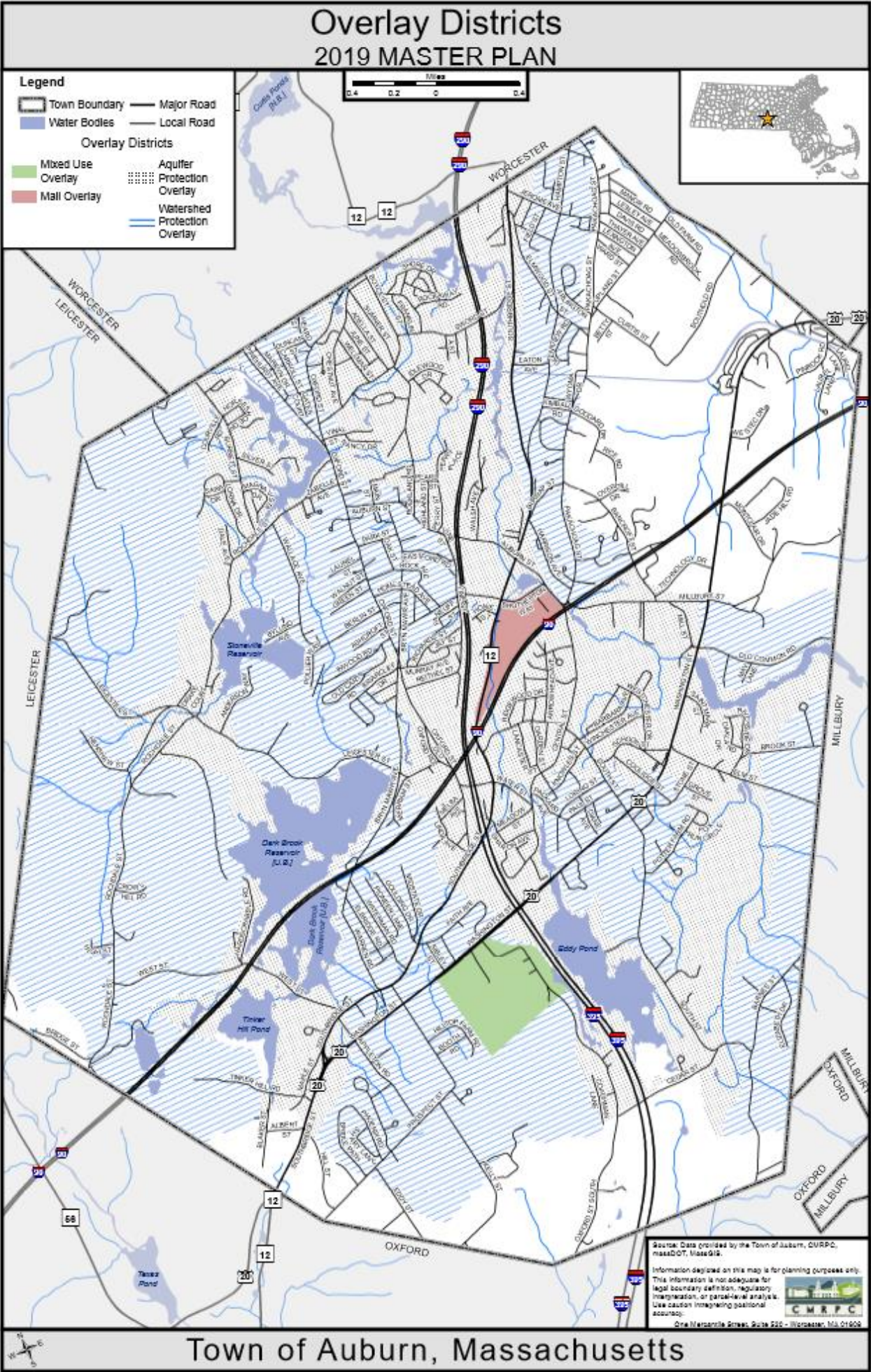


Figure 4. Master Plan Survey



Floodplain District

The purpose of the Flood Plain District is to protect people and property from the hazards of a 100-year flood, Also, to maintain flood storage capacity and flow pattern of the floodplain and provide long-term control over land subject to inundation by the 100-year flood. (Note: The 100-year flood has a 1 percent chance of occurring each year, it does not mean this flood occurs only once every 100 years). However, during the span of a 30-year mortgage, a home in the 1-percent AEP (100-year) floodplain has a 26-percent chance of being flooded at least once during those 30 years. Consideration should be given to including the 500-year floodplain to the floodplain overlay district.

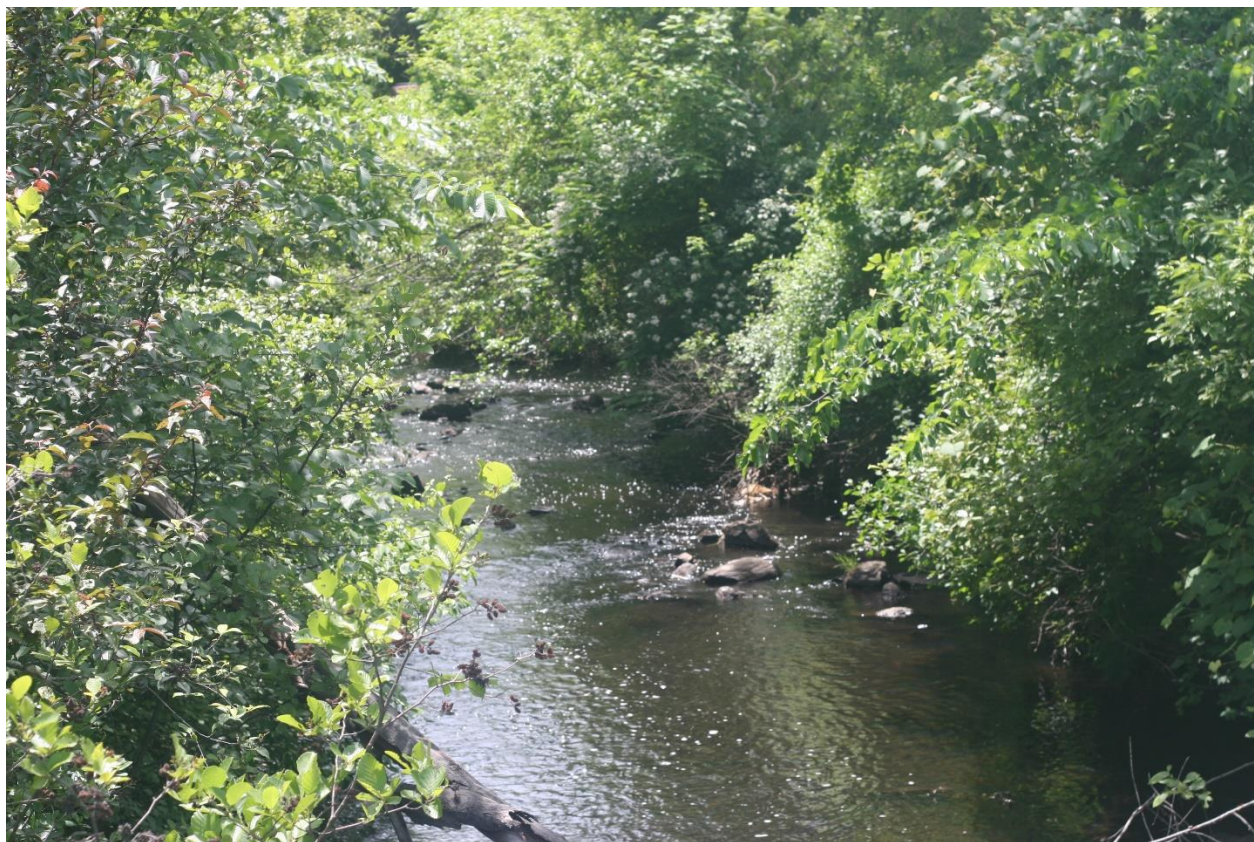
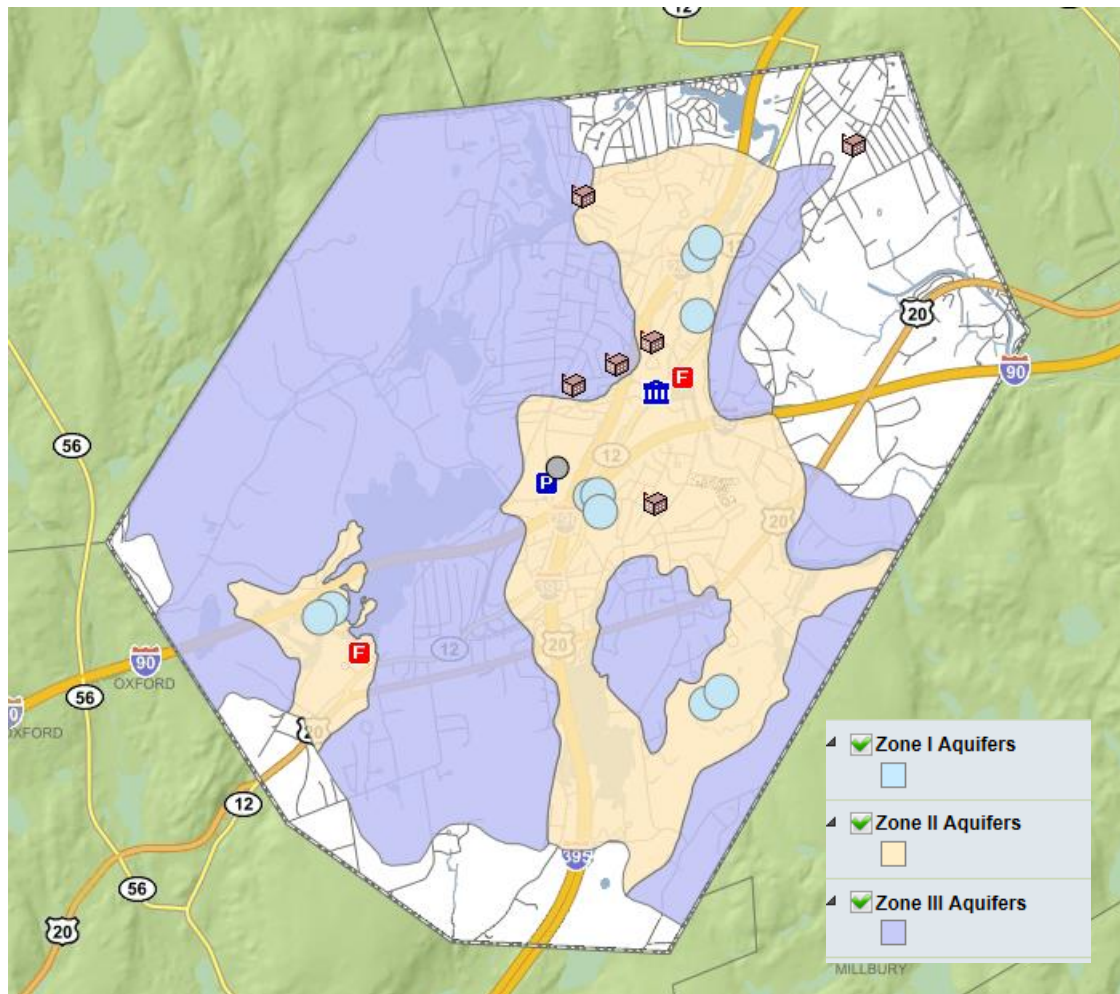


Figure 5. Ramshorn Brook at Drury Square

Aquifer and Watershed Overlay District

The intent of the Aquifer and Watershed Overlay District is to safeguard the town's water supply from contamination. This district places further restrictions to parts of town beyond the other zoning districts limitations. The district contains two regulatory areas, Zone II and Zone III recharge areas. Zone II protection refers to municipal wells or the area that directly contributes to the recharge of the wells during periods of heavy demand and extreme drought conditions. Zone III includes land that contributes surface water to the recharge area of the various wells. The bylaw outlines the permitted and prohibited uses in each area and specifies the performance standards

that must be adhered. To minimize nitrate loading caused by septic systems, the bylaw stipulates residential uses must have a lot area of 40,000 sq. feet per unit if the lot is not connected to the public sewer system. The amount of impervious surface is limited to 15 percent of the lot or 2,500 sq. feet, unless a system of artificial recharge is constructed to direct precipitation back into the ground water.



Map 6. Aquifer and Watershed Protection Overlay District

Mixed Use Development Overlay District

Originally recommended in the 1987 Master Plan, the mixed-use overlay is located in one section of town. This district is on the south side of US-20 and west of I-395. This bylaw to date has never been utilized. BJ's and Home Depot currently operate within the boundaries of this overlay district. The Mixed Use District allows for a mixture of residential, open space and commercial uses by special permit from the Planning Board. The district allows business uses on the first three floors of a structure and may include restaurants, theatres, retail sales and financial and professional services. Buildings in this district may be up to 70 feet tall. Consideration should be given to locate a mixed-use overlay district in other parts of town.

Current market trends are favoring mixed-use development patterns that are not typical of past suburban land use patterns. A mix of uses near one another offers people broader choices of activities within more compact and connected areas. In part, this is due to the benefits of increased convenience and shorter travel times between places to shop, work, live or visit. Tenants, employers, and shoppers are also increasingly responsive to well-designed places that incorporate landscaping and amenities within an excellent pedestrian environment.

Some of Auburn's land is adaptable to an increasing focus on mixed, compatible uses and more compact, environmentally responsive site development. Special opportunities will occur where buildings and tenancies are outmoded. Parcels that are owned or can be reasonably assembled by single entities will become targets for redevelopment, which could provide a better configuration of buildings, parking, and open space than in the past. This may occur in older industrial sites, as well as older residential areas, where future redevelopment may include cluster developments that provides improved open space and living accommodations such as senior living, starter family homes, or other new uses.

The concept of mixed-use encompasses uses that are adjacent to one another, or are contained within a single building. Uses are compatible where they provide amenities and services near where people live and work, and can be easily reached by a short walk. They are also compatible where a combination of uses create a more interesting, active and differentiated environment in which to live, work, shop or visit. Mixed-use approaches also benefit from increased pedestrian convenience and shared access to parking lots.

Benefits and qualities of mixed-use development can be very attractive to the types of uses that have been increasing in the area over the past ten years, including medical device technology, security software, biotechnology, nanotechnology and advanced material sciences. Auburn should consider expanding the Mixed Use Overlay District to build density and attract new business.

Regional Mall Overlay District

Auburn adopted the Regional Mall Overlay District in 1994 as a reaction to proposed plans and an eventual expansion of the Auburn Mall. The purpose of this overlay district is to regulate a large, approximately 38 acres, and complicated piece of property. A wide variety of commercial uses is permitted by special permit or site plan approval. Residential use is not allowed at this time. The Planning Board may allow a reduction in the number of parking spaces normally required to minimize the breadth of asphalt as an unsightly blight in the center of Auburn. There is room for expansion within the district. Shopping patterns have changed drastically since the Auburn Mall was constructed. For the mall to stay viable in the future, changes to the overlay district must be considered. As a large, centrally located property, allowance for creative use should be contemplated. The reuse of the former Caldor's and Macy's Home Store into Reliant medical offices is a prime example of an innovative use of a portion of this district.



Figure 6. Auburn Mall

Open Space Residential Development

The purpose of Open Space Residential Development special permit is to encourage the preservation of common land for conservation, agriculture, open space and recreational use. Also, to preserve historical or archeological resources and to protect existing or potential municipal water sources and to protect the value of real property. Promotion of open space in a development is better for the residents and the community as a whole. Locally based, long-term open space conservation plans help communities protect their environment, improve quality of life, and preserve critical elements of the local heritage, culture, and economy. Well-managed open space programs protect a community's natural green infrastructure, providing places for recreation, preserving important environmental and ecological functions, and enhancing quality of life. This is a special permit by the Planning Board that may be granted in any residential district.

STEPS TO CONSIDER

One of the key questions a Master Plan can help address is the geographic balance of growth and preservation. The Master Plan's land use strategy and Auburn's Zoning Bylaw should align so the future land use vision can be implemented through specific changes to the bylaw. If the two are not aligned, the changes desired by Auburn residents are unlikely to come to fruition. The Master Plan process explored with residents what types of development may be desirable in the future, and locations that may be appropriate to accommodate those types of development. The zoning bylaw should serve as the implementation arm of the Master Plan's land use chapter. The zoning bylaw is a reaction to the development patterns and issues of the last fifty years in Auburn. The Town has seen a substantial amount of development, particularly single-family homes in low-density subdivisions. If the future of the town is to push development in a different direction, the zoning bylaw needs to be updated to reflect that. For example, if there is a desire in town for smaller lots, clustered residential development, inclusionary zoning to help with housing affordability, mixed-use development in key activity centers and along travel corridors, and accessory dwelling units to support multi-generational living, the zoning bylaw would need to be updated to reflect those types of development. The existing zoning bylaw does not allow for some

of these development outcomes as it is currently written today. The key corridors of Routes 12 and 20 are a patchwork of zoning districts that result in auto-oriented, single-use, stand-alone structures with little integration across parcels or with the surrounding environment. The Master Plan process should identify the future vision for these corridors at a high level. Would it be possible for some of the existing business, industrial, and corridor development districts be consolidated to form a more consistent zoning approach along segments of the corridor? What uses are most appropriate along these corridors, and does that depend on where one is along the corridor? How does the intensity of the uses change as one travels from west to east along Routes 12 & 20? In 2019, a zoning bylaw diagnosis will be conducted with funds from District Local Technical Assistance; the town will be working with CMRPC to analyze the zoning bylaws. The zoning diagnostic is a comprehensive examination of all sections of a towns zoning bylaws. The diagnostic will target inconsistencies, redundancies and any errors or omissions. This is a vital first step to updating and modernizing Auburn's zoning bylaws, many of which were enacted decades ago and might require updates to work with modern zoning practices and new and evolving regulations.

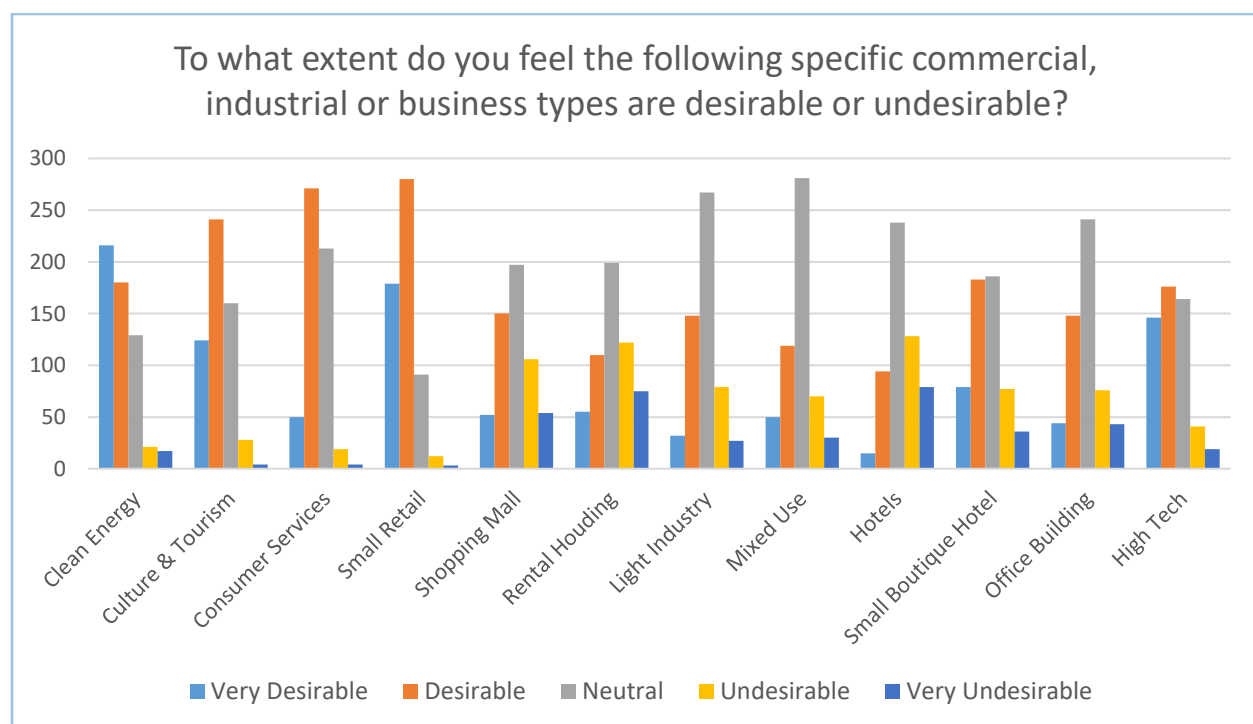
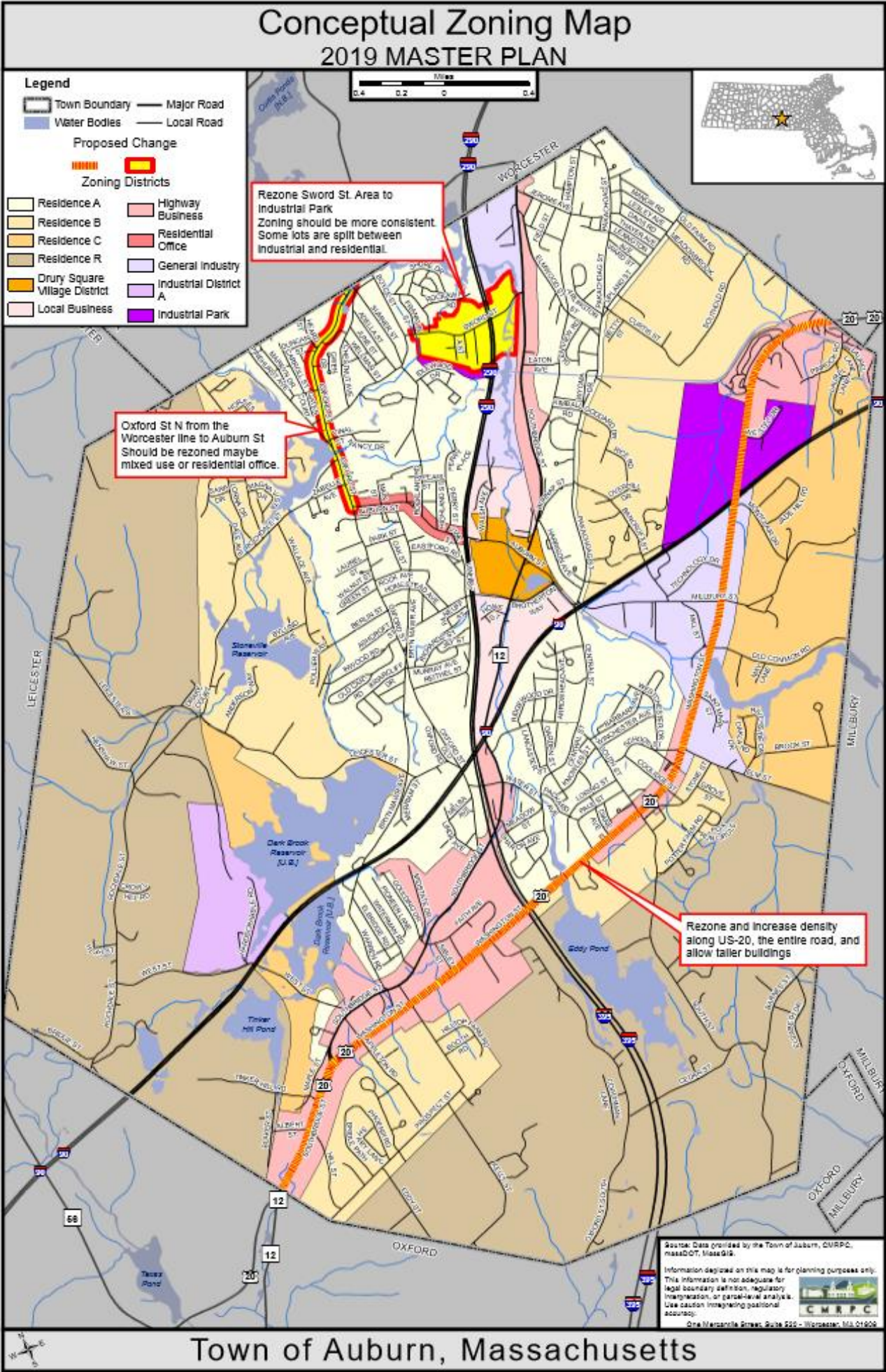


Figure 7. Master Plan Survey



The Master Plan is an opportunity for the citizens of Auburn to think about the future. Where do the residents, business and property owners and town management see the town in 10-20 years. The rapidly changing way we live and conduct business is not expected to slow. New technology will lead to new business and the disappearance of out dated business.

The town has successfully encouraged investment in the past through regulatory changes in some locations; other areas require analysis and potential regulatory changes to ensure their continued viability. Among these areas are the existing Highway Business and General Industrial Zoning Districts. These areas do not offer the types and mix of uses or dimensional standards needed to adapt to contemporary workplace and retail environments.

LOW IMPACT DEVELOPMENT/DESIGN-STORMWATER

Low Impact Development (LID) is the design and implementation of site-level practices to achieve stormwater management goals and objectives; facilitate the development of site plans that are adapted to natural topographic constraints; maintain lot yield; maintain site hydrologic functions; and provide for aesthetically pleasing, and often less expensive stormwater management controls.

The construction of roads, parking lots, and rooftops alters the movement of rainwater so that it no longer naturally infiltrates soil, a process that typically removes contaminants. The challenge of managing the resulting stormwater can be addressed through site design and specific management techniques to ensure source control and the retention of water at the site where it falls. Although traditional engineered stormwater systems reduce flood impacts by moving water away from the site through a system of gutters, curbs, and pipes, the LID approach combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality.

LID design principles, such as site assessment of hydrology, higher density buildings, or preserved open space, can be incorporated into site planning and management measures. The LID approach employs several flexible zoning options to meet the environmental objectives of a site without impeding urban growth. The use of these options provides added environmental sensitivity to the zoning and subdivision process over and above what conventional zoning can achieve. Auburn could support the use of design principles through stormwater regulations that prioritize natural or LID designs over traditional engineered stormwater systems. This ensures sites' impervious surfaces are minimized while the topography, soils, and vegetation features are preserved to maximize infiltration.

The Stormwater General Bylaw authorizes the Stormwater Committee to develop Stormwater Regulations. The intent of the regulations, set to be completed and adopted in 2020, is to protect

the town's waterbodies and groundwater and to safeguard the public health, safety, welfare, and environment. The increase of runoff from rain events and the melting of snow pack can lead to contamination of groundwater. Construction sites, developed land, and the accompanying impervious surfaces are major causes of impairment to water quality and decrease flow in lakes, streams wetlands and groundwater. These areas may also cause contamination of drinking water supplies, clogging of municipal catch basins and flooding. Strong regulations are necessary and required for any development occurring in Auburn.

PLANNING THE FUTURE

Auburn should remain a town that preserves and enhances its many low-scale, high quality single-family neighborhoods that is an essential part of the fabric of the community. While at the same time, the town should encourage modification of its commercial and industrial land areas to support a broader range of complementary uses near one another. These uses can be increasingly linked through circulation and transportation networks that reduce dependence on the strained roadway and street capacity. The amount of land devoted to surface parking, and aging buildings can be reconfigured through redevelopment to provide a better allocation and orientation of green space and pedestrian connections, add to the range of uses, and provide opportunities for people to reduce their use of the automobile. Adding new uses in appropriate locations and reconfiguring auto-oriented site designs to better accommodate the pedestrian and landscape environment will add value to the entire town and provide convenient locations for residents to shop, work, and enjoy the civic life of the community.

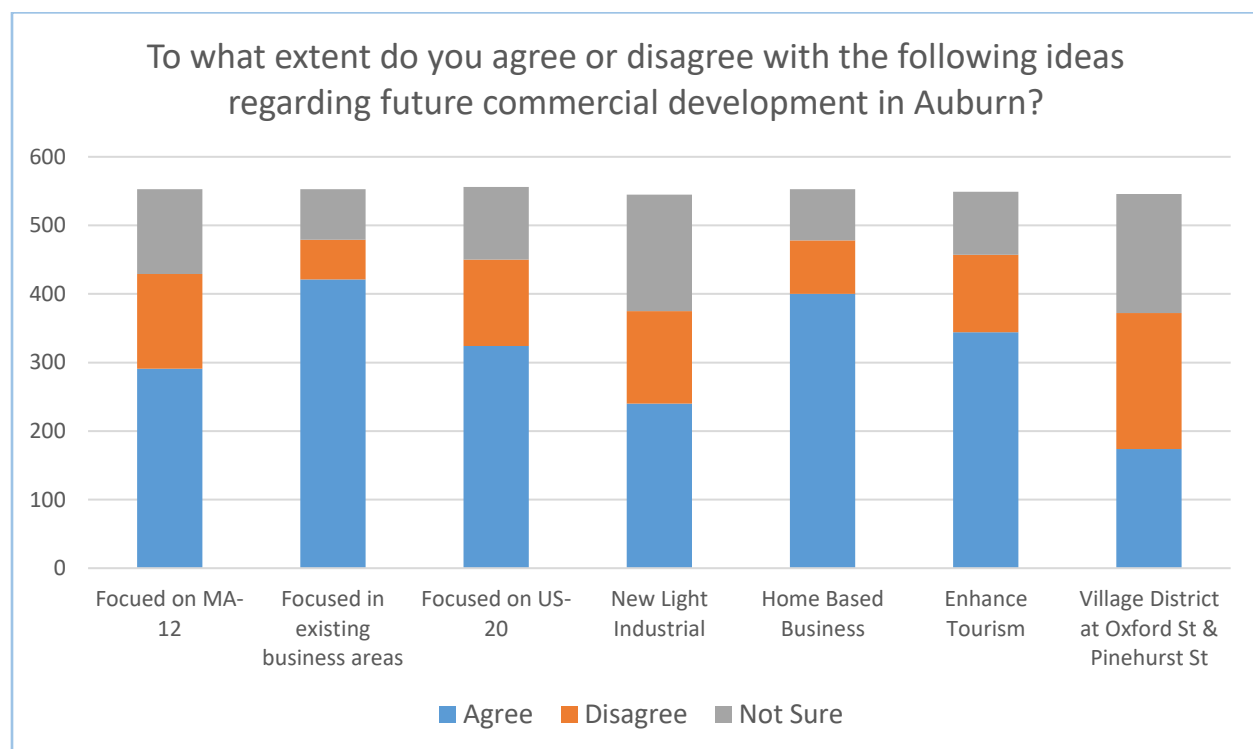
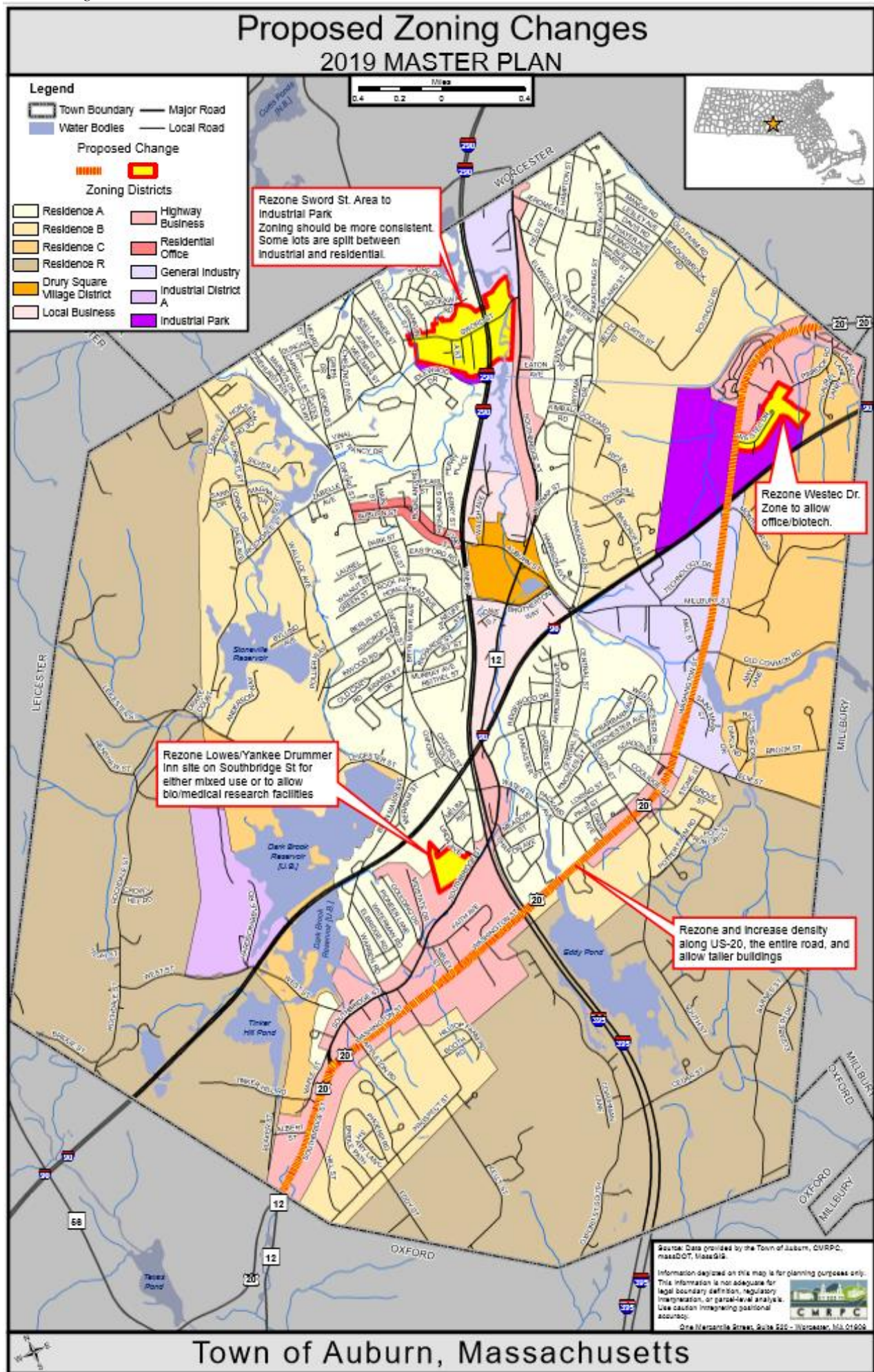


Figure 8. Master Plan Survey



The town should undertake a sequence of studies and evaluations of the potential changes to the Zoning Bylaw that may be needed to achieve the future land use plan compiled in this land use chapter. These efforts will include public participation and engage property owners and other stakeholders in affected areas. The studies and evaluations should consider which changes are necessary to provide for feasible development or desired new uses and improvements along with the management provisions to ensure that negative impacts are anticipated and then avoided or mitigated through proposed zoning amendments. The Central Mass. Regional Planning Commission is currently conducting a Zoning Diagnostic, funded by a grant through District Local Technical Assistance (DLTA). This diagnostic will analyze goals from various planning initiatives, such as the 2018 Housing Plan, and look at the towns Zoning Bylaws to determine which bylaws might be changed to better meet the goals and needs of Auburn.

GOALS

1. Allow and encourage compact, well-organized development within commercial and retail areas of town.
 - Focus new development and zoning changes along key commercial corridors.
 - Continue the Drury Square initiatives to develop a walkable mixed-use downtown.
 - Develop Pinehurst Ave/Oxford St N from the Worcester line to Auburn Street and I-290 into a gateway, amend zoning to reflect the current nature of the area, allowing low impact commerce and mixed use development.
 - Undertake a series of planning initiatives for key commercial and mixed-use nodes to establish desired visions and outcomes for each location and craft zoning to implement those desired outcomes.
2. Promote a broader mix of uses in areas where it will build upon and enhance the current use of land.
 - Identify areas of town that can support increased residential density and actively encourage denser development and redevelopment in those areas to balance needs for multiple housing options.
 - Adopt zoning that explicitly guides denser developments in allowable areas.
 - Encourage mixed-use developments that are appropriately scaled, in character with each of the unique areas, and minimize impacts on adjacent uses.
 - Adopt mixed-use zoning to create a sequence of development nodes and transition areas along specific roadway corridors.
 - Develop design guidelines for Drury Square.

3. Promote sustainable land use practices. Protect the natural landscape and resources throughout town and address the impacts of stormwater.
 - Ensure natural resource protection districts continue to serve as effective measures for protecting the town’s critical water supplies and natural habitats.
 - Update Stormwater bylaws, adopt Stormwater regulations, and develop a stormwater management program.
 - Develop Low Impact Design/Development guidelines and encourage this method of reducing stormwater runoff in all new development.
 - Identify and direct the appropriate streetscape character for each neighborhood and development patterns in town.
4. Actively work to update and modernize the zoning bylaw.
 - Work to update the Auburn zoning map. Consider simplifying and consolidating the number of zoning districts in the town’s Zoning Bylaw.
 - Create a predictable process to adjust regulations and restrictions based on feedback from the community, Planning Division Staff, Planning Board Members, and applicants.
 - Amend the zoning bylaw, regulations, and update the Zoning Map as necessary to create additional mixed-use zoning districts.
 - Look into changing the zoning at the Yankee Drummer/Lowes site, a long vacant prime location, consider mixed-use zoning as an option.
 - Review the current Zoning Bylaw and compare the current regulations to the desired vision and goals of the Master Plan. Ensure recommendations that are tied back to zoning changes are identified, prioritized, and completed.
 - Where a parcel is split between two or more zoning districts, work to change zoning to one district.
 - Consider more consistent zoning along US-20 and MA-12 corridors.
5. Work towards modernizing the residential zoning districts bylaw and the subdivision rules and regulations.
 - Update the Planning Board Subdivision Rules and Regulations; last updated in 2013.
 - Amend the allowed lot size for some residential districts to allow great density and bring many parcels into conformity.
 - Change the height restrictions currently in place for select zoning districts.
 - Review existing lot size requirements and dimensional regulations for Residential Districts to determine if they are consistent with the vision and goals of the Master Plan and desires of Auburn’s residents.
 - Determine whether consolidating the number of residential zoning districts fits the long-term strategy of housing diversity and affordability.

FACILITIES & SERVICES



Fire Department Headquarters

INTRODUCTION

New growth in a community places increased demands for services upon municipal departments. Most prominently, a significant number of new single-family homes can bring about the need to construct new expensive schools or to expand existing school facilities, which can have a dramatic effect upon municipal operating budgets and long-term debt. In addition, new residential developments may bring about the need for increased maintenance of roads, place additional burdens on the capacity of water and sewer systems, and increase demands upon police and fire departments. New residents may also increase the need for additional services by municipal departments such as recreation, libraries and senior centers.

Changing demographics can also have a significant impact on a municipality. Population increases in youth under the age of 18 may trigger the need for additional school facilities, recreational facilities, and youth programs. Increases in the senior population may dictate the need for a larger senior center, increased senior services and programs, and increased senior housing.

Additionally, new local, state or federal regulations, laws or requirements can also place increased demands and burdens on municipal services and facilities. Municipalities may need to add additional staffing capacity or equipment to comply with laws and regulations. For example, requirements for interoperability may require an upgrade to expensive radio equipment; emergency operations may require upgrades to expensive dispatch equipment that cannot be housed in current space; and additional health or building inspectors may be needed to comply with new laws and regulations. Unfunded state and federal mandates for storm water, education, and zoning can place physical and financial burdens on municipal facilities and operations that require additional space to accommodate programs and services.

Therefore, it is important to consider the ability of municipal operations and facilities to accommodate new growth. The ability of a community to pay for expanded services and facilities is affected by the regulatory environment, the economic climate, and the fiscal environment of the community, the region and the nation. On a local level, while new commercial, industrial and residential growth may result in additional tax revenue to the Town, those new revenues may not cover the cost of the additional services that are required. Capital building and equipment costs, as well as yearly operational expenses -such as the cost to educate each additional child in the school system or to maintain new roads - that result from new growth, may exceed the new revenue that is generated. Prudent fiscal planning is critical to ensure that the Town is using its limited resources as efficiently as possible and that other available resources are leveraged to the maximum.

Many of the Town's buildings were built during the Town's major growth spurt in the post World War II era. Over several decades, these buildings have become deficient in the amount and type of space provided which create inefficiencies in operations and the effective delivery of services

to the public. All of the capital needs of the Town will not be able to be satisfied in the short-term, therefore a carefully planned, well-thought out long-term strategy is needed to ensure that the Town's facilities are functional and efficient. This chapter summarizes the principal needs of the Town for capital buildings and facilities in order to set forth an agenda for future expenditures in an organized and logical fashion. Map 9 displays the location of the Town's public facilities.

The Town of Auburn, incorporated in 1778, is governed by the representative town meeting form of government. The Auburn Town Charter was amended in May of 2009. The most significant change under the Amended Town Charter was the creation of a Town Manager, appointed by the Board of Selectmen, who administers the day-to-day operations and administration of the Town (exclusive of the School Department which falls under the authority of the School Superintendent). The Town Manager supervises and directs the administration of all departments, committees, boards and offices of the town, except those elected by the voters or appointed by the selectmen, the moderator, or as otherwise provided by the Town Charter. The Town Manager has overall jurisdiction over, and is responsible for, the planning, construction, reconstruction, alteration, repair, improvement, use and rental of all town property except the property under the jurisdiction of the school committee or otherwise specifically voted by the town or provided by statute.

The provisions in the Town Charter as amended in May 2009 dictated that certain key elected positions would be eliminated at the end of their respective terms on May 19, 2011, which triggered the need to develop and implement operational and structural changes by that date. On April 4, 2011, the Board of Selectmen unanimously approved the omnibus Reorganization Plan submitted by the Town Manager, a comprehensive reorganization of municipal government, which consolidated and restructured 25 departments into 9 departments.

The reorganization plan became effective May 19, 2011 and the implementation of the sweeping changes within the reorganization plan continued throughout fiscal 2012 and into fiscal 2013. This includes the implementation of key systems and reforms throughout municipal government resulting in operational, structural and administrative systems that differ from the form of government Auburn had prior to the Charter amendments. The reorganization plan promoted efficiencies within government, promoted the sharing of resources – including staff and equipment – and streamlined decision-making to allow for quicker response and coordinated activities.

This chapter examines the status of many municipal departments that provide direct services to residents and businesses. It looks at existing conditions and identifies long-term needs of the departments in areas such as capital equipment, buildings, and technology. Auburn has been able to provide quality services while managing to keep its tax rate relatively low. Equipment and facility needs are provided to municipal departments through a predictable and orderly multi-year capital facility planning process – the Five Year Capital Improvement Plan, or CIP. Additionally, in 2015 Town administration developed a Five Year Facilities Improvement Plan. This multi-year plan addresses improvements, major maintenance and repairs to Town of Auburn municipal facilities. It is critical to maintain our town assets and, as such, the Town recognized

the need to develop a multi-year plan to invest in facility improvements and repairs that will retain municipal buildings in good condition in order to maximize their useful life expectancy.

The buildings evaluated and included in the Five Year Facility Improvement Plan are:

- Town Hall
- Merriam Building
- Department of Public Works
- Fire Headquarters (Auburn Street)
- West Street Fire Station
- Police Station
- Auburn Public Library
- Lorraine Gleick Nordgren Senior Center
- Camp Gleason
- Parks
- Cemetery
- 21 Pheasant Court (utilized by AYFS)
- 41 South Street (utilized by the Auburn Historical Museum)

The original Facility Improvement Plan created in 2015 was updated in 2018 and will continue to be reviewed on a regular basis. The Plan includes:

1. Major repairs and improvements undertaken on municipal facilities since 2011.
2. Planned improvements to municipal facilities that qualify under the Capital Improvement (CIP) Plan (items valued above \$10,000).
3. Projected improvements to municipal facilities that do not meet the criteria for inclusion in the CIP Plan, or which are going to be funded with donations, grants or through other sources.
4. Estimated costs, where available.
5. Prioritization and schedule of proposed improvements.
6. Whether the work can be performed “in-house” through the Facility Management Unit within the Department of Public Works or would be outsourced.

The Five-Year Facilities Improvement Plan FY19 to FY23 is included as Appendix E.

Funding strategies for the implementation of the Facilities Improvement Plan include a blend of the CIP Plan, bonds, the newly established Capital Fund (created through an annual allocation identified in the Town’s written and approved financial policies). In-house labor and volunteer labor (such as the Rotary Club, local businesses, the Sherriff’s Community Services Division or the Bay Path Regional Vocational Technical High School) in addition to those projects that will have to be out-sourced. As available, grant funding will be utilized to offset or replace other

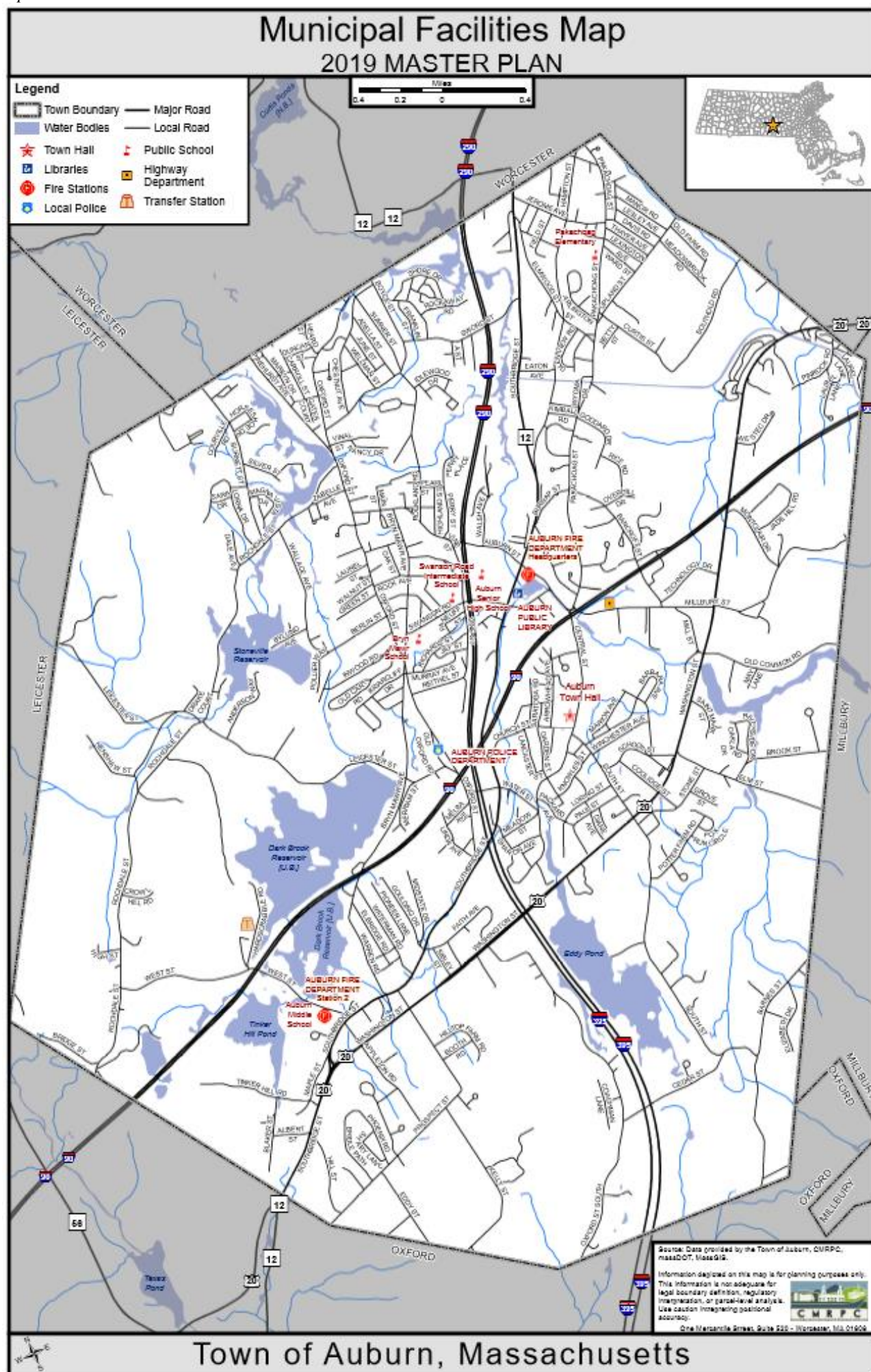
funding strategies. The Five-Year CIP Plan is revisited and amended annually to include newly identified projects from the Five Year Facilities Improvement Plan that are eligible for funding under the CIP criteria. Non-CIP eligible projects will be funded either through the Capital Fund, Free Cash (in accordance with the Town's approved Free Cash Policy), repair line items within departmental operating budgets, or grants.

Per the Town's Financial Policies, 10 percent of 2.5 percent is allocated annually into the Capital Fund as a funding strategy to reduce the Town's borrowing and thus reduce its debt service payments. In addition, Certified Overlay Surplus may be used to fund non-CIP projects. The Free Cash Policy Statement (Amended 6-26-17) for Use of "Free Cash" sets forth guidelines for determining the use of certified free cash on an annual basis. In order to utilize a portion of free cash, the Town must maintain a combined balance of Free Cash & Stabilization, commonly known as Unassigned Fund Balance, in the amount of 20 percent of current fiscal year General Fund Operating Revenue at the close of each Fiscal Year. Upon Department of Revenue Certification of free cash and provided the town has reached its 20 percent benchmark, the Town may appropriate up to 50 percent of the annual gain in free cash for non-operational expenditures listed as follows: OPEB (Other Post Employment Benefits), Stabilization, Capital Improvement Trust, Capital Purchases, Conservation Trust if statutorily adopted, Facility Improvements, or for any other one time non-operational expense. Any use of free cash under this policy is subject to appropriation approved by Town Meeting.

Town Administration may also consider proposing the utilization of a portion of new growth to fund facility improvements as well as unexpended bond proceeds, the latter of which requires Town Meeting approval. These strategies would reduce the borrowing requirements of the town, which will reduce debt service expenditures and thus, minimize the impact on the budget.

While the CIP and the Facilities Improvement Plan address the facility needs of municipal buildings in terms of renovation, expansion and upgrades, these do not address the long-term future facility needs of the Town with respect to those buildings that may no longer meet the functional and operational needs of the Town.

Map 9. Municipal Facilities



EXISTING CONDITIONS

Given that not every department has its own facility (i.e. some are co-located in Town Hall), not every department is profiled in this chapter regarding facilities. Only those departments and divisions that have a physical building are profiled herein. Other departments located in Town Hall are covered for facility needs under the Town Hall section of this chapter.



Goal

Long-term preservation of this town asset and the provision of efficient and effective services to the residents, businesses and taxpayers of the community.

Background

The 1896 Auburn Town Meeting approved the building of a Town Hall. At that time, the Town Clerk and all town officials kept the town's documents in their homes. Town business was conducted from the basement of the meetinghouse and the home of the town clerk. There was considerable concern about the danger of losing the documents in a fire. The Town Hall was constructed at a cost of \$7,721.82 and was dedicated on November 12, 1896. It was designed and built in the Queen Anne style; the architect was Edwin Chapin, M.J. Maher and Co.

In 1910, Leander Merriam, farmer and businessman, donated \$8,000 in memory of his parents, Ebenezer and Clarissa Merriam, and his sister, Lucy Merriam Hunt, who was a librarian. The gift was earmarked for a library, on the condition that it was to "be free to all religious sects, all nationalities, rich and poor alike." The library, a colonial revival style building, was dedicated on June 27, 1911. Leander died in 1924 at the age of 91. In his will, he left an additional \$5,000 to ensure the maintenance of the building and collections. The mortar stone located in front of the building was found at the Oxford gore in 1814, and was given to the town by Herbert Stockwell Merriam and Wright Nelson Merriam, cousins of Leander Merriam. The library was built in front of the Town Hall building on Central Street and is now called the Merriam Building.

Current Status/Operating Structure

The former library, the Merriam Building, houses municipal offices including the Town Manager's office and the Board of Selectmen on the main level. The basement level houses the Information Technology (IT) department and equipment. Neither the main level nor the basement level are handicapped accessible, as several stairs are required to enter the main level from both the front and side entrances. The basement can only be accessed via stairs from the side entrance. There is a very small bathroom on each floor.

The Merriam Building underwent a renovation in 2016 that included replacement of the hardwood floors on the main level, carpet on the interior stairway and renovation of the two offices in the basement. It also included the renovation of each of the two bathrooms and the reconfiguration of the space on the main level where the public comes to apply for licenses and permits, seek information, and outreach to the Town Manager and/or Board of Selectmen. The Board of Selectmen do not have any dedicated office space in the Merriam Building or Town Hall. Their file cabinet and mail slots are located on the main level of the Merriam Building. Selectmen must utilize one of the meeting rooms in Town Hall or in other municipal facilities if they wish to meet with constituents. While the form of government (Town Manager/Board of Selectmen) tends to generate much more visitor activity in the Town Manager's office, there is no meeting room space in the Merriam Building for the Town Manager other than her office, which can only accommodate a maximum of four visitors at once. Since the building is not handicapped accessible, public meetings cannot be held in the Merriam Building.

Town Hall currently houses several municipal departments, including the Finance Department, the Town Accountant's Office, the Assessor's Office, the Treasurer/Collector's Office, Human Resources, the Town Clerk's Office, the Veteran's Office and the Energy Manager's Office, all located on the first floor. The second floor is home to the Department of Development and Inspectional Services, which consists of the Building Inspections Division, Public Health Division, Animal Control, Economic Development, and Planning. The second floor also has two public meeting rooms: the larger room is referred to as the Board of Selectmen's meeting room (which serves many other boards and commissions as well as town events) and the smaller room is referred to as the Planning Board room, which also serves as meeting space for several boards and committees as well as internal meeting space for municipal departments. The lower level, or basement of Town Hall, has a small kitchen area for employee breaks and is used for small meetings when the two second floor rooms are unavailable. The basement also houses storage space and the vault where original documents required under the law are stored.

The third floor level is broken into two sections, which are not connected. The section in the front of the building, accessible only by stairs, consists of a small room that is used for interns and occasional internal employee meetings. The side/rear/ portion of the third floor is also only accessible via stairs from the side entrance of Town Hall. It is used for records storage.

One elevator services the basement, first and second floors of Town Hall. There are stairs leading from the side of the building to the basement, first and second floor. The front entrance is accessible via stairs from the outside and a set of stairs at the front entryway leads to the second floor as well as to the third floor, which is not handicapped accessible. The rear entrance is accessible via a handicapped ramp.

The DPW Facility Management Unit has renovated portions of Town Hall over the past few years. Renovations in some offices have included painting, new carpet, and partitions to sub-divide spaces in order to accommodate additional departments/divisions. The four bathrooms, two on the first floor and two on the second floor, are scheduled for renovations in FY20.

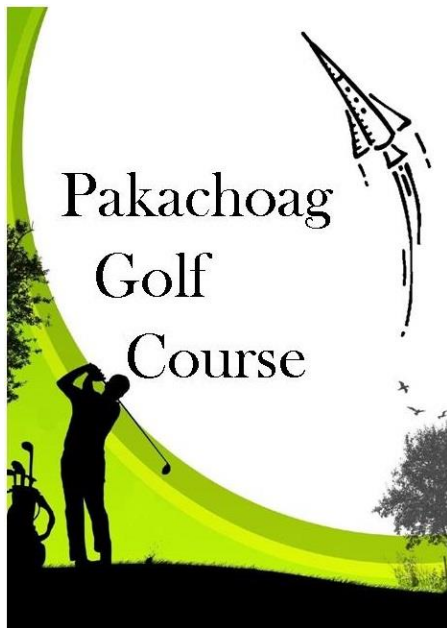
Town Hall and the Merriam Building do not provide efficient space for the current operating needs of the departments located within the building. Town department and division operations, and requirements for technology, equipment and storage, have changed drastically since the building was constructed in 1896. The interior space does not have the capacity to support any increase in staff nor any additional equipment. The renovations have reconfigured the space to provide as much space as physically possible. Some departments are squeezed into offices that have no additional opportunity for expansion. The second floor public (non-office) spaces are inefficient for public meetings. The largest room, the Board of Selectmen's room, has very high ceilings and one of the walls is a partial wall, rising only about 10", so the sound quality on the room is affected. It is very difficult to hear while in the Selectmen's Room if there are people in the hall abutting the room. Further, the room cannot be used for any private meetings due to the partial wall separating it from the hallway area. Although it is the largest meeting room in Town Hall as well as in any municipal building, the room occupancy is 113. The Town is therefore limited in its ability to hold or host meetings that exceed 113, and when tables are needed for conference room type space, that number drops substantially. The Planning Board room across the hall from the Board of Selectmen's room is very small. The table seats up to 10 while chairs at the back of the room seat 15. The room occupancy is 37. This makes for challenging public meetings when numerous abutters and applicants attend, often forcing the overflow crowd into the hallway.

The first floor of Town Hall holds many departments and divisions. Despite renovations to create more efficient space, the overall square footage for office use is maximized and no expansion of those offices can be accommodated within the current structure.

In order to continue to provide services to the public and to operate efficiently and effectively, as well as to meet state and federal mandates for storage, inspections, staffing and other municipal operations, the Town should give serious consideration to constructing an addition onto the Town Hall. Consideration should also be given to connecting the Merriam Building with Town Hall on the north side and creating handicapped accessibility to the Merriam Building. A two- or three-story addition on the south side of Town Hall could connect the original building to the new addition. Any addition should have an elevator which would allow access to the third floor.

The Annual Town Meeting in May 2019 to approved Local Cable Capital Funds to renovate the Camp Gleason building to accommodate additional and much needed meeting and event space. This will alleviate the pressure on the two meeting rooms at Town Hall and provide additional space for televised board and committee meetings and events. Space at Camp Gleason could also be rented when not in use by the Town to generate additional revenues and provide space for community groups to meet that are currently utilizing limited library or senior center function space.

PAKACHOAG GOLF COURSE



Goal

Long-term preservation of this town asset and the provision of quality golf opportunities for the Auburn community and the general public.

Background:

Pakachoag Golf Course is a 54- acre course that opened in 1932 and became a municipal public course in 1981. The 9-hole regulation length golf course is a par 36 course that features 2 sets of tees for different skill levels. The golf course is located off Pakachoag Street at 15 Upland Street and offers spectacular views of the region from its hilltop location. There is a clubhouse and small pro shop on site, golf cart rentals, parking adjacent to the course and across the street on town-owned property. There is also a large barn-type structure and a garage that was recently reconstructed on the parcel across the street.

Before becoming a 9 hole golf course, Effie Ward's property was a historic site where Robert Goddard launched the first liquid rocket on March 16, 1926. The site became a golf course in

1932. The actual launch site of Goddard's rocket is a National Historic Landmark located at the midpoint between the tee and the green on the ninth fairway.

Current Status/Operating Structure

Historically, operation and maintenance of the facility were contracted out to a private management company. However, after thorough analysis and evaluation by town administration, and with a vote of approval for certain appropriations for capital and operations from Fall Town Meeting in October of 2015, the Town assumed all operations, management and maintenance of the Pakachoag Golf Course on January 1, 2016. The functions of the golf course were placed under the Department of Public Works (DPW). The golf superintendent and assistant superintendent report to the Director of Public Works or his designee to oversee daily operations and course maintenance. The DPW is responsible for all facility improvements. The Town's Director of Recreation and Culture has an office at the golf course and oversees all part-time seasonal employees as well as developing and scheduling tournaments, leagues and programs. The Pakachoag Golf Course Advisory Committee was established and its three members appointed by the Town Manager to make recommendations to town administration on policies, fees, events, and promotions.

The Town entered into a six-year lease/purchase plan for new golf carts to be rented to patrons in the spring of 2016. The Town established an Enterprise Account to fund the operations of the facility.

During the winter/spring of 2016, the Town invested in capital improvements and maintenance to the facility to protect the golf course as a valuable town asset. Golf course improvements included the installation of approximately 800 feet of sub-drain to alleviate flooding and drainage issues, in addition to tree removal and trimming, reconstruction of a stairway on the fourth fairway and regraded cart paths and crossings. The construction of the detention basin was also completed. The project was designed to alleviate flooding of private property along Meadowbrook Road, and was funded in part by FEMA's Hazard Mitigation Grant. The golf superintendent worked with contractors to repair the well pumps, electrical, and irrigation system. DPW's Facility Management Unit completely renovated the Clubhouse with new flooring, paint, furniture, and bathroom renovation. A new addition to the rear deck was constructed to provide golfers with an enlarged exterior seating area.

Long-Term Plan:

The Pakachoag Golf Course, like all of Auburn's municipal parks and recreation facilities, can be a tremendous asset to the Town if properly maintained and managed. As such, it is critical to continue upgrades and maintain the entire facility to make it attractive to users. The Town has a multi-year plan to improve the facility through strategic capital investments and ongoing maintenance, professional management, and enhanced marketing of the Course. This strategy will

require an investment, but is necessary in order to plan for the long-term success of the golf course and preservation of a beautiful town asset. Short-term and long-term improvements (spread over Years 1 through 6 and Years 7 through 10) include repairing the tees and greens, installing a new well, installing a new electrical supply, new irrigation system, and continued clubhouse renovations.

It was originally anticipated that the cost for the Town to undertake all operations, management and maintenance of the Course might initially exceed the revenues generated from fees during the period from January 1, 2016 to June 30, 2016. Fortunately, since the Town assumed all operations, maintenance and management, each fiscal year has generated a net profit. If this trend continues, once the equipment is paid off after Year 6 and initial investment costs into the facility are complete, the Town should realize even greater net revenues. The Town does recognize, however, that in the long-term additional capital investments will need to be made.

The presence of a strong local golf course can have positive economic impacts on the local economy. In addition to providing residents with a beautiful golf course, attracting golfers to the Pakachoag Golf Course would bring additional visitors to the Town during the golf season. The potential for spin-off activity in Auburn will benefit local retailers and restaurants as tournament participants and attendees visit local stores, food and drink establishments.

AUBURN PUBLIC LIBRARY



Existing Conditions

Under the Town Charter as Amended in May 2009, the Town Manager oversees the operation and administration of the Library. The Library Director directly reports to the Town Manager. An elected Board of Trustees governs policy direction for the public library. There are six trustees, each elected to 3-year terms. Including the Director, the Library has a full time staff of nine employees and four part time employees. The Director outlines policies for adoption by the Board and is responsible for day-to-day leadership, management, personnel, and operations.

The existing Library is located at 369 Southbridge St. and was built in 1967. The facility contains approximately 14,500 square feet. The Library offers a variety of cultural and educational services for local residents. These include an adult book discussion group and two knitting groups, as well as an ever-increasing variety of programs for children, families, and adults. The Library offers services that seek to provide cultural enrichment for the community and offer residents of all ages access to print and electronic media. The Library also offers an extensive museum pass program, currently offering more than 40 different museum passes to residents of Auburn and surrounding towns, an increase from approximately 7 passes in 2006. In FY2018 1,496 patrons benefited from borrowing passes offered by the Library, saving patrons approximately \$17,950 in museum entry fees. The Library also provided free wireless computer access to the general public at a rate of 4,672 sessions per year and provided access to Library computers to a total of 11,472 patrons per year. In 2018 the Library was the first library in the CWMARS system to adopt MESH wireless technology, allowing for significantly increased speed and bandwidth throughout the library, resulting in zero dropped calls or lack of internet connection compared to complaints of dropped or inaccessible connections at an average of seventy issues per week before the upgrade. The Library is open 54.5 hours per week throughout the year and does not reduce operating hours during the summer months.

According to the state Board of Library Commissioners, Auburn had a total circulation of 122,489 items in FY2018, of which print materials exceeded 78,700 items. The Library loaned approximately 11,900 items, and in turn received over 17,921 items, ensuring full compliance, participation, and benefits from resource sharing with other certified Massachusetts libraries. Library staff answered a total of 17,706 general reference questions (excluding routine transactions) in FY 2018. Total attendance at the library in FY2018 was 71,243. Approximately one in seven patrons entered the library for a program in 2018, which also served to encourage perusing other resources such as books and the museum pass options.

Total attendance at Library programs for children, family, young adults, and adults in FY2018 was 9,761. Over the previous three fiscal years, FY2016, 2017, and 2018 under the revised design of the library model, the Library held 1,762 programs, an average of 587 per year, compared to the yearly average of 334 for the previous ten years, from 2006 – 2015 (inclusive). Program attendance totaled 22, 916, an average of 7,639 for each of FY 2016, 2017, and 2018, compared to program attendance for the 10 years from 2006 – 2015 of a 3,356 yearly average. The Library continues to expand its program offerings from external presenters and well as expanding in-house literacy and culturally based programs for children, young adults, adults, and families and will expand its technology education options and Young Adult resources and services.

Auburn currently holds approximately 147,500 items, including e-content; about 9.21 items per capita. FY2018, Auburn appropriated a total of \$37.87 per capita through its personnel and consumables budgets.

Existing Needs and Deficiencies

The existing facility is under-sized for a community of over 16,000 residents, and additional space has been a long-standing concern of the Board. Libraries are increasingly about encouraging social connections and space for people, not things. The community would benefit from an expansion to the current building, mainly in the areas of children's services, the magazine reading section, and an additional meeting room or individualized study or meeting spaces for the public.

Although the Town Meeting members voted in support of a new library on May 1, 2008, the voters in the May 15, 2008 election voted not to support requesting funding from the Public Library Construction Grant from the Massachusetts Board of Library Commissioners (MBLC) which stopped the possibility of building the new library. The cost for the new Library in 2008 was estimated at \$14 million, with \$3.6 million expected to come from the MBLC. There have been significant changes in increased library use and programs since 2008 that would benefit from a new library space or expanded library space at our current location. The Library Board of Trustees has looked into the expanded space option, but it would be premature to estimate costs at this time. There is a continued need for space for increased programming for families, children and adults, spaces for community programs and meetings and space for using and teaching technology and reading areas. Recognizing that Auburn has many competing needs for funding, the next proposal for Town and State funding will be determined when the Library Strategic Plan for 2020-2021 is completed.

AUBURN FIRE DEPARTMENT



Existing Conditions

The Auburn Fire Rescue Department is directed by a Fire Chief appointed by the Town Manager as a "Strong Chief" in accordance with the Town Charter and the provisions of Chapter 48, Section 42 of the Massachusetts General Laws. The Department currently consists of 38 career firefighters and 7 call firefighters. In addition to the Fire Chief, the full time department consists of a Deputy

Fire Chief in charge of operations, two staff fire prevention captains, four line captains who serve as Shift Commanders, four line lieutenants and 26 firefighters. The Department is responsible for fire suppression and prevention, paramedic level ambulance services, hazardous materials response, technical rescue operations, including underwater rescue and recovery, high angle, confined space, trench and structural collapse rescue. In addition, the Department's Bureau of Community Risk Reduction operates five separate divisions that include, Fire Prevention, Public Education, Community CPR, Pre-Fire Planning and Community Health and Wellness.

Facilities

There are two buildings under the care of the Fire Rescue Department. Fire Headquarters and one substation, called Station 2, or the "West Street Station". Headquarters was built in 1964, and is fully built out within the current confines of the structure. Station 2 is a building shared by the School Department and Fire Rescue Department. Station 2 is the former Randall Elementary School. The building opened as an unmanned fire station in 1985 to house ancillary equipment and to serve West Auburn. The station has had very few improvements to the building since its opening in 1985. The station is currently staffed daily with an Engine Company and a Paramedic level ambulance. Station 2 plays an integral role in providing timely emergency response to the west end of Town. On November 27, 2018, the Town signed a contract with Tecton Architects to conduct a feasibility study for both fire stations and the police station. The completed report is expected to be delivered to the Town before the end of 2019. Although the study has not been started as of the writing of this report, it is clear at this time that the Fire Rescue Department is in dire need of additional space and newer facilities. Neither building in which the department is currently operating were either designed to be a fire station or were not designed to house full time staff. The modifications made to the buildings over the years have reached their limits and the buildings are out of room and still lack many amenities required for a modern fire rescue building that houses full time personnel, including male and female employees.

Fleet

The rolling stock within the department is in good condition as the Town's Capital Improvement Plan (CIP) has allowed equipment upgrades in a timely manner. The creation of the Town's Fleet Maintenance Unit within the DPW has also been a tremendous asset in allowing our fleet to be well maintained and to deal with any fleet issues that arise in a very timely manner. The Town should continue its efforts with the CIP to keep state of the art, reliable equipment in service. The investments made through CIP assist in the reduction of breakdowns and keeps unreliable and unsafe equipment out of service. As the town continues to grow and seeks to increase commercial growth through economic development, a second ladder truck or a "Quint" should be considered to serve the west end of town from Station 2.

Call Volume & Staffing

The departments emergency call volume continues to increase on average by 1.5 – 2 percent annually. In a ten year time frame from 2007 – 2017, the Department saw an increase of 657 emergency calls. The ten-year average for that period was 3,531 emergency calls annually. 2018 will again see a record setting number of emergency calls. Even with the rising number of emergency calls and other non-emergency activities and programs that the Department is now responsible for, there has not been an increase in per shift staffing since 2006. Although more full time firefighters have been added to the Department in previous years, those positions allowed the department to cover the station around the clock with a 24-hour operation. Prior to 2003, there was no weekend coverage around the clock. With that said, the fire chief still considers the department understaffed. The department's current minimum staff is five firefighters and a shift commander, for a total of six members on duty. That has been the same minimum staffing since 2001. It should be noted that in fiscal year 2019, town administration initiated steps to increase the Department's minimum shift staffing from six to seven members. Two additional firefighters were hired on January 1, 2019 and it is the hope that two additional firefighters will be budgeted in fiscal year 2020. This would bring each of the four full time groups to nine members at full staffing which increases its minimum to seven. The Town should continue to evaluate its shift staffing and minimums. Because it took many years to address the increase in staffing and minimums, ideally the department should be staffed at ten full time members per shift with a minimum of eight. This would allow at full staffing two Paramedic level ambulances, one three person Engine Company out of headquarters, one two person Engine Company out of Station 2 and a Shift Commander in the command vehicle. At the minimum staffing of eight, the command vehicle and the three person Engine at Headquarters would be reduced and that would allow the department to staff two, 2 person Engine Companies and the two Paramedic level ambulances. Current call volume and department activities warrant this level of staffing today. Even at a shift strength of 10 members per shift, the Department still does not meet NFPA Regulation 1710, a guideline which recommends that an engine be staffed with four firefighters.

Existing Conditions

The Auburn Fire Rescue Department is currently in good condition. Strong leadership, trained and capable command staff and a highly trained group of firefighters, Paramedics and EMT's set our department apart within this region. The Town continues to support the department with equipment and personnel to carry out daily missions. The Town should continue, as it has always done, to look to make further investments to improve the operations of its Fire Rescue Department to keep pace with technological advancements, changes in emergency operation best practice and societal changes.

AUBURN POLICE DEPARTMENT



The Master Plan report submitted by the police chief as it pertained to the Auburn Police Department in 2006 detailed the existing conditions and the concerns at that time of the chief by writing, in part:

“The Chief of Police commands the Auburn Police Department, with a complement of 30 sworn officers, including a lieutenant, 6 sergeants and 23 patrol officers. In addition, 11 civilian employees who work in administration, communications and maintenance. The main function of the Auburn Police Department is to protect and serve the residents and visitors to the Town of Auburn”.

The most pressing issue facing the department is a lack of personnel. The Police Chief believes that Auburn does not have adequate personnel resources to meet existing demand, and even greater resources will be needed in the future. The FBI recommends 2.7 police officers per 1,000 persons, which would set a standard of 43 police officers for the approximately 16,000 residents of Auburn. However, the Chief believes that the true complement for Auburn should be higher given its position as a retail and employment center and the accompanying demands this places on his staff, including store crime, high accident rates from turning movements, and large number of hotel units.”

Since that document was drafted, Auburn Police personnel, town employees and members of our community have suffered trauma and sadness with the 2016 line of duty death of Officer Ronald Tarentino Jr. In 2017, another officer was feloniously assaulted and gravely injured and an officer involved shooting in 2018 resulted in the death of a wanted, armed criminal. Law enforcement continues to be one of the most dangerous professions in America. In 2018, there were 148 officer fatalities nationwide, which realized a six percent increase from the year before, an average of three line of duty deaths, per state, per year. Auburn has not escaped those troubling statistics.

In 2018, the Auburn Police Communications / Dispatch center received in excess of twenty-one thousand calls for service. Notwithstanding the City of Worcester, the department receives on average one-third more calls to 911 than our surrounding communities. As MassPort continues to

develop the Worcester Airport and anticipated future development in Auburn and the City of Worcester, the calls for service and calls to 911 will increase, putting more strain on our public safety personnel.

Residential and commercial growth, combined with Auburn's unique and complex geographic location, increases the workload. The citizens of Auburn, Town Meeting members, Board of Selectmen as well as other local and state political leaders have been extremely supportive of the Department's determination and commitment to provide exemplary public safety services and to accomplish the Police Department's mission.

The current staffing level is forty sworn officers, twelve communications specialists (nine full-time, 3 part-time), a civilian communications supervisor along with other civilian support personnel. The Department has expanded many of the current programs and assignments based on our evolving public safety needs.

As previously stated, the Auburn Police Department strives to provide exceptional public safety services to Auburn's citizens. The Police Chief and town administration have supported the communications center remaining in the Department's facility with unrestricted public access, staffed by communications specialists 24 hours a day. The Auburn Police Department handles all the emergency intake calls for Police, Fire and EMS.

In 2006, the Police Chief anticipated that our staffing levels would need to exceed the FBI recommendations and that continues to be true today. Lacking any natural land barriers and proximity to the City of Worcester, the Police Department realizes many of the same crime concerns such as gang violence, narcotics, human trafficking and a myriad of traffic safety issues that spill into the community.

Existing Conditions and Deficiencies

As noted in the 2006 Master Plan, "the Auburn Police Department Headquarters was built in 2000, with funds from the sale of the old station and a community policing grant. While it was adequate for the department's needs at the time, no accommodation was made for expansion. Parking is inadequate just 5 years later, for example, and while showers and locker rooms are suitable for current personnel, there is no room for new officers, nor is there an exercise room or equipment".

The current headquarters facility has a small, ill-equipped training room, which doubles as a roll call area, community room and makeshift Emergency Operations Center in the case of a town wide emergency management crisis. A small area designated as a break room/kitchen was essentially cut in half, removing a table to provide room for records storage. As there was no longer a place to eat, the officers have now moved to the EOC/Community room, an area not designed for this purpose, for meals during their often-time long shifts.

As noted above, the existing structure was completed in June of 2000. At that time, the only monitoring system was an analog (utilizing needle pointers) alarm system for the sewer department and school's burglar alarm. At that time, no provisions were made for the current computer systems in the entire facility. Before they sheet rocked the walls, the then-police chief personally ran one Cat 5 computer cable to each room in the building that would be able to support the few computer monitors on that system.

No one anticipated or could have anticipated the explosion of technology that would happen in a few short years. Cell phones with still cameras and video capability coupled with the capability to connect to 911 PSAP to provide location via GPS coordinates. The internet, security cameras, TV/flat screen monitors, in-cruiser computers, court-mandated interview recording, and so forth. These technologies would come with further complexities in storage and management of data as well as security. These advances, while welcomed and have led to many crimes being solved, have now completely overwhelmed the entire building. Advances in technologies are still coming. It is not hard to see a future that involves body worn cameras for the officers and dash mounted video for the cruisers. There is no place to locate the storage framework or manage the stored data internally.

Currently there are multiple computers with their monitors and recording devices in almost every room. The walls in dispatch are covered in monitors, so many in fact, that they are almost covering every usable square inch of wall space. Those monitors are due in part to fiber optic cables being run throughout Auburn allowing dispatch video access to approximately 100 Town controlled cameras (schools, parks, Town Hall, DPW, etc.) for security purposes. Each has recording and storage devices as well. The cabinets under the dispatch console are full with computers. It is a dusty and hot location at foot level, not designed for computer hardware or easy maintenance access. The original coat closet for dispatch personnel was repurposed and a high-tech routing and switching system was placed in there to handle the computer lines. Cables were run across and through the entire building like strands of spaghetti at random and without regard, as there were no traces or routing passages pre planned in the entire building. The computer systems have mostly been tucked into any available space. No dedicated temperature controlled "computer room" was even conceived of at that time. No space is available to create one at this time. The Community Room has been repurposed as the Emergency Operations Center for the Town and technology has covered all four walls and continues to expand. Parking for the community room and police station is insufficient. A member of an Auburn Police Citizen's Academy was hit by a motor vehicle crossing the street walking to the academy class. Even the booking room has computers and monitors for electronic fingerprinting, recording bookings and for recording information and biographical data of hundreds of prisoners that are processed each year. The booking counter is essentially a kitchen counter with under storage repurposed for computer equipment. Again, that technology was not considered as the facility was conceived but the needs of the town and the department continues to expand.

The deficiencies are far more numerous than this summation can cover however, one of the most grievous shortcomings is that four officers at a time share a report room that is no larger than an office cubicle, and each gets a file drawer to manage their cases. The officers have heavy caseloads, the work they do is serious, and the space is woefully inadequate.

The Department currently houses the \$1 million-dollar NEXTGEN 911 system in a small room originally designed for attorneys to meet with the prisoners near the booking room. The room lacks the space and environmental conditions needed for housing such technical and critical hardware. Since the 2006 Plan, the Auburn Police Department has experienced two circumstances of burst pipes both with the fire suppression systems and general plumbing in the third floor. Both catastrophes realized thousands in damage and compromised written records, internal electrical and computer systems. One of the leaks almost flooded the room with the million-dollar NEXTGEN 911 system.

The Commonwealth of Massachusetts has demanding public records laws with regards to records retention. The Department are facing a storage crisis. Many of the records produced in policing are required to be kept indefinitely; efforts have been taken to purge what is allowed by law. The storage area for records is nearly full and other areas of the building are being used to store paper records. A small area designated as a break room / kitchen was cut in half to provide room for records storage.

The current facility is plagued with maintenance and repair issues, most significantly the poorly designed HVAC system which costs between ten and fifteen thousand dollars annually for repairs. It has been a constant battle dealing with weapons and evidence storage due to moisture and mold issues. Employees working in that environment have complained. Due to inadequate insulation and the technical difficulties of making improvements as a result of the architectural design of the station, it remains a constant battle for adequate temperature control and to avoid freezing pipes in the winter.

In 2018, the Town of Auburn sought the services of a qualified architectural designer within the meaning of and in accordance with M.G.L. c.7C, § 44-57, to provide a facility evaluation, spatial needs assessment, site and conceptual building plans, floor plans with exterior conceptual designs and professional cost estimates related to the Auburn Fire Headquarters, Fire Station #2, and the Auburn Police Station. After a Designer Selection Committee was appointed, interviews were held with several bidders and TECTON Architects was eventually selected to move forward with the feasibility study. This endeavor was the result of the collaborative efforts of the Town Manager, Board of Selectmen, Town Meeting Members and department heads all of whom realized this needed to be done to ensure the integrity of our aging and inadequate public safety facilities.

Since selected, TECTON Architects have since held lengthy programming sessions with key police and fire personnel to begin their feasibility study and provide a detailed report sometime in the fall of 2019.

Facility upgrades, most importantly space for personnel, technology and records storage is an issue that faces the Town of Auburn and needs to be addressed imminently.

Capital needs of the department are met through the Capital Improvement Plan (CIP). Equipment such as vehicles, weapons, radio and dispatch equipment have been purchased or are scheduled for purchase.

The Police Department has expanded many of the current programs and assignments based on our evolving public safety needs. Although our staffing levels have increased incrementally over the past several years, our minimum staffing on the streets has remained the same due to critical administrative assignments such as court officer, school resource officers, detectives, etc. The current deployment remains one patrol supervisor (sergeant) and three patrol officers as it has been for the past two decades. During a critical incident such as a serious motor vehicle crashes or crimes in progress, our resources are quickly exhausted. Moving forward, the Police Department is in need of additional patrol personnel to increase our minimum staffing to at least five patrol officers and one supervisor per shift.

In summation, responsible and safe staffing remains one of the most pressing issues facing the future of Auburn Police Department. Safety of the officers, citizens and visitors of Auburn cannot be compromised. In the future, Auburn Police should consider additional line and supervisory positions to provide quality service with professional leadership and oversight at all levels.

INFORMATION TECHNOLOGY DEPARTMENT

Existing Conditions

The Department is generally responsible for the installation, maintenance, repair, security, and direction of the Town government's computer hardware, software, and networks. Additional responsibilities include systems such as VoIP telecommunications, operations, support, websites, and social media. The Department has a full-time Director and a part-time Assistant to the Director.

The budget for the Department has increased in recent years, due to growing use and need of technology resources. The Department has implemented a 5-year replacement plan for workstations, laptops, and servers. Computer hardware is in good working order. Following the replacement plan implemented, hardware should stay relatively up-to-date with recent trends.

The Town was awarded a \$28,000 IT Grant for online permitting from the State's Department of Administration and Finance through the Community Compact Program to increase operational efficiency, create a user-friendly system, and enhance transparency for building permits and online dog licensing. The system was developed and commenced in 2018. This enables residents, contractors, and vendors to apply for and track progress of their permits and licenses. The Town of Auburn can collect permit and license fees through the new online payment system. This project also equipped the Town's inspectors with mobile tablets, which allows them to conduct and

complete inspections on-site, without requiring them to return to the office to complete the documentation and paperwork process. The on-line permitting system creates better access to the services of local government, as it allows residents, contractors, and vendors to apply and complete applications online, at any time of day, through any internet connection. They can also track the progress of these permits and licenses, on demand, simply by checking the site.

Town administration launched its new Financial Transparency Center in 2018 in partnership with ClearGov, a municipal transparency and benchmarking platform. This new tool provides taxpayers an easy-to-understand, visual breakdown of Auburn's finances, as well as insights into the Town's demographics. ClearGov helps local governments communicate and operate more effectively and efficiently through a unique fiscal clarity and insights platform. Like Auburn, local governments collaborate with ClearGov to communicate their financial performance in an effort to build citizen trust and participation through transparency. Town Administration also uses many internal administrator tools available through ClearGov internally for various budgeting and planning activities. Auburn's Transparency Center provides detailed revenue and expenditure breakdowns of the General Fund, as well as budgeted funds and data on the Town's debt. The new Financial Transparency Center enables citizens to easily view the breakdown of the Town's revenues and expenses and demographics. It allows taxpayers to see how their tax dollars are spent and provides a better understanding of the fiscal operations of the Town of Auburn. By launching this site, Auburn has enhanced its fiscal transparency and accountability to the public. It also provides a user-friendly mechanism to access the Town's revenues and expenditures and break down that data by department and line items.

Town administration developed and implemented a multi-faceted, overall communication strategy to enhance outreach and communication to the residents and businesses in Auburn. This strategy includes Social Media (Facebook and Twitter), YouTube, The Auburn Account Quarterly Newsletter, Auburn Local Radio 1610 AM, CodeRED (Emergency Communication System, Weather Warning, Mobile Alert, and Community Notification System), the Town's web site, Auburn Cable Television, public service announcements, electronic Town updates, School Department email announcements, electronic billboards, and local media outlets. The communication strategy enables town administration to effectively communicate with residents and businesses on all issues such as emergencies, community events, programs, initiatives, and plans.

Existing Needs and Deficiencies

The use of older facilities lacks proper infrastructure for computing resources. Generally, network cabling could be replaced with newer cables, and rerouted back to a secured and dedicated data room. These data rooms should be climate controlled, on a generator, and utilize UPS batteries.

The amount of data being stored continues to increase. This data not only needs to be stored for access, but also backed up for security purposes. Increased storage will be needed to meet these demands.

The Town's fiber network is using aging network equipment. Replacing this equipment with newer upgraded equipment would allow more reliable and faster communication between facilities.

Staff security training to deal with phishing, viruses, ransomware, and other threats needs to be addressed. Most of the staff are cautious, but newer, enticing threats are evolving.

The Town's internet connection is sufficient for its current needs. However, as the trend pushes towards internet-based services, the connection would need to be upgraded to meet demands.

With the current trend of software as a service, we need to address if and when the Town will implement it. Considerations include the future availability of traditional software and subscription-based costs of service software.

DEPARTMENT OF PUBLIC WORKS



Existing Conditions

On May 19, 2011, Phase I of the Auburn's Reorganization Plan was enacted. This Plan was a result of the change in the Town's Charter voted in 2009, which established a strong Town Manager form of government. One of the first priorities of the new Town Manager was to establish a Reorganization Plan to improve town services. Phase I of the Town Manager's Reorganization Plan consisted of the following changes:

- All of the Town's Public Works divisions; Engineering, Highway, Sewer, Parks, Cemetery and Recreation would now be overseen by a DPW Director
- The elected Highway Surveyor position would be eliminated
- The Parks Superintendent's position was combined with the Cemetery Superintendent's position, eliminating one position and forming one Parks & Cemetery

- Superintendent. Similarly, the Parks, Recreation and Cemetery Departments were combined to form the Parks, Recreation and Cemetery Division.
- The Town Engineer's position was combined with the new DPW Director position to create a DPW Director/Town Engineer.
 - The Fleet Maintenance Unit was created. The Unit is responsible for maintaining all of the Town's rolling stock, with the exception of the School Department which remains responsible for the maintenance of their rolling stock. Previously the Police and Fire Departments were responsible for maintaining their own vehicles.
 - The Facilities Maintenance Unit was created to maintain and improve the Town's buildings.

Both, the Fleet Maintenance Unit and Facilities Unit were implemented leveraging the skills of existing DPW employees.

Existing Deficiencies and Future Needs

With the additional functions of the DPW, there has been an increased demand on DPW employees and administrative staff. The Department currently has 2 full-time administrative assistants and a part-time administrative assistant in the Cemetery Division. Consideration should be given to hiring an additional full-time administrative assistant to aid in the Highway and Sewer Divisions.

The current DPW facility located at 5 Millbury Street, which accommodates the Highway and Engineering Divisions, was constructed in 1963 as a Police Station. A maintenance garage was added circa 1970. The building that currently accommodates the Parks and Sewer Divisions at 7 Millbury Street was constructed in 1985. A separate Facilities Maintenance garage was constructed in 2019.

The building at 5 Millbury Street was constructed of cinderblock, with little to no insulation, and the existing Fleet Maintenance garage was not designed to handle the current demands of the Department. In addition, because the DPW is housed in several different buildings the functions of the Department become disconnected which complicates day-to-day operations. Funds have been allocated for improving the structures, however, the Town should consider constructing a modern DPW facility in the future.

ENGINEERING DIVISION

Existing Conditions

The Engineering Division currently consists of two engineers: the DPW Director/Town Engineer and a Civil Engineer. The Division provides technical support to all Town departments, boards, committees, and commissions. The Engineering Division also interacts with consultants, developers, state agencies, citizens groups and individuals to provide technical input and feedback as necessary. The Engineering Office, in conjunction with a separate peer review, reviews all

design plans submitted to the Planning Board. The Division is also responsible for preparing plans and technical reports for the Administration and as the Facilities Unit.

The Engineering Division reviews and inspects all subdivision roadway work and drainage infrastructure construction on private commercial sites. The Division provides professional technical guidance for the all Department of Public Works projects on a regular basis. Professional oversight of the Snow & Ice Operation as it pertains to the salt usage, including calibration of salt trucks is a responsibility of the Division.

The Town's aggressive Roadway Improvements Program is another responsibility of the Engineering Division. This includes preparing bid documents and overseeing all roadway construction. Using past maintenance records and in the field observations, the Engineer's Office developed a 20-year plan to improve all Town roads.

In recent years, the Engineering Division has been very involved with the oversight and ensuring compliance with the EPA's National Pollution Discharge Elimination Permit (NPDES), which is the result of the Federal Government's Clean Water Act. The new permit took effect in July of 2018 and will require significant engineering efforts to comply with the new requirements.

The Engineering Division maintains and coordinates all inspections of the Town owned dams and the former landfill.



Auburn Pond Dam

Existing Deficiencies and Future Needs

With the implementation of the EPA's NPDES permit in July of 2018, the demands on the Engineering Division will continue to increase significantly. The NPDES permit is intended to protect and improve the water quality of all United States waterways. As a result, this will require extensive testing and monitoring of all drainage pipes discharging from the Town's drainage system. In addition, as part of the permit requirement, the water quality of the Town's waterways will need to be improved by upgrading the Town's drainage infrastructure and implementing Best Management Practices (BMP's) on all town-owned facilities. The Engineering Division provides oversight of construction projects, public and private, to ensure compliance with this permit.

The Town will need to consider hiring an additional engineer to meet these demands. In addition, a review of the current stormwater budget of \$299,000 will need to be reassessed going forward, as improvements to the drainage system within the Town facilities and roadways are further evaluated and upgraded.

The Town has made significant investments into the Town's roadway program over the past 7 years. By utilizing these funds in addition to the Chapter 90 funds, the Engineering Division has made significant improvements to the Town's roadway system. However, if the Chapter 90 funding continues to remain level, as it has over the past several years, the Town will need to increase the roadway funding to account for the rising costs of construction and lack of increased Chapter 90 funds. Without an increase in Chapter 90 funds, the engineer's 20-year plan to improve all Town roads will be more dependent on an increase in Town Funds.

HIGHWAY DIVISION

Existing Conditions

The Highway Division currently consists of a Highway Superintendent, who also serves as the Parks, Recreation & Cemetery Superintendent and Tree Warden, one Administrative Assistant and 9 Highway employees, including one Construction Foreman, one Foreman, and seven Heavy Equipment Operators.

The Highway Division is responsible for providing a safe and well-maintained public road system that allows for efficient transportation throughout the community. This is accomplished by continuing to make general repairs to roadways including; paving, crack sealing, patching, cleaning, repairing and maintaining catch basins and culverts to manage stormwater runoff, as well as sweeping, snow plowing.

The Town's 96 roadway miles and drainage infrastructure has improved significantly over the past 7 years. This is largely due to the increase in roadway funding at the local level, which includes stormwater and drainage improvements funding.

The Division has seen a significant investment in equipment in the past 7 years, and as a result, its fleet has improved from being in fair/poor condition to being in good/excellent condition. This investment also allowed the Division to purchase a crack-sealing machine, permitting staff to perform this work in-house.

Existing Deficiencies and Future Needs

With the creation of the DPW and the additional Facilities and Fleet Maintenance Units, the DPW has seen a significant increase in workload and a limited increase in staff. Two positions were added since the creation of the Department: one employee was added to the Highway Division, and another employee was added to the Fleet Maintenance Unit, with the intent of sharing the

position with the Highway Division. However, two Highway Division positions were reassigned with the creation of the Facilities Unit, resulting in no net increase in the Highway Division employees. In order to continue with an aggressive Roadway Maintenance Program, consideration should be given to hiring additional Highway Division staff to better maintain Town roads and “Keeping the Good Roads Good”.

The Town has made significant strides towards improving the roadway system and must continue to provide adequate maintenance to its infrastructure. Every dollar spent on maintenance results in a significant savings in the future. With additional highway staff, the highway division could allocate additional time to crack sealing, permanent patching, rebuilding drainage structures, and replacing drainage pipes and culverts.

PARKS AND RECREATION DIVISION



Existing Conditions

The Parks Division is responsible for the maintenance of all outdoor recreation facilities administered by both the DPW and the School Department. The Division’s responsibilities consist of maintenance, of not only all Town athletic fields, but also the Veteran’s Memorial Corridor, traffic islands, monuments, playgrounds, and the grounds at all Town owned facilities including the Town Hall, Senior Center, Schools, Police and Fire Departments. The Division is also responsible for preparing the fields for all sporting and recreational events. Since the opening of the Pappas Recreation Complex and the purchase of the Southold Road agricultural land, the total area of grounds maintained by the Division has increased to over 200 acres. During the winter, the Parks Division staff also assist the Highway Superintendent with road treatment and snow removal.

The Recreation Division of the DPW is responsible for organizing various programs, for all age groups, throughout the year. These programs include fitness classes, summer camps, and organized sports activities, including tournaments at the Pakachoag Golf Course. Auburn’s annual events

include the Fall Festival, Holiday Craft Fair, The Independence Day Celebration, and Special Olympics Massachusetts Basketball. Recently, additional programming has been introduced including; the summer outdoor movie series, a flea market and craft fair, and the Auburn Farmers' & Cultural Market which was organized in collaboration with the Pakachoag Church and the Auburn Cultural Council.

The DPW has taken over the responsibility of operations and maintenance of the Pakachoag Golf Course on January 1, 2016. Since this time, numerous improvements have been made. These improvements include the construction of 2 new women's golf tees, one located on the 7 tee and the other on the 9th tee, clearing vegetation and overgrowth along the fairways and irrigation pond, renovation of the Clubhouse, construction of a pump house at the irrigation pond, replacement of the irrigation controls and added/replaced irrigation heads, in addition to numerous drainage improvements, including the construction of a new detention pond on the 5th fairway and sub drain in the area of the 2nd and 5th greens.

The Pakachoag Golf Course currently has one full time superintendent, one full-time assistant superintendent, and 12 part-time seasonal cashiers, one part-time seasonal groundskeeper and one full-time summer groundskeeper.

The Parks Section has five staff members, a Superintendent, a General Foreman, a Working Foreman, a Laborer and a part-time Secretary, while Recreation is comprised of a full-time Recreation and Culture Director, a part-time assistant, and seasonal employees hired on an as-needed basis.

The Recreation and Culture Director is also responsible for the operations and management of the Pakachoag Golf Course Clubhouse, located at 15 Upland Street.

Existing Deficiencies and Future Needs

As fields and public spaces are added or improved, the staffing needs of the DPW should be evaluated to sustain the level of maintenance required for each facility.

The demand for the use of existing outdoor recreational facilities has increased dramatically in the past several years, primarily from organized sports leagues. The increase in popularity of youth sports and programs has had significant impact on athletic fields. As a result, the amount of sufficient "down time" to recover from the constant use is a major concern. In response to the demands, the Town has constructed several fields using artificial turf. These new fields have improved the situation, however the future replacement costs will need to be budgeted every 10 to 12 years for each turf field.

The Pakachoag Golf Course Barn will need to be replaced and/or renovated to provide an office space for the superintendent and a work area for equipment maintenance.

CEMETERY DIVISION



Existing Conditions

The Cemetery Division of the DPW is responsible for the maintenance of Hillside Cemetery (Central Street), West Cemetery (at Route 12/Waterman Road), Center Cemetery (corner of Central Street and Church Street), and Clark-Cudworth Burial Ground (Prospect Street at Oxford Town Line). In addition to performing all maintenance and grounds-keeping activities, the employees are also responsible for interments and staging for funerals.

The Division consists of two full-time staff members (a General Foreman and a Working Foreman), one seasonal grounds keeper, and a part-time secretary. The Superintendent's position is currently shared with Parks and Recreation and the Highway Division

Existing Deficiencies and Future Needs

Hillside Cemetery is currently the main cemetery serving the community. There is presently land available in the area that will accommodate Auburn's needs for the next 10 to 20 years. However, the Town will need to evaluate options for a cemetery at a different location to serve the community in the future.

SEWER DIVISION

Existing Conditions

The Sewer Division works closely with a three-member Board of Sewer Commissioners to operate and maintain the sewer infrastructure within the Town of Auburn. Staff consists of a

Superintendent, an Operations Foreman, four Sewer Mechanics, and a Clerk. The Division operates on an Enterprise accounting system, i.e. users are charged for their sewage use and the resulting revenues cover all of the expenses of running the system. The sewage flow is calculated at 100 percent of the metered water use. This does not account for outside watering that does not result in flow to sewer pipes. Sewer customers that have irrigation systems or have extensive outside usage can install a deduct meter. Customers on wells are billed at the Title 5 sewage generation rates, for example, 110 gallons per day per bedroom. This results in very high usage figures compared to what is actually generated by most households. (Title 5 is intended to meet high demand rates for use of septic systems.) Well users can request meters to more accurately determine actual water demand.

Sewer bills are mailed out twice each year in October and March. Billing occurs one year in arrears, that is, the current bill is for the previous year's use. This helps to minimize the cost of using an outside firm (once per year rather than quarterly) but creates some confusion with customers. More frequent billing provides more timely information to the user and can lead to water conservation. In addition, since costs always seem to increase, it is hard to run the system based on the previous year's income. The Sewer Division would like to move to a more accurate metering system but the costs would be considerable.

The sewer system consists of approximately 85 miles of sewer lines and 12 sewer-pumping stations. The Sewer Division maintains sewers in about 85 percent of the Town's roads. Areas not served are primarily those in the rural areas of Auburn where hilly terrain would increase the cost of construction. At this time, there is no plan to extend the Town's sewer system to these areas. The number and type of connections are listed in the table below:

Table 4

Sewer Connections, 2017	
Sector	Number
Residential	5,534
Residential/Commercial	44
Commercial	508
Worcester Connections	58
Total Connections	6,407

Source: Auburn Sewer Division

The Town's sewage flow is treated at the Upper Blackstone Water Pollution Abatement District (UBWPAD) treatment plant on the Worcester/Millbury line. Auburn and Worcester were the two founding members of the District. The District was created to serve 11 communities with the primary goal of protecting the water quality of the Wachusett Reservoir and Blackstone River. The Superintendent is the Town's representative on the District's Board of Directors. The sewage

treatment plant was constructed with excess capacity to meet the future needs of the entire district. The plant discharges an average daily flow of 29 mgd and Auburn's contribution is currently approximately 5.1 percent of the total flow to the plant.

EPA and DEP has mandated numerous revisions to the plant's discharge permit including much stricter pollutant limits in an effort to help clean up the Blackstone River. The situation is somewhat unusual in that the UBWPAD plant is at the upper reaches of the River where flows are relatively low compared to the volume treated at the plant. During summer months, the plant's discharge is the principal contributor to the River's flow. Since the treated outfall makes up a significant portion of the River, the stricter discharge limits set by state and federal regulators will require expensive equipment upgrades to meet the new standards. The District has appealed these permit limits. However, a revised permit was issued in September 2001 that sets more stringent effluent limits for nitrogen and phosphorus than the plant was originally designed to treat. The plant was in compliance with the permit limits by August of 2009 and meeting the advanced treatment standards. This project was completed in 4 phases, with the mandated work being completed in 2009. Since the 2009 upgrades, EPA has instituted even more stringent effluent limits for nitrogen and phosphorus. The total cost of the upgrades was in excess of \$150 million and was funded by low interest loans (percent) through the Massachusetts Water Pollution Abatement Trust over a 20-year period. Operating costs of the upgraded facility are expected to be similar to the current costs; however, payback of the notes will increase the operating budget considerably. Individual users will be expected to pay for the upgrades through higher rates.

The town has already begun to feel the effects of the construction costs. Presented below is a summary of costs of running the Sewer Department. While operations and administration have remained fairly stable, the charges to Auburn for disposal at the treatment plant in FY '00 was \$159,623 which represented 30 percent of the total budget and the current charge is \$1,273,789 which represents 62 percent of the current budget. On the positive side, the plant has, and will continue to have, adequate capacity to meet the needs of the entire District, and the water quality of the Blackstone River should continue to improve to meet fishable/swimmable standards.

Table 5

Sewer Division Budget					
	FY2015	FY2016	FY2017	FY2018	FY2019
Administration	\$372,210	\$369,668	\$399,733	\$412,108	\$416,038
UBWPAD	\$1,106,798	\$1,184,760	\$1,185,174	\$1,108,849	\$1,273,789
Operations	\$232,770	\$228,552	\$217,690	\$347,895	\$362,645
Total	\$1,711,778	\$1,783,000	\$1,802,596	\$1,868,852	\$2,052,472

Source: Auburn Sewer Division

Existing Deficiencies and Future Needs

Auburn has made improvements to its pumping stations in recent years. The Sewer Division spent about \$1.2 million to replace various components in five of the twelve stations. At this time, there are no capacity issues regarding inadequate mains or pumping stations.

A major issue facing the Department is the Infiltration/Inflow (I/I) into the system. Infiltration is groundwater that enters the sewer system through cracks or leaking joints in the sewer pipes while inflow is rainwater that enters the system, such as illegal sump pump connections, downspouts connected to the system and holes in the manhole covers. During heavy spring rains, flow can increase to over 9 million gallons per day for short periods of time (current normal flow is less than 1 million gallons per day). Most of the sewer mains in the system were built around the same time when federal grants were readily available and the town was experiencing rapid growth. The installed pipes were asbestos lined concrete and are particularly susceptible to I/I. PVC pipes did not come into common use until the 1980's, after most of the sewer system was constructed. These increased flows cause not only additional operational costs but also cause capacity concerns, therefore an I/I study was performed. The results of the study showed that during the rainy part of the year, 47 percent of the flow through the sewer system was rainwater. Once the study was completed, the Sewer Division appropriated approximately \$1.2 million dollars to remove the I/I from the system.

The Division does not have a Facilities Master Plan to extend the sewer system into unsewered areas. Landowners may request such extensions and the Division will generally comply provided all costs are borne by the applicant and the additions meet current engineering standards. As noted above, there are no significant capacity issues limiting growth in the system. However, as an Enterprise fund, the users assume the cost of operating and expanding the system. With the absence of federal grants, major expansions, not requested by landowners, would most likely occur with low interest loans from the State Revolving Fund. Users would pay off the loans through increased rates. With rates sure to rise due to the treatment plant re-construction, extending new sewers would place added costs onto the ratepayers.

Since capacity at the treatment plant has not reached its limit, the entire town could be sewerred, however high costs will limit future expansion. The Division extended the system along Route 20 in recent years to serve Westec Industrial Park and other industrial users. In considering the long-range growth of the Town, it is important to recognize that extending sewers to undeveloped areas can have beneficial environmental effects by allowing for the replacement of failed septic systems, a significant source of ground and surface water contamination. Additionally, the presence of sewers can allow for development of land that previously was unsuitable due to poor soil conditions on property that could not pass Title 5 standards. The excess capacity of the sewer system should be viewed as a valuable resource that can benefit the community.

FLEET MAINTENANCE

Existing Conditions

The Fleet Maintenance Unit was formed during the Town's reorganization in May of 2011, which included the creation of Auburn's first Department of Public Works. After review and analysis of the costs of outsourcing various fleet maintenance activities, in the winter of 2011/2012 the DPW began to handle minor repairs and oil changes for the police and fire vehicles previously outsourced. A vehicle repair database was developed to manage the fleet maintenance program. Based on preliminary estimates that indicated a savings, the Town amended its Reorganization Plan in June 2012 to create a Fleet Maintenance Unit within DPW. A 1-year pilot program was started on July 1, 2012 to determine whether there would be any vehicle repair savings by having Town employees perform the work rather than having outside, private garages or companies do the work. By December of 2012, which was the Town's budget preparation time for FY14, it was decided that there would be enough savings each year to establish the new Unit. As a result, during the budget process for FY14, DPW proposed a total budget for the Fleet Maintenance Unit of \$161,543, with the Town Manager's concurrence, which was approved by Annual Town Meeting in May 2013. The budget included funding for two full time mechanics, part time employees as needed, a vehicle repair line and a tool line. The Fleet Maintenance Unit was established and started its first full year on July 1, 2013 (FY14).

The first year that the Fleet Maintenance Division was fully functional showed a savings of over \$21,000.00. The Fleet Division maintained the entire rolling stock of town vehicles. Bringing repairs and maintenance in-house have resulted in annual savings of approximately \$70,000 and will continue to result in significant savings from previously out-sourced services. The town also established an aggressive preventive maintenance program for the municipal fleet. This pro-active approach allows for regular cost effective inspections of the entire rolling stock of Town-owned vehicles and the scheduling and performance of proper maintenance.

Existing Deficiencies and Future Needs

The Fleet Maintenance Unit is a relatively new entity and its needs are still being realized. As experience of operating and maintaining the Unit continues, one of the major needs identified is a larger fleet garage to maintain the rolling stock of the DPW, Town Hall, Police and Fire in addition to space for storing vehicles and equipment.

FACILITIES MANAGEMENT

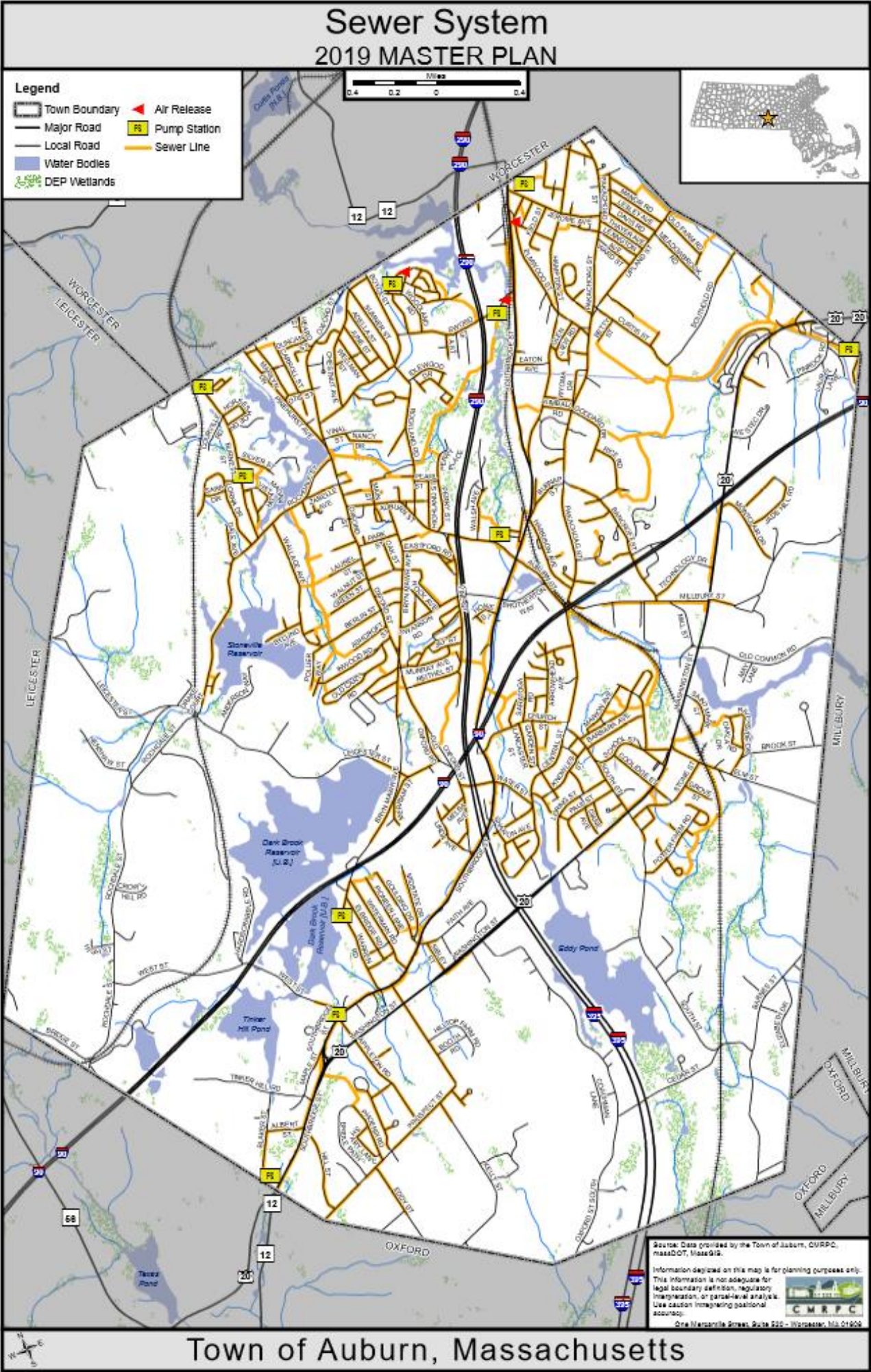
Existing Conditions

The Facilities Unit is a new section of the DPW created as part of the Town's Reorganization Plan in 2011/2012. The Unit consists of two full-time employees and additional staff from other DPW Divisions to assist on larger projects on an as-needed basis. The Skilled Craftsman I /Estimator position supervises the operations with assistance of a Skilled Craftsman II. In the winter months, the two full-time Pakachoag Golf Course employees assist the Facilities Unit on larger indoor projects. The Facilities Unit has completed numerous major projects since its inception. Some of the noteworthy projects consist of; the construction of the High School Press Box, the DPW Salt Shed Rehabilitation, the Fire Headquarters 2nd floor renovation, installation of new windows at the Police Station, the Pakachoag Golf Course Clubhouse renovation, Merriam Building improvements, Town Hall 2nd floor expansion and renovations, and Highway and Sewer building improvements. Currently, the construction of a Facilities Maintenance workshop is underway. This will provide much needed work space for the division.

To date, the total savings of all the improvements completed by the Facilities Unit is approximately \$850,000.

Existing Deficiencies and Future Needs

In general, the existing need of the Facilities Maintenance Unit is an overall Capital Improvement study to evaluate all town owned properties and plan for the replacement/rehabilitation of the aging town buildings and bring them up to modern standards. At a minimum, this study should include the Library, Town Hall, DPW Facility, and school buildings. This study could incorporate the Police and Fire needs as well, depending upon the outcome of the current Public Safety Feasibility Study.



AUBURN SENIOR CENTER



Existing Conditions

The Auburn Senior Center is located at 4 Goddard Drive. The building is a 6,235 square foot structure built in 1978. The staff consists of an Executive Director, Assistant Director, Outreach Coordinator and four van drivers. Numerous volunteers assist the staff in delivering services to the Town's senior citizen population. The volunteers offer assistance as program leaders, reception staff, maintaining the Senior Center Library, staffing blood pressure clinics, assisting with the nutrition program, producing the senior newsletter, and serving as trip coordinators. Per the Auburn Town Clerk's 2018 Census, there are estimated to be 4,370 people over the age of 60 residing in Auburn.

Under the Town Charter, the Town Manager is responsible for the operations and administrations of all town departments, including the Senior Center/Elder Affairs Division within the Public Services Department of the Town. The Senior Center/Elder Affairs Director, as the Division Head appointed by the Town Manager, is responsible for the management and general supervision over the programs, services, operations, activities and facilities of the division, including the supervision of all personnel in the Division. The Auburn Elder Services Division (ESD) of the Town government provides services and programs to the Town's senior population.

The Council on Aging, a nine-member advisory board, is appointed by the Town Manager. The Board helps to set goals, objectives, support/advocacy to help implement and promote the COA's mission.

The Senior Center provides a wide variety of outreach and support services, community partnerships, recreation/social activities, tax assistance, health/fitness classes, educational programs, congregate lunches, and transportation services. Seniors can take part in technology classes, blood pressure clinics, SHINE health insurance counseling, fitness classes (Zumba, chair

dance, strength and balance, move and groove, yoga and pedal exercise) quilting, knit and stitch, mediation, and entertainment. There is also opportunity to socialize with peers by playing various card games (bingo, canasta, whist, pitch, bridge, cribbage, dominos and bingo). There is also an array of health, safety, educational and wellness classes offered each month. Technology classes are offered to assist with learning to use I-pads, tablets, phones, and computers. The Senior Centers monthly newsletter, “Flagtime Flyer” has over 1,600 copies distributed to various town departments and businesses in Auburn.

Approximately 79 volunteers provide about 12,754 hours of service per year. This valuable contribution helps to keep the Center’s budget at a modest level. A number of other civic functions are held at the Center, including the Auburn Historical Society, Red Hats, political committees, and other committee meetings. The Tax Work-Off Program for Senior Citizens, which has income guidelines, allows residents to work for various municipal departments to reduce their real estate tax bill.

The town budget is used for the maintenance, operation and capital improvements of the Senior Center building and staff salaries. All other expenses, programs, activities and instructor fees are paid through fundraising, donations, the state formula grant and contributions from FASCA, the Friends of the Auburn Senior Center. FASCA raises their funds through various fundraising but primarily through a travel and trip program that operates within the Senior Center. In 2018, the Worcester Regional Transit Authority provided \$36,000 to cover the cost of transportation for the elderly and disabled population in Auburn. The State Formula Grant funds the Outreach Coordinator position, fitness instructors and other needs of the Center.

Existing Needs and Deficiencies

The Lorraine Gleick Nordgren Senior Center is a 6,235 square foot (excluding external space) structure built in 1978. At that time, the senior population of the Town was 2,400; based upon the 1990 U.S. Census of residents over the age of 65. Currently, the senior population has grown to 4,370 and it is expected to rise in the future. It is the fastest growing cohort in Auburn. According to the US Census, approximately 20 percent of Auburn’s residents are age 65 or older compared to about 16 percent of the population statewide. This population change reflects a nearly 50 percent increase in potential users of elder services and the senior center facility. Beyond the simple increase in potential users, senior centers are currently in a mode of modifying to respond to changing expectations of “Baby Boomers”, the new seniors, who will be seeking more programs related to continuing education, arts, and more focused physical activities. Additionally, with the growing senior cohort and longer lifespans, there is increased demand for human services for seniors that will require more health and social worker professionals within Centers.

Town administration secured a consultant in the summer of 2018 to undertake a Strategic Study for the Senior Center, in order to identify operational weaknesses and recommend strategies to improve efficiencies and effectiveness within the town’s delivery of elder services. The study found that the Senior Center facility is inadequate for current and projected utilization needs and

is in need of additional attention through improved maintenance and refurbishment. Auburn's percentage of senior residents is projected to increase in the coming years. Thus, it is expected that additional services for the senior cohort will be needed. This demographic trend mirrors most other communities around the Commonwealth and has led to initiatives by the state government, non-profit institutions and local governments through Councils on Aging and Elder Service departments to focus on needs assessments and the development of programs that will respond to the growth in population and changing expectations of the momentum of new seniors. The physical limitations of the facility hamper the ability to offer additional programs or simultaneous programming.

The Lorraine Gleick Nordgren Senior Center essentially consists of a large meeting space that is appropriate for large programs and presentations, large group exercise classes, the weekday lunch program and holiday celebrations. The space is impeded by its daily use in the early morning as a work center for the Meals on Wheels workers and volunteers. The Center also has a small meeting room/Library that can be converted to two very small meeting rooms, and a small open area with a pool table that is also used for limited sized classes and small activities. The area is also used to store some small exercise equipment. Roughly, 25 percent of the Center is used for a reception desk and foyer, and small offices for the Director, Assistant Director, the FASCA trip staff, the newsletter editor, and a very small built out desk area for the Outreach Worker. Overall, the administrative area is extremely tight and cramped.

According to the Study, the general condition of the center is in need of a refurbishment. While there have been some efforts to clear out excess materials, there are probably more items that can be disposed of or stored differently. An area off the large gathering room has been used for storage but better efforts to organize those materials would enhance the utilization of the space and allow for moving items from the active areas of the center. Town administration should evaluate the existing groups and events that regularly utilize the facility to determine if any of those activities can be relocated to another municipal building in order to free up much-needed space. Those activities that could be considered for relocation to another site include those whose emphasis is not on Auburn seniors or those that require smaller space than the large dining room area provides. Based on the findings of this Study, Town administration is planning to seek approval from the Annual Town Meeting in May 2019 to utilize Local Cable Capital Funds to renovate the Camp Gleason building to accommodate additional and much needed meeting and event space. Creating this space at Camp Gleason would free up space at the Senior Center for additional programming and events. The town should also look into whether a flexible room divider could be added to the dining room space to sub-divide the area into smaller rooms to accommodate multiple programs.

Beyond the role of senior centers, elder service programs are becoming more expansive to adjust to more complex human, medical and social needs. With extended lifespans, demands for at home services have increased if seniors are supported to age in place. Such services would respond to social interaction deficiencies, medical care and other support systems. The problem is exacerbated by the increased mobility where family members no longer live close by to provide care.

Additionally, the acceleration of Alzheimer's is requiring many communities to develop responsive programs, such as adult day care.

Staffing at the Senior Center needs to be restructured to provide for increased outreach services, events, and program planning. Town administration is looking into mechanisms to meet these staffing needs in FY2020.

Auburn's Comprehensive Housing Plan, approved by the Department of Housing and Community Development in September 2017, notes that more housing will need to be developed for residents wishing to age in place. The Town issued a Request for Proposals (RFP) for two former, vacant elementary schools in early 2017 and selected Pennrose Properties as the preferred developer for both properties. The Town and Pennrose entered into a Development Agreement for each property to provide affordable senior housing. Pennrose has filed for various grants and both state and federal tax credit applications to build affordable senior housing at the former Mary D. Stone and Julia Bancroft schools. It is anticipated that these two redevelopment projects will take approximately 3 years to secure the needed state and federal financing to begin redevelopment of these parcels. The proposed redevelopment of the two schools for senior housing will fill a serious need for affordable and accessible senior housing in Auburn. Both projects have been identified as key developments in the Comprehensive Housing Plan and both projects meet the Town of Auburn and State goals for the creation of affordable housing. Specifically, the redevelopment of these properties will create approximately 114 affordable senior housing units. Since June of 2017, extensive public input, time and energy have been invested into the redevelopment of both properties with strong support in Auburn from the Planning Board, Zoning Board of Appeals, Council on Aging, Elementary School Re-use Advisory Group, Historic Commission, Board of Selectmen and town administration.

SCHOOL DEPARTMENT

The Community's District

Believing that the quality of any school district is a reflection of the value the citizens of the community places on it – with the Auburn community demonstrating substantial support of the Auburn Public Schools – the District operates in an inclusive and transparent manner, regularly seeking the input of the Auburn community in major decisions. The creation of the most recent versions of the Strategic Plan are clear evidence of that partnership, with budget development likewise being an open and transparent process that speaks to the priorities determined by the School Committee, Leadership Team and the Auburn community, as a whole.

In November of 2017, building on the success of the World Café that was first held in October 2013 with 120+ school and community representatives on a Saturday in the Auburn High School Cafeteria, the Auburn Public Schools again brought together a diverse group of individuals to answer the question, "How will the Auburn Public Schools continue to ensure our PreK-12

students are prepared to meet the opportunities and challenges of a changing world?” On November 18, 2017, nearly 140 school and community representatives, including students, parents, clergy, local and state representatives, youth organization representatives, members of various Auburn Boards and Committees, higher education representatives, teachers, administrators and other interested community representatives participated in a World Café event, generating important ideas about how to ensure that the Auburn Public Schools continues to meet our students’ needs. Throughout the winter and early spring of 2018, the Planning Team, comprised of a subset of the World Café attendees, worked to create the Strategic Plan for the Auburn Public Schools, a copy of which is posted on the District’s website (www.auburn.k12.ma.us).

As determined by the Planning Team from the information gathered at the World Café events, five overarching goals were established: “Teaching and Learning,” to further advance rigorous and relevant teaching and learning; “Technology,” to support learning, communications and operations; “Community Partnerships,” to strengthen and create collaborative partnerships; “Health, Wellness and Safety,” to promote a positive, safe learning environment; and “Transitions,” to build and strengthen supportive transitions. Those five overarching goals, along with the shared core values that are outlined below, drive the decision-making in the Auburn Public Schools, to include budget development, staffing, materials and equipment purchases.

- Student-Centered Decision Making
- High Expectations for All
- All Environments are Safe and Respectful
- Responding to Needs Based on Data
- Equitable Opportunities for All
- Dedicated to Continuous Improvements

The Auburn Public Schools is immensely grateful for the support it receives from the residents of Auburn and looks forward to continuing to work together in the best interest of students, believing that they deserve nothing less than the very best we can offer them.

Existing Conditions

The administrative offices of the School Department are located in the former Randall School at 5 West Street. The School Department shares space in the building with the Fire Department’s West Auburn Fire Station. The Department operates two primary schools, an intermediate school, a middle school and a high school. Existing facilities and their current enrollments are listed below:

Table 6

School Facilities			
School	Location	Grade	2018-2019 Enrollment
Bryn Mawr School	35 Swanson Road	K-2	300
Pakachoag School	110 Pakachoag Street	K-2	266
Swanson Road Intermediate School	10 Swanson Road	3-5	609
Auburn Middle School	9 West Street	6-8	626
Auburn High School	99 Auburn Street	9-12	726
Preschool	3 class rooms at AHS 2 classrooms at PAK	Pre-K	105

Source: Auburn School District

The total enrollment of the Auburn School District for the 2018-2019 school year is 2,632 students as of the October 1, 2018 enrollment figure reported to the Massachusetts Department of Elementary and Secondary Education (DESE). That number reflects a net enrollment gain of 185 students since 2012, placing more demands on all of its schools, but most notably the two primary schools and the intermediate school that have not, in recent years, undergone any additions or major renovations.

Opened in 2006, Auburn High School is a state-of-the-art facility that houses students in grades 9 through 12, along with three preschool classrooms. In addition to the approximate 175,000 square feet of interior space, the Auburn High School campus has artificial turf fields for football, baseball and an all-purpose field used for field hockey and other athletic events and practices, as well as a natural grass softball field. School and community members alike regularly use tennis and basketball courts, accessed by a bridge over Dunn's Brook. There is a fenced playground area that includes ADA-accessible pieces of equipment that are regularly used by the public, as well as by preschool students who enjoy recess there almost daily. The total cost to build Auburn High School was approximately \$41 million and was supported by the Massachusetts School Building Authority's grant program that reimbursed 66.89 percent to the Town for eligible costs.

In 2015, a modern and technologically equipped Auburn Middle School opened its doors to the sixth, seventh and eighth graders of Auburn, now totaling 626 students in 2018. In addition to the approximately 101,000 square feet of interior space, the Auburn Middle School campus has an artificial turf football/soccer/all-purpose field as well as a grass practice field and exterior garden. Aptly named the Randall Field after the family who once owned the property on which it sits, the artificial turf field is used by school and Town teams during multiple seasons each year, with the smaller grass practice field named the Granger Field. The Granger Field is named in honor of Carrie Granger who was a cousin to the Randall family and served as a housekeeper of the Randall Farm in return for her room and board. Carrie took the trolley daily to Gates Lane School where she taught. The main building of Crystal Caves was the original homestead to the Randall Farm.

In addition to the construction of the new Auburn Middle School, project funds were also used to expand the West Street roadway approach to Route 12, providing a turning lane, which greatly improved the intersection.

The total cost to build Auburn Middle School was approximately \$41 million – nearly \$3 million less than anticipated - and was supported by the Massachusetts School Building Authority’s grant program that reimbursed 58.61 percent to the Town for eligible costs.

Existing Needs and Deficiencies

Auburn has taken a big step forward with the opening of the new Auburn High School for grades 9 through 12 in 2006 and the new Auburn Middle School for grades 6 through 8 in 2015. Additionally, approximately \$2 million in accumulated Capital Improvement Program (CIP) funds were spent making improvements to the former Auburn Middle School, converting it into the Swanson Road Intermediate School, which now serves all of Auburn’s grades 3 through 5 students. The District’s remaining schools, Bryn Mawr School and the Pakachoag School, are 71 years old and 89 years old, respectively. While every effort is made to maintain them as appropriate educational spaces for the primary students of Auburn, replacements or major renovations/additions will need careful consideration in the not-too-distant future. In the years 2012 through 2018, the District saw a net increase of 185 students, requiring additional staff and programs. Currently, every available space is utilized in our elementary facilities as our student population grows and the demand for programming, to include programs that support our growing population of substantially challenged special education students and those requiring social-emotional support grows. All three of the elementary schools utilize modular classrooms, the majority of them having been installed nearly 20 years ago. Bryn Mawr School has three modular classrooms, however one was installed in 2016, the Pakachoag School has two modular classrooms and the Swanson Road Intermediate School has four modular classrooms. Strong maintenance efforts have extended the useful life of those modular classrooms, but at some point, they will need to be replaced.

The enrollment situation requires careful monitoring; a school projection study should be performed to quantify the potential need for a new elementary school or an addition/renovation. Whether a new elementary school is eventually needed, over the near-term the Town will be required to continue to provide sufficient funds to monitor and maintain the physical facilities of the existing schools. Presented below is a brief summary of conditions at the existing elementary schools.

Swanson Road Intermediate School:

Year Built: 1959

Size: 59,000 square feet. The school expanded by 25 percent in 1972, and 4 modular classrooms were added in the 1990s.

Expansion Potential: Limited due to development surrounding the campus. Playing fields would be lost to accommodate an addition and a portion of one was already lost due to the expansion of the parking lot, which occurred in the summer of 2015.



Recent Upgrades and Renovations: When the decision was made to build a new Auburn Middle School on West Street, this left the former middle school building available for potential educational use. Following an extensive review of the District's remaining buildings, namely the Julia Bancroft School, Mary D. Stone School, Bryn Mawr School and the Pakachoag School by the District's Master Plan Team, a recommendation was made to the School Committee to continue to use Bryn Mawr School, the former Middle School and the Pakachoag School as educational facilities. With that information in hand, the School Committee voted to return the Julia Bancroft School and the Mary D. Stone School to the Town.

Having refrained from spending Capital Improvement Program (CIP) funds on buildings until a determination was made as to which would remain educational facilities, approximately \$2 million was spent at the former middle school – renamed to the Swanson Road Intermediate School (SWIS) – to ensure that it was an appropriate learning environment for all of Auburn's third through fifth graders. Renovations included, but were not limited to, the following: expanded kitchen to support nutritional meal preparation for increasing student body; installation of student bathrooms on the lower level; upgrade of HVAC system to ensure proper air exchange to meet current building codes due to increased student enrollment; expanded vestibule area, complete with security doors; added student bathrooms to handle increased enrollment; expanded and redesigned parking lot; and installation of an age-appropriate playground area. Additionally, through the Massachusetts School Building Authority's (MSBA's) Accelerated Repair Program, a new roof and new boiler were installed at SWIS in 2016, reimbursed by MSBA at 54.16 percent of eligible costs, with the Town paying the remaining 45.84 percent.

Difficulties:

- Every available classroom space, to include the modular classrooms, is utilized, leaving no room for future expansion within the current building.
- The parking lot, while sufficient to accommodate current staff, is insufficient for evening activities and school-day assemblies that involve students' families.
- Library/media center is undersized
- Lack of meeting space and very limited storage space.

- Windows will need to be replaced at a future date
- Underground oil tank needs to be replaced.
- Asbestos abatement is needed on an ongoing basis.
- Two of the modular classrooms are nearly 20 years old and will, at some point, need to be replaced or an addition added to Bryn Mawr as students use those classrooms daily. The third modular installation occurred in 2016.
- Exterior brickwork is needed.

Bryn Mawr Elementary

Year Built: 1948

Size: 25,000 square feet. Three modular classrooms were added, two in the year 2000 and the third in 2016.

Expansion Potential: There is expansion potential at this site.

Recent Upgrades and Renovations: A third modular classroom was added in the summer of 2016 and, because of that addition, a sprinkler



system is required and is scheduled to be installed in 2019. Several years ago, a portion of the dedicated cafeteria was separated to house the library that had been on the lower level of the school, yet had no handicapped-accessible access. In the summer of 2017, a classroom was created in the remaining section of the cafeteria, with student's now eating lunch in the Cafetorium that had once been a dedicated gymnasium. Upgrades to the HVAC system have been done and in the next eighteen months, the electrical system will be upgraded from a single-phase to a three-phase system. A handicapped-accessible student bathroom, to include changing area, was added to service the students in the substantially separate special education classrooms to meet their toileting needs. Additionally, through the Massachusetts School Building Authority's (MSBA's) Accelerated Repair Program, a new roof was installed, reimbursed by MSBA at 54.16 percent of eligible costs, with the Town paying the remaining 45.84 percent.

The original two modular classrooms that were installed in the year 2000 have received repairs, thus extending their anticipated useful life, but will need to be replaced with a permanent addition at some point in the future. Permanent art and music rooms are a high priority, with a dedicated technology lab being needed as well.

Difficulties:

- Every available classroom space, to include the modular classrooms, is utilized, leaving no room for future expansion within the current building.

- The parking lot, while sufficient to accommodate current staff, is insufficient for evening activities and school-day assemblies that involve students' families.
- Library/media center is undersized.
- Lack of meeting space and very limited storage space.
- Windows will need to be replaced at a future date.
- Underground oil tank needs to be replaced.
- Asbestos abatement is needed on an ongoing basis.
- Two of the modular classrooms are nearly 20 years old and will, at some point, need to be replaced or an addition added to Bryn Mawr as students use those classrooms daily. The third modular installation occurred in 2016.
- Exterior brickwork is needed.

Pakachoag Elementary

Year Built: 1929

Size: An addition was added in 1961. Total size is 26,500 square feet. Two modular classrooms were added in approximately the year 2000.

Expansion Potential: There is expansion potential at this site.

Recent Upgrades and Renovations: In the summer of 2018 through the Massachusetts School Building Authority's (MSBA) Accelerated Repair Program, the roof of the Pakachoag School was replaced. MSBA reimbursed the Town for 54.16 percent of eligible, with the Town paying for the remaining 45.84 percent. In recent years, the parking lot has been resurfaced and upgrades to the HVAC and electrical systems have likewise been made.



Difficulties:

- Every available classroom space, to include the modular classrooms, is utilized, leaving no room for future expansion.
- The school is ADA compliant, but there is inadequate storage.
- Overall, the school is in good condition but needs upgrades in several areas.
- Lack of meeting space and very limited storage space.
- Windows will need to be replaced at a future date.
- Underground oil tank needs to be removed.

- Two modular classrooms are nearly 20 years old and will, at some point, need to be replaced or an addition added to the Pakachoag School as students use those classrooms daily.
- Asbestos abatement is needed on an ongoing basis.

Randall Elementary/Central Office

Year Built: 1951

The school closed in 1981 and converted to administrative offices for the school district. A portion of the school now houses the West Auburn Fire Department Substation. Repairs were made to that portion of the building in 1983.

Size: 21,000 square feet.

Expansion Potential: Limited since Auburn Middle School was built at 9 West Street.



Difficulties:

- Mechanical systems, but for the boiler that was replaced in recent years, are original and will need to be replaced/upgraded at some point.
- Windows are not heat efficient and will need to be replaced at a future date.
- Asbestos abatement is needed on an ongoing basis.
- Exterior brick needs re-pointing and wood fascia needs repair.

School Performance Indicators

Various educational indicators are available that compare the Auburn Public Schools with that of the state as a whole. Some of the more relevant statistics for the entire District are listed below:

Table 7

Selected School Performance Indicators		
Indicator	Auburn	State
Grade 9-12 Dropout Rate	1.1%	1.8%
Attendance Rate	95%	93.9%
% of Core Academic Teachers Identified as Highly Qualified	100%	97.2%
Student Teacher Ratio	14.6-1	13.1-1
Students Attending a 2 or 4 Year College	91%	81%
Students per Computer	1:1	Not Reported

Source: Massachusetts Department of Elementary and Secondary Education (DESE)

The Auburn School District compares quite favorably with its state counterparts. The dropout rate, attendance rate, students attending a two- or four-year college and students per computer are more favorable than the state figures. Auburn has a higher rate of teachers identified as highly qualified, with 100 percent of Auburn's teachers holding appropriate certifications. However, Auburn's student teacher ratio at 14.6 to 1 is higher than the statewide average of 13.1 students to one teacher.

Needs for Continuous Improvement

As noted above, the District's Teacher Student Ratio (14.6 to 1) is higher than the state average of 13.1 students to one teacher, particularly impactful at the elementary level. With the District's enrollment having increased from 2012 to 2018 by 185 students, additional staff will be needed to maintain appropriate class sizes, particularly at the elementary level. Currently, class sizes at the elementary level range from 22 to 25 students; ideally, class sizes at the primary level would be at 18, with levels at the intermediate school being a maximum of 22 per class. To reach those preferred levels, however, a minimum of seven additional teachers would be required, with space to house those additional teachers being likewise required.

The District transitioned to full-day kindergarten programming in the 2011-2012 school year, joining, at that time, the 77 percent of other Massachusetts districts that offered free full-day kindergarten, an educational benefit to our young children. As the research on the benefits of early childhood educational programming continues to grow, so, too, should the Preschool program in the Auburn Public Schools, the goal being to start by offering free programming to all of Auburn's four year olds and eventually doing the same for our three-year old population. To do so would require a significant increase in staff and, most notably, space to house the additional educational spaces necessary to service those additional young children in the three and four year old age bracket. Currently, Auburn offers half-day programming for our three year olds and both full- and half-day programming options for our four year olds.

Currently, three preschool classrooms are housed at Auburn High School and two at the Pakachoag School, serving 105 students in total. To provide full-day preschool programming, tuition free, to all of Auburn's four year olds would require a total of eight classrooms, 8 teachers and approximately 16 support staff members, determined as dictated by students' needs. To offer similar programming to Auburn's three year olds would require the same space and staffing needs. In order to provide such programming, a major addition would be required, potentially to the Bryn Mawr School. At approximately 1,000 square feet per classroom, plus breakout spaces for small group instruction, remediation and support, an addition of approximately 25,000 square feet, doubling the size of Bryn Mawr School, would be required. As part of that addition/renovation, dedicated classrooms for art, music and technology could likewise be addressed, with a dedicated cafeteria built to alleviate the need to use the gymnasium for student lunches.

As subsets of our student body increase, to include students requiring special education supports and our English Language Learners (ELLs), so, too, does the need for specialized programming increase to meet those demands. As a District, we are committed to identifying, developing and

maintaining programming to address our students' needs so that they may be educated with their peers in their local schools, meeting not only our legal obligation to do so, but our ethical one as well. Students with such significant needs may require sensory breaks, physical and occupational therapy, adaptive physical education, art and music and speech-language services, all of which require specialized space. While there is space in each building to support students' current needs, as/if this population continues to grow, so, too, will the demands for additional space.

Finally, the social-emotional (SEL) needs of our students demand that we have appropriate programming in place to support them in their growth and development. In recent years, the District has added the support of two Board Certified Behavior Analysts (BCBA) and one part-time Board Certified Assistant Behavior Analyst (BCaBA). The role of a BCBA is critical in the treatment and management of behavioral, emotional and developmental disorders, particularly for those students who present with a variety of challenges. The District's Social-Emotional Team, is working to identify programming that will help bolster the support for all children in their growth and development, but particularly for those who present with challenges. Additional SEL supports, to include social workers, additional guidance/adjustment counselors, school psychologists and/or BCBAs will be required to continue to meet our students' expanding needs.

Educational Program: A Commitment to Excellence

The Auburn Public Schools is committed to providing an engaging, rigorous and relevant educational program designed to challenge and support our students to achieve their personal best. As a comprehensive educational institution, the District believes that the students of Auburn deserve nothing less than the very best that can be offered to them in terms of a safe environment, academic offerings, athletic and fine arts opportunities and various extracurricular programs.

The District believes in supporting and challenging our students to reach their full potential and takes great pleasure in recognizing them for their efforts toward achieving academic excellence. Curriculum is aligned with state frameworks, Advanced Placement (AP) and honors courses are offered, and the promotion of high expectations defines each level of our educational program.

The District believes that our students deserve to learn and grow in physically and emotionally safe environments. A Safety Advisory Team, comprised of representatives of the police, fire and school departments, along with the building inspector, meets regularly to assess District facilities, activities and programs, offering recommendations on how improvements can provide further enhancement.

The Auburn Public Schools is a District committed to educational excellence. The support received from the Auburn community is greatly appreciated, with the District committing to earn continually that support in the years ahead.

WATER SYSTEM

Auburn's Public Water System consists of two (formerly three) independent water districts. The Auburn Water District, which is the larger and covers most of the Town, serves about eighty percent of the population. The Elm Hill Water District, together with private wells, serves the remaining population.

In 2004, the Auburn Water District acquired the Woodland Park Water District, which, due to its small size and lagging capital needs, was unable to manage adequately the system for its customers. The Auburn Water District was selected to operate the Woodland Water District, which like the Elm Hill Water District, is supplied with water from the City of Worcester through metered connections.



AUBURN WATER DISTRICT

The Auburn Water District is a separate water district, similar to many other water districts, was created by an act of the Legislature (Chapter 585 of the Acts of 1947) and is independent of Auburn's town government. The Woodland Water District was created under Chapter 385 of the Acts of 1935.

A multi - member elected Board of Water Commissioners manages the District's affairs and operations. The District has a total full-time staff of eight (8) people: a water superintendent, three administrative support personnel, and four operational / service employees. Service personnel are on call 24/7 to respond to after-hours calls and emergencies.

The Auburn Water District is a member of Mass. WARN which is a mutual aid agreement among various towns and districts within the Commonwealth to provide mutual aid of water utility services should damage to the District's infrastructure be that which is beyond the District to handle with its' own resources.

The Auburn Water District's operational budget is funded as an enterprise system where the District's customers pay for all operating expenses and major capital expenditures. The District

does not utilize any local tax revenue nor State grants to stabilize / subsidize its water rates. Billing is done on a quarterly basis.

System Description

The boundaries of the Auburn Water District covers the entirety of Town with the exception of the area Elm Hill Water District service area located in north Auburn adjacent to the Worcester / Auburn boundary. As indicated, in 2004, the District acquired the Woodland Park Water District that also abuts the City.

Presently, the City of Worcester supplies all water to the Woodland Water District, as well to the Elm Hill Water District through a metered permanent connection. The rate at which the City charges to those outside of the City, is significantly higher than the “in-City” water rate.

The Auburn Water District operates with two pressure zones (High and Low), each with their own wells and storage tanks. Due to similar operating pressures, the Auburn Water District can supply the Woodland Water District on an interim basis during those times when the City of Worcester cannot supply them during breaks and when their system is undergoing major repairs / renovations. Until such time as a significant reliable additional water source is developed and operating, any plans to supply the Woodland Water District from the Auburn Water District’s distribution system on a regular basis, will need to be placed on hold.

Due to a difference in operating pressures, the Auburn Water cannot provide water to the Elm Hill Water District, but with some pressure control devices, the Elm Hill Water District can supply water to the Auburn Water District through hydrant-to-hydrant temporary connections.

The source of water for the Auburn Water District comes from its twelve shallow gravel / sand wells. Most of the raw water from its wells is treated for iron, manganese and arsenic removal. The finish water is pumped into two pressure zones each with their own storage tanks. The water is distributed to its approximately 4500 customers through approximately 70 miles of water mains ranging in size from two to sixteen inches.

The Auburn Water District water sources have a design maximum capacity to deliver between 2.3 and 2.6 mgd, with 2.6 mgd being the system’s ultimate safe yield. However, the average daily water withdrawal currently permitted by the Massachusetts Department of Environmental Protection (MassDEP) is about 1.2 mgd. Through extensive water conservation efforts, including public education, limiting non-essential outdoor water uses, water conserving fixtures and appliances, and water conserving efforts by industrial / commercial customers, the daily average water demands have been reduced significantly over the past decade to just over one million gallons per day down from that of 1.3 million gallons a day back in 2004..

Of the Auburn Water District’s approximate 4,500 customers, nearly sixty percent are residential customers, with the remainder being commercial and industrial users with a very low percentage for agricultural customers. The large residential customer base likewise accounts for a majority of

the water usage. Water conservation efforts, which are being directed towards the residential customers (i.e. limiting lawn irrigation watering, etc.), are the most effective in reducing the overall water demand.

In terms of a per capita water use figure, the Auburn Water District's annual statistical reports that each residential customer uses less than the sixty five (65) gallons of water per day target use established by regulatory agencies. All of the Auburn Water District's customers are metered and the Auburn Water District consistently operates its systems to maintain the system's water losses to less than the ten percent set by regulatory agencies. The Auburn Water District regularly performs leak detection surveys on the distribution system to locate leaks that may not be visible from the surface. All leaks / breaks are repaired as soon as possible after they are reported / discovered.

Water Sources

The Auburn Water District is always seeking out new sources of water to serve its customers better, with redundant sources to maintain adequate supply of water during times of emergencies or when various wells / pumps / treatment facilities are off line for regular maintenance and upgrades. The Auburn Water District has been successful in obtaining Sustainable Water Management Initiative grants to study ways to be able to withdraw more water from the underlying aquifer by various approaches, including performing exploratory drilling to seek new water sources, recharging runoff back into the aquifer, connections to abutting water systems, etc.

Development of new water sources can take up to 10 years to design, permit, and to construction costs many millions of dollars to build and are becoming increasingly costly to operate to meet new water quality regulatory requirements . Currently, the Auburn Water District is working on a proposal for metered connection to the City of Worcester along Southbridge St. to provide a seasonal supplemental water source as well an emergency water source should one (or more) of the District's major wells be off line due to contamination or emergency repairs. This proposed connection would also provide a much-needed additional connection to the Sword St. area to improve fire flows and to eliminate a deadened water main in that area.

During the interstate highway building boom of the 1950's and 1960's, heavily traveled roadways (I-90 and I-290) were constructed adjacent to a number of the District's major producing wells. Over the decades run off from these nearby highways has created a hazard to the life expectancy of these wells by contamination with elevated salt levels that greatly exceed regulatory limits. Additionally, a more immediate hazard to our wells is the danger of well contamination by hazardous substances due to an ever increasing number of motor vehicle accidents on these roadways, which result in the release of hazardous materials (vehicle fuels) that flows into the drainage systems that discharge near the wells.

The Auburn Water District works closely with the Auburn Fire Department and local and state highway departments to work in an unified effort to mitigate these releases before they reach the

wells which, should the contaminants reach the well, could permanently contaminate the well and making it un-usable.

Additional efforts are needed to further investigate the feasibility (including funding sources) to add engineered controls to the stormwater systems on the nearby highways to better treat the runoff including the ability to collect and store hazardous substances (vehicle fuel) that maybe discharged as the result of a motor vehicle accident.

The Auburn Water District continues to work with MassDOT with efforts to minimize salt usage in areas tributary to the wells and to study sources of salt intrusion and to formulate plans to reduce salt levels in the wells.

Facilities:

Distribution System

Water is distributed throughout the system from the storage tanks through approximately 70 miles of piping ranging in size from 16 inches down to 2 inches. Piping larger than 2 inches is cement lined cast or ductile iron pipe. The two inch mains are either cement lined steel pipe, plastic, or copper tubing.

Individual water services (domestic and / or fire protection) can range in size from ¾ inch to 8 inches. Services 2” and less in size are either copper or plastic with larger sizes being cement lined cast or ductile iron. All domestic water services are 100 percent metered. Non-residential domestic water services and fire-protection water services include backflow prevention devices to protect the system from contamination.

A number of in-line and isolation gate valves are located throughout the system to allow areas to be isolated for repairs / maintenance. A higher number of isolation valves help to reduce the area affected by main breaks / leaks.

There are approximately 500 “public” fire hydrants located throughout the system in addition to the approximately 80 “private” hydrants located on private property. The Auburn Water District maintains / repairs / replaces the hydrant inventory at no cost to the Town of Auburn for the water use or hydrant maintenance.

Wells /Pumps

The source of water for the Auburn Water District comes from twelve (12) shallow gravel pack wells located throughout the Town and takes water from the underground aquifer designated by the Zone II delineation on the Town’s Aquifer and Watershed Protection Overlay Zone Map. The water from seven (7) of the wells undergoes treatment (primarily for iron, manganese and arsenic removal) at the District’s treatment facilities. The treatment of the raw water from the five (5) remaining wells include corrosion control and disinfection.

All of the District's twelve (12) wells are shallow (less than 60') sand and gravel wells. Wells #4 & #13 in close proximity to the Walsh Avenue treatment facility and feed into that treatment facility. Wells #6, #9 & #10 are located near to and feed into the Southbridge Street Court treatment facility. Wells #1, #2 & #3 located near the intersection of Church Street and Southbridge Street. Another wellfield containing two wells #7 & #8 are located off of Pine Valley Drive proximal to the railroad tracks. Wells 11 & 12 are located behind the West St. Water Treatment Facility and Auburn Middle School and are treated by the West St Treatment Plant.

Treatment Plants

The Auburn Water District's three (3) water treatment facilities, treat the raw water primarily for iron, manganese and arsenic removal. As indicated above, the three treatment facilities located at the end of Southbridge Street Court, on Walsh Avenue and the on West St.

All three water treatment plants utilize green sand filtration systems that remove iron, manganese, and arsenic. The Southbridge St. Ct and Walsh Ave. Water Treatment Plants were constructed in the mid 1990's and both have been recently undergone major upgrades to replacement the filter media and to upgrade the control systems. The West Street treatment facility went on line in 2006 and included treatment for radon removal and was expanded in 2013 to included filtration for iron, manganese and arsenic removal. The total cost of the West Street Wells and Treatment Facility was approximately 5 million dollars.

Water Storage

The Auburn Water District operates two (2) pressure systems within its distribution system. Water is from the respective wells through the indicated treatment plants to the individual pressure system's storage tanks. The water level in the tanks determine the on / off cycle of the pumps throughout the day. Pumping times can range from 8 to fifteen hours per day depending on water demand. The District has the ability to discharge water from the High Pressure to the Low pressure system for domestic and fire protection needs. Currently the District is working on a project to be able to pump water from the Low Pressure to the High Pressure System through a permanent metered connection.

The District's finish water storage currently consist of storage tanks located off of Leicester St., and off of Prospect St. The Leicester St. Tank Site recently underwent a 2.2 million dollar upgrade to replace the aging one million gallon steel tank with two (2) new 600, 000 gallon fused glass steel storage tanks that will not require periodic repainting. Not only was the water storage volume increased under this project, but mixers were added to both tanks to circulate the stored water for improved water quality purposes. The second tank allows one tank to be taken off line for maintenance while the other tank remains on line. Other improvements included upgrade to the

electric service. The Leicester St. Tank Site provides a primary site to locate the communication radios for the Town's Emergency Services as well for other emergency entities serving the Town.

The District is underway with a four (4) million dollar project to replace the two steel tanks at the Prospect Street Tank Site with two (2) new one (1) million gallon glass fused steel tanks with mixers similar to those installed at the Leicester St. Tank Site. The Prospect Street Tank Site will also include provisions to locate future communication radios for Town's Emergency Services.

Dams / Reservoirs

The Auburn Water District owns and maintains three (3) reservoirs / dams being the Dark Brook Reservoir, Upper Stoneville Reservoir and Lower Stoneville Reservoir. The impoundments and dams were acquired by the Water District from the Massachusetts Electric Company in 2001 as part of a plan to reduce the property inventory holdings of the Massachusetts Electric Company. These reservoirs were constructed during the post-World War II era to create a means to store water throughout the year needed to operate / cool the Massachusetts Electric Company coal fired power plant, located in the Webster Square area of Worcester, which operated until the 1960's when it was shut down and demolished.

In as much as the District may own the actual waterbody, water rights and underlying land, the District continues the previous practice by Massachusetts Electric of allowing direct abutters to use the water body for recreational purposes at their own risk. The District has established a set of regulations for use of its reservoirs including limits on boat horsepower, dock size and motor vehicle restrictions when the ice is in. With the closing of the boat ramp on West St. in 2015 due to safety concerns crossing the heavily traveled West St. and the impacts of traffic from the Middle School, there is no public access (boat ramp) to the District owned reservoirs. Any use of the District owned reservoirs (recreational use) is at the risk of the user.

The reservoirs are relatively shallow in depth and the water storage volume is somewhat limited and were constructed for use as a potable water supply. The idea of utilizing the reservoirs as a potential potable water supply has been studied in the past and due to water volume, quality, replenishment rate and development around the water bodies, cost to construct water treatment facilities to meet current regulations for surface water sources, were found not to be suitable nor feasible as a potable water source. The acquired reservoirs and surrounding land do provide valuable protection for the watershed feeding the underground aquifer from which the District's wells use as a water recharge.

The dams at the outlets of the reservoirs are classified as "High Hazard" and are inspected annually and are listed to be in good condition. The Auburn Water District maintains the dams and surrounding areas including mowing, spillway maintenance, operation of outlet devices and aquatic weed control by non-chemical means (lowering water levels during winter months).

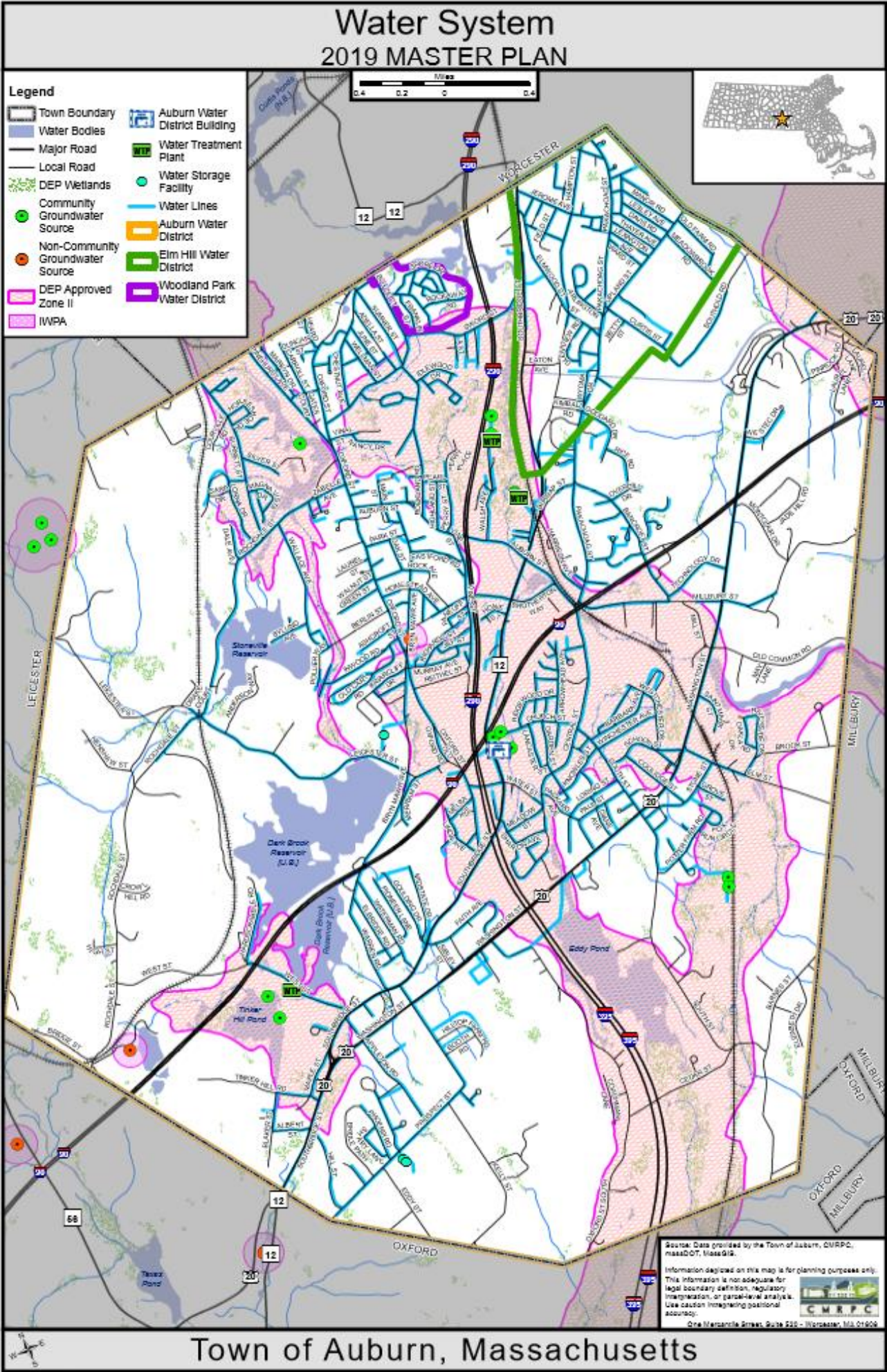
Equipment

The Auburn Water District performs all of its repair work on the water distribution system and even installs replacement water mains and water services. The District operates a fleet of vehicles, which includes two (2) water service trucks, two pickup trucks, a backhoe / loader, a dump truck in addition to other equipment / vehicles to maintain the District's three reservoirs and four (4) dams. All of the equipment is in good working order and periodically maintained and replaced on an as-needed basis, to have a fleet of reliable vehicles and equipment ready to respond to on-going normal water emergencies.

Upcoming Capital Needs for the Auburn Water District

In addition to repaying borrowed monies for construction of the West St. Water Treatment Plant and Filter Addition and the two new water storage tanks at Leicester St., the most significant upcoming capital expenditure(s) for the Auburn District will be to complete the replacement of the remaining two (2) water storage tanks at Prospect St. Also, completion of upgrades to existing water treatment plants and wells / pumps, constructing a permanent pumped connection between the two operating pressure systems, upgrading the treatment plant backwash handling system, acquisition of land / property around District wells to protect by better control of the land use in and near the wellhead. Expansion of the District's garage area to be able to securely store vehicles and equipment under cover, and to complete the design, permitting and construction of the metered water connection to the Worcester Distribution system in the Sword St area, upgrading emergency generation equipment to improve the District in order to continue normal operations during prolonged power outages, etc.

Other than that, the Auburn Water District will continue spending capital improvement money on identifying and developing new water supply sources, upgrades to the office and pump / well control computer systems, maintaining its construction equipment to continue to make timely repairs in house to leaks and breaks. Also, to be able to replace older water mains prone to repeated leaks, breaks, and to make upgrades to the system to replace some of the smaller aged water mains, to make upgrades to water meters and meter reading / billing system, as well as on-going capital expenditures for safety equipment and for vehicle and other construction equipment replacement.



ELM HILL WATER DISTRICT

The Elm Hill Water District, similar to the Auburn Water District is a separate water district, created by an act of the Legislature under Chapter 386 of the Acts of 1935, and is independent of Auburn's town government. A multi-member elected Board of Water Commissioners manages the District's affairs and operations. The District has only one full-time employee who serves as Superintendent. The Auburn Water District provides back up emergency repair services to the Elm Hill Water District under a mutual aid agreement.

System Description:

The Elm Hill Water District covers a small service area located in northeast Auburn, lying east of Southbridge St and bounded on the north and east by the City of Worcester, and by the Auburn Water District on the south. The only source of water for the Elm Hill Water District is that supplied by the City of Worcester through a number of metered connections. The rate the city charges to those outside of the city is significantly higher than the "in-city" water rate.

The Elm Hill Water District's operational budget is funded as an enterprise system where the District's customers pay for all operating expenses and major capital expenditures. The district does not utilize any local tax revenue nor State grants to stabilize / subsidize its water rates. Billing is done on a quarterly basis.

The District serves 770 residential customers, including a portion of the Auburn Housing Authority on Pakachoag Street along with some non-residential commercial / industrial users located along Southbridge St. The district uses approximately 53,000,000 gallons of water per year, or 145,205 gallons per day.

Water System

The Elm Hill Water District's water distribution system consists of cast /ductile iron pipe ranging in size from 2 to 12 inches. Not unlike other water mains of a similar age, the District's water mains can be as old as 75+ years old and are subject to unexpected leaks and breaks.

In 2012-13, the Elm Hill Water District undertook a major capital project to replace the existing 6 inch water main with a new 12 inch major supply water main on Pakachoag St. from the meter at the Worcester line 7,200 feet to the Auburn Housing Authority. This new main greatly improved water flows for fire protection along Pakachoag Street, and replaced an aging water main prone to breaks and leaks. The District does not have a formal pipe replacement program, but it does utilize leak detection surveys on a regular basis.

The water system is 100 percent fully metered and is read and billed internally. The District estimates that its unaccounted-for water loss ranges from 2-5 percent of the system's total water usage.

Facilities:

Since the Elm Hill Water District is supplied with water from the City of Worcester through several metered connections, and operates on the same pressure system as the City, the District does not have any other water sources (wells) and does not have any treatment facilities or storage tanks. As mentioned previously, due to a difference in operating pressures, in emergency situations, the Elm Hill Water District can supply the Auburn Water District with water, but the Auburn Water cannot supply the Elm Hill Water District without the use of pressure boosting pumps. The Elm Hill District relies solely on the City of Worcester as a water source.

Equipment:

The Elm Hill Water District has one (1) service vehicle truck. Outsourced contractors complete all repairs, new mains, and water services.

ENERGY EFFICIENCY & CLIMATE RESILIENCY

Efficiency, resiliency, and sustainability may be addressed through municipal facility operations. Increased energy efficiency and sustainable building operations can be incorporated in addition to maintenance and repair of existing facilities for energy use reduction, efficient heating and cooling, and waste minimization. A waste audit of all town departments could identify sources of solid and hazardous waste reductions. An alternative energy feasibility study could explore municipal facilities and land for alternative energy installations. As Town vehicles require replacement, the purchase of fuel efficient or electric vehicles is encouraged. Electric vehicle charging station s could be located at town facilities as town vehicles are transitioned away from strictly gasoline powered vehicles.

Over the past decade, Auburn has been steadily working towards being more energy efficient and preparing for the effects of climate related disaster. Several notable initiatives are ongoing and have been completed.

In June 2012, the Commonwealth of Massachusetts designated Auburn as a Green Community. As a result of this designation, the Town has applied for and received several grants from the State totaling nearly \$953,000 to implement energy efficient projects in various town and school buildings. These projects include energy efficient measures in Town Hall, the Merriam Building, the Library, the Police Station and the High School. In addition to creating energy efficiencies and facility upgrades, many of these measures also generate cost savings to the Town.

FEMA's Hazard Mitigation Grant Program (HMGP) provides funds to states, territories, Indian tribal governments, communities, and regional entities to help communities implement hazard

mitigation measures following a Presidential major disaster declaration. Auburn's 2012 Natural Hazard Mitigation Plan was updated and adopted in 2018. FEMA funded the update and approved the completed plan. Natural hazards addressed in the plan include flooding, snowstorms, drought, and other weather related events. The intention of the strategies identified in the Hazard Mitigation Plan is to reduce the overall risk to residents and property, and to reduce the costs of disaster recovery.

Auburn became a Massachusetts Municipal Vulnerability Preparedness (MVP) certified community in 2019. This designation is a first step to prepare the town for the effects of climate change. As an MVP certified community, Auburn is eligible for MVP Action Grants the designation also gives the town an edge with other grant programs, such as MassWorks. The MVP program is designed to help communities define extreme weather and climate events, understand how the community may be impacted by climate change and to identify vulnerabilities and strengths. The program also helps identify priorities and opportunities to take action to reduce risk and implement actions identified in the planning process.⁶ The MVP certification is renewed annually.

SUMMARY OF PRINCIPAL FINDINGS

1. Through its Capital Improvement Program, financial policies, and Facility Improvement Plan, Auburn has done a very good job maintaining existing buildings and equipment as well as planning for future maintenance needs and improvements. Prior to 2011, many of the Town buildings had experienced significant deterioration due to old age and heavy use with limited planning to address these conditions. Whether through the CIP process, the Facility Improvement Plan, or annual budgeting, augmented by successful grantsmanship, the Town has a plan for addressing facility needs five years out and continues to update that plan regularly. Equipment needs are assessed annually and long-term plans have been developed for technology, public safety and public works equipment.
2. The School Department has done a very good job replacing outdated buildings with new schools or renovating older schools to accommodate current educational needs. The high school is still relatively new with state-of-the-art technology, and improvements and upgrades have been made as needed. Retrofitting the former Swanson Road Middle School into the Swanson Road Intermediate School for grades 3-5, and utilizing Pakachoag Elementary School and Bryn Mawr Elementary for grades K-2 enabled the School Department to close the Mary D. Stone School and the Julia Bancroft School and declare each as surplus property. Those surplus properties, through a comprehensive bid process in 2017, will be redeveloped by a private developer into senior affordable housing facilities,

⁶ Municipal Vulnerability Summary of Findings
<https://www.auburnguide.com/DocumentCenter/View/2586/Municipal-Vulnerability-Preparedness-Summary-of-Findings-PDF>

addressing a critical need for affordable housing in Auburn for those aged 55 and above. While the redevelopment process for each property will take a few years, at completion the Town will gain more than 110 units of privately owned and managed senior affordable housing.

3. The older schools will continue to have facility improvement needs in the coming years. Lack of meeting space, limited storage space, older windows, aging modular classrooms, and older boilers will need to be replaced and an addition may be needed at the Pakachoag School.
4. While the Town has done a great job since 2011 maintaining Town buildings and developing and implementing a Facility Improvement Plan, the Town has not been as successful in replacing or expanding its aging municipal building stock. Town Hall is in need of a significant amount of additional space for offices as well as records storage. Built 123 years ago, the facility cannot accommodate the current needs of municipal departments nor is it expected to accommodate future needs within its existing footprint. A significant addition to the facility should be considered over the next few years. Other municipal buildings must either be replaced or enlarged and extensively renovated. This includes the Senior Center, which cannot accommodate any additional programming needs, as well as the Library, which has been renovated but is still in need of additional space for programs as well as operations. Town administration's plan, pending a vote of Town Meeting, to renovate the Camp Gleason facility to provide for one additional meeting room should alleviate some of the space issues at Town Hall, the Library and the Senior Center but even this renovated meeting room will not address the needs of these three buildings for operational space, program and event space. The Town's public safety facilities – Police Headquarters, Fire Headquarters and the West Street Fire Station, no longer provide the space needed to support the operations of today – nor of the future. The Town is taking steps to address this through a much-needed Public Safety Feasibility Study, which will provide recommendations for either replacement, expansion or rehabilitation. The study is anticipated to be completed end of 2019.
5. Town administration has made significant strides over the past few years in addressing prior departmental staffing deficiencies, although some municipal departments are still in need of additional staff resources. Current laws and regulations, unfunded state and federal mandates, and other regulatory requirements have placed additional staffing burdens on many municipal departments and the school department. It is anticipated that unfunded mandates will continue to place staffing and resource burdens on town departments. Although Town Administration has increased staffing levels in those areas of dire need, there remain certain staffing needs that will have to be addressed in the long-term. Town administration has a plan to phase in additional new positions during those years in which it is anticipated that revenues will support the new positions with less of an impact on the

taxpayers. However, there will, be an impact and Town administration is working to address those impacts through strategic budgeting and various reforms.

6. The substantial commercial and industrial economic base in Auburn provides a strong level of relief for Auburn residential taxpayers due to the dual tax rate, which places more burden on the commercial/industrial property owners than on residential property owners. However, the dual tax rate also makes it more difficult to attract commercial/industrial businesses to Auburn as most of the surrounding communities with which Auburn competes, have a single tax rate. The City of Worcester and Auburn are the only two municipalities in the Central Massachusetts region with a dual tax rate. The Board of Selectmen has made steady movement over the past several years to reduce the tax rate differential and close the gap in the tax rate. The new growth realized over the past few years reflects this shift as the Town has benefitted from increased growth in commercial/industrial valuations. The vacancy rate in commercial/industrial properties has also declined as new businesses have located to Town and existing business have expanded their facilities. Since 2011, the Town has focused its efforts on economic development including business attraction, expansion and retention. The Economic Development Strategy Plan, discussed in this Master Plan, provides strategies to stimulate development and increase the tax base. It is critical to continue to implement the economic development strategies in order to increase the tax base and provide revenues to fund operations, programs and services.
7. Beginning in 2011, the Town embarked on a strategy to upgrade its technology at all levels in order to create efficiencies in operations, provide outreach and education to the public, and enhance its communications, both internally and externally. In eight years, the technological advances have been tremendous. The Town has computerized most of its operations and files. With upgraded software and computer systems, the Town now has the ability to accept on-line applications and payments. The Town implemented an online permitting system for building permits and online dog licensing. The Town can collect permit and license fees through the online payment system. This system creates better access to the services of local government as it allows residents, contractors, and vendors to apply and complete applications online, at any time of day, through any internet connection. In 2012, the Town created social media pages on Facebook and Twitter. The Police Department and Fire Rescue Department also have social media sites Facebook, Twitter and Instagram. YouTube is utilized for meeting videos and community events. By utilizing available technology, the Town is able to communicate quickly and effectively with residents. The Financial Transparency Center is a great online tool for the public to utilize to view all aspects of the Town's budget and to see how their tax dollars are allocated. Part of its overall communications strategy mentioned above, the Town does an excellent job informing its residents, businesses and taxpayers of programs, services, initiatives, plans and events.

8. Since 2011, the Town has focused on grantsmanship across all departments. From the Town Manager to department heads, each is tasked with identifying, applying for and securing grants throughout the year. Since 2011, town administration has applied for 250 grants totaling \$14,690,695.87 in requests. A total of 207 grants have been received totaling \$4,260,730.81 since 2011. These grants have funded parks, playgrounds, public safety, public health and public works vehicles and equipment, programs, services, events, plans and initiatives. Grants have also funded programs and services at the library, the senior center, Town Hall and the school department. Significant funding has been secured for infrastructure, facility improvements, and emergency management equipment, planning, and response and prevention.
9. The Town has done a good job integrating technology into operations and utilizing it to enhance communications with residents and taxpayers. Technology needs and systems change rapidly and the Town plans to update equipment and software as necessary through the CIP Plan.
10. The Town has implemented a vehicle replacement plan that schedules the purchase of new vehicles to replace aging stock, which is funded through the CIP Plan. Through one of its financial policies, 1/10 of Proposition 2 ½ is allocated annually into a fund to be utilized for capital needs with the long-term goal of eliminating borrowing for capital items.
11. The Town has made a significant investment in its local roads since the summer of 2011 when a \$3 million Roadway Improvement Program commenced. In addition to Chapter 90 funding, the Town allocated a total of \$1.6 million in local funds in Fiscal 2012 and Fiscal 2013 in support of the new Roadway Improvement Program. In Fiscal 2012, 6.0 miles of roadway improvements were completed, while another 3.5 miles were completed in Fiscal 2013, with a cost of \$1.5 million. Additionally, in the fall of 2013, the Town awarded a \$1.1 million contract for the reconstruction of 3.1 miles of roads. The Roadway Improvement Plan focused on primary arteries and connector roads in Year 1 (Fiscal 2012), and on secondary roads and neighborhoods in Year 2 (Fiscal 2013). In Fiscal Year 2014 and 2015, the Town continued to balance the reconstruction of primary arteries with local roads. In Fiscal Year 2014, the Town invested \$1.4 million dollars to reconstruct 4.5 miles of Town roads. In Fiscal Year 2015, the Town began construction on a \$3.4 million project to reconstruct 7.8 miles of roads. This project was completed in Fiscal Year 2016. In Fiscal Year 2017, the Town completed the reconstruction of an additional 4 miles of roadway improvements. This project consisted of 0.5 miles of collector roads and 3.5 miles of local neighborhood roads. The total cost of the FY 16/17 roadway improvements was \$1.4 million. In Fiscal Year 2018, the Town will begin on a \$1.5 million reconstruction project, consisting of 4.3 miles of roadways. As part of the new Auburn Middle School project, the Town invested in a \$1.06 million roadway improvement project along West Street. This work included construction of sidewalks and widening of the roadway to accommodate an additional travel lane near the intersection of West Street and Route 12.

In total, over \$16 million has been invested in reconstructing or resurfacing over 40 miles of Town Roads in the past 9 years. The Town remains committed to this program and will continue to advocate for and secure funds to continue its aggressive infrastructure improvements. In addition to the Roadway Improvement Program, the Town of Auburn has made significant investment in its sewer and dam infrastructure. The Town has invested approximately \$1.0 million to rehabilitate and reconstruct several Town-owned dams, and \$1.2 million to improve the Town's sewer infrastructure.

12. Despite the tremendous investment the Town has made into its infrastructure annually, the infrastructure is aging. The sewer system consists of approximately 85 miles of sewer lines and 12 sewer-pumping stations. A long-term financial plan for the replacement of aging lines needs to be implemented at significant cost.
13. The Auburn Water District's water system is close to running at full capacity and the District anticipates that new water supply sources will need to be developed during the next decade. The water delivery pipes are as old as 50 years and there is no formal pipe replacement program, as pipes are replaced as they break.
14. The Town's sewage flow is treated at the Upper Blackstone Water Pollution Abatement District (UBWPAD) treatment plant on the Worcester/Millbury line. Although the sewage treatment plant was constructed with excess capacity to meet the future needs of the entire district, EPA and DEP have mandated numerous revisions to the plant's discharge permit including much stricter pollutant limits in an effort to help clean up the Blackstone River. The stricter discharge limits set by state and federal regulators will require expensive equipment upgrades to meet the new standards. The total cost of the upgrades was in excess of \$150 million and was funded by low interest loans (2 percent) through the Massachusetts Water Pollution Abatement Trust over a 20-year period. This causes significant increase to the operating budget and will affect individual users who will be expected to pay for the upgrades through higher rates.
15. The Storm Water Management Plan, new regulations and unfunded mandates will require the Town to continue making improvements to its storm water infrastructure. This will also increase the day-to-day operations, engineering, inspection, enforcement and reporting duties of the Town engineering staff. A long-term plan to address stormwater infrastructure needs is being developed by the administration and a plan for meeting state and federal mandates needs to be addressed in the budget.
16. Auburn does not have an Americans with Disabilities (ADA) Transition Plan. Such a plan is needed to identify conditions in Town-owned buildings and facilities that limit accessibility by people with disabilities. The Town has an obligation to insure that all citizens can fully participate in the Town's services, programs, and activities. ADA requires that buildings, parks and other facilities that offer services to the public be readily accessible to and usable by persons with disabilities. Auburn also does not have a

Commission on Disability that is charged with insuring that the Town complies with its obligations under the law and assisting those with disabilities to insure that their needs are recognized and accommodated. Town administration is actively undertaking the development of the ADA Plan.

GOALS

1. Continue to provide a high-quality range of services and public utilities, including the ongoing modernization or replacement of aging facilities.
 - Continue to update the Facility Improvement Plan and allocate sufficient resources to fund the Plan in order to maintain adequately the town's inventory of municipal buildings to prolong their life.
 - Develop a long-term building replacement program to ensure that new municipal buildings are constructed to replace facilities that can no longer meet the needs of the town.
 - Continue to prioritize the update, repair, and renovate the town's public buildings and schools as needed.
 - Work with local internet and cell service providers to proactively seek out new technology to expand access and infrastructure across Auburn.
 - Continue to upgrade and replace aging pipes for sewer systems, including evaluating possible expansion to residents that are not currently served by town sewer infrastructure.
 - Conduct a study on the feasibility of updating and modernizing or replacing the Public Library.
2. Care for residents of all ages including providing opportunities for recreation and community gathering for all age groups.
 - Support and increase disaster and resiliency planning and mitigation.
 - Prepare an ADA Transition Plan to identify barriers for the use of town facilities by those with disabilities, develop a program, and schedule to eliminate systematically such barriers.
 - Prepare and implement a long-term maintenance plan for existing fields and, if needed, identify locations and types for additional athletic fields and other recreational facilities.
3. Continue roadway maintenance and roadway replacement and upgrades as necessary.
 - Develop and allocate resources to fund a long-term infrastructure replacement program to replace aging infrastructure.

- Continue to allocate funding into the Roadway Improvement Program to augment Chapter 90 funds from the State.
 - Conduct a corridor study of MA-12/Southbridge Street.
4. Continue high level of staff support in order to maintain and build upon current level of services provided by the town.
 - Allocate resources to provide municipal departments with staffing levels and capital equipment needed to meet state and federal mandates and to provide high quality services and programs to Auburn citizens and taxpayers.
 - Continue to invest in technology upgrades across all departments.
 5. Increase energy efficiency in all town facilities.
 - Transition away from strictly gasoline powered vehicles and equipment to fuel efficient and electric vehicles.
 - Investigate feasibility and install electric vehicle charging stations at appropriate town facilities.
 - Conduct an alternative energy study of town facilities and where feasible install energy efficient upgrades and equipment.
 6. Promote water quality and water resource management.
 - Encourage the use of low-flow devices, water collection, and recycling.
 - Educate residents and property owners about the importance of water conservation.
 - Develop robust stormwater regulations.
 - Encourage use of rainwater irrigation systems.
 7. Improve the sustainability of town operations during emergency situations and prepare for the effects of climate related events.
 - Update and maintain the town Comprehensive Emergency Management Plan
 - Undertake strategies identified in Auburn's 2018 Natural Hazard Mitigation Plan and update the plan every five years.
 - Pursue grants through the Massachusetts Municipal Vulnerability Preparedness (MVP) program to combat the effects of climate change.

HOUSING & POPULATION



Pakachoag Hill Residential Area

INTRODUCTION

Auburn is a suburban community with a housing supply consisting of mostly single-family dwellings. Most new developments consist of large single-family homes on fairly large lots. In the past, homebuyers tended to want spacious homes, good schools and the various amenities that Auburn offers. Housing opportunities consist primarily of single-family homes with the owner-occupied rate remaining very high, indicative of a stable residential base. Auburn is a desirable community with good schools, close proximity to employment centers, transportation networks and recreation facilities. Subdivisions with looping street patterns exist throughout the town. These subdivisions appeal to families looking for safe roads with very little traffic. Despite the drawbacks associated with cul-de-sac streets (poor circulation, excess pavement, etc.), families with children like them, as do developers. In Auburn, cul-de-sacs seem to reinforce a sense of neighborhood identity, a characteristic many residents say they appreciate. Auburn will face several challenges over the next decade. The population of Auburn is aging, the median age of residents is 47 compared to a median age of 40.1 for Worcester County⁷. Affordable housing is lacking in Auburn, currently 3.7 percent with a target of 10 percent. The challenge the Town of Auburn faces in the coming years is housing for the elderly, as well as an adequate number of affordable housing units. This chapter will describe the current existing conditions and will chart a path for the town to address the housing challenges.

EXISTING CONDITIONS

Data throughout the Housing Chapter concerning the population and the trends in Auburn are important so town government may provide sufficient services and to plan for the future. A well-prepared town will more effectively confront the challenges of the future head on. The town sits at the junction of three interstates, I-90, I-290 and I-395, as well as two major highways, US-20 and MA-12. These roads have helped transform Auburn from a largely agricultural economy into a predominantly industrial and retail-based economy. Auburn has a strong commercial/industrial base consisting of diverse sectors, including warehousing, distribution and other industrial companies. Additionally, the town is home to a significant retail sector, anchored by the Auburn Mall, and other service related businesses. Auburn attracts much of its labor from other communities to fill jobs created by local industry resulting in a greater day-time population than the evening population. Population projections predict slow growth for the town over the next 20 years. The Central Massachusetts Regional Planning Commission's (CMRPC) projections show Auburn with an estimated 16,877 residents by 2020 and 17,814 residents by 2030, Auburn's current, 2017, population is 16,552. Most communities that neighbor Auburn are expected to grow

⁷ US Census ACS 2013-2017

at a faster rate, which is not surprising given that there is little unconstrained developable land left in Auburn.⁸



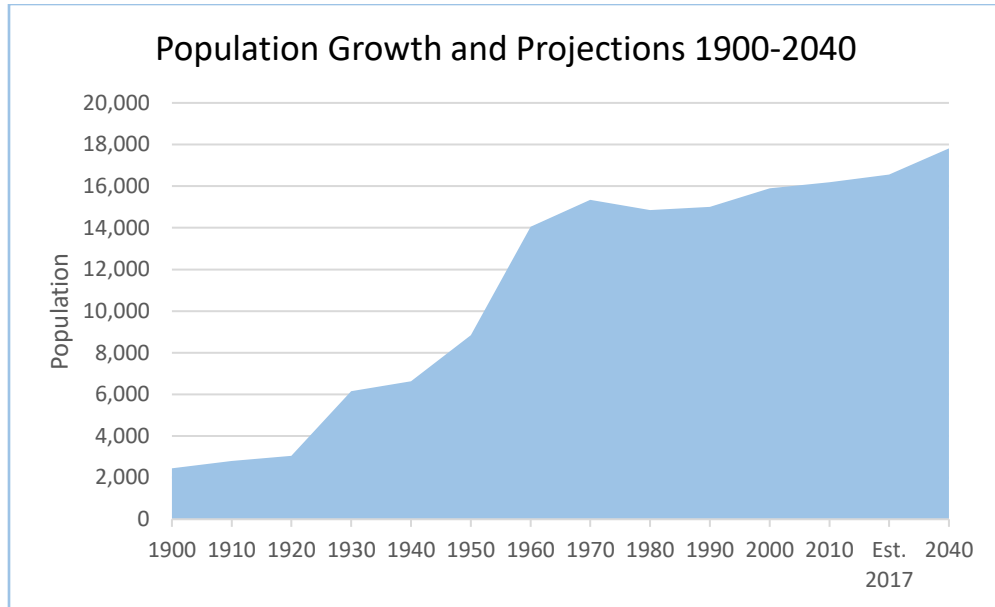
Figure 9. Pakachoag Hill Residential Area

POPULATION AND HOUSEHOLD TRENDS

In 2010, Auburn’s population totaled 16,188 residents, making it the 12th largest community out of all 60 communities in Worcester County. In terms of population density, Auburn had 1,054 residents per square mile, making Auburn the ninth densest community in Worcester County. The town’s most substantial period of growth occurred between 1930 and 1970. During this period, the town’s population increased from roughly 6,000 residents to over 15,000 residents. Since then, Auburn’s population growth rate has been slow and stable. For example, from 2000 to 2010 the town’s population grew by two percent or around 300 residents. Worcester County’s population grew six percent over this period, while the state population grew by three percent.

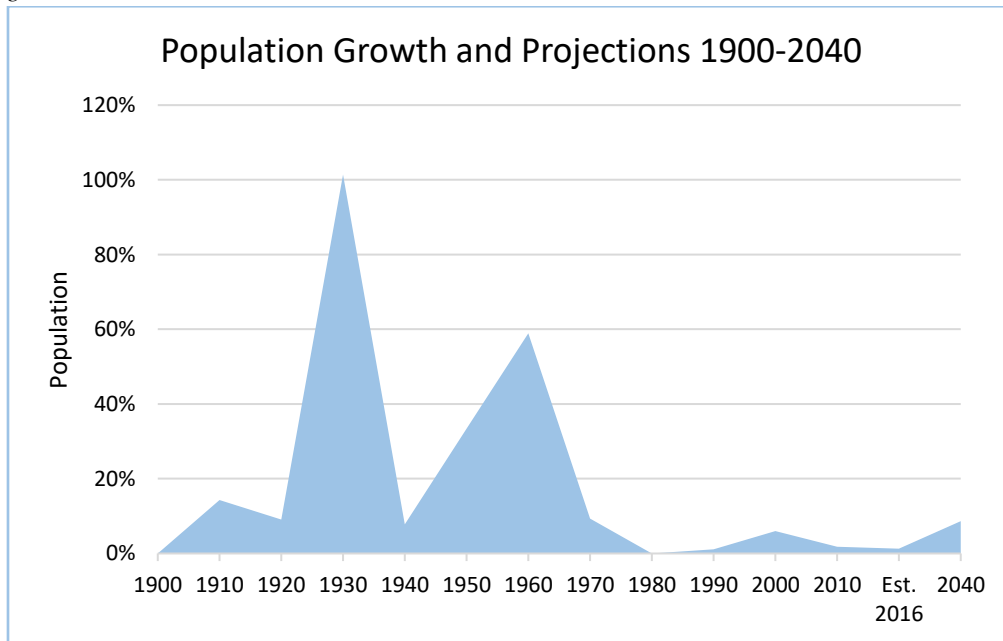
⁸ Town of Auburn Comprehensive Housing Plan, 2017

Figure 10



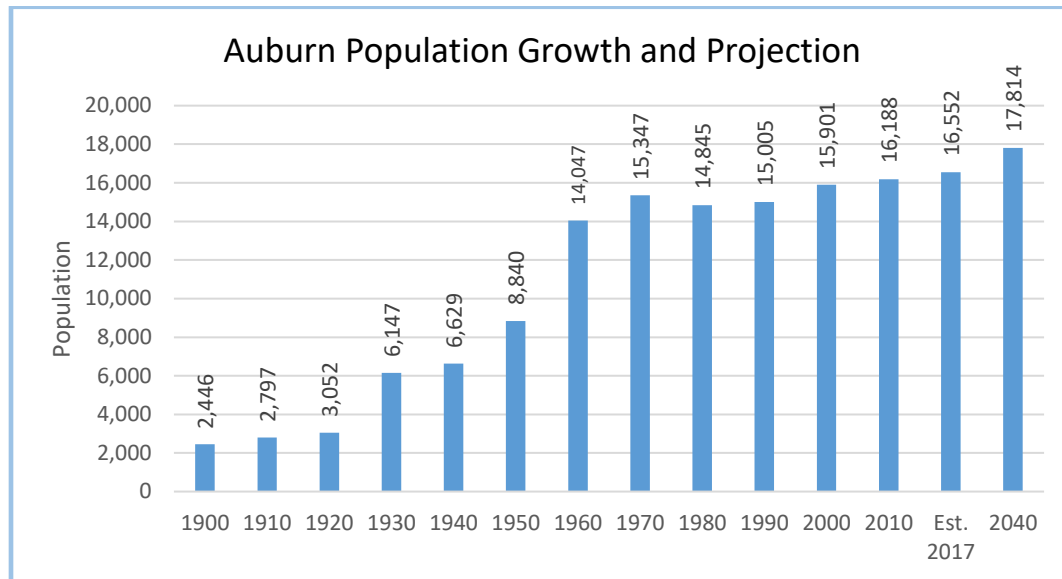
Source: US Census, ACS 2013-2017, CMRPC projections

Figure 11



Source: US Census & CMRPC Projections, 2017

Figure 12



Source: US Census Bureau & CMRPC Projections

In 2010, just over 65 percent of all households in Auburn were family households, meaning the household consisted of a householder and one or more other people related to the householder by birth, marriage or adoption. Approximately 30 percent of all households in town were single-person households and just over ten percent of these households were elderly single-person households. Both measures were comparable to the state as a whole for this period. Just over five percent of the remaining households were households in which members were not related to one another.

Almost 30 percent of all households in Auburn had children under the age of 18 living with them, which was comparable to the state as a whole in 2010. Six percent of all households consisted of single-parent households. Single-parent households may have more difficulty affording a decent and safe place to live because of the reliance on one income to support the family. Proportionally, Auburn had fewer single parent households than the state, which was nine percent of all households in 2010. Families with children are a protected class under federal law, and Massachusetts has made it unlawful to discriminate based on marital status.

Table 8

Housing Characteristics						
	2017	2017 Percent	2010	2010 Percent	2000	2000 Percent
Population	16,552	--	16,188	--	15,901	--
Households	6,716	100%	6,417	100%	6,346	100%
Families with Children	1,553	23.0%	1,784	27.3%	3,374	28.1%
Householder Living Alone	1,914	27.6%	1,822	27.9%	1,634	25.7%
Household with individual under 18	1,780	25.5%	1,951	29.8%	1,933	30.5%
Household with Individuals 60+ Years	3,089	46%	2,701	42.1%	2,029*	32.0%
Median Age	47		43.7		40.9	
Average Household Size	2.44		2.52		3.01	
* 65+ years of age						

Source: US Census & www.Housing.ma

Table 9

Population Growth and Projections by Age Group												
	1990		2000		2010		2017		2020 est.		2030 est.	
	number	% of Total	number	% of Total	number	% of Total	number	% of Total	number	% of Total	number	% of Total
Total Population	15,005	100%	15,901	100%	16,188	100%	16,552	100%	16,332	100%	16,297	100%
Under 5 Years	914	6%	847	5%	791	5%	580	4%	--		--	
5-19	2,760	18%	3,051	19%	2,957	18%	2,857	17%	2,659	16%	2,794	17%
20-34	3,239	22%	2,490	16%	2,411	15%	2,551	15%	2,564	16%	2,273	14%
35-64	5,660	38%	6,631	42%	7,072	44%	7,332	44%	6,938	42%	6,566	40%
65 and over	2,432	16%	2,882	18%	2,957	18%	3,305	20%	3,305	20%	3,837	24%
Median Age	37.4		40.9		43.7		47					

Source: www.housing.ma & US Census & American Community Survey 2013-2017

Auburn's population has been relatively stable, growing slower compared to other towns in the area and the county as a whole. The total estimate population in Auburn is 16,393 (2017)⁹ this is

⁹ <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

an increase from the 2010 US Census 16,188, the 2000 US Census 15,901, and the 1990 15,005 US Census.

Table 10

Area Municipalities Population Growth						
	1990	2000	2010	2017	Increase from 1990	Projected 2040
Auburn	15,005	15,901	16,188	16,552	10.31%	17,834
Grafton	13,035	14,894	17,765	18,517	42.06%	22,390
Leicester	10,191	10,471	10,970	11,277	10.66%	12,048
Millbury	12,228	12,784	13,261	13,521	10.57%	15,319
Oxford	12,588	13,352	13,709	13,898	10.41%	15,601
Worcester	169,759	172,648	181,045	184,743	8.83%	197,195
Worcester County	709,705	750,963	798,552	818,249	15.29%	---

Source: www.housing.ma & US Census & American Community Survey 2013-2017

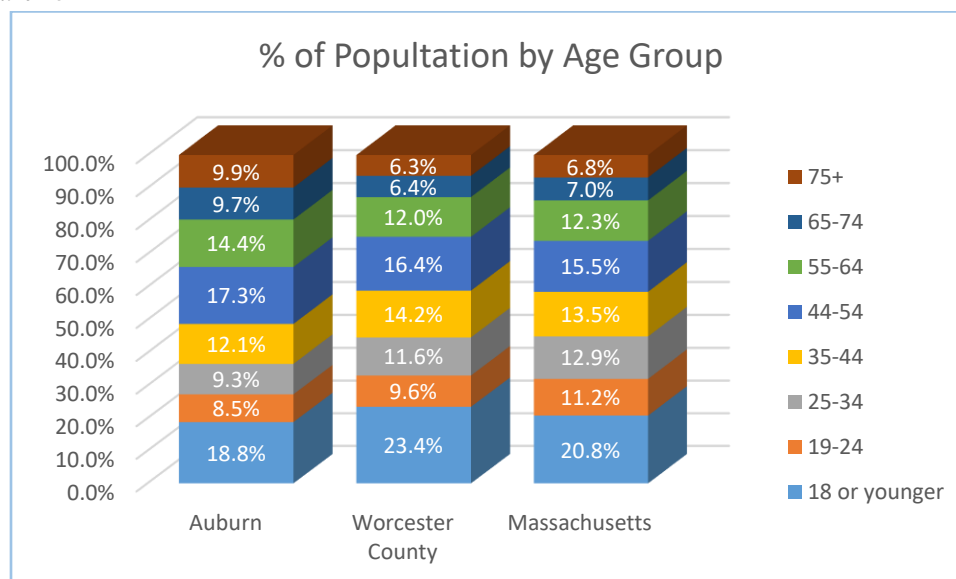
The region and the Town of Auburn's population are aging. The Baby Boomer generation, those born between 1945 and 1965, are reaching retirement age and much of the housing in the area is not suitable for an older population. Smaller single story homes are at higher demand for those downsizing. The mobility problem of the aging population will play a role in how people live and where they dwell. Aging in place is a term describing a person's decision to stay in a dwelling of their choice for as long as they wish, without losing their quality of life; this necessitates the rethinking of housing options. Aside from smaller single story homes, options include apartments, senior communities, care homes with different stages of assistance depending on the health and wellbeing of the resident are some of the options available. Building out the capacity of residences suitable to people interested in aging in place will need to be addressed in the short term. It should be noted, the millennial generation are beginning to purchase homes and often times a "starter home" might be the small single story home a senior would be interested in to age in place. Increasing the supply of housing options is a challenge that will need to be met at the municipal and state levels of government.

AGE

The age distribution of a community's population has important implications for planning and the formation of public policies related to housing and community development as different age groups have different demands and preferences. In addition, age is a protected class under state law. The changing age composition of the town and state as a whole will have an impact on the demand for housing better suited for older households, as well as smaller households. Similar to

the nationwide trends, the town's population is aging as the Baby Boomer generation nears and surpasses retirement age. The median age of Auburn's population has steadily increased since the 1970s from 30.4 years of age in 1970 to 43.7 years of age in 2010 to 47 years of age in 2017.

Figure 13



Source: American Community Survey 2013-2017

Table 11 shows how the population has aged over the last ten years, as well, as how the town is projected to age. From 2000 to 2030, an overall decline in the town's population under the age of 19 is projected. The decline in the residents age 19 and under, and of residents in their prime childbearing years suggests that school enrollment may go down, at least over the next decade. This expectation could change if there is an unexpected increase in new housing growth or a significant turnover in the existing housing stock to families with school-aged children. Auburn Public Schools has reported a small, five percent increase of 125 students, in its student population from 2001 to 2016. The Superintendent of Auburn Public Schools anticipates stable school enrollment over the next decade, noting though that this could change, should a substantial number of housing units be created in town. Auburn's stable and slightly increased enrollment is in contrast to other school districts in the state that have witnessed declining enrollments over the last decade and a half.

Table 11

Population Growth by Age 1990-2030												
	1990		2000		2010		2017		2020 est.		2030 est.	
Total Population	15,005	100%	15,901	100%	16,188	100%	16,552	100%	16,332	100%	16,297	100%
Under 5 Years	914	6%	847	5%	791	5%	580	4%	--		--	
5-19	2,760	18%	3,051	19%	2,957	18%	2,857	17%	2,659	16%	2,794	17%

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65 and over	2,432	16%	2,882	18%	2,957	18%	3,242	20%	3,305	20%	3,837	24%
Median Age	37.4		40.9		43.7		47					

Source: US Census, American Community Survey 2013-2017, housing.ma

Table 11 also projects an overall increase in the number of residents age 65 and older, suggesting complacency with current housing situations and the potential desire to age in place. A small decline in the number of residents age 25 to 34 years is projected, suggesting that there may be insufficient housing options that this age group can afford in Auburn, such as starter homes, condominiums or apartments.

EDUCATION

The relationship between educational attainment, employment, and household wealth is well understood. In today's economy, a high school education is the minimum requirement to participate effectively in the job market. The 2013-2017 American Community Survey (ACS) estimated that 38.2 percent of Auburn residents had a bachelor's degree or higher. Auburn's educational attainment rate for the population with a bachelor's degree or greater was slightly higher than the Worcester County rate of 35.3 percent, but lower than the state rate of 42.1 percent.

Table 12

Educational Attainment									
Residents 25+ years of age	Percent High School graduate or higher	Percent Bachelor's degree or higher	less than 9th grade	9-12 grade no diploma	High School graduate & equivalency	some college, no degree	Associates degree	Bachelor's degree	Graduate or professional degree
Auburn	93.2	38.2	1.7	5.1	29.5	16.5	9.1	24.3	13.9
Worcester County	90.3	35.3	3.6	6.2	28.6	17.4	8.9	21.6	13.7
Massachusetts	90.3	42.1	4.6	5.1	24.7	15.8	7.7	23.4	18.7

Source: US Census, American Community Survey 2013-2017

INCOME

The ability to exercise housing choice bears a strong relationship to the amount of money a household can afford to spend on housing. Housing that is affordable for low-income and moderate-to-middle income or “working class” households are major regional and state priorities. Housing that is affordable to lower income households is critical to creating household stability and economic self-sufficiency. Housing that is affordable to working class and middle class households is critical to building and retaining talent and for improving the regions’ and the states’ overall economic competitiveness. Household and family income in Auburn has been stable over the last decade with a slight increase in both median household income and median family income. In comparison, Worcester County and the Commonwealth of Massachusetts experienced slight decreases in median household income and very slight increases in median family income over this same period. Auburn’s median household income of \$74,174 and median family income of \$95,097 based on the 2013-2017 ACS estimates were higher than those of Worcester County and Massachusetts during the same period.

Table 13

Median Income			
	Auburn	Worcester County	Massachusetts
Households	\$74,174	\$69,313	\$74,167
Families	\$95,097	\$69,313	\$94,110
Non-Family	\$38,396	\$36,232	\$42,119
Families Below the Poverty Line	1.8%	7.5%	7.8%

Source: US Census American Community Survey 2013-2017

In 2017, Auburn had labor force of 9,002 residents, of which 8,458 residents were employed, amounting to an annual unemployment rate of 5.9 percent. This rate was about the same, 6 percent, as the state’s annual unemployment rate for 2017. The number of jobs in Auburn exceeds that of its labor force, confirming Auburn’s position as a regional employment center. The average monthly employment in Auburn for 2017 was 10,719¹⁰.

¹⁰ Executive Office of Labor and Workforce Development (EOLWD), Labor Market Information

Table 14

Auburn's Employment Population by Industry	
Total Employed 16+	8,458
Agriculture, fishing, hunting, and mining	26
Construction	483
Manufacturing	850
Wholesale Trade	303
Retail Trade	1,023
Transportation and Warehousing & Utilities	360
Information	258
Finance & Insurance, Real Estate & Rental & Leasing	620
Professional, Scientific and management and administrative and Waste Management	882
Educational Services and Healthcare and Social Assistance	2,545
Arts, Entertainment and Recreation and Accommodation and Food Service	479
Other Services, except Public Administration	285
Public Administration	344
Unemployed	531

Source: US Census American Community Survey 2013-2017

Table 15

Industries in Auburn and the Weekly Average Wage				
	# Jobs 2007	Average Weekly Wage	# of Jobs 2017	Average Weekly Wage
Total, all industries	10,696	\$768	10,719	\$944
Goods-Producing	1,626	\$1,256	1,713	\$1,431
Construction	709	\$1,179	1,137	\$1,137
Manufacturing	917	\$1,316	576	\$1,616
Wholesale Trade	996	\$949	1,600	\$837
Retail Trade	3,148	\$516	2,403	\$623
Financial Activities	583	\$1,015	498	\$1,362
Information	28	\$917	39	\$742
Education and Health Services	1,428	\$780	1,772	\$890

Industries in Auburn and the Weekly Average Wage				
	# Jobs 2007	Average Weekly Wage	# of Jobs 2017	Average Weekly Wage
Leisure and Hospitality	1,067	\$298	1,119	\$384
Other Services	396	\$517	337	\$642
Professional / Business Services	930	\$954	813	\$1,173

Source: US Census American Community Survey 2013-2017

The retail industry in 2017 employed the greatest number of people with 2,403 employees; approximately 25 percent of all employees. Auburn hosts one of the region's shopping malls as well as numerous other shopping and dining destinations that serve residents across southern Worcester County. The retail industry, the accommodation, and food service industries, however, offer some of the lowest wages of all industries in Auburn. The manufacturing industry continues to offer some of the highest wages in town, with average wages over \$1,600 a week. Five other industries in Table 15 offered average wages over \$1,000 per week. Auburn has seen steady business growth over the last ten years adding almost 40 new businesses between 2005 to 2015, also adding approximately 80 net jobs. The largest growth was in the health care and social assistance industry, which added 64 businesses and 402 jobs. The wholesale trade industry also added over 400 jobs during this period.¹¹

Auburn has very good highway access given that the interstate highways of I-90, I-290 and I-395 are all located in the central area of town. The town is served by three fixed bus routes via the Worcester Regional Transportation Authority (WRTA), which connect with the passenger rail service in Worcester. In addition, the Auburn Council on Aging contracts with the WRTA for Americans with Disabilities Act (ADA) and demand-response transportation services. In addition, the Council on Aging has a daily scheduled service that provides transportation for local services such as grocery shopping, hairdressing and medical appointments. Penrose Development, the selected developer for the conversion of two Town-owned former school buildings to elderly housing, will be working with WRTA to potentially extend bus service to areas in proximity of the former schools. The 2013-2017 ACS reports that less than 1 percent of the working population in Auburn uses public transportation to commute to work. An estimated 90 percent of Auburn residents who commute to work drive alone in a car, truck, or van. This rate is much higher than that of Massachusetts, in which just over 70 percent of residents drive alone to work. An estimated three percent of the working population in Auburn, or 295 residents, work from home.¹²

¹¹ Town of Auburn Economic Development Strategic Plan, 2017

¹² Auburn Housing Plan, 2017 & ACS 2013-2017

HOUSING INVENTORY

Table 16

Median Area House Value		
	Total housing units	Median Value
Auburn	6,854	\$245,300
Grafton	7,179	\$352,000
Leicester	4,639	\$231,300
Millbury	5,621	\$263,200
Oxford	5,570	\$232,600
Worcester	76,173	\$210,600
Worcester County	329,285	\$260,800
Massachusetts	2,864,989	\$352,600

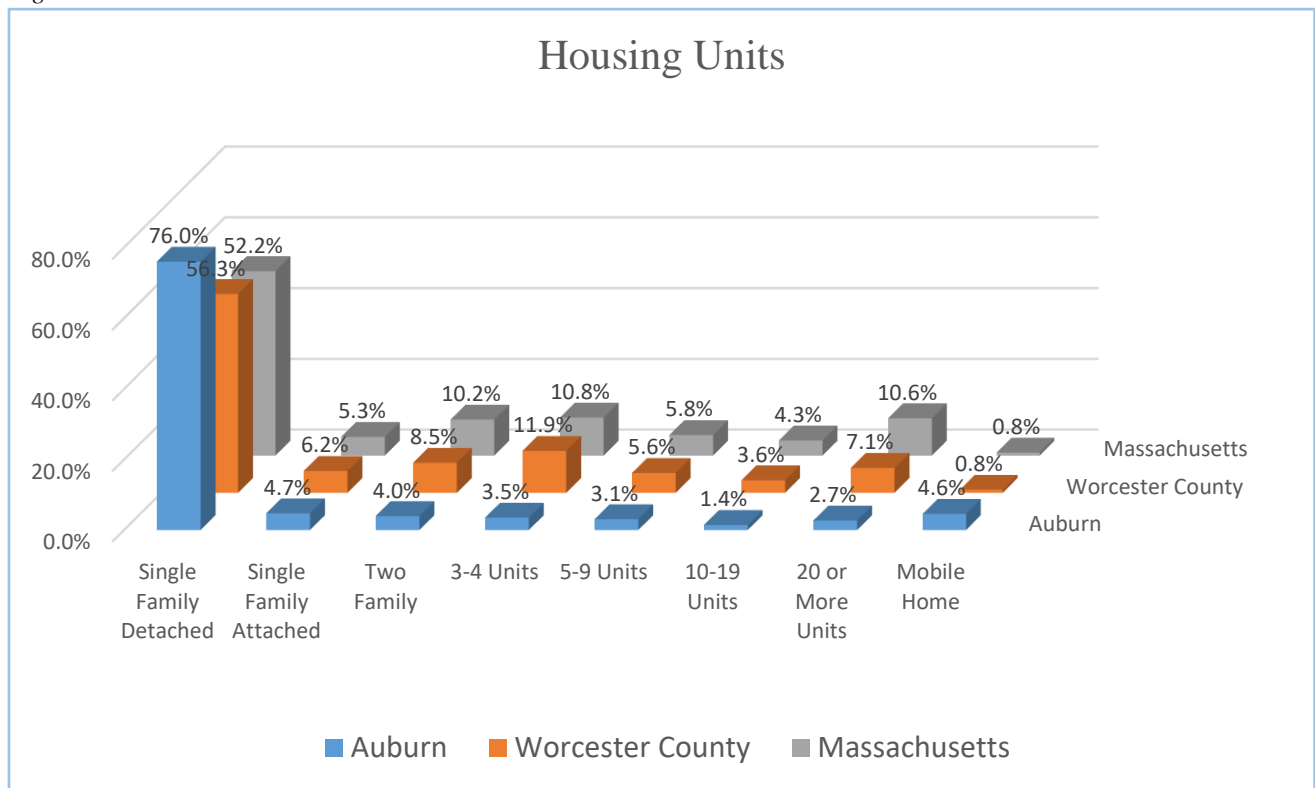
Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Current Housing Stock

There are many varieties of housing, the most common being single-family households apartments, townhouses, multifamily, and mobile homes. These varieties can then be broken down into various subcategories. For example, an apartment could be a loft or a single family could have an in-law apartment on the same property. Ensuring there is enough affordable housing available is an ongoing challenge and something that might work well in one town will not necessarily work well in another.

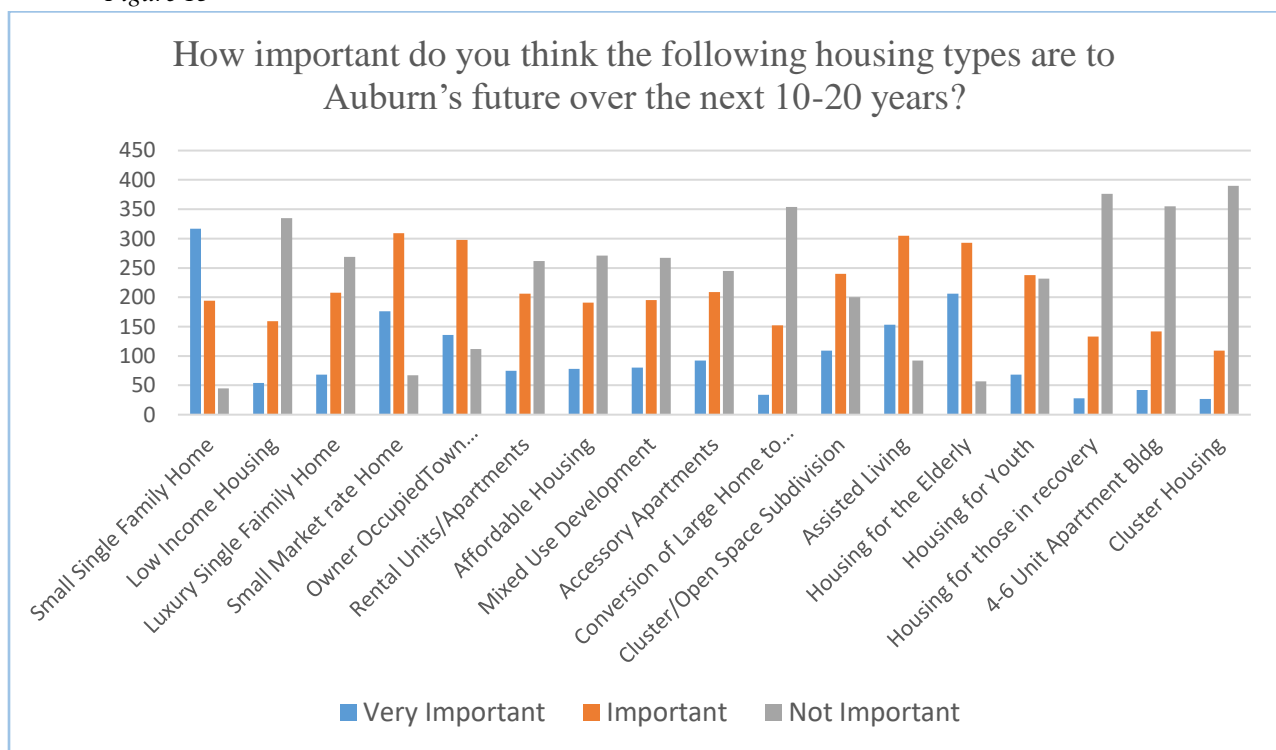
Detached single-family homes make up the majority, 76 percent, of Auburn's housing stock. This is a common feature in most towns in the area. Cities, such as Worcester tend to have many more multifamily rental units, such as three-deckers.

Figure 14



Source: housing.ma

Figure 15



Master Plan Survey

Housing Suitability Map

2019 MASTER PLAN

Legend

- Town Boundary
- Water Bodies
- Zoning Districts
- Structures
- Slopes 25% or More
- River Protection Act (100ft Buffer)
- 100-year Flood Area (DFIRM)
- 500-year Flood Area (DFIRM)
- Major Road
- Local Road
- Protected Open Space
- Developed Land (2005 Land Use)
- Developed Land (2013 Audubon Land Use)
- Developed Areas (2017 Google Imagery)

Scale: 0.4 Miles

Inset map showing location within Massachusetts.

Town of Auburn, Massachusetts

Source: Data provided by the Town of Auburn, GIS/CIP, MassDOT, MassGIS.
Information depicted on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Use caution interpreting positional accuracy.

CHRPC
One Mercantile Street, Suite 500 - Worcester, MA 01608

Date: 9/1/2019 Document Path: \\gis\projects\2019_master_plan\mxd\map_server_cache\2019_master_plan\mxd\map_server_cache\2019_master_plan.mxd

Housing Options

There are several housing trends that have evolved in the last few years. These include tiny or small homes, cluster developments and accessory housing.

Cluster housing is a method to group dwellings close together to preserve open space and have a communal recreation area. This method increases density and helps to preserve open space by allowing dwellings to be build closer together than current zoning bylaws allow.

Figure 16



Example of Cluster Housing¹³

¹³ <http://www.pocket-neighborhoods.net/blog/wp-content/uploads/2015/08/PN-Cluster.png>

¹³ www.yimby.wiki/index.php

Housing assessments typically point to a need for more rental opportunities if a community has more than 70 percent owner-occupied homes. This is indicative that rental options for young, old, or transitional populations such as recent divorcees and new employment recruits may be limited. Auburn's comparatively low number of rental opportunities is one reason that the town may want to consider encouraging additional rental opportunities through zoning or affordable housing initiatives.

Accessory Dwelling Unit (ADU) was once a more common method of housing that went out of fashion in the middle of the 20th century. Today, as the population ages, accessory units are a way for those seniors to live near family while keeping their independence and having their own space on the same property. Accessory housing is generally a detached unit adjacent to the primary residence. In-law apartments are generally apartments built off a house or above a garage. People generally do not want to leave their home when they get older, so these two methods are potential options to keep the family close and keep housing more affordable.

Auburn approved a zoning bylaw at Town Meeting in the spring of 2019, allowing residents to construct tiny homes. One of the first towns in the Commonwealth to allow tiny homes, Auburn residents saw a benefit in allowing these structures in certain instances. The zoning bylaw specifies only a "direct" family member who is elderly or disabled and their caregiver may reside in a tiny home. The bylaw also stipulates the tiny homes may only be located on a lot with a single-family house and only in a residential zoning district, RA, RB, RC, and RR. The tiny home zoning bylaw allows further living options in Auburn, as the population continues aging, this living option is a way for seniors to maintain independence while remaining close to family.

Seniors are a growing part of the population and many will need smaller, affordable and barrier-free / accessible housing. There are a few senior housing options in town, with varying levels of care, ranging from independent or active senior living to very dependent, 24/7 care settings. Models for housing senior populations are constantly evolving. Some elderly residents prefer to age in place and models for meeting these desires are evolving too. Auburn may want to consider creating incentives or mandating that all or a high percentage of units in these developments include universal design, accessibility, and/or other adaptable features.

What is an ADU?

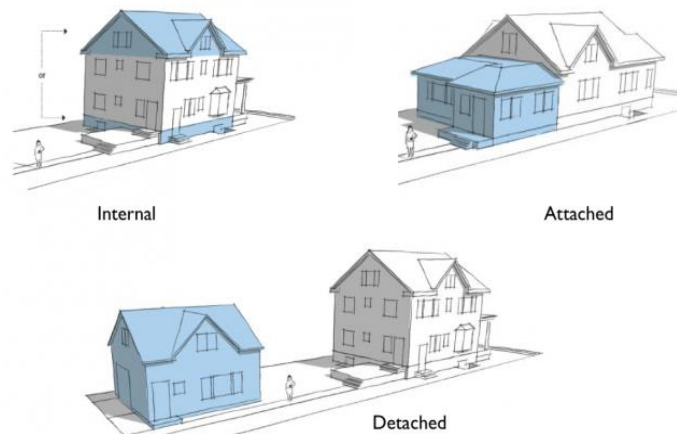
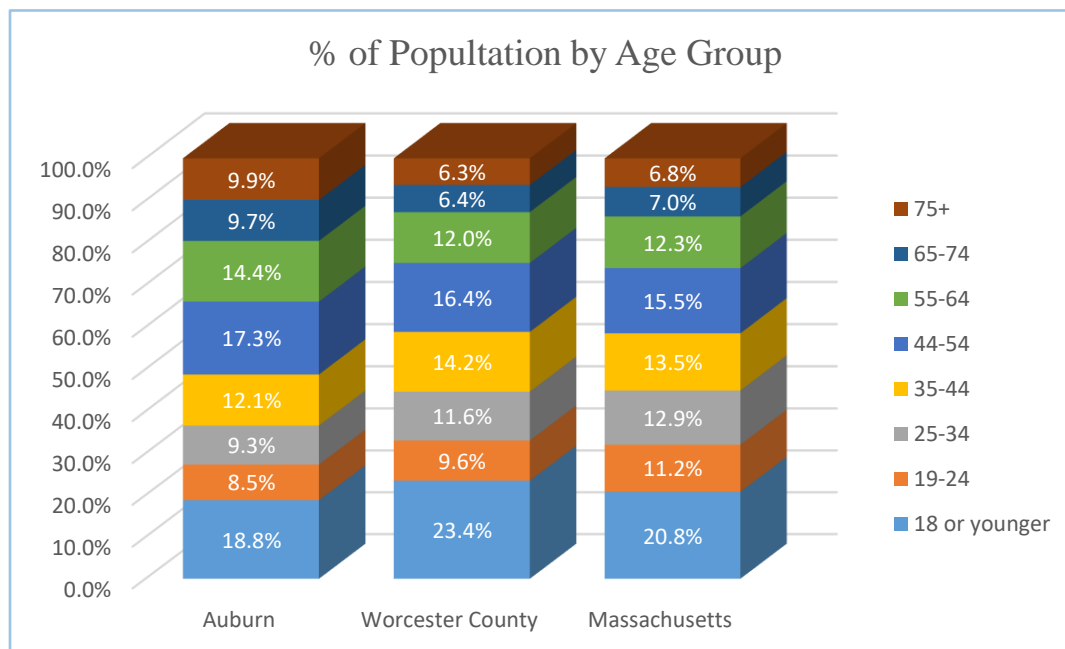


Figure 17. Accessory Dwelling Unit Styles⁸

Figure 18



Source: American Community Survey 2013-2017

Seniors, those 65 and over, account for nearly 20 percent of Auburn’s total population. There is a large group of residents, 14.4 percent of the total population that are 55-64 years of age who will be nearing retirement over the next decade. The growth in the number of residents over the age of 65 has clear implications for housing in Auburn. Seniors, particularly those looking to downsize, will be looking for housing options that match their life stage, physical ability, and price point.

There are two 55 and older communities in Auburn, Potter Farm Estates and Windmill Estates. There is also a 40B 55 and older housing, Kateri Tekawitha apartment building. According to current zoning, senior housing or 55 and older housing is allowed, with Special Permit or Site Plan Approval throughout most of town. These dwellings are not allowed in the various Industrial Districts and the Regional Mall Overlay District. Auburn should further encourage senior housing developments over the next decade. Identify specific suitable locations for the development of these housing complexes and encourage developers to consider these sites.

Continuing care retirement communities (CCRC) also called life care communities, offer different levels of service in one location. Many of them offer independent housing (houses or apartments), assisted living, and skilled nursing care all on one campus. Healthcare services and recreation programs are also provided. In a CCRC, where you live depends on the level of service you need. People who can no longer live independently move to the assisted living facility, or receive home care in their independent living unit. If necessary, they can enter the CCRC's nursing home.

SMART GROWTH OVERLAY DISTRICT 40R

A Smart Growth Zoning Overlay District encourages communities to create dense residential or mixed-use smart growth zoning districts. These districts include a high percentage of affordable housing units, located near transit stations, or in areas of concentrated development such as existing city and town centers, or situated in other highly suitable locations. While all residential and mixed-use development must be “as-of-right” in a smart growth zoning district, communities can use design review to regulate the physical character of the development, as long as requirements are not unduly burdensome. Twenty percent of the housing in the district must be affordable to those earning 80 percent or less of the median income, with deed restrictions for at least 30 years. The district must provide a minimum allowable density of eight units per acre for single-family homes, 12 units per acre for two and three family buildings, and/or 20 units per acre for multi-family dwellings. Smart growth zoning districts must provide a range of housing opportunities for a diverse population, including households with children. Auburn could consider adopting an overlay district in parts of town to encourage this type of development; the town would become eligible for financial benefits if adopted.

AFFORDABILITY

Housing is considered ‘affordable’ if the household pays no more than 30 percent of its annual income on housing. Households who pay more than 30 percent of their income for housing are considered “cost-burdened” and may have difficulty affording necessities such as food, clothing, transportation, medical care, as well as saving for their future. The U.S. Department of Housing and Urban Development (HUD) and the Massachusetts Department of Housing and Community Development (DHCD) to calculate Area Median Income (AMI) and promote income-restricted housing use this definition of housing affordability. The AMI is the median family income for the Metropolitan Statistical Area (MSA), which includes all communities in Worcester County. HUD calculates the AMI annually based on the U.S. Census Bureau’s American Community Survey’s (ACS) estimated median family income for the MSA. The Worcester AMI in 2016 was \$79,700.¹⁴ Median value of owner occupied dwellings in Auburn have been fairly

Affordable Housing Chapter 40B

Chapter 40B is the Commonwealth’s Affordable Housing Law. Because Massachusetts is such an expensive place to live, the Affordable Housing Law was enacted many years ago with the goal of making at least 10 percent of every community’s housing affordable. The law allows developers to build affordable housing by allowing for a streamlined permit process and more flexible zoning rules. The process is available to developments that devote at least 20 to 25 percent of their units to low and moderate income families. To be eligible to purchase an affordable unit, you must • Have income and assets that fall below certain limits, 80 percent median area income • Be a first-time homebuyer (with some exceptions) • Agree to a deed restriction which describes certain responsibilities you will have as an affordable unit owner • Live in the home as your principal residence.

¹⁴ Auburn Comprehensive Housing Plan, 2017

stable since 2010. The median value in Auburn in 2016 is \$239,800 and is somewhat lower than Worcester County, \$254,200 and much lower than Massachusetts, \$341,100, in the same time period.¹⁵ Median value actually decreased by more than 7.75 percent from \$260,000 in 2010 to \$239,800 in 2016. The relative affordability of housing in Auburn and the towns' central location, along with the road network and other amenities are an attraction to anyone looking to move to Auburn.

According to the Massachusetts Department of Housing and Community Development Auburn, as of 2010, Auburn has 251 or 3.7 percent Chapter 40B Subsidized Housing Inventory. Under Chapter 40B, in any municipality where less than 10 percent of its housing qualifies as affordable under the law, a developer can build more densely than the municipal zoning bylaws would permit. Thus allowing more units per acre of land when building a new development, if at least 25 percent (or 20 percent in certain cases) of the new units have long-term affordability restrictions.

Table 17

Total and Affordable Housing Units in Area Towns				
	2010 Census Year Round Housing Units	Total Development Units	SHI Units	Affordable Units
Auburn	6808	251	251	3.7%
Oxford	5520	404	404	7.3%
Leicester	4231	176	176	4.2%
Grafton	7160	732	365	5.1%
Millbury	5592	244	221	4.0%
Charlton	4774	83	83	1.7%
Worcester	74383	10076	9977	13.4%

Source: Department of Housing and Community Development

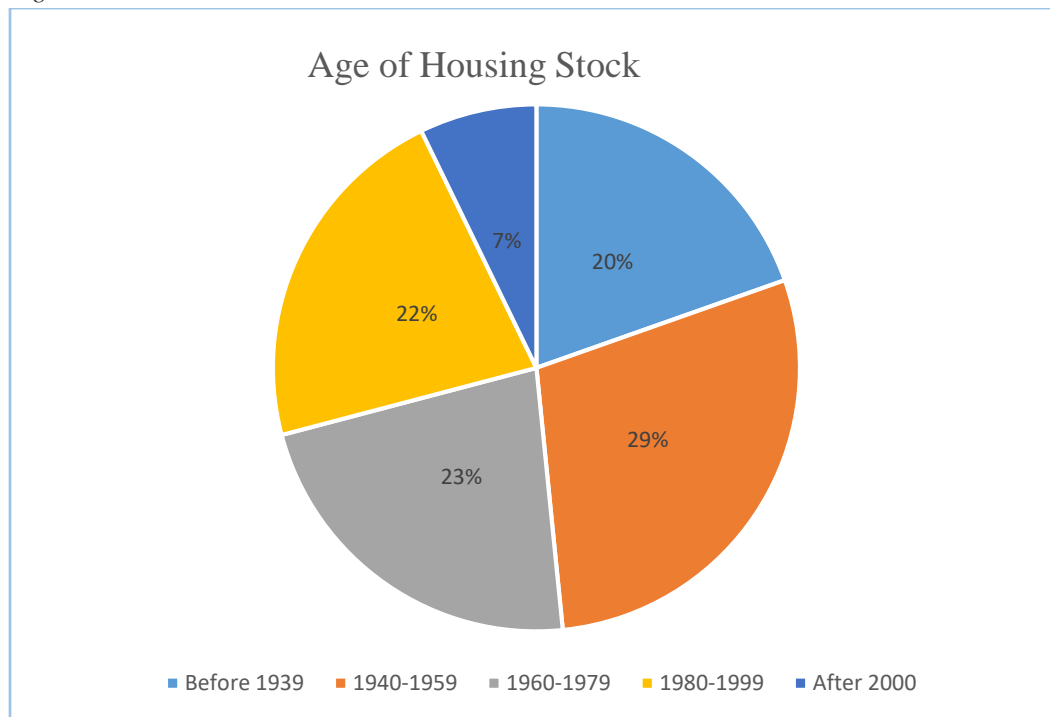
Most of the housing stock in Auburn was constructed before 1979. This is not surprising considering the population growth that took place in town between 1930 and 1970. The first Massachusetts building code went into effect in 1975 and the first seismic standards became effective in 1979. Many of these older buildings may require more than just simple cosmetic attention. Seniors and first time homebuyers may be in the market for similar homes. Seniors may be looking to down size, and first time homebuyers are looking at a starter home. Move in ready homes are often at a premium, a fixer upper by its nature may be less expensive but requires time

¹⁵

https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_DP04&prodType=table

and funds to improve the house. Not every homebuyer is willing or able to spend years improving a house. Diverse housing stock is necessary for buyers to consider all options.

Figure 18

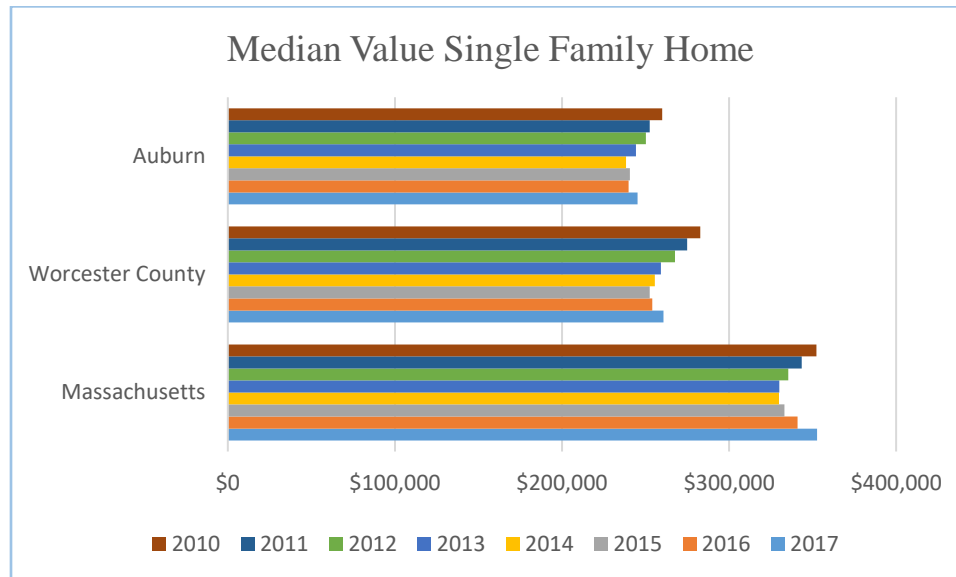


Source: US Census American Community Survey 2013-2017

Single income households may be on the rise limiting the housing available to them for purchase. People are waiting longer to get married or may never get married. A single person household generally has dramatically less income and therefore can not afford a larger house that was more popular in the 1990's and 2000's, the "McMansions" style of home common in many subdivisions built before the Great Recession. This population will put pressure on the previously mentioned seniors who might be looking to downsize, making these already scarce dwelling less affordable.

Auburn's median single-family home in 2017 was \$245,300; this is well below the county and the state median value, \$260,800 and \$352,600.

Figure 20



Source: US Census American Community Survey 2013-2017

Auburn's Median Family Home Value is similar to some of the surrounding towns, Leicester, Millbury and Oxford. The value of Auburn's homes, like most towns, dropped substantially following the Great Recession housing crises. Median value has yet to return to the pre-recession value.

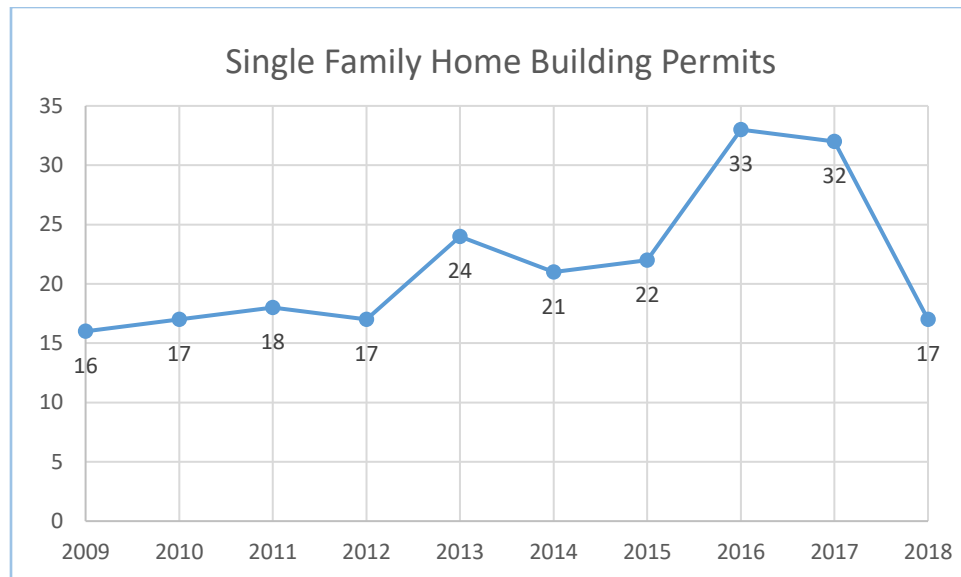
Table 18

Median Value Single Family Home							
	Auburn	Leicester	Oxford	Millbury	Grafton	Shrewsbury	Worcester
2017	\$245,300	\$231,300	\$232,600	\$263,200	\$352,000	\$394,600	\$210,600
2016	\$239,800	\$226,400	\$229,900	\$261,200	\$349,500	\$385,100	\$206,500
2016	\$240,700	\$227,400	\$230,600	\$259,200	\$339,600	\$366,200	\$205,200
2014	\$238,400	\$233,600	\$229,400	\$258,100	\$339,100	\$369,100	\$210,200
2013	\$244,200	\$238,800	\$238,700	\$266,300	\$337,000	\$363,400	\$216,000
2012	\$250,300	\$258,000	\$245,300	\$276,700	\$346,600	\$363,700	\$226,200
2011	\$252,600	\$262,900	\$252,200	\$281,000	\$352,800	\$366,200	\$234,400
2010	\$260,000	\$274,600	\$265,200	\$293,200	\$361,000	\$377,200	\$242,800

Source: US Census

New home construction has been generally slow in Auburn. This is partly due to the built out nature of the town, most parcels that are suitable for construction already have houses. The parts of town that are less developed are zoned in a way to limit growth. In addition, there is limited access to public water, constraining the number of dwellings that may be constructed.

Figure 21



Source: Auburn Department of Development & Inspection Services

AUBURN HOUSING AUTHORITY

The Auburn Housing Authority (AHA), a public housing authority established by state law to provide affordable housing for low-income residents, currently manages 182 units of public housing for low-income households. Their portfolio consists of 150 units for elderly and disabled residents and 32 units for families. The AHA reported substantial wait time for all of its units, with over 200 applicants for each unit size. The AHA does not administer any rental subsidy vouchers such as Section 8 Housing Choice Vouchers. The Executive Director of the Housing Authority noted that the AHA does not have expansion plans, nor seeking additional property in Auburn due to a lack of additional funds that would allow them to purchase property, build and operate such development. The Executive Director noted that the lack of affordable housing

Community Preservation Act

This is statewide enabling legislation allowing cities and towns in the Commonwealth of Massachusetts to adopt a property tax surcharge, with revenues from this surcharge (plus state matching funds) to be used for open space preservation, the creation of affordable housing, preservation of historic buildings and landscape and the creation of recreation opportunities. For more information on the CPA statute, visit the Community Preservation Coalition website.

www.communitypreservation.org.

for elderly residents and families is an issue facing town residents. Auburn Family Youth & Services, a nonprofit resource that offers counseling, after school care and summer programs for a fee is located at AHA's 21 Pheasant Court development. There is also a Food pantry available on site Tuesday mornings.¹⁶ The Auburn Housing Authority (AHA) manages 190 units of public housing, 150 federally assisted units for the elderly and younger disabled (60 units at Stoneville Heights and 90 units at Pakachoag Village) and 32 units for families (20 state-assisted units at Pheasant Court and 12 federally assisted units at Pine Brook Court).

There is a need to expand the range of housing options in Auburn to better serve the housing needs for different age groups and living circumstances, so that young people and seniors can find suitable housing in town that is affordable, relative to their available income and resources. The types of housing provided in Auburn should keep pace with the changing demographics and needs of its residents. Young people cannot readily afford single family homes in Auburn as they were able to in the past, and many seniors today seek alternatives to the houses they have lived in as they age. The Town should support the addition of townhouse, multifamily and senior housing choices where they will be compatible with other uses and contribute to overall quality of life for those who live and work in Auburn.

GOALS

1. Limit the construction of large tract subdivisions and encourage smaller clusters of housing with an emphasis on open space preservation.
 - Consider lowering minimum parcel size in certain residential districts.
 - Consider allowing smaller sized lots where there is adequate public water and sewer
 - Consider zoning changes for less restrictive height requirements in parts of town to allow for higher density housing projects.
 - Allow Mixed Use Development in certain areas of town with commercial business on the first floor with residences above.
 - Adopt bylaws for cluster housing, tiny-homes and accessory-use apartments.
 - Participate in the abandoned housing initiative (ahi).
 - Continue working towards a small-scale walkable mixed-use downtown area at Drury Square.
2. Consider adopting the Community Preservation Act (CPA).
 - Educate the town about the Community Preservation Act and the benefits provided if adopted.
 - Consider establishing a Housing Trust to fund housing initiatives to develop affordable housing.

¹⁶ Auburn Housing Plan 2017 http://auburnguide.com/Pages/AuburnMA_Planning/init/Housing%20Plan.pdf

3. Continue progress to meet Affordable Housing / 40B requirements.
 - Collaborate with the Auburn Housing Authority to expand current stock of housing.
 - Work with the developer to complete Mary B Stone and Julia Bancroft redevelopment projects into senior housing.
 - Actively seek developers interested in building affordable housing, consider tax credits as an enticement to developers.
 - Adopt a 40R Smart Growth Overlay District.
 - Determine the supply and demand for senior housing, both market rate and affordable housing, and plan for the housing stock to meet the needs of the aging population.
 - Explore Inclusionary Zoning, an affordable housing tool that links the production of affordable housing to the production of market-rate housing.
4. Develop options for senior and age in place housing.
 - Encourage the use of the Massachusetts Local Initiative Program, which works with developers seeking to build single or multi-family homes, condominiums or apartments where a certain percentage of the units are proposed to be affordable and work with town officials to obtain approval.
 - Consider tax increment financing for developers constructing senior housing.
 - Develop marketing tools to actively promote prime locations for development.
5. Maintain and build upon current stock of quality of housing.
 - Establish a long-term program to improve streetscapes: add sidewalks to improve connectivity. Encourage Complete Streets throughout town.
 - Establish a housing rehabilitation program, thereby incentivizing property owners to adequately maintain and rehabilitate housing.
6. Expand upon types of allowable housing stock.
 - Consider amending zoning bylaw to allow cluster housing in certain areas of town.
 - Amend zoning to allow houses on non-conforming lots that have adequate public water, sewer, and access.
 - Consider changing the zoning to allow mixed-use development in certain areas of town, such as the Lowes/Yankee Drummer site.

Auburn needs more diversified housing stock?

562 responses

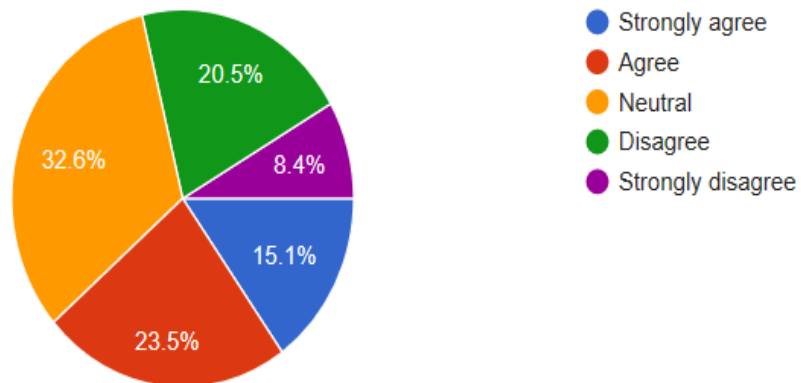


Figure 22. Master Plan Survey

Is housing affordability an issue for you or anyone you know who lives in Auburn?

569 responses

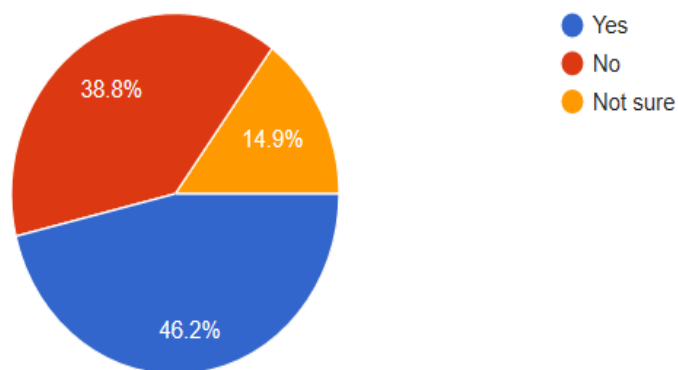


Figure 23. Master Plan Survey

ECONOMIC DEVELOPMENT



Construction off US-20, 2019

INTRODUCTION

Economic development is vital to the sustainability of a town. The success of the economy is contingent on the availability of natural resources, adequate infrastructure, a sufficient transportation network and a diverse set of industries within Auburn and the greater Worcester region. Additionally, the people living and working in Auburn are a valuable resource for economic growth. The availability of a skilled and educated workforce is necessary to support existing and future business in town. Providing diverse and affordable housing opportunities assist in attracting and supporting a strong workforce and should be strongly considered when looking at the future of economic development in town. The Town of Auburn is well poised to harness the available resources and continue the growth the town has seen of over the last few decades. Auburn's strong economic position emerged with the advent of the regional highway system, which provided it the opportunity to participate in the dynamic economy of central Massachusetts. Early land use planning and entrepreneurial development in Auburn paved the way for the commercial mix of retail, office, manufacturing, distribution and services industry. Keeping pace with the changes in all of these sectors, Auburn's economy has continued to evolve. Looking ahead, the town can continue to anticipate and adapt to emerging trends to maintain its economic advantage.

EXISTING CONDITIONS

Auburn is well situated in the heart of Worcester County and borders the City of Worcester. There are three interstates bisecting the town, I-90, I-290, and I-395, as well as, highways MA-12 and US-20. Auburn also has two railroads intersecting the town, CSX and Genesee & Wyoming (Providence & Worcester). These factors all help explain why Auburn has developed in to an important retail, commercial, and industrial town in Central Massachusetts. As of 2015, Auburn is estimated to have 10,511 jobs in 650 establishments, generating almost \$491 million in wages according to the Massachusetts Executive Office of Labor and Workforce Development (EOLWD). Economic development, in general, refers to the development of commercial and industrial property in a community or region, and by extension, the creation of jobs that can be supported within that commercial and industrial space. In addition, economic development activity helps to support the community and its component parts. When businesses select a community such as Auburn for a location, they provide tax revenues (either directly or indirectly), which the Town then uses to support town functions, such as schools, utility and infrastructure systems, public safety, and open space/recreation. These public services and amenities can be a significant factor when businesses are considering where to locate. Additionally, businesses also consider labor force, housing stock and affordability, and the business climate of the community.



Figure 24. Mass Pike, I-290, and Southbridge Street looking northeast

Table 19 compares Auburn to several nearby towns. The jobs to population ratio is a macroeconomic statistic that indicates the ratio of the civilian labor force currently employed to the total working-age population of a region or municipality. Auburn at 0.65, has a much higher ratio than many of the towns in the area

Table 19

Employment Data of Auburn, Area Towns & Massachusetts					
2017	Employment	Jobs to Pop Ratio	Average Weekly Wages	Commercial/Industrial Tax Rate 2019	Commercial/Industrial Taxes % of Total
Auburn	10,719	0.65	\$944	\$23.23	34.30%
Holden	3,892	0.21	\$906	\$17.45	5.71%
Hudson	9,456	0.48	\$1,191	\$34.10	25.76%
Millbury	5,218	0.39	\$761	\$15.85	21.69%
Oxford	6,023	0.43	\$1,104	\$17.03	23.72%
Shrewsbury	14,557	0.40	\$976	\$12.57	12.80%
Westborough	25,514	1.35	\$1,562	\$18.33	32.22%
Massachusetts	3,493,112	0.51	\$942	N/A	N/A

Source: Massachusetts Executive Office of Labor and Workforce Development, ES-202 Data; American Community Survey 2013-2017; and Massachusetts Department of Revenue, Division of Local Services

The Town of Auburn at 34.3 percent has a much higher percentage of industrial and commercial tax levy than most surrounding towns, the exception being Westborough, 32.2 percent, which is only slightly below the Auburn tax levy percentage. Auburn's commercial and industrial tax base

is high even though the town has a higher commercial/industrial tax rate, of \$23.23, higher than most area municipalities, one exception is the City of Worcester, \$34.10. Auburn currently has three tax rates, one for residential one for commercial/industrial and a third for personal property. Since 2010, the difference between residential and commercial tax rate has been decreasing. Long-term Auburn will continue to move away from a dual tax rate towards a single tax rate, which is consistent with most towns in Central Massachusetts.

Table 20

Tax Rates in Area Towns			
2019 Tax Rate	Residential	Commercial/Industrial	Personal Property
Auburn	\$18.42	\$23.23	\$23.09
Holden	\$17.45	\$17.45	\$17.45
Hudson	\$17.03	\$34.10	\$34.10
Millbury	\$15.85	\$15.85	\$15.85
Oxford	\$17.03	\$17.03	\$17.03
Shrewsbury	\$12.57	\$12.57	\$12.57
Westborough	\$18.33	\$18.33	\$18.33

Source: MA Dept. of Revenue Division of Local Services

Table 21

Tax Rate in Auburn 2003-2018				
Tax Year	Residential	Commercial/Industrial	Personal Property	Residential Commercial Difference
2018	\$18.44	\$24.18	\$24.05	\$5.74
2017	\$18.34	\$24.16	\$24.06	\$5.82
2016	\$18.09	\$24.40	\$24.31	\$6.31
2015	\$17.26	\$23.26	\$23.16	\$6.00
2014	\$17.29	\$23.38	\$23.27	\$6.09
2013	\$16.70	\$23.43	\$23.33	\$6.73
2012	\$16.05	\$23.93	\$23.82	\$7.88
2011	\$15.38	\$24.33	\$24.21	\$8.95
2010	\$14.34	\$24.06	\$23.95	\$9.72
2009	\$11.77	\$23.02	\$22.92	\$11.25
2008	\$10.91	\$21.83		\$10.92
2007	\$10.41	\$20.89		\$10.48
2006	\$10.48	\$21.60		\$11.12
2005	\$11.85	\$21.62		\$9.77
2004	\$11.70	\$21.13		\$9.43
2003	\$13.28	\$23.97		\$10.69

Source: MA Dept. of Revenue Division of Local Services

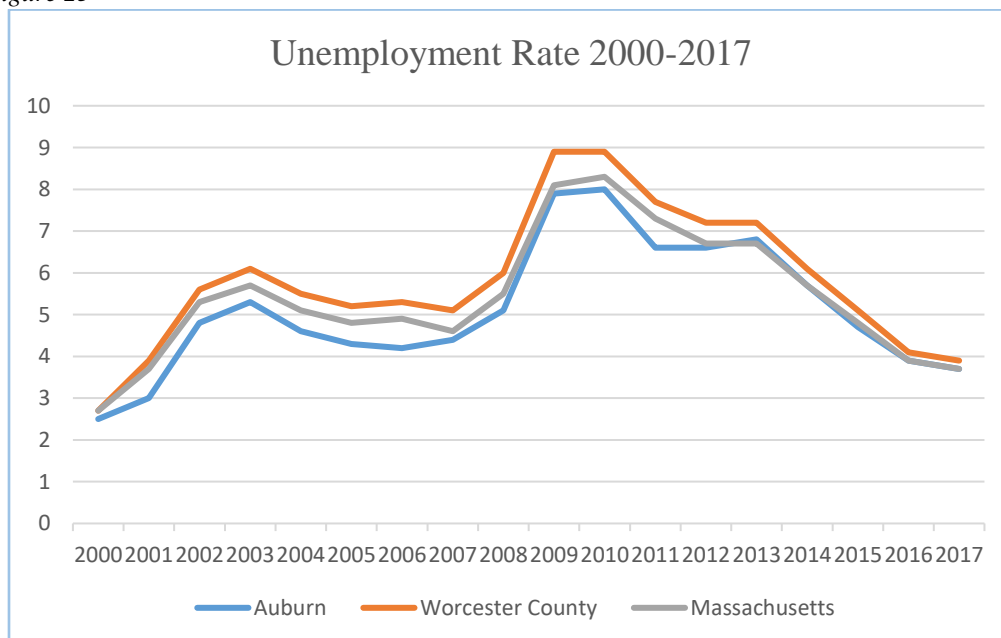
Table 22

Tax Levy in Area Towns					
	Residential Levy	Commercial Levy	Industrial Levy	Total Property Tax Levy	Residential % of Total
Auburn	\$28.5	\$8.7	\$3.4	\$42.5	67.0%
Holden	\$38.8	\$1.3	\$0.5	\$41.2	94.1%
Hudson	\$40.0	\$6.3	\$5.3	\$53.5	74.7%
Millbury	\$21.1	\$2.5	\$0.8	\$26.4	79.9%
Oxford	\$18.0	\$2.2	\$1.9	\$23.4	76.9%
Shrewsbury	\$66.8	\$6.5	\$2.2	\$76.6	87.2%
Westborough	\$51.6	\$11.6	\$7.6	\$75.1	68.7%

Source Mass. Department Revenue, Division of Local Service, 2019 (millions of dollars)

Auburn fared better than Worcester County and the Commonwealth as a whole during the Great Recession. The unemployment rate peaked at 8 percent in 2010 in Auburn while Worcester County peaked at 8.9 percent and Massachusetts 8.3 percent in 2010. Unemployment, since the Great Recession, has steadily decreased. Since 2010 steady progress occurred each year, the unemployment rate in 2017 was 3.7 percent, Worcester County stood at 3.9 percent and Massachusetts, 3.7 percent. The low unemployment rate generally signals a strong economy.

Figure 25



Source: Executive Office of Labor and Workforce Development

Table 23

Unemployment Rate 2000-2018			
	Auburn	Worcester County	Massachusetts
2018	3.3	3.6	3.8
2017	3.7	3.9	3.7
2016	3.9	4.1	3.9
2015	4.7	5.1	4.8
2014	5.7	6.1	5.7
2013	6.8	7.2	6.7
2012	6.6	7.2	6.7
2011	6.6	7.7	7.3
2010	8.0	8.9	8.3
2009	7.9	8.9	8.1
2008	5.1	6.0	5.5
2007	4.4	5.1	4.6
2006	4.2	5.3	4.9
2005	4.3	5.2	4.8
2004	4.6	5.5	5.1
2003	5.3	6.1	5.7
2002	4.8	5.6	5.3
2001	3	3.9	3.7
2000	2.5	2.7	2.7

Source: Executive Office of Labor and Workforce Development

EDUCATION

Education is closely related to lifetime earnings, generally the higher the level of education one has the more one will make over their lifetime. Auburn is comparable to the region and the Commonwealth to educational attainment. The percentage of residents who complete high school is similar to the county and state at 93.2 percent. Residents with a bachelor's degree is 24.3 percent, which is higher than Worcester County and Massachusetts. Those with graduate or professional degrees is 13.9 percent, more than the county, but less than the Massachusetts at 18.7 percent. Employment in Massachusetts generally requires a higher level of education than the rest of the country. 22.7 percent of jobs in Massachusetts require a bachelor's degree compared to the United States at 18 percent. In Massachusetts 2.7 percent of jobs required a Master's degree, in the United States, as a whole 1.7 percent of jobs required a Master's degree.¹⁷ For Auburn residents to remain competitive, the high quality of the public schools must be maintained.

¹⁷ Education level and jobs: Opportunities by state, <https://www.bls.gov/careeroutlook/2014/article/education-level-and-jobs.htm>

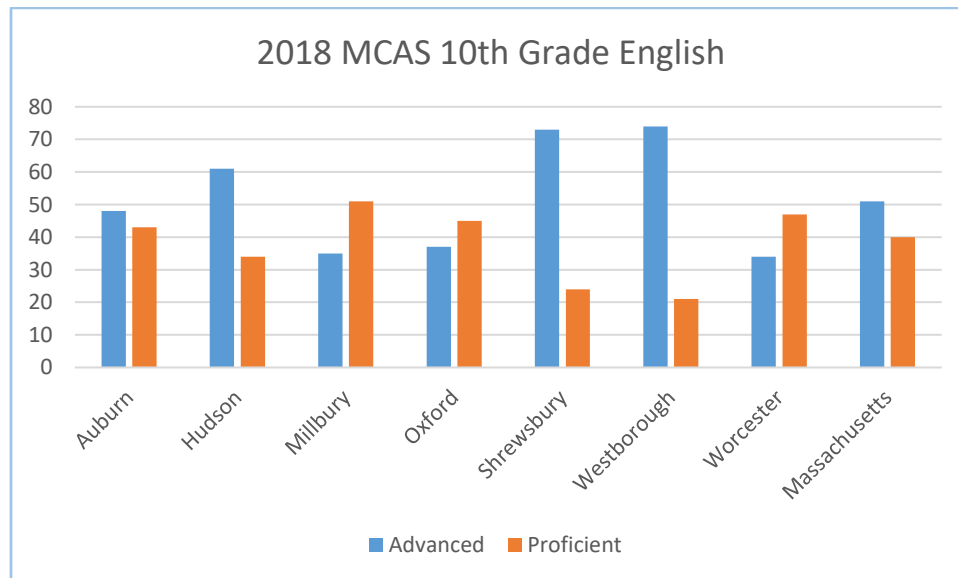
Table 24

Educational Attainment			
Residents 25+ years of age	Auburn	Worcester County	Massachusetts
High School graduate or higher	93.2%	90.3%	90.3%
Bachelor's degree or higher	38.2%	35.3%	42.1%
less than 9th grade	1.7%	3.6%	4.6%
9-12 grade no diploma	5.1%	6.2%	5.1%
High School graduate & equivalency	29.5%	28.6%	24.7%
some college, no degree	16.5%	17.4%	15.8%
Associates degree	9.1%	8.9%	7.7%
Bachelor's degree	24.3%	21.6%	23.4%
Graduate or professional degree	13.9%	13.7%	18.7%

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

One of the requirements of receiving a high school education in Massachusetts is to achieve a Competency Determination with a high enough score from the Massachusetts Comprehensive Assessment System (MCAS). Auburn 10th grade students in 2018 fared well in the testing. In English Language Arts 91 percent of students were proficient or higher, the same as the entire state.

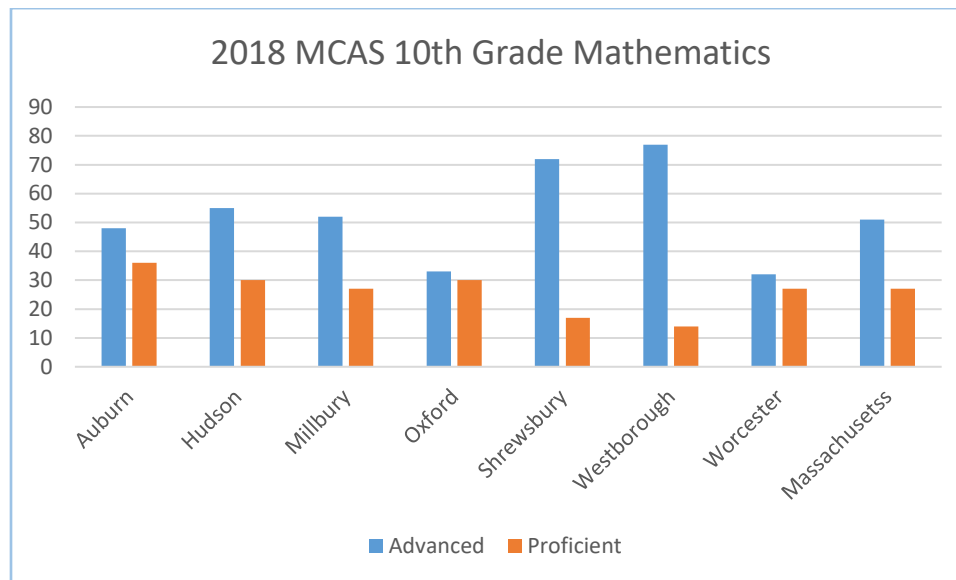
Figure 26



Source: Massachusetts Department of Elementary and Secondary Education

In mathematics, Auburn 10th grade students were tested at 84 percent proficient or higher compare to 78 percent statewide. Generally, Auburn students tested were similar to the surrounding towns and all of Massachusetts. As mentioned above education is important to resident's future earnings and career prospects.

Figure 27



Source: Massachusetts Department of Elementary and Secondary Education

Table 25 below illustrates the diverse type of business currently in operation in Auburn. Most of the business in Town require at least a high school education. Businesses value an educated work force and having a qualified pool in Town is an asset to all. Below, Table 25 shows the various types of industries in Auburn including average weekly pay. Of note is the high weekly wage of construction and manufacturing jobs, these jobs do not necessarily require a bachelor's degree, often in these industries training is accomplished on the job or during an apprenticeship.

Table 25

Industry in Auburn				
Industry	Establishments	Total Wages	Average Employment	Average Weekly Wage
Construction	67	\$79,095,587	1,137	\$1,338
Manufacturing	16	\$48,415,857	576	\$1,616
Wholesale Trade	54	\$94,828,611	1,600	\$1,140
Retail Trade	132	\$77,876,316	2,403	\$623
Transportation and Warehousing	18	\$10,691,035	220	\$935
Information	6	\$1,505,779	39	\$742
Finance and Insurance	34	\$26,596,044	346	\$1,478

Industry in Auburn				
Industry	Establishments	Total Wages	Average Employment	Average Weekly Wage
Real Estate and Rental and Leasing	19	\$8,663,818	153	\$1,089
Professional and Technical Services	46	\$17,191,138	275	\$1,202
Management of Companies and Enterprises	4	\$4,474,778	70	\$1,229
Administrative and Waste Services	36	\$27,923,123	468	\$1,147
Health Care and Social Assistance	103	\$58,372,349	1,262	\$889
Arts, Entertainment, and Recreation	9	\$1,815,639	91	\$384
Accommodation and Food Services	48	\$20,539,970	1,028	\$384
Other Services, Except Public Administration	60	\$12,593,791	377	\$642

Source: Executive Office of Labor and Workforce Development (EOLWD)

CURRENT INDUSTRY TRENDS

The largest companies by number of employees illustrated below demonstrate the diverse business in town. Whether it is construction, manufacturing, retail or healthcare Auburn, is a major employer and a center of commerce.

Table 26

Largest Private Employers in Auburn		2019
Company	Location	# Employees
R. H. White	Central Street	500-999
Worcester Envelope	Millbury Street	250-299
Atlas Distributing	Southbridge Street	100-249
Home Depot	Washington Street	100-249
Kadent Solutions Inc.	Sword Street	100-249
Life Care Center	Masonic Circle	100-249
Macy's	Southbridge Street	100-249

Largest Private Employers in Auburn		2019
Company	Location	# Employees
Masterman's	C Street	100-249
NGM Insurance	Midstate Drive	100-249
Republic Services	Hardscrabble Road	100-249

Source: Executive Office of Labor and Workforce Development (EOLWD)

Retail trade is clearly the largest industry sector for Auburn in terms of jobs and establishments, providing almost one-fourth (24.6 percent) of all jobs in the town, including part-time positions. In terms of wages, the industry mix is more evenly distributed with retail trade, wholesale trade, and the broad education and health care services sector each generating more than 16 percent of wages. This discrepancy (compared to jobs) is indicative of the relatively low wages earned per job in retail trade as average weekly wages are \$602 for retail compared to \$898 across all jobs (with higher average wages for wholesale trade, education and health care).



Figure 28. Reliant Medical Office at the Auburn Mall, 2019

Education and health care services is the second largest industry in Auburn in terms of jobs with about 1,770. This is by far the largest industry in Massachusetts, providing 28 percent of all jobs statewide, and over 32 percent of jobs in Worcester County. Unlike many larger areas, Auburn does not have a hospital or any higher education institutions which tend to generate significant numbers of jobs. Other industry strengths in Auburn (where there is a relatively high share of total jobs) include wholesale trade, which generates over 13 percent of employment (about 1,410 jobs) in 2015. Wholesale trade appears to be the industry classification for most of Auburn's distribution center businesses (many of which reside in the Auburn Industrial Park). This industry sector (along with transportation and warehousing) directly benefits from the town's strategic location at the

crossroads of I-90 (the Mass Pike) and I-290. Construction and the leisure/hospitality industries are also strong in Auburn, generating over 19 percent of total jobs.

Business Certificates

The Town Clerk issues Business Certificates for anyone who is conducting business under a name other than his or her own name, Doing Business As (DBA), for individuals, corporations, LLC, LP, or LLP's register at the town hall. The Town of Auburn has 530 current business certificates that are active as of January 2019. These businesses include everything from retail shops, financial services, and all kinds of contractors, landscapers, hair salons, car sales, doctors, and many, many more.

Retail, Restaurants and Hospitality

Numerous retail stores and restaurants of various types and the town's five hotels are some of the most visible businesses in Auburn. The majority of these establishments are located along Washington Street/ US-20 and Southbridge Street/ MA-12. The Auburn Mall is perhaps the focal point of the town's retail establishments. Auburn has an unusually high retail industry concentration, generating almost 25 percent of all jobs in the town.¹⁸ Industry trends point to challenging times for malls and national retail chains as consumers continue to purchase more goods online. Simon Properties continue to adapt to the changing retail industry, which was exemplified by welcoming Reliant Medical Group to the Auburn Mall. Reliant replaced the previous anchor store, Macy's Home Store; this increased foot traffic and brought higher paying jobs to the mall. The Town should work with the Auburn Mall to enact creative solutions to maintain low vacancy. Another trend that can impact chain retail and food establishments is consumers are generally more interested in locally owned unique retail shops and more diverse non-chain higher quality restaurants with greater food variety. Auburn has a strong presence with its hotels, however, a convention space is lacking in town. A convention center would draw new consumers for many of the business in Auburn. During public meetings for the Economic Development Plan and Drury Square Vision Plan, Auburn residents expressed the desire to see more "mom and pop" and small businesses and restaurants in town. Town Administration should continue to look at potential zoning bylaw revisions and economic development incentive programs to attract and retain small businesses.

Due to Auburn's convenient location, hotels experience low vacancy rates and contribute to the ongoing economic development in town. Despite the number of hotels in town, Auburn lacks convention space. There is a great demand for convention and event space in Central Massachusetts, which presents a great opportunity for developers to locate a convention center in Auburn. Additionally, the City of Worcester will be welcoming the "Woo Sox" in 2021 which may present more opportunities for hotels and event space in the area. A convention center would draw new consumers for many of the business in Auburn and create a widespread economic impact in town and the region

¹⁸ Town of Auburn Economic Development Strategic Plan, 2017

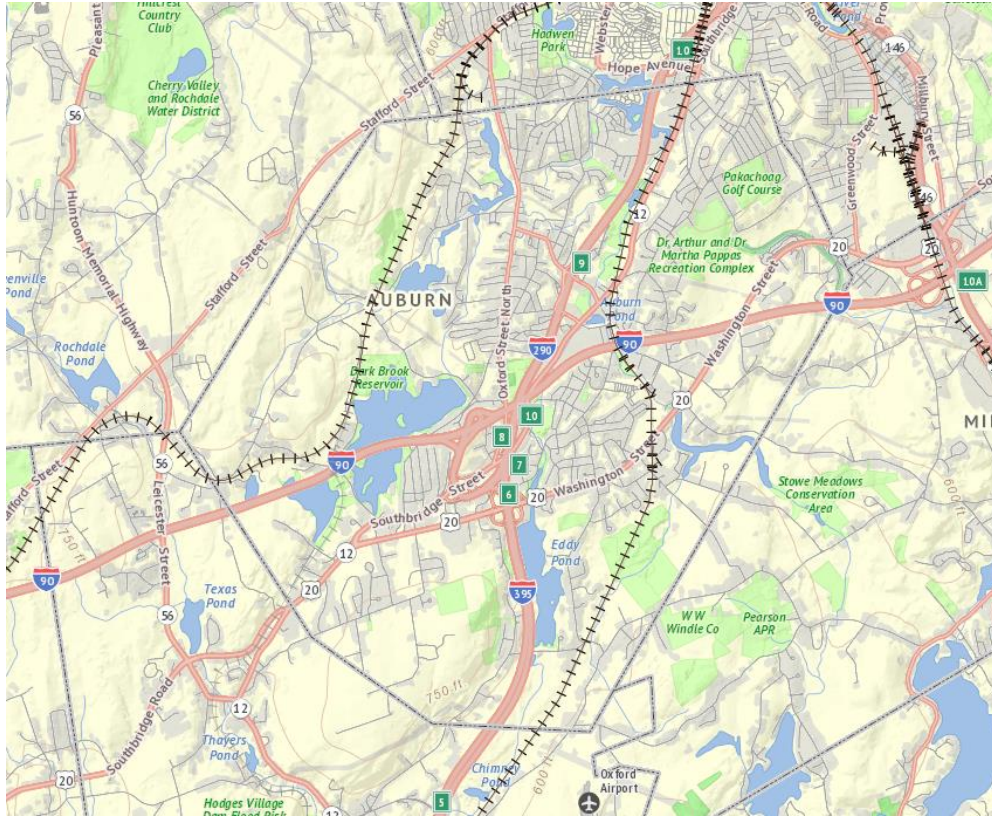
Railroads

There is one branch of the, formerly called the Providence and Worcester Railroad, now owned by Genesee & Wyoming Railroad in Auburn located towards the southeast section of town. CSX has a line towards the northwest portion of town. There are no stations or depots in town however, at Casella Waste, there is a spur off the CSX line where trains may load waste on to carriages. There is another spur near Millbury Street that is not currently operational, though according to the 2015 Freight Rail Study, could become operational if there was a need in this location. The following is an excerpt from the Freight Rail Planning Study and Feasibility Analysis, 2015: *“Overall the Town of Auburns zoning requirements limit opportunities for freight rail base economic development. The town does allow warehouses by site plan approval and light manufacturing by right in the general industry-zoning district.”* It would be useful for the Town to explore and determine special assets at specific sites such as properties that are (or could be) rail-served. For example, the site at Millbury Street. Expansion of the rail line could present more industrial and manufacturing opportunities in town.



Figure 29. Railroad Crossing at Sword Street

Map 13. Railroad Tracks in Auburn

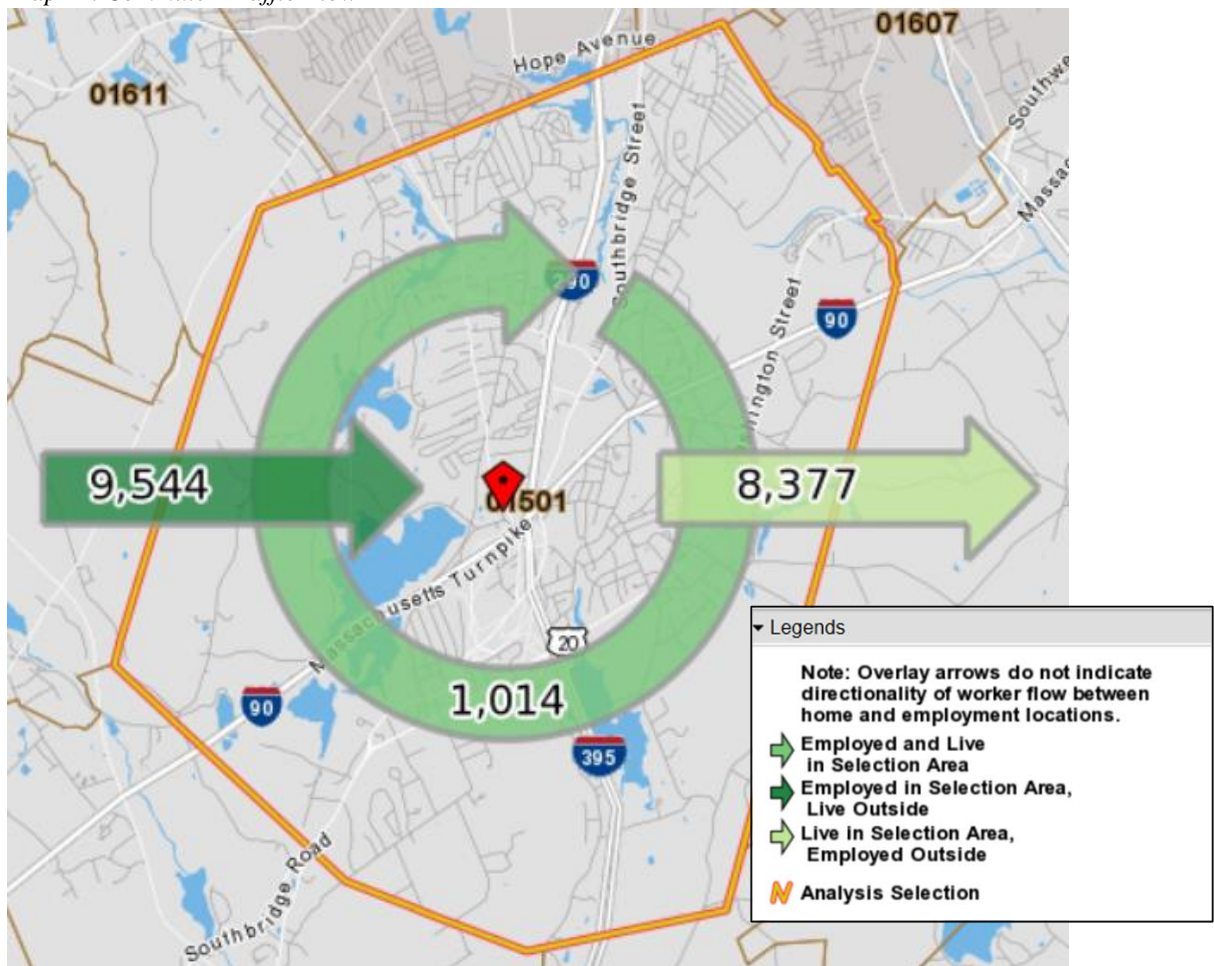


Source: MassGIS

TRAFFIC PATTERN

Due to Auburn's central location, neighboring the City of Worcester, and the crossroads of three interstates and two major highways, the town receives a very large volume of motorists each day. Of the approximately 8,457 workers living in Auburn, an estimated 2,420 work in Worcester – the biggest destination municipality of residents. The next largest single city/town where Auburn workers are employed is Boston (455 jobs), followed by Framingham (233) and Marlborough (159). Of the 9,642 primary jobs in Auburn, an estimated 1,615 come from Worcester with no other town (besides Auburn) providing more than 200 workers to Auburn businesses. The consistent traffic moving through town coupled with the large amount of workers in Auburn everyday can be extremely beneficial to businesses in Auburn. Workers, residents and individuals driving through Auburn may visit local gas stations, parks and/or food and retail establishments in town.

Map 14. Commuter Traffic Flow

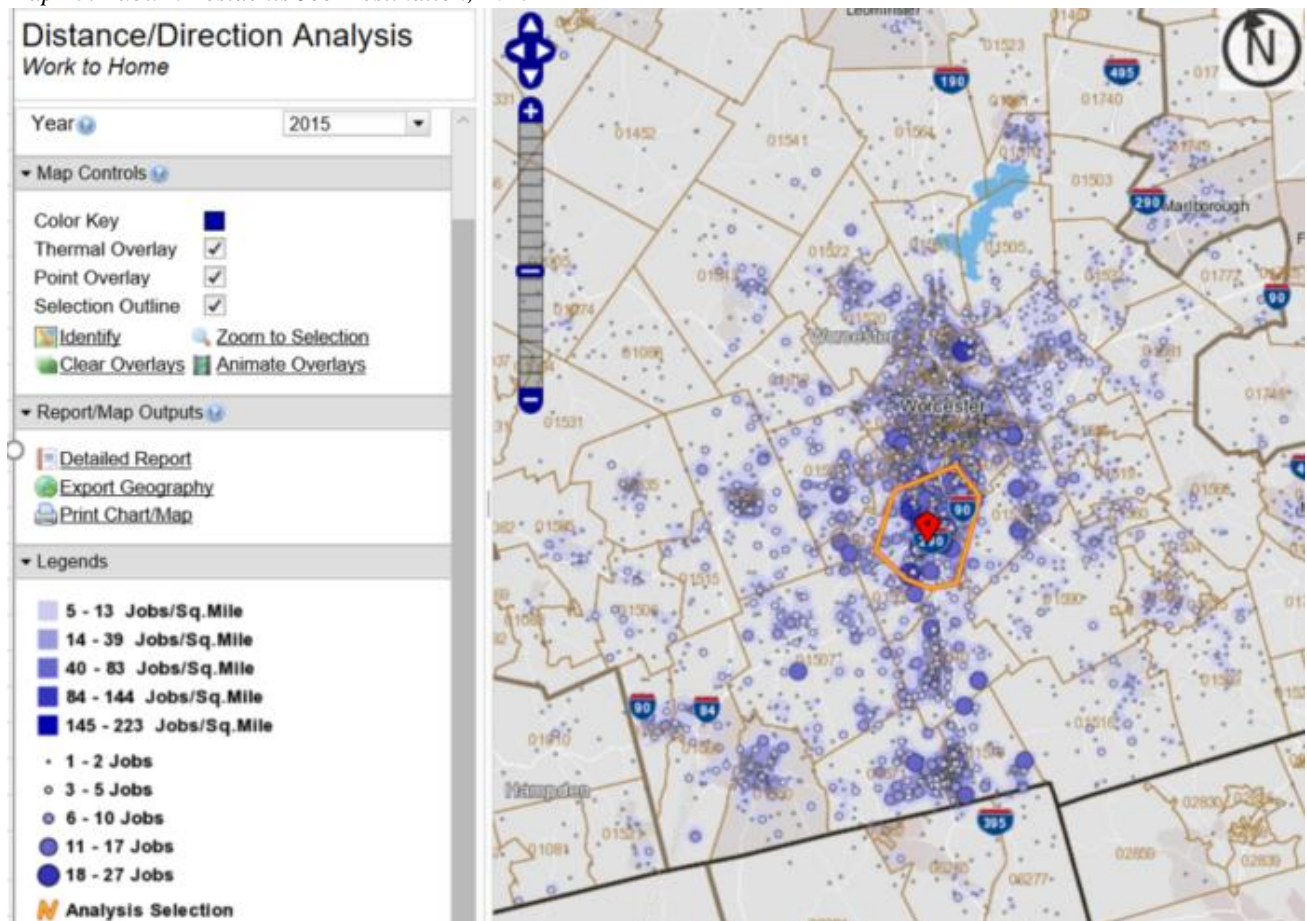


Source: U.S. Census Bureau <https://onthemap.ces.census.gov/>

Approximately 90,000 vehicles on average traveled daily on the Mass Pike between exits 10-10A as of 2017.¹⁹ Approximately 16,000 vehicles exited the Mass Pike and entered I-290 eastbound each day. At the Oxford town line MA-12/US-20, approximately 30,000 traveled along this roadway each day. Approximately 30,000 vehicles traveled along MA-12 in Auburn, though there were only 10,000 vehicles per day at the Worcester line. This is just a sampling of traffic counts in Auburn over the past few years. The high volume of traffic is both an asset and a challenge for the town, it is a good indicator for business looking to come to Auburn, but ensuring smooth traffic flow can be challenging, notably if there is a slowdown on the Mass Pike often times there is spill over to secondary roads in Auburn. Continuing to look at traffic calming measures in specific areas of town will help support traffic flow on a local level.

¹⁹ MassDOT

Map 15. Auburn Residents Job Destination, 2015²⁰



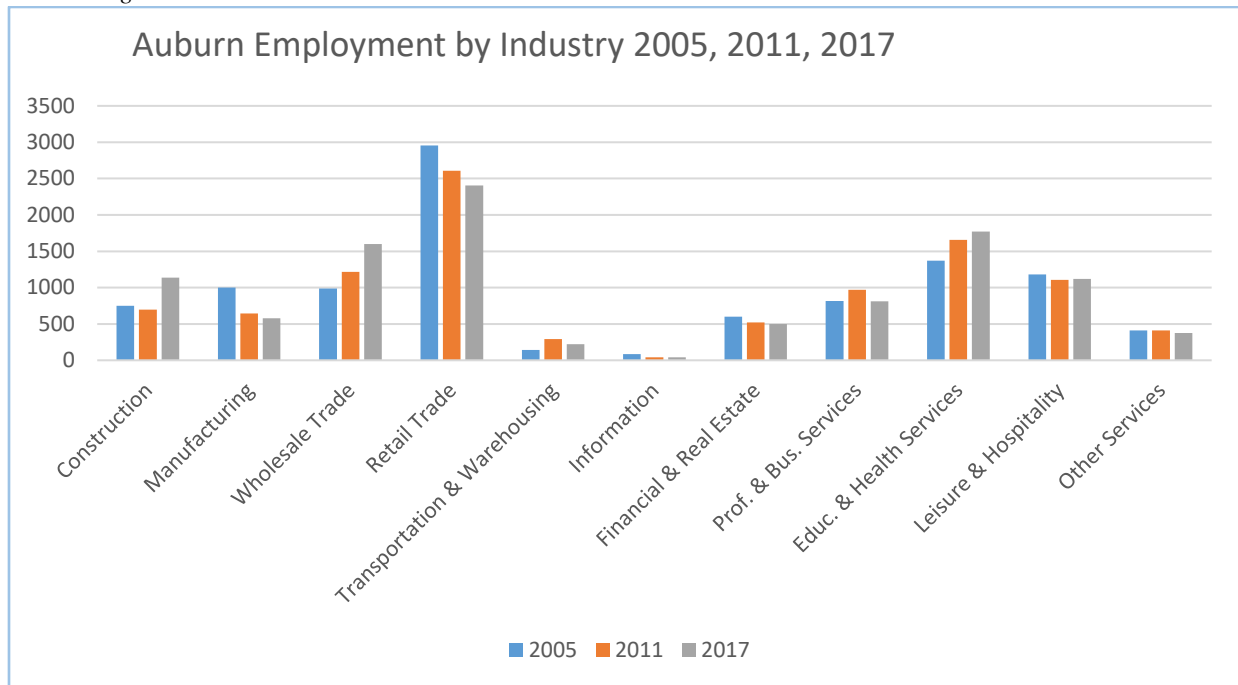
Source: U.S. Census Auburn Residents Traveling to Job Locations, 2015²¹

Auburn possesses a unique asset with the five Veterans Memorial parks along Rt. 12. These public spaces could help Rt. 12 to be re-branded as the Veteran's Memorial Corridor, with corresponding efforts by the town and local businesses to enhance the overall visual appeal of the corridor with improved streetscapes and signage, for example.

²⁰ <https://onthemap.ces.census.gov/>

²¹ <https://onthemap.ces.census.gov/>

Figure 30



Source: Executive Office of Labor and Workforce Development, ES-202

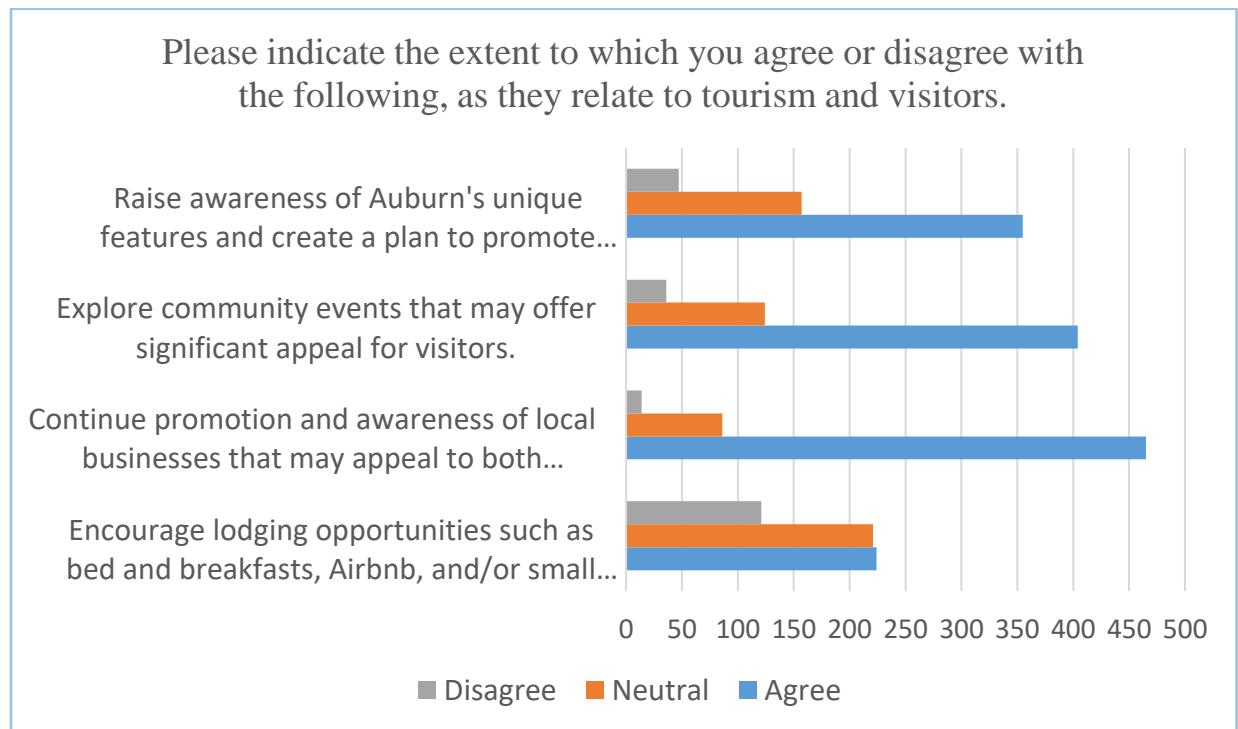
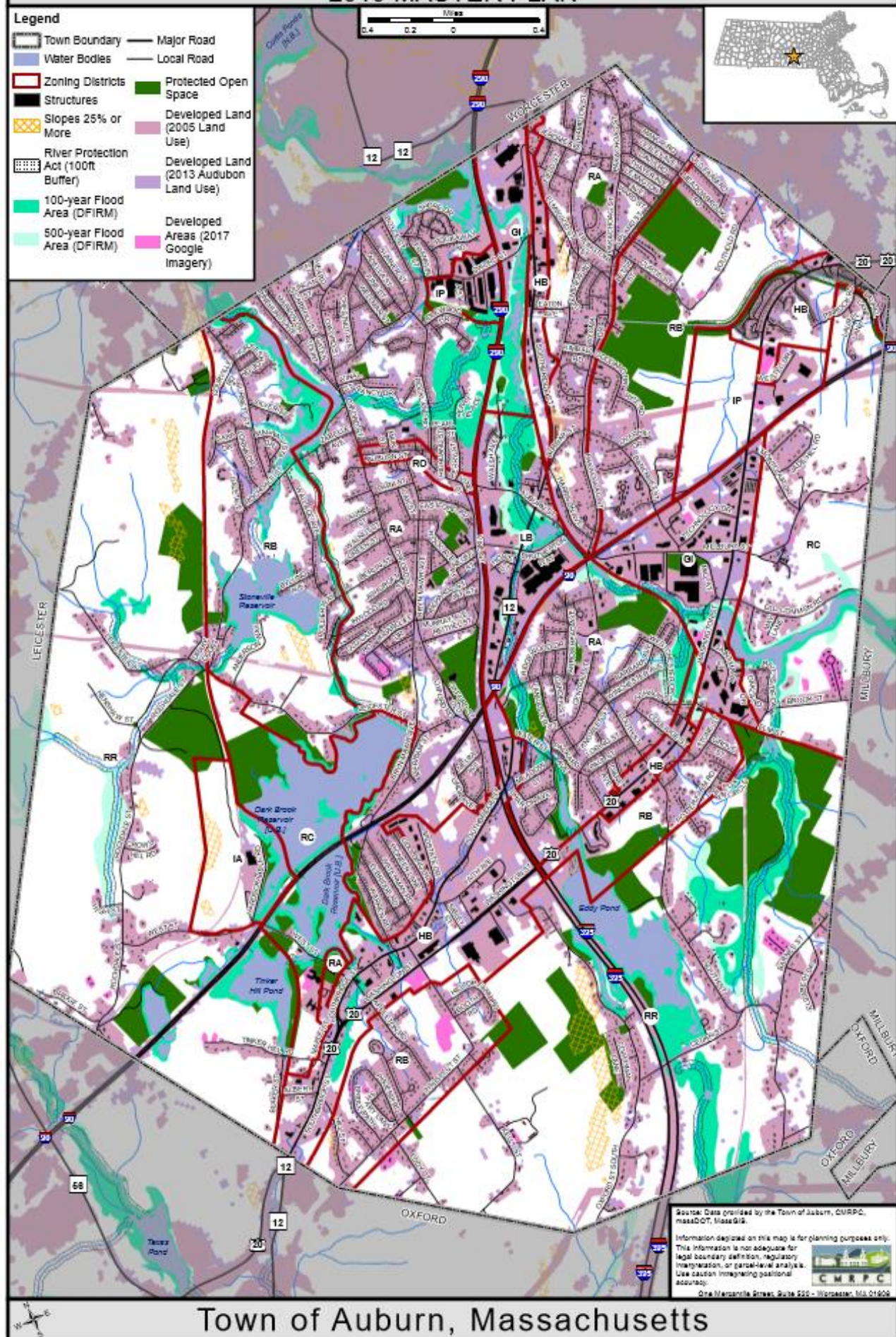


Figure 31: Master Plan Survey

Economic Suitability Map

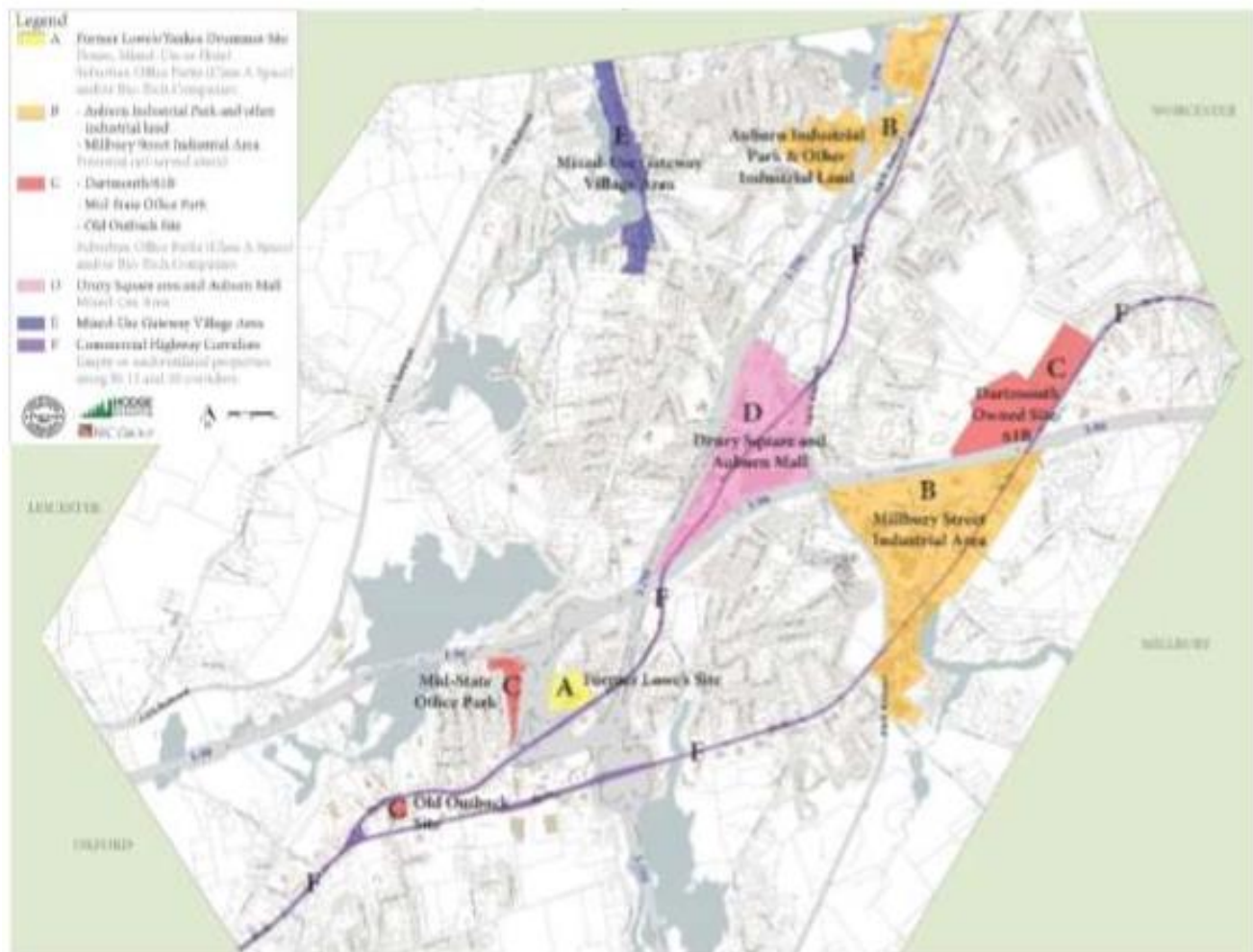
2019 MASTER PLAN



DRURY SQUARE

Auburn does not have a traditional downtown that many New England communities have developed over the years. There has been a move in recent years to develop Drury Square, long a center of commerce and civic activity, into a town center or downtown. A study, conducted in 2017, titled Planning Vision and Design Guidelines for Drury Square realized several recommendations. One of the recommendations of the study is to alter the zoning bylaw to create a Village District. Another recommendation is to develop design guidelines for Drury Square. A grant was awarded and work is now under way to develop these guidelines, the completion date for this project is expected to be December 2019. A façade improvement program is also being drafted to accompany the design guidelines. This program would provide business owners in the area incentives to make improvements to their storefronts to create a more consistent visual aesthetic in the Square. Additionally, a wayfinding and branding grant was also awarded in 2018. The recommendations resulting from the wayfinding and branding report should be implemented so there is consistent signage throughout the area. Drury Square is a landmark for the region, Auburn and Southbridge Streets intersect and upwards of 15,000 vehicles traverse this intersection daily. The Auburn High School, Public Library and Fire Headquarters are all within walking distance along with football, baseball, soccer fields and multiple tennis courts. The Dr. Robert H. Goddard Park is a landmark and a site of historic note with the Polaris missile erected in 1970 as a tribute to the first liquid propelled rocket launch. The mix of businesses, open space and municipal uses in the area offers a unique experience for residents, workers and visitors. Refining visual aesthetics, implementing consistent signage and improving traffic flow will help revitalize the Square. The remaking of Drury Square into a walkable, mixed-use, vibrant civic space is a long-term goal for town management. Active progress is occurring and further action shall ensue over the next couple of years and beyond.

Map 17: Economic Development Areas by Use in Auburn



Source: Town of Auburn Economic Development Strategic Plan, 2017

Gateway Village Area

Pinehurst Avenue in the northern part of Auburn, provides a natural gateway into town from Worcester. That roadway as it travels south to the intersection with Oxford Street N is primarily a residential area and that is how it is currently zoned. However, there are a number of smaller service and retail businesses located in that area. It makes sense to both: a) formally recognize that there are a mix of uses in that part of town and allow for it as future business development; and b) develop some high-level design guidelines to ensure that the area is a welcoming gateway (e.g., streetscapes) to Auburn and that the character of the area is preserved even as small businesses are permitted.

THE NEW ECONOMY

The innovation economy, the new economy, the knowledge economy, on-demand business, these are all terms for 21st century business economy. The nature of the economy is changing at a rapid pace, a pace not seen for several generations. The ‘on-demand’ nature of business, 3D printing, next day and same day delivery for just about any product one desires, ride sharing, bio-manufacturing, programming, robotics, AI and quite possibly the early stages of a space economy are all emerging as strong contributing industries in the worldwide economy. To stay competitive in the 21st century, Auburn must continue to evolve and plan for the future, actively market the strategic location of Auburn, adjacent to Worcester with quick access to the highways. In the knowledge-based economy, the town must tap in to the many colleges and universities in the area and develop incentives to attract young professionals to live and work in Auburn. To remain competitive and draw the businesses of the new economy Auburn must be open-minded to find zoning solutions and incentive programs to attract and retain more STEM focused businesses while retaining the traditional “town” feel residents love and desire. New development may mean different expectations and services will be needed. Unique identity and sense of place are important attractors in place making for knowledge communities.²² The Town should be open to developing more mixed-use environment; Centrality; Connectivity; Learning and playing, and; Branding²³, for example the initiative to transform Drury Square into a walkable diverse mixed use center of Auburn. This strategy may work elsewhere in Town, possibly the site of the former Yankee Drummer Inn or the Dartmouth College property on US-20, or perhaps elsewhere. Place making is a branding or marketing method to change and influence the perception of an area. A grant, awarded in 2018, to establish “wayfinding” in Drury Square will help in this branding of Auburn. Rezoning areas in town would be beneficial to attract biomedical, bioinformatics and ICT, which refers to technologies that provide access to information through telecommunications. In this new economy, we are seeing traditional box retailers and chains consolidate or file for bankruptcy. The town should be productive in actively looking to attract less vulnerable industries while supporting the businesses that are already contributing to the local economy.

CHALLENGES AND STRENGTHS

The following is an excerpt from Auburn’s 2017 Economic Development Strategic Plan highlighting some existing conditions and recent trends. Several stakeholders were interviewed as part of the 2017 plan. Interviewees, see Economic Development Plan for full list²⁴, felt that Auburn’s economic development conditions are generally strong and that it has improved over the past five years. Specific points mentioned during the interviews about existing and recent trends includes:

²² <https://eprints.qut.edu.au/95137/3/95137.pdf> pg. 2

²³ <https://eprints.qut.edu.au/95137/3/95137.pdf> pg. 4

²⁴ http://www.auburnguide.com/Pages/AuburnMA_Planning/Economic%20Development%20Planning/EcDev_StrategicPlan_04-2017.pdf

- The number of vacancies and empty buildings has gone down along the Rt. 12 and Rt. 20 highway business corridors as new businesses have located or expanded to help improve the economic conditions in the town's key commercial corridors.
 - The mix of businesses along these highway routes tends to include retail establishments, automotive dealers and repair, chain restaurants, and other local services.
 - Some feel that there are still too many empty lots and buildings along Rt. 12 and Rt. 20, which detracts from the economic health of the town, and they would like more business to locate in the town.
- Multiple respondents noted that the change in town government to include a strong Town Manager has had a very positive impact on the local business environment in at least two ways:
 - The town has placed a lot of emphasis on being fiscally strong in terms of managing its revenues and expenditures. Through concerted efforts, Auburn's bond rating has improved twice in the last three years. For example, the bond rating from Standard and Poor's is currently AA+ and is a very healthy AA2 from Moody's.
 - Most companies commented that the Town Manager, Planner and other staff are generally responsive, and that businesses appreciate their efforts to listen and provide help when they need it. Some went so far as to say that the Town Manager is the best thing that has happened to Auburn. Improved Town Hall operating hours, including evening hours on select days, was a very specific positive that was mentioned by business.
- Some of the other town functions related to code enforcement, building inspection, and zoning received mixed reviews. The most typical complaint was a lack of responsiveness and corresponding delays in various permitting and building inspection processes. While it was hard to disentangle current (2016) conditions from the not-so-distant past, it is clear that experiences can have long-lasting impacts on business perspectives. For example, some interviewees suggested that companies that had negative experiences might move their business functions out of Auburn once their leases are up. On the other hand, a long-term participant in these processes praised the current Planning Board and Zoning Board of Appeals for being "thorough and fair" and that they are good listeners, evaluate projects fairly, and ask for reasonable conditions.
- Auburn has had a relatively flat growth over the past 10 years. While the town has been able to hold its school enrollment steady, the lack of population growth combined with lower median incomes than some nearby towns (Shrewsbury, Holden) limits the interest of national retail businesses to locate in Auburn.
- Auburn essentially has no obvious town center or downtown area, and lacks walkable places or bike/pedestrian trails.

GOALS

1. Encourage a strong, diversified tax and employee base.
 - Actively market the Lowe's/Yankee Drummer Inn site, this is a prime site, located on Southbridge Street/MA-12 and adjacent to the Mass Pike interchange. Consider rezoning to make the site more marketable.
 - As a gateway into Auburn from Worcester, allow small-scale commercial and mixed-use along Pinehurst/Oxford Street N to Auburn Street. There are a number of smaller service and retail businesses as well as several multi-family dwellings currently existing in this area already.
 - Work with the Auburn Mall to develop innovative solutions, striving towards maximum occupancy as the market evolves.
2. Continue development of Drury Square as a mixed-use walkable district.
 - Develop wayfinding elements in Drury Square.
 - Revitalize Goddard Park, consider a walking trail around Auburn Pond.
 - Develop a fund (small loan program) for facade improvements and site landscaping.
 - Develop a walkable Drury Square and link the Auburn Mall with trails and bike paths to the district and install wayfinding signage.
 - Clean Ramshorn Brook to make more attractive and inviting.
3. Provide incentives and opportunities for small businesses and other desirable business.
 - Allow multiple businesses on the same lot in the same building.
 - Consider Tax Increment Financing (TIF) in select situations to attract select business.
 - Consider amending the zoning bylaws to allow development along the two railroad branches.
 - Consider zoning to allow truck terminals in certain areas of town to bolster railroad usage.
 - Continue progress towards a single tax rate.
 - Encourage the build out and redevelopment for modern office space.
 - Increase ranking as a BioReady community to attract biotech business.

OPEN SPACE & RECREATION



Dr. Arthur and Dr. Martha Pappas Recreation Complex

INTRODUCTION

Open space and recreation lands are important to the Town of Auburn in many ways. There are many economic benefits to preserving open space. People enjoy living next to or near property that is protected and property values are enhanced due to open space. Social benefits of open space add to quality of life and allows people to interact with others who enjoy this resource. Natural areas of open space in a preserved state contribute to biodiversity and improved quality of air and water. Open space becomes more critical as the pressures to develop land increases. The most sensitive and environmentally significant resources need to be preserved and managed. The 2014 Open Space and Recreation Plan outlines the town policies to protect and enhance its open space and recreational facilities, defines challenges, and summarizes community needs. The Open Space and Recreation Plan, developed with public participation, lays out a path to complete the goals of the plan, and is a tool used to pursue grant opportunities.

The Town of Auburn owns open land with various levels of protection. Municipal lands, are generally, managed for conservation, recreation, and watershed protection. The Open Space and Recreation Chapter of the Auburn Master Plan provides recommendations to support and enhance the access and use of open space and recreation oriented facilities in Auburn. These efforts are to ensure current open space and recreation facilities evolve into a succinct network of outdoor areas and civic spaces that attract residents and visitors so they may appreciate the value of nature, enjoy cultural events of various sizes and participate in recreation activities.



Figure 32. Southold Road

The recommendations within this section were informed by studying the established setting of the town. The recommendations are also informed by the needs and aspirations of the community as expressed at public meetings and a survey during the planning process. Notable planning strategies behind the recommendations are, preserve and protect what exists, encourage the acquisition of additional lands, and support the expansion of access and use of open space and recreation amenities. This section of the Master Plan derives much of the information and goals from the town's 2014 Open Space and Recreation Plan and the 2016 update of said plan. The Open Space and Recreation Plan (OSRP) provides a detailed, up to date discussion of the town's lands with regards to conservation and recreation. The OSRP outlines a seven-year action plan with priorities, responsible parties, collaborators, and resources needed for implementation. Like the town's Housing Production Plan, the OSRP serves as a valuable resource for the town and for the development of this Master Plan

This chapter considers surrounding land use, transportation, and natural and cultural resources in the context of the open space and recreational areas existing conditions, and the potential opportunities for improvement that they offer. Conversely, the consideration of existing conditions and opportunities for improvements in the open space and recreation resources provides understandings for land use, transportation, natural and cultural recommendations in other Master Plan chapters.

EXISTING CONDITIONS

The Town of Auburn has seen significant changes since the end of World War II. The Town was once a rural agricultural town with industries reliant on the natural environment, namely the streams which were often dammed, creating recreational areas by the ponds, created by said dams. In the early decades after World War II the town's population more than doubled. Mobile home parks became a trend in new residential development for the quickly growing population. This trend was checked by regulations of mobile homes between 1959 and 1961. Urban sprawl accounted for the majority of post-war development. During this growth period, Auburn had no coherent open space plan; this resulted in a lack of adequate open space for the expanding population. In the 1950's construction of President Eisenhower's Interstate System drastically altered the Town of Auburn's character. Close to five percent of Auburn's total area is accounted for by the interstates and their associated interchanges. These roads provided easy regional access for town residents, but created a strain on the town's open space and recreational resources by increasing the demand for land use for other purposes.

A division of the Department of Public Works, the Parks, Recreation, and Cemetery Division maintains Auburn's parks and open space areas. The Parks, Recreation, and Cemetery Division manages, develops, and improves the parks and recreation facilities of the town; plans, implements and manages the recreation and cultural activities of the town; and operates and maintains town cemeteries as facilities for public and private internments. When open space and recreation lands

refers to diverse properties with a range of uses. The Town has an inventory of lands that have been preserved for a variety of reasons and have different levels of protection. There are three types of protection that are placed upon space land, Perpetual or permanent, temporary or limited and no protection.²⁵



Figure 33. Veterans Memorial Park at MA-12/US-20

LEVELS OF PROTECTION FOR LAND

In Perpetuity or Permanently Protected

Lands protected in perpetuity are legally protected and recorded as such in a deed or other official document. Examples of public lands protected in perpetuity are:

- Land owned by the Town, including the Conservation Commission;
- Land owned by the Water Districts;
- Land with a Town conservation restriction;
- Land owned by one of the Commonwealth's conservation agencies; or
- Land purchased or improved by the Town with federal or state assistance.

Lands acquired for watershed and aquifer protection, habitat conservation, or state parks are often permanently protected open space. Municipally-owned properties used for cemeteries, public

²⁵ EOEEA Land Use & Management <https://www.mass.gov/land-use-management>

recreation and conservation areas may be permanently protected via a town meeting vote. Often these lands are placed under the ownership or protection of the Conservation Commission.

Private lands, including those owned by non-profit organizations, can also be protected in perpetuity through deed conservation restrictions.

Land may have agricultural preservation restrictions or historic preservation restrictions as well as wetlands restrictions.

Temporary or Limited Protection

Temporary protection lands include those legally protected for less than perpetuity (e.g. short-term conservation restriction or Chapter 61A lands), or temporarily protected through an existing functional use. For example, some water district lands are only temporarily protected while water resource protection is their primary use. These lands could be developed for other uses at the end of their temporary protection or when their functional use is no longer necessary. These lands will revert to unprotected status at a given date unless protection status is extended. In addition, some easements may run for a more limited period (such as 30 years), and those are not considered permanently protected.

Properties with limited protection are protected by legal mechanisms other than those above, or protected through functional or traditional use. These lands might be protected by a requirement of a majority municipal vote for any change in status. This designation also includes lands that are likely to remain open space for other reasons (e.g. cemeteries and municipal golf courses).



Figure 34. Farm in Auburn

No protection

Privately owned land is not legally protected from future development. It could be sold without restriction at any time for another use. Examples include scout camps, sportsmen's clubs, private golf courses, and private woodlands.

As Auburn has developed for residential, commercial, and industrial uses, the quality and quantity of public open space lands has diminished. The fate of Mirror Lake vividly illustrates this trend. "The name Mirror Lake [now called Auburn Pond] came from the clear water with almost perfect reflections of shorelines, sunsets, white clouds in a blue sky, autumn foliage, etc. There were fish to be caught, swimming for the boys in the summer with ice-skating and a goodly harvest of ice for the farmers in the winter. An abundant variety of wildflowers, including the now rare blue gentian grew along the banks and dam."²⁶ Despite the valuable resource described in this quote, half of Mirror Lake (Auburn Pond) was filled to build parking lots for the Auburn Mall. Now surrounded by the noisy bustle of Drury Square, Auburn Pond now functions more as a stormwater retention basin rather than a swimming or fishing hole. Goddard Park, dedicated to the launch of the first rocket that took place at Pakachoag Meadows, is located next to the pond, in the heart of Auburn's commercial district.

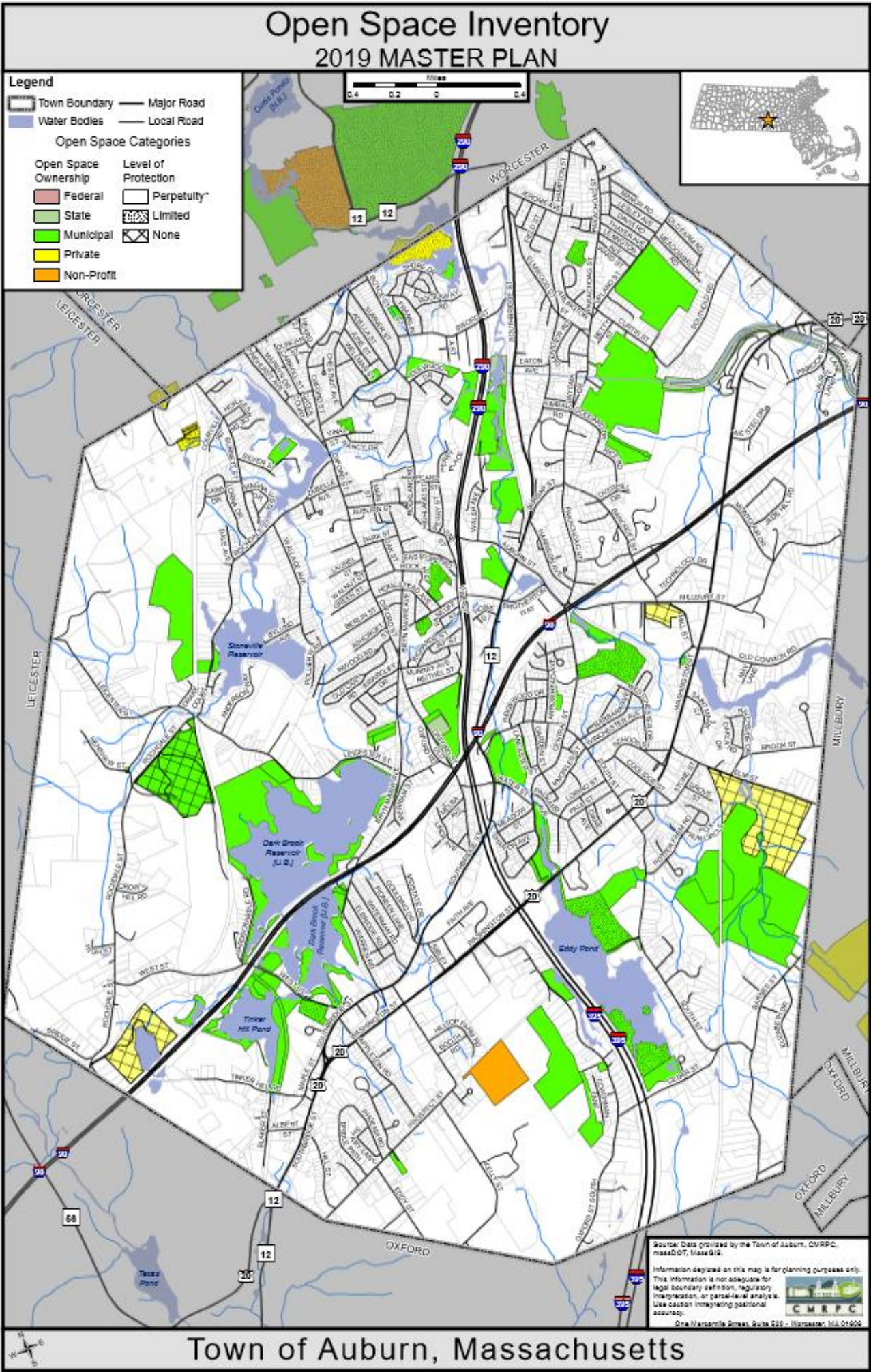
Open Space Residential Development Zoning Bylaw

To encourage the preservation of common land for conservation, agriculture, open space and recreational use; to preserve historical or archaeological resources; to protect existing or potential municipal water supplies; to protect the value of real property; to promote more sensitive siting of buildings and better overall site planning; to promote better utilization of land through a greater flexibility in design; and to allow more efficient provision of municipal services.

~Town of Auburn Zoning Bylaws~

Open space parcels are divided into two main categories, protected and unprotected. Protected lands include all federal, state, local, non-profit and private lands that are legally protected by state or federal statutes, by the vote of Town Meeting at the time of acquisition or by restrictions in their deed. Unprotected lands are town-owned lands uncommitted for conservation purposes such as schools and other municipal property, land enrolled in MA General Law CH. 61, 61A & 61B, and other private lands that, due to low intensity of use, add to the quality of open space in the town.

²⁶ Quoted from Happy Birthday Auburn, Auburn Historical Society, 1978.



PARKS, RECREATION AND CEMETERY DIVISION

The Parks, Recreation and Cemetery Division of the Department of Public Works maintains and improves Auburn's parks, fields, recreation facilities and municipal facilities as well as the town cemetery.

The following are the goals and objective of the Parks, Recreation, and Cemetery Division.

1. Respond in a timely fashion to any citizen complaints;
2. To provide a wide range of park services for all interests and age groups;
3. Foster open communication with all other Town department heads;
4. Maintain operating budget that reflects what the community needs and can afford;
5. Develop staff growth with training opportunities;
6. Teach value of good public relations to all staff;
7. To coordinate programs with community youth and adult athletic leagues to best meet their needs;
8. To improve existing park facilities and playgrounds;
9. To seek and explore field development opportunities;
10. To collaborate and coordinate with Auburn School Department regarding use of facilities and programs.

Inventory of Recreation Facilities

Several notable recreation areas include the following:

- ❖ Auburn High School, Auburn Street: This complex consists of one full size soccer/football field with lights, an all-purpose field with lights, quarter mile track, one full size baseball diamond with lights, one full size softball diamond with lights, a youth playground, 5 tennis courts with lights and one basketball court with lights. There are public bathrooms and a concession stand.
- ❖ Lemansky Park, Oxford Street North: Is a 24.4 acre multi-use complex which contains the following: full size baseball diamond with lights; full size softball diamond with lights; 3 tennis courts; 2 basketball courts with lights; youth playground (Rocketland); skateboard park; quarter mile track. There is also a full size soccer field inside of the track area and a multi-purpose field (behind tennis courts) that can be used for soccer practices, football practices and youth soccer games. This complex also has public bathrooms and a concession stand.
- ❖ Dr. Arthur & Dr. Martha Pappas Recreation Complex: 2 Little League and 1 softball fields, a combination synthetic soccer/lacrosse field, a half-sized soccer field, a performance pavilion, restrooms, concession facilities, a playground, and a parking area. Sanitary facilities are available. See below for more details.
- ❖ Goddard Park, Southbridge Street: This 2 acre park is located directly behind the Fire Station. Dedicated to Robert Goddard, it contains a Polaris rocket in commemoration of the first rocket launch at nearby Pakachoag hill. A dam is located here, which has been dedicated to Captain

Patrick Foley, the only Auburn firefighter to die in the line of duty. There are no playing fields or sanitary facilities located at the park.

- ❖ Camp Gleason, Central Street: contains 15.7 acres of wooded property that was deeded to the town by American Steel and Wire Co. The existing building is scheduled to be renovated so it may be used for public meetings. A small beach area was once used for public swimming which has since been closed. The beach area is used for fishing. There are many nature trails throughout this park, including a dam area.
- ❖ Holstrom Field, Holstrom Court: This property is located at the end of Holstrom Court, which is adjacent to Town Fair Tire off Southbridge Street. It consists of 1.6 acres with a youth baseball and/or softball diamond. Auburn Little League holds games for youths 7 and under on this field.
- ❖ Franklin Field, Franklin Street: his park contains a youth playground, a Little League baseball diamond, and one basketball court. It consists of 2.1 acres of property and is located directly on Franklin Street, off Sword Street, adjacent to the Auburn Industrial Park. A seasonal concession stand is open throughout the Little League season.
- ❖ Boyce Street Tot Lot: This 1.6-acre park contains a youth playground.
- ❖ Eddy Pond Boat Ramp: This 1-acre area is used for public access to Eddy Pond.
- ❖ Middle School, West Street: This property contains a youth soccer field and Little League baseball diamond on 7 acres.
- ❖ Carrie Granger Field, Southbridge Street: Granger Field is a 6.5-acre park with a full size soccer field, 1 intermediate soccer field and a Little League baseball diamond.
- ❖ Mary D. Stone, Church Street: The half-acre property contains a youth playground and youth soccer fields.
- ❖ Bryn Mawr School, Swanson Road: This school contains playing fields for Little League baseball and soccer fields. There is also a playground and can be used after 5:30 pm while school is in session.
- ❖ Julia Bancroft School, Vinal Street: The schoolyard consists of 6 acres that contains a youth playground and a youth softball diamond.
- ❖ Pakachoag School, Pakachoag Street: The schoolyard contains a youth playground, youth baseball diamond and soccer fields. This facility consists of 7.2 acres and has no sanitary facilities.
- ❖ Swanson Intermediate School, Swanson Road: The school consists of 12.9 acres containing a full size soccer field and a Little League diamond.



Figure 35. Camp Gleason circa 1940's

The Athletic Director for the Auburn School Department is responsible for scheduling the use of school recreation facilities, with school-sponsored activities having priority over private recreation groups. The Auburn Department of Public Works Parks, Recreation, and Cemetery Division is responsible for scheduling the use of town-owned recreation facilities. In practice, scheduling the use of recreation facilities is a joint venture of the Parks, Recreation, and Cemetery Division and the School Department. The Auburn Parks, Recreation, and Cemetery Division is responsible for maintaining all of Auburn's recreation facilities, both town-owned facilities and those associated with the Town's various schools. Planning for new facilities is a joint venture of the Recreation Committee, Parks Department and the School Department. The Town does not have any recent planning documents regarding new recreation facilities; rather, Auburn is making use of the 1999 Parks Department Strategic Plan.

SPORTS

There are several youth sports leagues in operation in Auburn. These include Auburn Little League, Bandits Youth Lacrosse, Auburn Fastpitch Girl Softball, and Soccer. The Adult Golf League began in 2018 with matches held at the town golf course, Pakachoag Golf Course.

Horgan Skating Arena is a Commonwealth of Massachusetts public ice skating facility, overseen by the Department of Conservation and Recreation (DCR). The arena is a full service skating facility offering an extensive variety of skating programs for all ages and abilities. The facility features a full service pro shop, a heated conference room, and a snack bar. The Horgan Arena provides patrons with affordable recreation in a clean, safe, and well-maintained facility.

The Town of Auburn owns several large parcels of land throughout town. Each parcel was acquired through various means for different reasons. Southold Road was acquired in November 2014, which was classified as 61A, and as such, the town had a right of first refusal. Subsequently the town purchased the 50 acres with the condition that it be bonded for municipal use for 10 years,

and that the municipal use of the property be reserved for passive recreation. The area known as Granger Cliffs was acquired by the town due to the original owner's desire to conserve the land as open space. In the past, there was walking trains throughout the area. Today utilization is limited because of access.

Dr. Arthur and Dr. Martha Pappas Recreation Complex

The Dr. Arthur and Dr. Martha Pappas Recreation Complex, also known as the Pappas Complex, is a 20 acre facility which consists of five playing fields (two artificial turf and three sod), a concession stand, a performance pavilion and the Pakachoag Hiking Trail. This facility opened in 2012 and hosts youth sports, family recreation and cultural events for all ages. The facilities include:

- Pappas Field (Softball)
- Camosse Field (Little League/Softball Turf)
- Fuller Field (Little League) Baseball field
- Marois Field (Small Soccer)
- Soccer Field (Full-size turf)
- Thompson Concession Stand and Covered Patio
- Riley-Pappas Performance Pavilion

Each year, since 2014, an Independence Day celebration has been held at the Pappas Recreation Complex. This major event draws thousands of people each year. There is food, various vendors, kids' games, a rock climbing wall, train rides, face painting, rock and roll racing, a fun house, Speed Pitch and many other activates. The evening's activities end with a fireworks display.

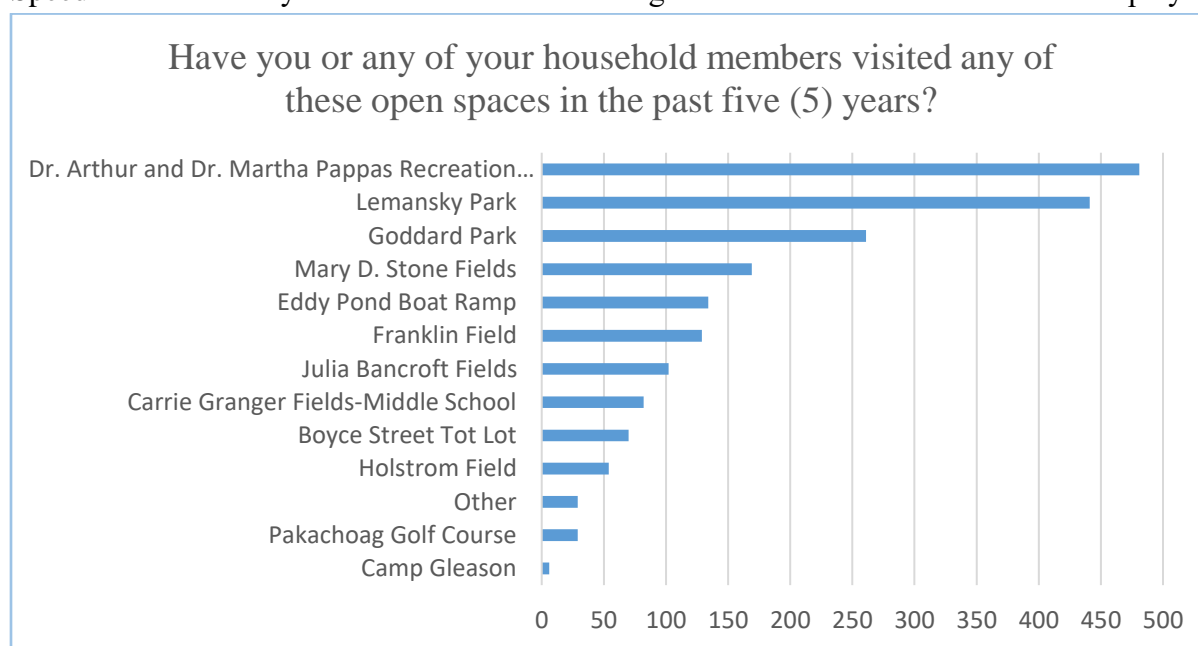


Figure 36. Master Plan Survey



Figure 37. Pakachoag Hiking Trail

Pakachoag Hiking Trail opened in 2017; the entrance is located at the Dr. Arthur and Dr. Martha Pappas Recreation Complex. The trail was surveyed, designed, and constructed with grant assistance funding from the Blackstone Heritage Corridor, Inc. The trail is one hiking path that extends southeastward along the Worcester Flood Diversion Channel for a stretch of 4,624 feet (7/8 mile). This stretch is almost entirely downhill. Two picnic tables mark the end of the trail at which hikers must turn-around and repeat the same trail, uphill in a northwesterly direction, for a total distance of 9,248 feet (1 ¾ mile).

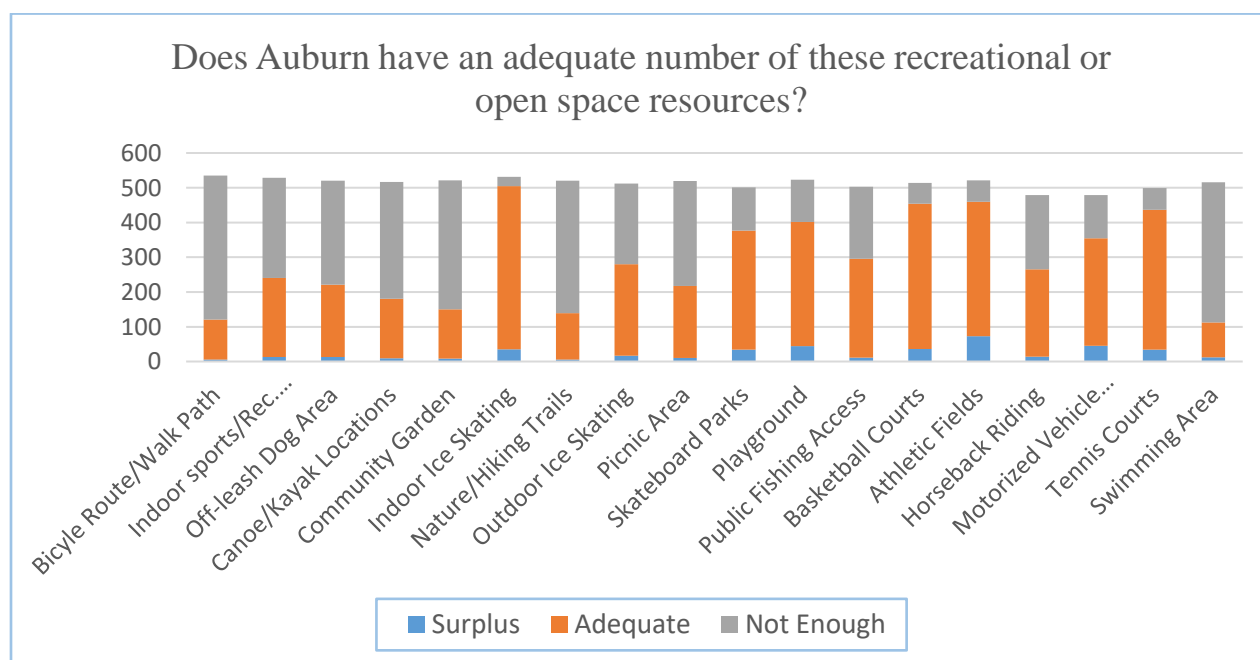


Figure 38. Master Plan Survey



Map 19. Pakachoag Hiking Trail Entrance²⁷

Southold Road

The town owns more than 49 acres along Southold Road. This land abuts Pakachoag Golf course to the south and Pakachoag Hiking Trail at the Pappas Complex to the west. At the time of this writing, there is no specific plan for this land. Multiple options are available including expanding Pakachoag Golf Course or expanded walking trails in connection with the Pappas Complex. Cooperation with the Army Corps of Engineers on a walking trail along the Worcester Flood Diversion Channel might be considered.

Granger Cliffs.

Auburn owns approximately 97 acres in the area known, as Granger Cliffs, located south of US-20 and west of I-395. The Granger Cliffs site has significant topographical variations that, combined with the Aquifer location, deem the property unsuitable for large-scale recreational projects such as multiple athletic fields. Such large developments could increase the volume of surface runoff that would exacerbate natural erosion towards distinct rocky ledge features. Low impact passive recreation uses such as walking/hiking trails are in high demand by Auburn citizens and would be the most suitable use for this site.

²⁷ Town of Auburn Website

Veterans Memorial Park Corridor

There are several Veterans Memorial Parks along Southbridge Street/MA-12. The parks feature four standing military figures in three locations along the corridor. The figures' uniforms are those from World War I, World War II and the Korean War, the Iraq War, and Desert Storm.



Figure 39. Veterans Park at Southbridge Street and Prospect Street

Farmland

Auburn contains approximately 770 acres of privately owned agricultural lands that are a mix of both active and inactive farmlands. The largest collection of parcels is located off Kelly Street, which contains open meadows rich with arable soils and a dense thicket of perimeter forest that serves as a cover for wildlife. A majority of all agricultural land is located in the Residential Rural (RR) zoning district, which provides scenic values and very little threat of high-density development at this time.

Table 27

Chapter 61A Parcels in Auburn								
Assessor's Parcel ID#	Location	Description	Ownership	Managing Agency	Zoning	Use Code	Level of Protection	PPA ID#
Map 75 Lot 1	86 Kelly Street	Chapter 61-A (farm)	Martin Realty Co. of Auburn Inc.		RR	7130	Limited	17-5

Chapter 61A Parcels in Auburn								
Assessor's Parcel ID#	Location	Description	Ownership	Managing Agency	Zoning	Use Code	Level of Protection	PPA ID#
Map 72 Lot 2	Kelly Street	Chapter 61-A (farm)	Martin Realty Co. of Auburn Inc.		RR	7130	Limited	17-5
Map 73 Lot 2	71 Kelly Street	Chapter 61-A (farm)	Martin Realty Co. of Auburn Inc.		RR		Limited	17-5
Map 77 Lot 1	93 Kelly Street	Chapter 61-A (farm)	Kelly Phyllis R		RR	7160	Limited	17-5
Map 79 Lot 4	393 South Street	Chapter 61-A (farm)	Brossman Alice E	Dewolfe Douglas	RR	7190	Limited	17-8
Map 78 Lot 1	South Street	Chapter 61-A (farm)	Cody Jaimie N Trustee	Ret Properties	RR	7190	Limited	17-8

Source: Auburn Assessor

Auburn has long been a well-developed suburban town bordering the City of Worcester. The town is in the top third state wide in total area of developed land. Due to the well-developed nature of the town, Auburn is in the bottom third statewide for total percentage of natural land. However, considering the nature of the town, it does well protecting its open space with 8 percent designated and ranked 187 out of 351 municipalities.

Table 28

Land Use 2003-2013 State Rank		
Land Use 2005-2013		Rank Statewide
Total Area of Developed land (acres)	4,091	90
Total Area of natural Land (acres)	5,588	247
Total Area of Open Land (acres)	827	224
Percent Developed	39%	95
Percent Natural Land	53%	243
Percent Open Land	8%	187
Total area (acres)	10,505	234
Total Area (square miles)	16	234

Source: Mass Audubon Losing Ground Report 2014

Overall improvements can be made in protecting the land. Table 29 below illustrates the towns' statewide rankings.

Table 29

Land Protection 2005-2013 State Rank		
Land Protection 2005-2013	Auburn	Rank Statewide
Overall area protected (acres)	711	308
Overall percent protected	7%	319
Area protected 2005 - 2013 (acres)	0	309
Percent BioMap2 Core Habitat protected	11%	313
Percent BioMap2 Critical Natural Landscape protected	13%	292
Percent TNC resilient land protected	13%	299
Total area (acres)	10,505	234
Total area (square miles)	16	234

Source: Mass Audubon Losing Ground Report 2014

Auburn as a centrally located municipality with its many well-traveled roadways it is not surprising the amount of development that occurs. Table 30 illustrates the amount of land developed from 2005-2013 and the ranking statewide.

Table 30

Recent Development 2003-2013 State Rank		
Recent Development 2005-2013	Auburn	Rank Statewide
Total area of new development (acres)	74	118
Natural land converted to development (acres)	42	115
Open land converted to development (acres)	32	116
Total development (acres per square mile)	5	85
Natural land converted to development (acres per square mile)	3	69

Recent Development 2003-2013 State Rank		
Recent Development 2005-2013	Auburn	Rank Statewide
Open land converted to development (acres per square mile)	2	95
Total area (acres)	10,505	234
Total area (square miles)	16	234

Source: Mass Audubon Losing Ground Report 2014

PROGRAMS, EVENTS, AND OTHER ACTIVITIES

- ❖ Old Landfill Site, Rochdale Street: This town-owned, 46.4-acre site contains roughly two miles of trails for all-terrain vehicles (ATVs). A private ATV association is responsible for maintaining the trails on this site.
- ❖ The Auburn Cultural Council, supported by the MA Cultural Council, strives to distribute allocated monies and create venues for a wide variety of arts & science endeavors that will benefit all residents of Auburn.
- ❖ Holiday Craft Fair
- ❖ The Annual Tree Lighting is held each year at Drury Square.
- ❖ Summer in the Park Concert Series takes place each week throughout the summer at the Riley-Pappas Performance Pavilion
- ❖ Farmers' and Cultural Market takes place each summer, at the same time as the Summer in the Park Concert Series

Open space must be a key consideration in planning if the health of a community and its people are both considered important. There are numerous health benefits associated with access to public open space and parks. Access to vegetated areas such as parks, open spaces, and playgrounds has been associated with better-perceived general health, reduced stress levels, reduced depression and more. As Auburn continues to grow, continuing to value open space is vital but also challenging, particularly where there is pressure for space, resources and development.

GOALS

Many of the goals are from Auburn's 2014 Open Space and Recreation Plan and the 2016 update.

1. Expand and improve existing open space and recreational resources and facilities to meet the town's anticipated recreational needs for the benefit of all segments of Auburn's population.

- Establish greenway corridors to connect and guide users to the town's open space and recreation resources. Construct wayfinding systems to better identify and delineate these routes. Encourage and invest in multi-modal transit infrastructure to provide greater accessibility to destinations near or at open space and recreation resource areas.
 - Expand the Pakachoag Hiking Trail.
 - Establish a community garden.
 - Continue to maintain parks/facilities and refurbish parks/facilities as needed.
 - Continue to combat invasive species in the town's waterways.
 - Pursue and if feasible develop public access for swimming.
 - Develop water-based recreation such as a canoe/kayak launch at Eddy Pond or Auburn Pond or any other waterbody.
 - Continue to support the Recreation Department operations and programs.
 - Investigate the feasibility of a disc golf course as a possible use at the town owned Southold Road property.
2. Protect open space and sensitive environmental areas and acquire undeveloped open space land for conservation.
 - Consider adopting the Community Preservation Act with a portion of the funds marked for Open Space and Recreation.
 - Update the 1999 Parks Dept. Strategic Plan.
 - Update Auburn's 2014 Open Space and Recreation Plan when current plan expires in 2021.
 - Establish a municipal conservation agent.
 3. Increase public awareness of open space preservation and conservation and the many benefits attributed to these resources.
 - Work with area land trusts to develop information on conservation and estate planning for large landholders, the tax implications of preserving open space for all, and the importance of preserving sensitive environmental areas for the purpose of educating school age children.
 - Work with the town's public library and school district to disseminate information regarding natural resource preservation and conservation.
 - Provide information to new residents regarding the towns' recreational resources.
 4. Promote awareness of Auburn's recreation opportunities and open space resources, from its farmlands to its conservation areas and trails, to encourage the continued preservation of the community's natural landscape.
 - Provide and promote additional programs, activities, and events at town-owned facilities. Encourage more of such actions on privately-owned land.

- Establish a Trails Committee tasked with working to expand current trails network.
 - Collaborate with the John H. Chafee Blackstone River Valley National Historic Corridor. Develop programs and tourism in Auburn as it relates to the National Corridor.
 - Provide and promote additional programs, activities, and events at town-owned facilities. Encourage more of such actions on privately owned land.
5. Enhance the recreational and outdoor space at Drury Square.
- Revitalize and promote Goddard Park as a central historic location.
 - Develop a walking trail around Auburn Pond. Clean the shoreline of trash and vegetative debris, address any invasive aquatic species in the pond.
 - Clean Ramshorn Brook of trash and debris to make a more inviting waterbody.



Figure 40. Veterans Memorial on Auburn Street

TRANSPORTATION



Drury Square

INTRODUCTION

Auburn is a centrally located community in Worcester County surrounded by the towns of Leicester, Worcester, Millbury, and Oxford. The Town currently has several major Interstate corridors such as Interstate 90, Interstate 290, and Interstate 395 in addition to US Route 20 and MA Route 12. Auburn is also a member community of the Worcester Regional Transit Authority (WRTA) and receives fixed-route and paratransit services. While Auburn is suburban in nature, it holds a strong economic presence in Central Massachusetts as a retail, employment, and services hub for many individuals inside and outside of Town boundaries. Auburn is a mobile community relying mostly on automobile transportation and some public transit. Auburn is a member community of the Central Massachusetts Regional Planning Commission (CMRPC) and is a member of the Central Massachusetts Metropolitan Planning Organization (CMMPO) for transportation planning purposes.

TRAVEL CHARACTERISTICS

Journey to Work

There has been a steady decrease in the number of Auburn residents working either in Worcester or within Auburn over the last 25 years. In 1990, there were 3,337 Auburn residents working in Worcester, but has decreased to 2,436 in 2015. In a similar manner, Auburn residents working within town has decreased from 2,077 in 1990 to 1,572 in 2015. The decrease in Auburn residents working within town can be attributed to many factors such as yearly changes in the job market, costs of living, shorter commute times, or higher wages.

Table 31 identifies the top ten communities that Auburn residents commute to work according to the American Community Survey (ACS). The data indicates that the places Auburn residents commute to have shifted to include more communities to the east, while maintaining Worcester and Auburn as the top two commuting locations for its residents. While some towns remain a constant in the list of communities, there are new communities that have not been on the top ten lists in the past. According to the ACS, the national average commuting time for individuals traveling to work is between 20 to 24 minutes. Auburn residents who commute to the locations in Table 31 maintain a similar average travel time of 20 to 24 minutes.

Table 31

Major Work Destinations for Auburn Residents				
Destination to Municipality	Workers in Commuting Flow 1990**	Workers in Commuting Flow 2000	Workers in Commuting Flow 2015*	Estimated Drive Time in Minutes
Worcester	3,337	3,048	2,436	15 minutes
Auburn	2,077	1,746	1,572	N/A
Shrewsbury	253	242	408	20 minutes
Westborough	186	311	395	24 minutes
Framingham	123	138	205	35 minutes
Millbury	101	156	202	12 minutes
Marlborough	209	203	160	28 minutes
Northborough	57	77	155	22 minutes
Boston	79	157	130	60 minutes
Milford	N/A	N/A	123	35 minutes

Source: American Community Survey (ACS) 2011-2015* US Census, 1990 and 2000 (2006 Auburn Master Plan) **

The advancement of technology has allowed the opportunity for telecommuting, which is defined as the ability to make use of the internet to work from home. Increasingly, more individuals are taking advantage of working from home as many can perform their daily work related duties such as attending meetings, answering emails, making phone calls, from the comfort of their home. Auburn had a total of 194 of its residents working from home, per the 2006-2010 ACS which has since increased to 262 residents in the 2011 -2015 ACS. It is likely that as technology continues to advance and become more available, the number of individuals working from home will also rise. The continued growth of telecommuting will have an impact on commuting patterns to and from Auburn. As a result, there may be a decrease in traffic congestion, commuting times, Greenhouse Gas (GHG) emissions, and reliance on vehicles. Auburn has a strong employer base, employing many of its own residents, as well as many residents of other towns. Table 32 shows the locations and number of workers commuting to Auburn. According to the ACS, these individuals are traveling an average of 13.5 minutes to work, which is less time than the average commute time of Auburn residents. The highest-ranking towns and cities that workers are traveling from are Worcester and Oxford with 2,215 workers and 711 workers, respectively.

Table 32

Major Places of Residence for Employees at Auburn Businesses			
Commuting Town to Auburn for Work	Workers in Commuting Flow 2000**	Workers in Commuting Flow 2015*	Estimated Drive Time in Minutes
Worcester	3,048	2,215	15 Minutes
Auburn	1,746	1,572	N/A
Oxford	75	711	8 minutes

Major Places of Residence for Employees at Auburn Businesses			
Commuting Town to Auburn for Work	Workers in Commuting Flow 2000**	Workers in Commuting Flow 2015*	Estimated Drive Time in Minutes
Leicester	51	374	16 minutes
Charlton	39	370	12 minutes
Dudley	12	288	20 minutes
Webster	48	283	14 minutes
Thompson, CT	N/A	255	18 minutes
Millbury	156	224	12 minutes
Holden	50	223	20 minutes

Source: American Community Survey (ACS) 2011- 2015* American Community Survey 2000**

The influx of workers into Auburn from other communities causes Auburn to have a high daytime population that relies on various town services. The US Census Bureau defines the daytime population as “the number of people who are present in an area during normal business hours, including workers.” The daytime population of Auburn is calculated using the following US Census Bureau formula²⁸:

Total resident population (16,364) + Total workers working in area (10,475) - Total workers living in area (1,572).

Using this calculation, the total daytime population for Auburn is 25,267 people. This exceeds the total census population of Auburn by 8,903 individuals. The daytime population in Auburn has the potential to put an immense amount of strain on the transportation network and added stress onto the roadway infrastructure.

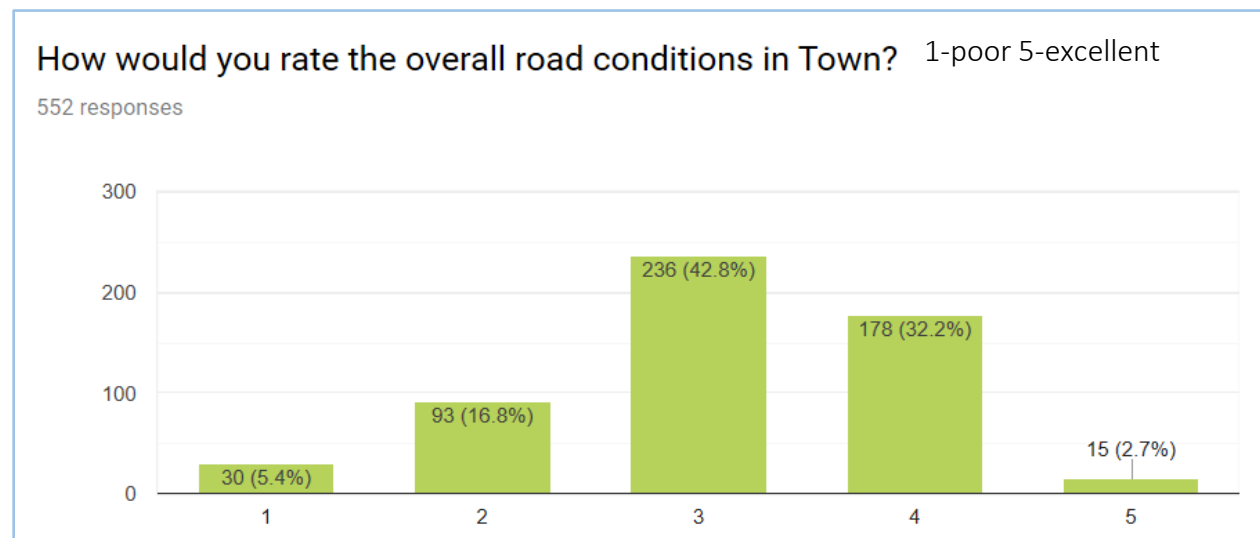


Figure 41. Master Plan Survey

²⁸ <https://www.census.gov/topics/employment/commuting/guidance/calculations.html>

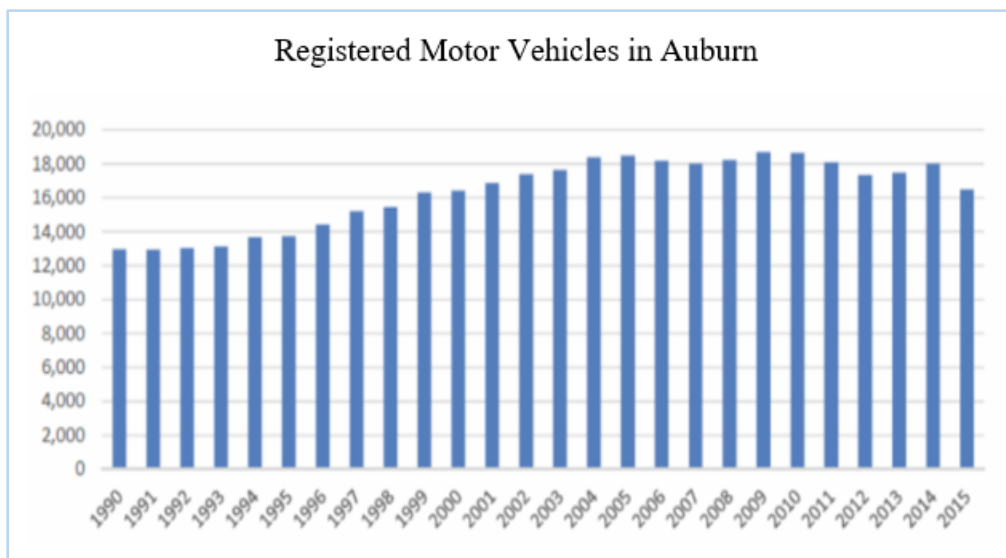


Figure 42. Intersection US-20/Washington St. & MA-12/Southbridge St.-Approximately 30,000 vehicles a day²⁹

REGISTERED MOTOR VEHICLES

The 2006 Auburn Master Plan noted that between 1990 and 2000 the number of registered vehicles in Auburn rose 25 percent due to a variety of factors. Since 2000, vehicle ownership has continued to rise, but in recent years, the rate has regressed. Many factors play into this changing trend including the growing prevalence of ride and car sharing services. Figure 1 shows how vehicle ownership has changed from 1990 to 2015.

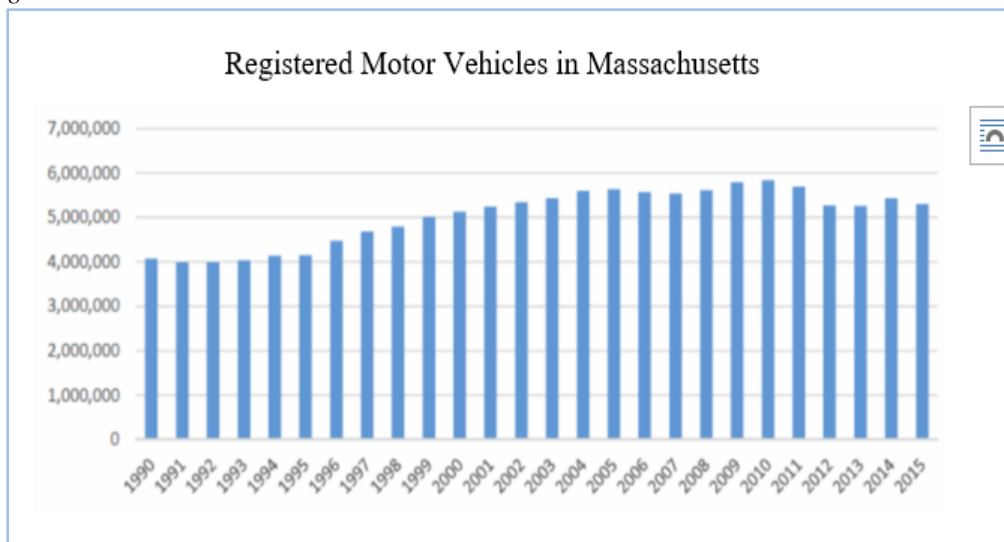
Figure 43



Source: Massachusetts Department of Revenue/Division of Local Services

²⁹ CMRPC Traffic Count, 2/2018, www.cmrpc.org

Figure 44



Source: Massachusetts Department of Revenue/Division of Local Services

EXISTING CONDITIONS

ROAD NETWORK

Jurisdiction

The ownership, or jurisdiction, of a road, is important to know as it determines the entity responsible for maintaining that road. The Massachusetts Department of Transportation (MassDOT) Road Inventory File (RIF) is the authoritative source of information on roadway ownership for all communities in Massachusetts. The RIF contains information on ownership, classification, and layout among others. This information is used to help determine the local aid funding each town receives on an annual basis. The Town Clerk is responsible for sending updated information to MassDOT for any inclusions or exclusions when the ownership status of a road is changed at Town Meeting.

Based on the number of miles, Table 33 highlights the jurisdiction of roadways within Auburn. This information is from the MassDOT Road Inventory File (recent version: June 2018).

Table 33

Road Jurisdiction in Auburn	
Jurisdiction	Miles
Unaccepted	19.34
MassDOT	37.7
Auburn	97.4
Null	2.6

Source: MassDOT

Roads classified as ‘Unaccepted’ are not owned or maintained by Auburn, with responsibilities falling to the residents of that particular street, such as a Homeowners’ Associations. Roads classified as ‘Null’, similarly are not owned or maintained by Auburn and are generally roadways through cemeteries. Map 20 highlights the Jurisdiction of the roads in Auburn.

Classification

Vehicle travel involves movement through a network of roads. Functional classification is the process of categorizing roads and highways into different groups based on the service they provide. This classification determines how travel can be guided within a road network in a logical and efficient manner. According to the Federal Highway Administration, roads can be classified into a hierarchy of five categories:

1. Interstate
2. Principal Arterials
3. Minor Arterials
4. Collectors (Major, Minor)
5. Local Roads

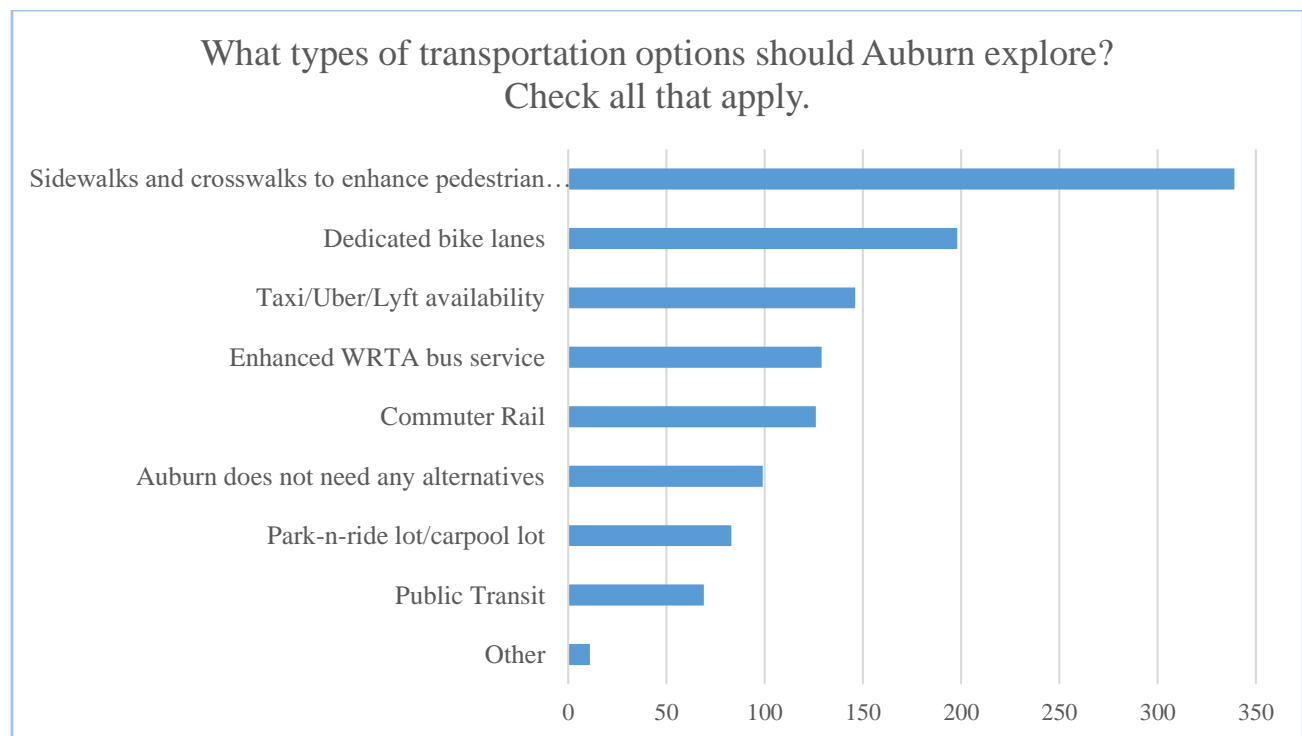
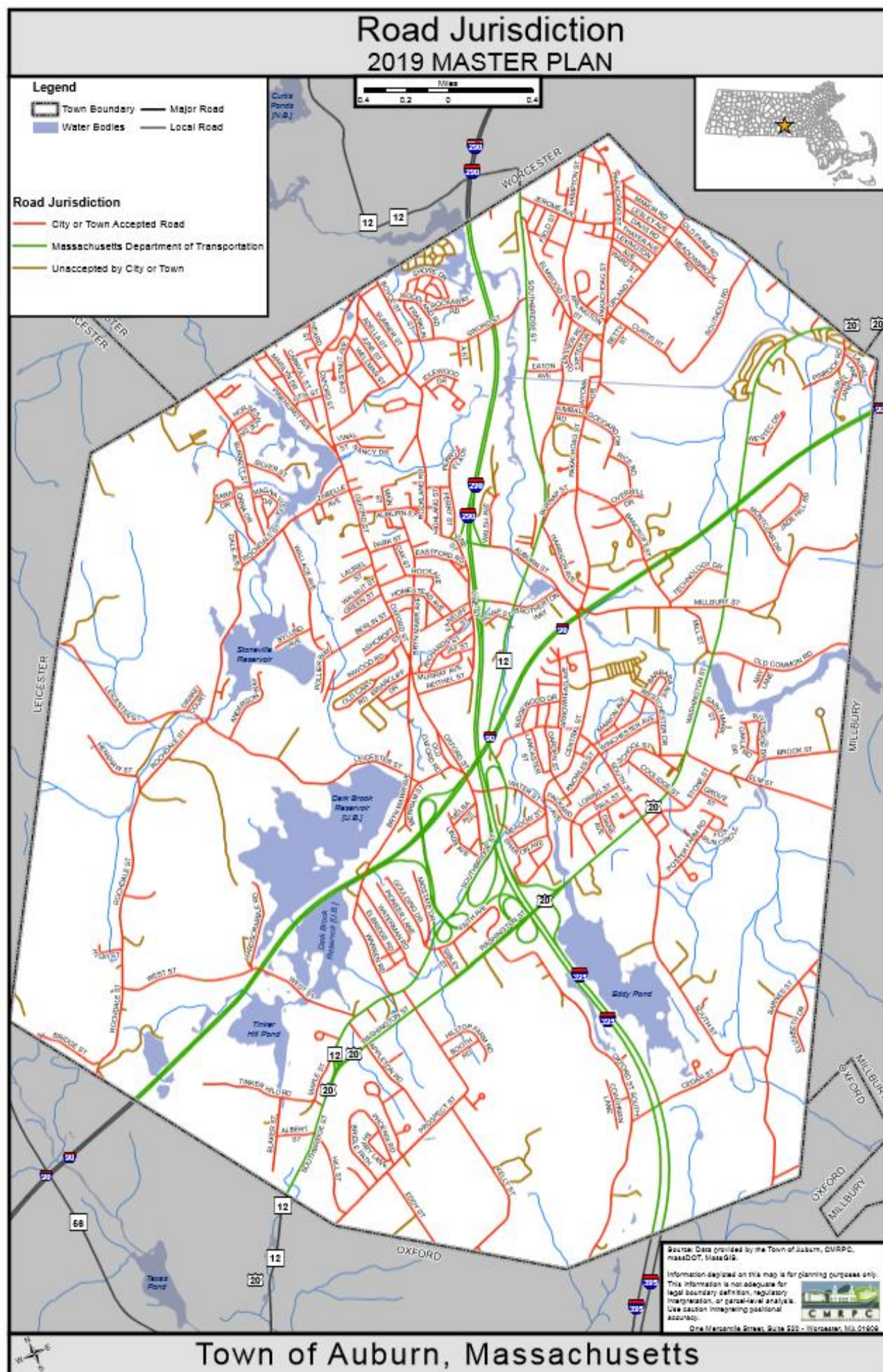


Figure 45. Master Plan Survey



Roads such as Principal Arterials or Minor Arterials, are designed to provide greater mobility and typically have higher design speeds. Arterials are typically used for longer through-travel between major trip generators (larger cities, recreational areas, etc.). Local Roads provide local access to private property or low volume public facilities and typically have lower design speeds. Collectors provide a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials and connecting smaller cities and towns with each other and to arterials. Arterials and Collectors have further sub-classifications of ‘Urban’ or ‘Rural’, and ‘Major’ or ‘Minor’ based on population density characteristics.

Based on the number of Federal functional classification miles, Table 34 shows the classification of roadways within Auburn. This information is from the MassDOT Road Inventory File (recent version: June 2018). Map 21 shows the roadway classification in Auburn.

Table 34

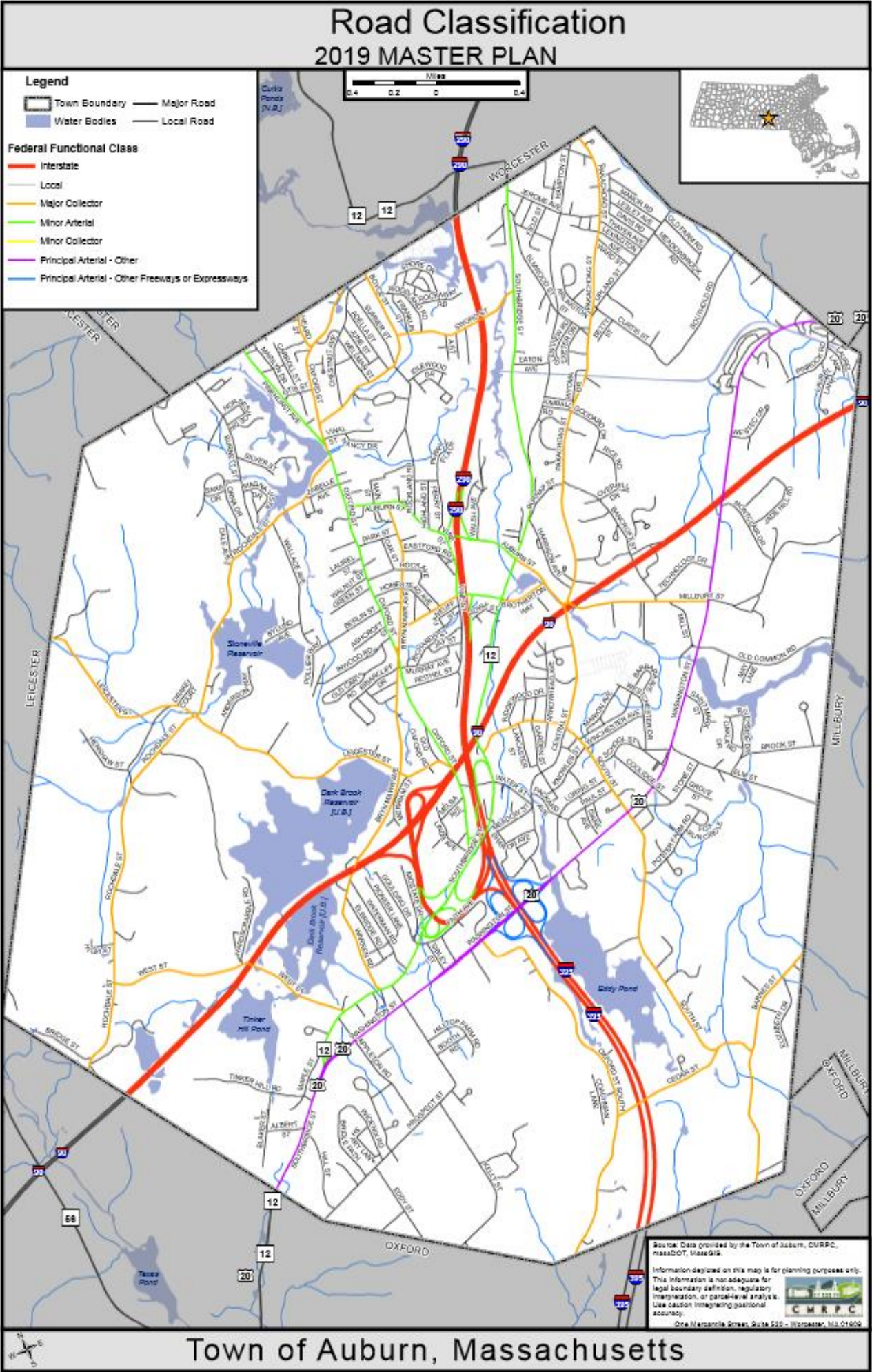
Road Federal Functional Classification in	
Federal Functional Class	Miles
Interstate	23.6
Principal Arterial – Other Freeway	2.4
Principal Arterial – Other	6.3
Minor Arterial	11.4
Major Collector	22.8
Local	90.0
Null	0.2

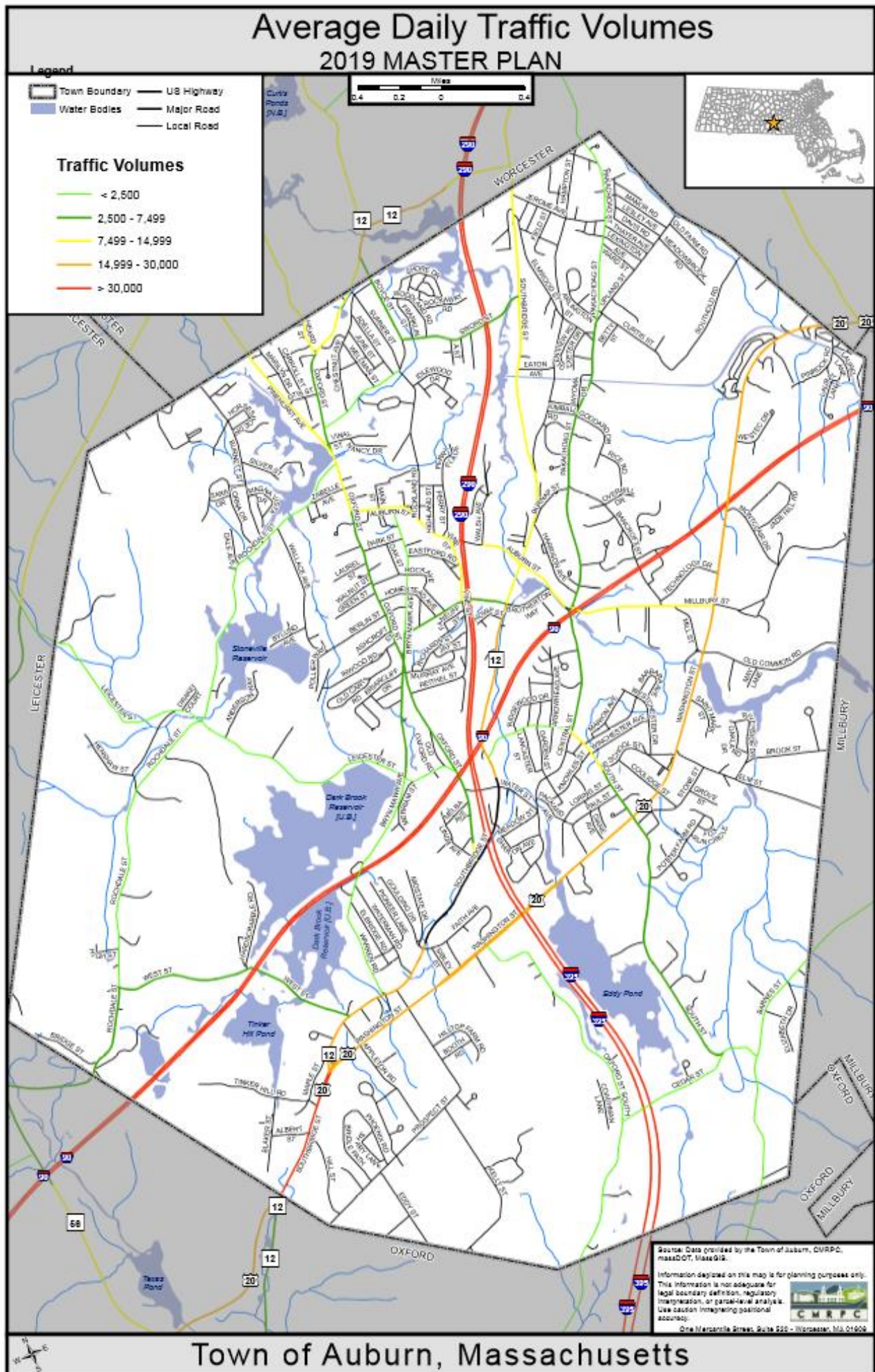
Source: MassDOT Road Inventory File

Federal aid-eligible roads include all interstates, urban/rural arterials, urban collectors, and rural major collectors. Rural minor collectors and local roads are excluded from this group.

Vehicle Volumes

Traffic counts are collected regularly in Auburn by CMRPC on Federal-aid eligible roadways and other select local roadways. Map 22 displays observed traffic volumes on selected roads.





Pavement

The Town of Auburn has an in-house Pavement Management System (PMS) that the Department of Public Works (DPW) uses to help plan and schedule roadwork. A PMS is a planning tool utilized to collect and monitor current pavement information, as well as evaluate and prioritize pavement maintenance, rehabilitation, and repair strategies. When properly implemented, a PMS provides decision-makers with the necessary information for understanding the long-term consequences of short-term budgeting decisions. The Auburn Highway staff within the Department of Public Works currently manage the Town of Auburn's PMS.

The Auburn Highway Division is responsible for delivering safe, well-maintained public roads and sidewalks for safe and efficient transportation through the community. Many of Auburn's roads were built between 15 and 20 years ago as new subdivision streets. Today, some of Auburn's roads are reaching the end or have surpassed their functional lifespan and will need to be reconstructed in the coming years. New residential developments steadily add to the number of miles of roadway for which the highway division is responsible.



Figure 46. Drury Square

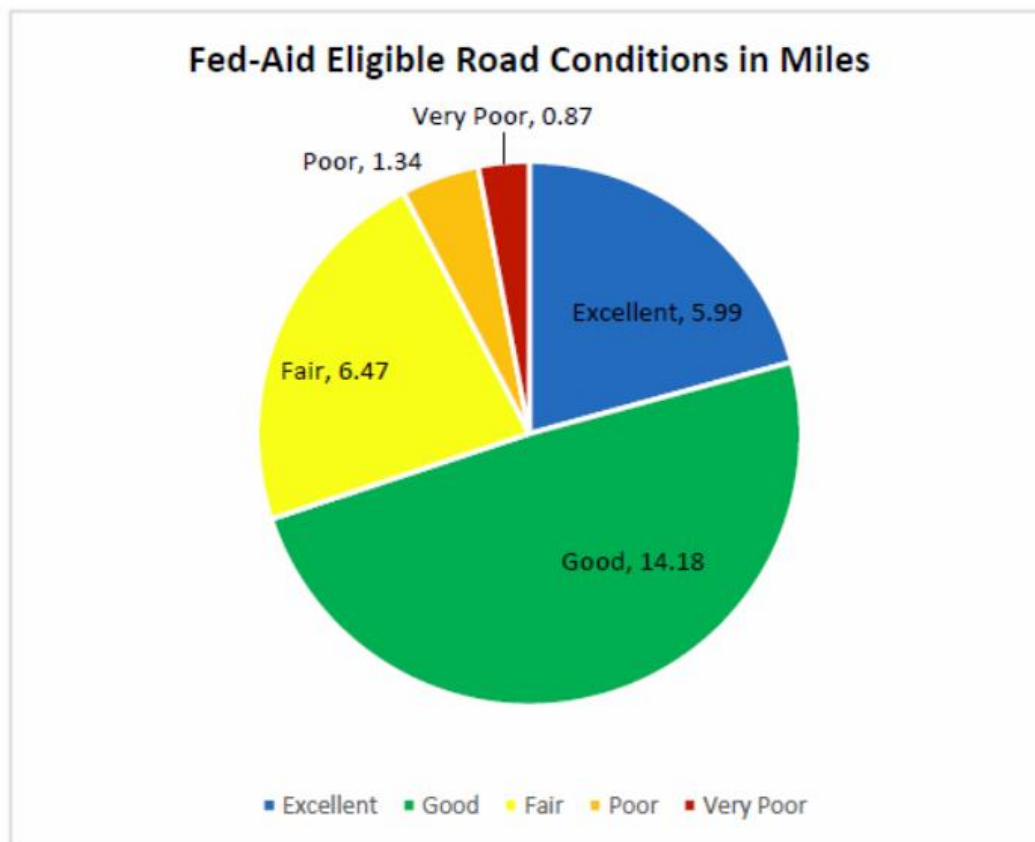
In addition to Auburn's efforts, CMRPC staff regularly monitors the conditions of all Federal-aid eligible roads in the Central Massachusetts region through its Pavement Management Program.

The program aims to assist decision makers in determining cost-effective strategies to address the region's deteriorating roadway conditions. The CMRPC program includes traffic counts, inventory and assessment of Federal-aid eligible roads, as well as associated sidewalks and Americans with Disabilities Act (ADA) ramps.

Over the summer of 2017, CMRPC surveyed the condition of Federal-aid eligible roadways in Auburn. This data is typically referenced when selecting projects for the Transportation Improvement Program (TIP) and the Long-Range Regional Transportation Plan (LRTP), among other transportation-related work. The pavement condition survey conducted categorizes road segments into repair bands based on an Overall Condition Ranking (OCI). An OCI is determined by the condition of the road and determines what types of repairs are needed. The road conditions are ranked as follows: Poor, Fair, Good, and Excellent.

The Overall Condition Index (OCI) is a score used to rate each pavement segment on a scale of 0 to 100. This rating can be used to determine a Network OCI. The Network OCI for the Town of Auburn as of 2017 is 74.67, an overall indication that the Federal-aid eligible roadways in town are in Good condition. Figure 46 displays the number of miles in each pavement condition band and Map 23 shows the conditions of Federal-aid eligible roadways.

Figure 47



Source: CMRPC

Each of these pavement condition bands can be associated with a specific cost of repair, which has been determined with the assistance of MassDOT. Based on the most recent survey in Auburn, it is estimated that the current backlog for Federal-aid eligible roadways is about five million dollars. Since the costs of repairs increase as the road deteriorates, it is significantly more cost effective to repair roadways early on rather than waiting until they are in the more expensive repair categories.

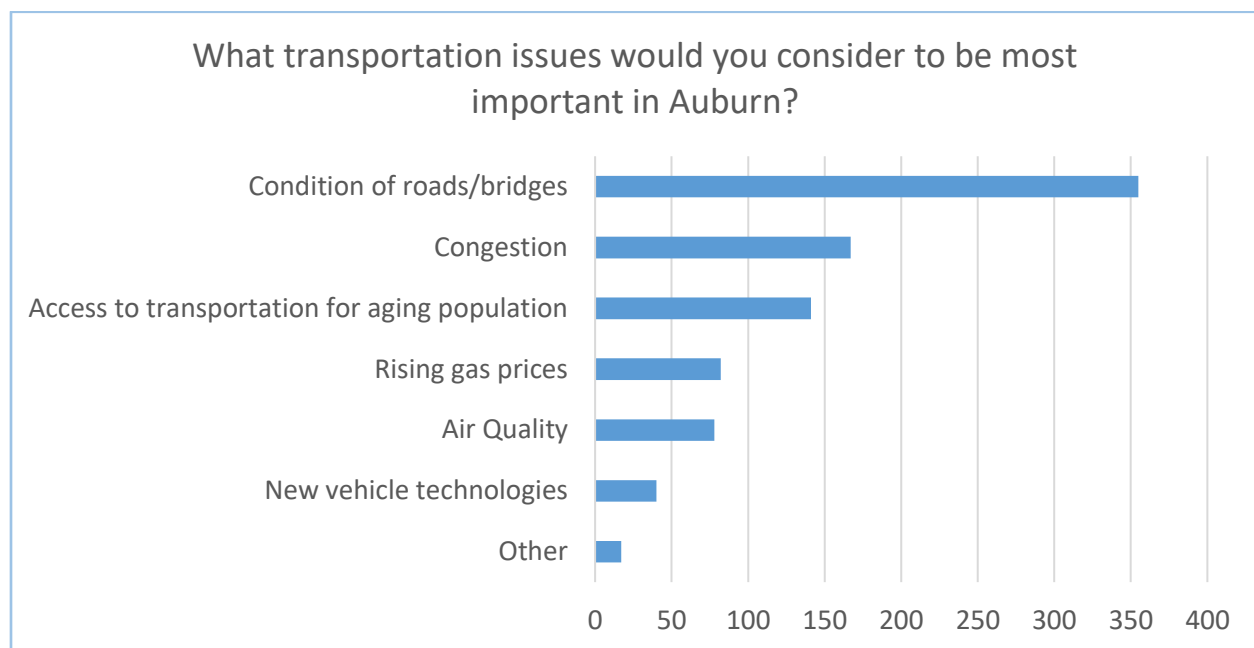


Figure 48. Master Plan Survey

**CMRPC Fed-Aid Road Conditions
2019 MASTER PLAN**

Legend

- Town Boundary
- Water Bodies
- US Highway
- Major Road
- Local Road

Pavement Condition 2017

- Excellent
- Good
- Fair
- Poor
- Very Poor

Town of Auburn, Massachusetts

Source: Data provided by the Town of Auburn, CMRPC, MassDOT, MassGIS.

Information displayed on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Use caution interpreting positional accuracy.

One Mansfield Street, Suite 520 - Worcester, MA 01608

BICYCLE AND PEDESTRIAN MOBILITY

Sidewalks

Providing sidewalks and controlled crossings in areas where pedestrian activity is significant or encouraged are common strategies to ensure user safety. Most importantly, providing accommodations for all user types enables greater accessibility and mobility in the community. For instance, any segment of roadway in town that has a paved shoulder of at least four feet in width is generally considered an appropriate accommodation for bicycle activity. In Auburn, pedestrian and bicycle facilities are used for both commuting and recreational purposes.

CMRPC Pedestrian Network data collection efforts are performed in tandem with the regional pavement data collection efforts. The last survey in Auburn was conducted over the summer of 2017. The inventory also includes detailed information on the corresponding sidewalks and ADA ramps on Federal-aid eligible roadways.

The sidewalk segments are given a ranking of Excellent, Good, Fair, and Poor. Figure 49 displays how the conditions of Auburn's sidewalks are distributed. An inventory has also been completed of the ADA ramps along these sidewalks. For the purposes of this inventory, the condition of the ADA ramps is divided into four categories: Compliant, Historic (a ramp that is non-compliant but is easily upgradeable or likely would have been compliant if built today), non-compliant (does not meet accessibility requirements and is not easily upgradeable), no ramp (location lacks any type of ramp). Figure 48 shows the distribution of ADA ramp conditions.

In 2017, there were a total of 22 miles of sidewalks and 448 ramps inventoried in Auburn. Similar to Federal-aid eligible roadways, the majority of pedestrian facilities along these roads are in good condition. The ADA ramps in town are mostly accessible to residents. The exception being the

Figure 49

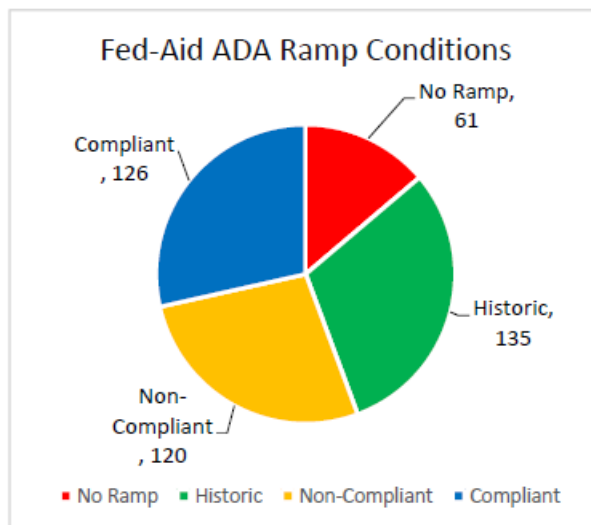
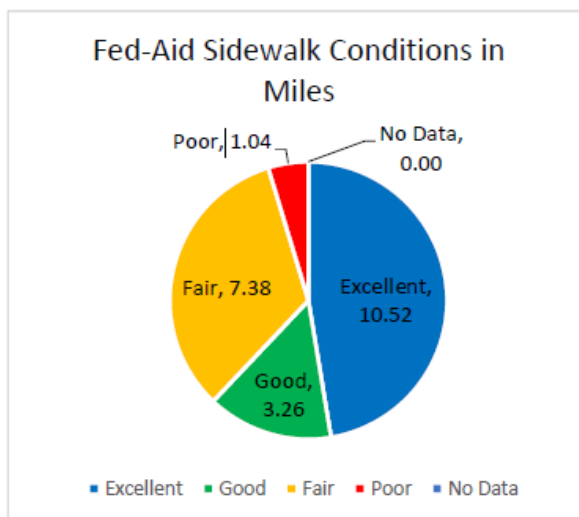


Figure 50



120 ramps in town with non-compliant conditions and 61 crossings without any ramps. Map 24 displays the location and condition of the pedestrian network along Federal-aid eligible roads.

Complete Streets

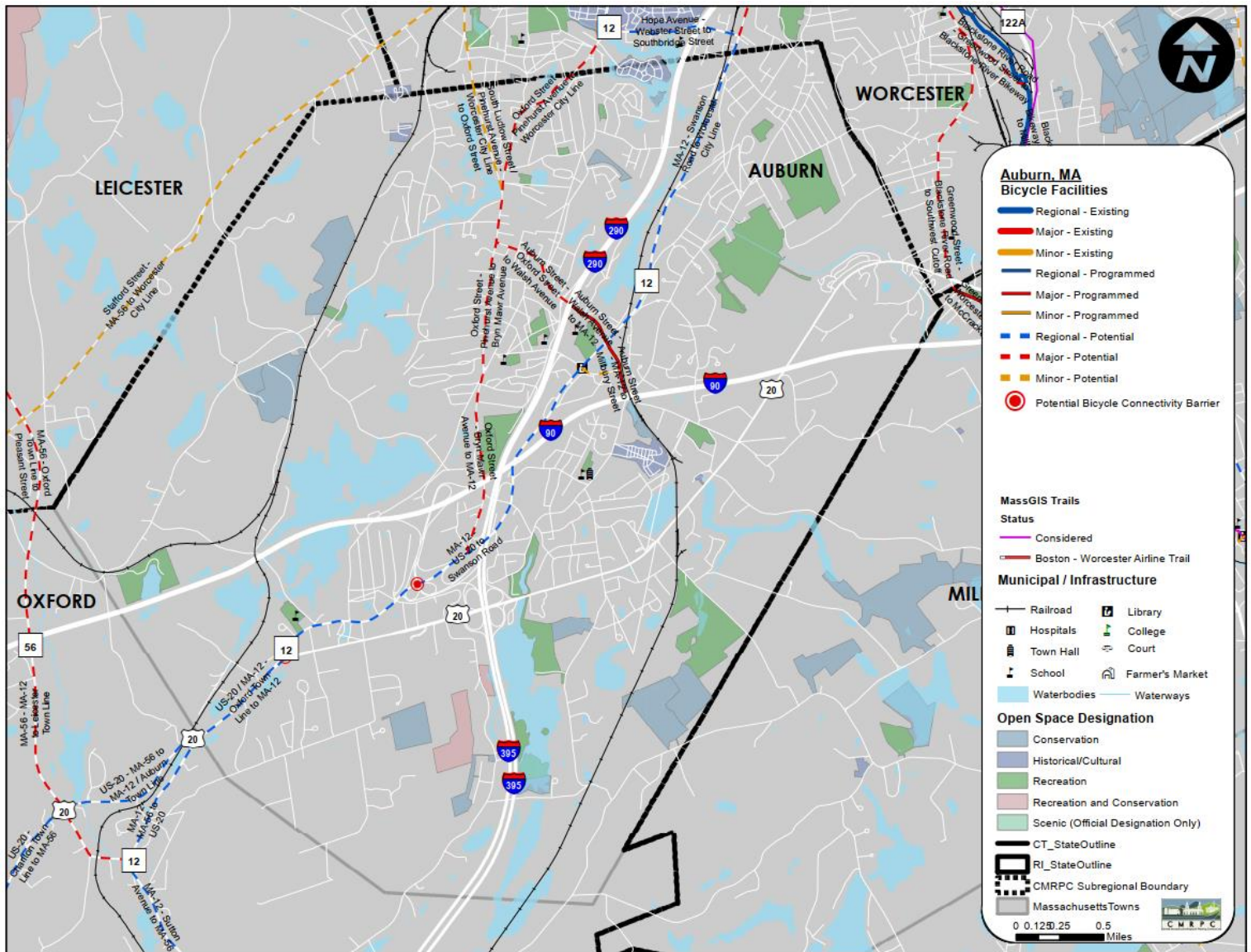
A Complete Street is one that provides for safe and accessible travel for all modes of transportation and for people of all ages and abilities. While it is true that many areas have transportation systems that favor automobiles over other forms of movement, there is a growing desire to “complete” streets in a manner that serves a greater number of modes. Planners, engineers, public health officials, and municipal leaders are working to build roads that are safer, more accessible, and convenient for all users. Networks of Complete Streets make it easier for people who rely on transit to access jobs, and providing safe places to walk encourages walking and bicycling for transportation and recreation.

Adopting a Complete Streets approach demonstrates a community’s intention to improve quality of life for all its citizens, regardless of their neighborhood. According to the National Complete Streets Coalition, by adopting a Complete Streets policy, communities direct their transportation planners and engineers to routinely design and operate the entire right-of-way to enable safe access for all users, regardless of age, ability, or mode of transportation. This means that every transportation project will make the street network better and safer for drivers, transit users, pedestrians, and bicyclists – making a town a better place to live.

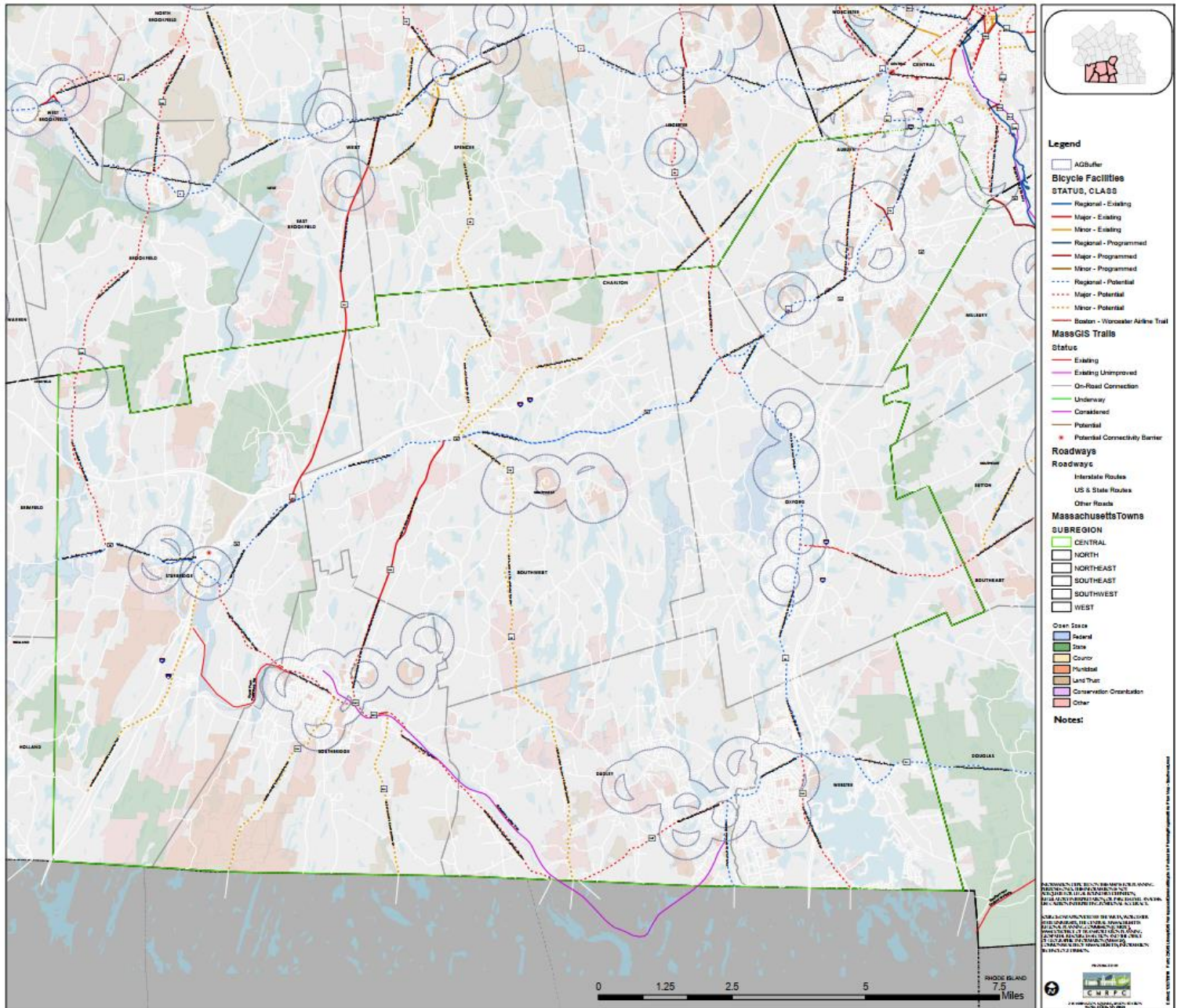
On January 22, 2018, the Auburn Board of Selectmen voted to adopt a Complete Streets Policy. The successful adoption of the Complete Streets Policy completed the first step, known as Tier I of the MassDOT Complete Streets Program. The policy encourages town officials to examine every infrastructure project from a Complete Streets perspective, assessing where bicycle and pedestrian mobility best practices could apply and where improvements were needed. Auburn is now able to develop a Tier 2 prioritization plan and become eligible for Tier 3 construction funding under the MassDOT program.

Bicycles

In 2018, the CMMPO developed a Regional Bicycle Plan that sought to identify opportunities for encouraging and enhancing bicycle travel in the region. The plan studied and recommended areas that could benefit and support the installation of various facilities in the development of a regional bike network. The plan found that there are currently no existing bike lanes in Auburn but that .60 miles have been programmed to be constructed as a part of other road projects. An additional 9.93 miles have been identified as areas for potential bicycle facilities. Map 24 is of Auburn from the 2018 CMMPO Regional Bicycle Plan.

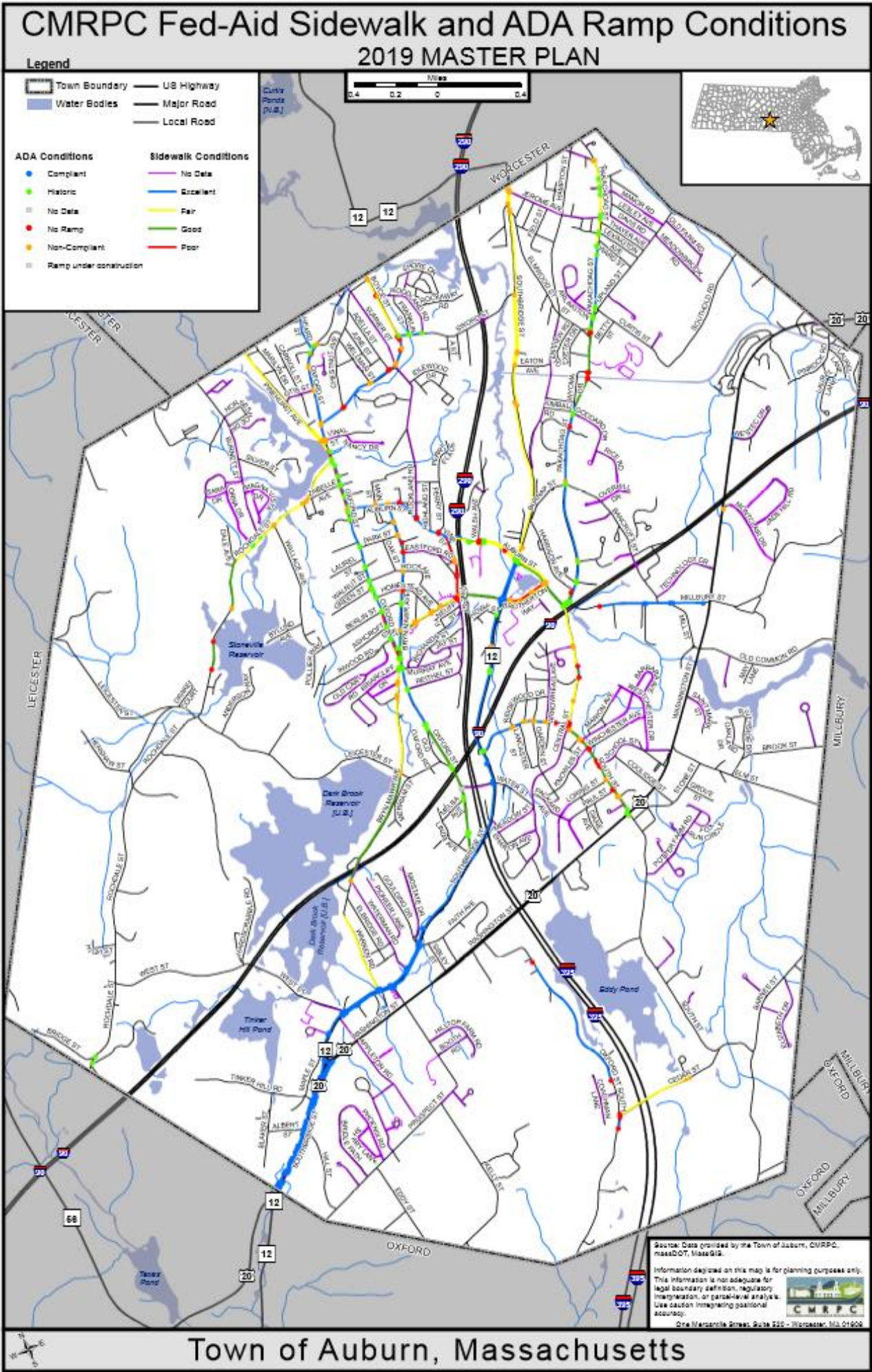


Map 24. Auburn Bicycle Facilities



Map 25. Regional Bike Plan

Map 26. Federal Aid Sidewalk & ADA Ramp Conditions



Bridges

The MassDOT Bridge Inspection Management System (BIMS) is the statewide dataset for bridge structures and contains the inspection status. The database features information of MassDOT and municipality-owned bridges with spans greater than 20 feet. Inspections are completed biannually. Information on MassDOT and municipality-owned bridges with spans between ten and twenty feet, and culverts with spans of four to ten feet are not available at this time, but data collection efforts are underway.

The BIMS identifies 57 total structures in Auburn, of which MassDOT owns 43 and 14 are owned by Auburn. Of all bridges in Town, four are identified as being structurally deficient and six are identified as being in unknown condition with no current inspections. The bridges identified as being structurally deficient carry Interstate 90 over Route 12 (Southbridge Street) and are owned by MassDOT. Table 35 shows all the bridges included in the MassDOT BIMS database in the Town of Auburn.

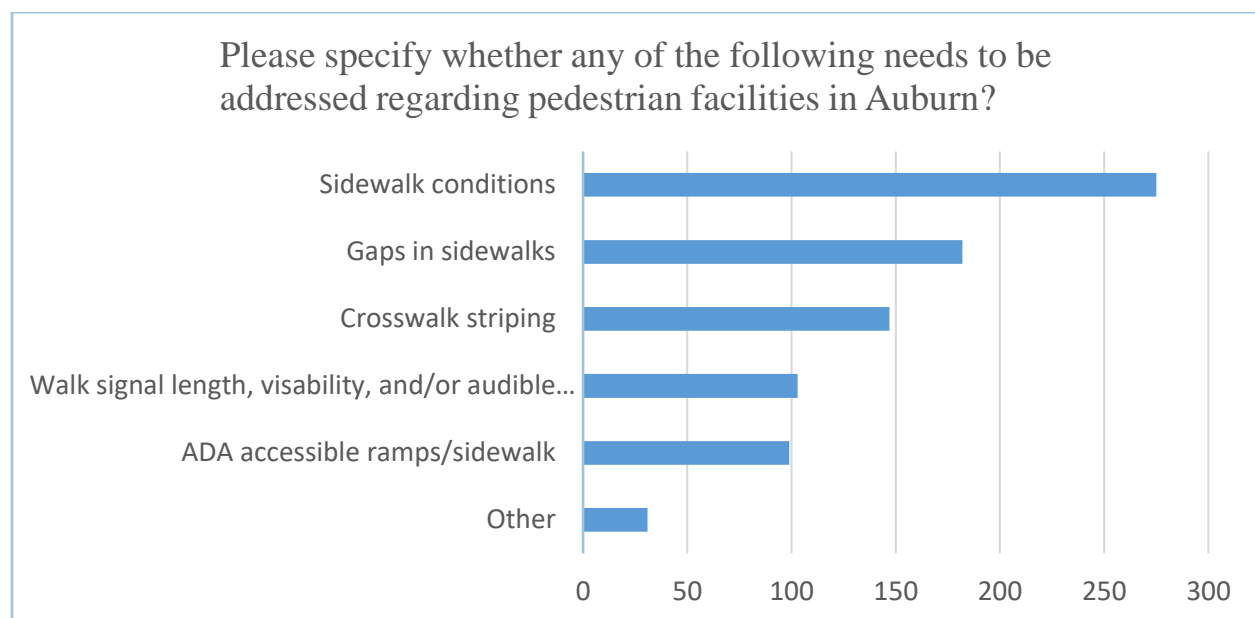


Figure 51. Master Plan Survey

Table 35. Bridges included in MassDOT BIMS database in the Town of Auburn

Facility Carried	Year Built	Year Reconstructed	Type of Service	Structure Length	Bridge Owner	Structurally Deficient	Structure Category	Feature Intersected	Bridge Inspection Date
US 20	1931	0	Highway	4.3	DOT	NO	Short Span Bridge	WATER PONDVILLE PND	12/21/2015
I 90 EB	1957	1986	Highway	81.1	DOT	NO	Bridge (NBI)	US 20 WASHINGTON ST	10/19/2015
I 90 WB	1957	1986	Highway	81.1	DOT	NO	Bridge (NBI)	US 20 WASHINGTON ST	10/18/2015
I 90 EB	1957	1980	Highway	121.6	DOT	NO	Bridge (NBI)	COMB CNTRL MLBRY & PWRR	4/10/2017
I 90 WB	1957	1980	Highway	121.6	DOT	NO	Bridge (NBI)	COMB CNTRL MLBRY & PWRR	4/10/2017
HWY BANCROFT ST	1957	1994	Highway	74.2	DOT	NO	Bridge (NBI)	I 90	3/30/2017
HWY INWOOD RD	0	0	Highway	0	MUN	UNKNOWN	Short Span Bridge	WATER DARK BROOK	NO CURRENT INSPECTION
I 90 EB	1957	1980	Highway	96	DOT	YES	Bridge (NBI)	ST 12 SOUTHBRIDGE ST	2/23/2017
I 90 WB	1957	1980	Highway	95.4	DOT	YES	Bridge (NBI)	ST 12 SOUTHBRIDGE ST	2/28/2017
I 90 EB	1957	1980	Highway	21	DOT	NO	Bridge (NBI)	HWY OXFORD ST	6/28/2016
I 90 WB	1957	1980	Highway	21	DOT	NO	Bridge (NBI)	HWY OXFORD ST	6/28/2016
I 90 RAMP INT 10	1957	1978	Highway	54.4	DOT	YES	Bridge (NBI)	ST 12 SOUTHBRIDGE ST	1/21/2016
HWY OXFORD ST	1880	1934	Highway-pedestrian	32	MUN	NO	Bridge (NBI)	WATER KETTLE BROOK	6/17/2015
HWY AUBURN ST	1960	0	Highway-pedestrian	14	MUN	NO	Bridge (NBI)	WATER DUNN BROOK	6/9/2015
HWY BROTHERTON W	1962	0	Highway-pedestrian	6.4	MUN	NO	Bridge (NBI)	WATER DARK BROOK	4/6/2015
I 90 RAMP INT 10	1957	1978	Highway	75.2	DOT	YES	Bridge (NBI)	I 90	3/28/2017
HWY BRN MWR AVE	1957	1994	Highway-pedestrian	108.5	DOT	NO	Bridge (NBI)	I 90	11/17/2016
I 90 EB	1957	1986	Highway	89	DOT	NO	Bridge (NBI)	COMB WEST ST & RELIEF	6/16/2015
I 90 WB	1957	1986	Highway	89	DOT	NO	Bridge (NBI)	COMB WEST ST & RELIEF	6/16/2015
HWY CEDAR ST	1976	0	Highway-pedestrian	88.3	DOT	NO	Bridge (NBI)	I 395	10/14/2016
HWY LEICESTER ST	1955	0	Highway-pedestrian	5.7	MUN	NO	Short Span Bridge	WATER DRK BRK RES OUT	12/1/2015
I 395 RAMP X	1965	0	Highway	21.9	DOT	NO	Bridge (NBI)	I 395 RAMP W	5/16/2016
I 290 EB ON RAMP	1965	1993	Highway	71.6	DOT	NO	Bridge (NBI)	I 395 SB	8/27/2016
ST 12 SOBRIDGE ST	1957	2003	Highway	9.1	DOT	NO	Bridge (NBI)	WATER DUNNS POND OUTLET	5/9/2016
HWY ROACHDALE ST	1968	0	Highway-pedestrian	5.2	MUN	UNKNOWN	Short Span Bridge	WATER DRK BRK RES OUT	NO CURRENT INSPECTION
I 90	1957	0	Highway	5.3	DOT	UNKNOWN	Culvert	WATER EDDY POND INLET	NO CURRENT INSPECTION
US 20 WASHINGTON ST	1958	0	Highway-pedestrian	25.3	DOT	NO	Bridge (NBI)	WATER WORC DVRSN CHANNEL	9/20/2016
US 20 WASHINGTON ST	1931	1971	Highway-pedestrian	45.1	DOT	NO	Bridge (NBI)	RR PWRR	11/28/2016
US 20 EB/WSHNGTN	1965	0	Highway-pedestrian	64.6	DOT	NO	Bridge (NBI)	I 395	5/17/2015
US 20 WB/WSHNGTN	1965	0	Highway-pedestrian	66.4	DOT	NO	Bridge (NBI)	I 395	5/17/2015
I 90	1957	0	Highway	4.3	DOT	NO	Culvert	WATER DARK BROOK RESRVR	7/20/2009
HWY CENTRAL ST	1957	0	Highway-pedestrian	8.3	DOT	NO	Bridge (NBI)	WATER AUBURN POND	7/1/2015
I 290 WB	1965	0	Highway	56.7	DOT	NO	Bridge (NBI)	ST 12 SOUTHBRIDGE ST	5/26/2015
I 290 EB	1965	0	Highway	56.7	DOT	NO	Bridge (NBI)	ST 12 SOUTHBRIDGE ST	5/26/2015
I 290 WB	1965	0	Highway	26.5	DOT	NO	Bridge (NBI)	HWY WATER ST	10/5/2016
I 290 EB	1965	0	Highway	26.9	DOT	NO	Bridge (NBI)	HWY WATER ST	10/5/2016
I 90 EB	1965	0	Highway	107	DOT	NO	Bridge (NBI)	I 290	4/14/2015
HWY ROCHDALE ST	1993	0	Highway-pedestrian	21.3	DOT	NO	Bridge (NBI)	RR CSX	2/18/2016
US 20 WASHINGTON ST	1955	0	Highway	3	DOT	UNKNOWN	Culvert	WATER EDDY POND STREAM	NO CURRENT INSPECTION
HWY UPLAND ST	1970	0	Highway	1.2	MUN	UNKNOWN	Culvert	WATER STREAM	NO CURRENT INSPECTION
I 90 WB	1965	0	Highway	111.6	DOT	NO	Bridge (NBI)	I 290	4/29/2015
HWY SWANSON RD	1965	2013	Highway-pedestrian	73.5	DOT	NO	Bridge (NBI)	I 290	6/12/2015
I 290 EB	1965	2004	Highway	37.8	DOT	NO	Bridge (NBI)	HWY AUBURN ST	2/1/2016
I 290 WB	1965	2004	Highway	37.8	DOT	NO	Bridge (NBI)	HWY AUBURN ST	2/1/2016
I 290	1965	0	Highway	14.3	DOT	NO	Bridge (NBI)	WATER KETTLE BROOK	5/9/2016
HWY WEST ST	1994	0	Highway-pedestrian	21.6	DOT	NO	Bridge (NBI)	RR CSX	2/18/2016
ST 12 SOBRIDGE ST	1934	1983	Highway-pedestrian	39.3	DOT	NO	Bridge (NBI)	RR PWRR	5/18/2016
I 290 EB	1965	2004	Highway	47.5	DOT	NO	Bridge (NBI)	HWY SWORD ST	3/9/2017
I 290 WB	1965	2004	Highway	35.5	DOT	NO	Bridge (NBI)	HWY SWORD ST	3/9/2017
I 290	1965	0	Highway	8.5	DOT	NO	Bridge (NBI)	WATER KETTLE BROOK	5/8/2015
HWY ELM ST	1949	0	Highway	2.7	MUN	UNKNOWN	Culvert	WATER STONE BROOK	NO CURRENT INSPECTION
HWY MILL TERRACE	1956	0	Highway	7.9	MUN	NO	Bridge (NBI)	WATER PONDVILLE STREAM	9/20/2016
HWY PINROCK RD	1957	0	Highway-pedestrian	18.3	MUN	NO	Bridge (NBI)	WATER WORC DVRSN CHANNEL	11/18/2015
HWY ROACHDALE ST	1999	0	Highway-pedestrian	3.1	MUN	NO	Short Span Bridge	WATER KETTLE BRK FLME	10/29/2015
HWY ROCKLAND RD	1938	1954	Highway-pedestrian	5.8	MUN	NO	Short Span Bridge	WATER KETTLE BROOK	12/1/2015
HWY ROCKLAND RD	1954	0	Highway-pedestrian	4.9	MUN	NO	Short Span Bridge	WATER BR KETTLE BROOK	12/15/2010
HWY BERLIN ST	1938	0	Highway	4.1	MUN	NO	Short Span Bridge	WATER DARK BROOK	12/6/2010

Source: MassDOT

CONGESTION MANAGEMENT PROCESS

Local and regional roadways in Auburn carry a large volume of traffic. This volume has the potential to create traffic congestion that will affect the movement of people and goods through Auburn. As noted in the 1987 and 2006 Master Plans, Auburn is located in a desirable area attracting new residents and businesses, while spurring economic development but also increasing traffic and congestion. The 2006 Master Plan noted concerns about the ability of emergency

vehicles to respond to incidents on Interstate 290 and the Massachusetts Turnpike when traffic backs up onto neighboring highways and local roads during peak hours.

CMRPC is responsible for maintaining the region's Congestion Management Process (CMP), which includes the following steps:

- Development of congestion management objectives
- Establishment of measures of multimodal transportation system performance
- Collection of data and system performance monitoring to define the extent and duration of congestion and determine the causes of congestion
- Identification of congestion management strategies
- Implementation activities, including identification of an implementation schedule and possible funding sources for each strategy
- Evaluation of the effectiveness of implemented strategies

To complete this process, CMRPC conducts extensive data collection throughout the region. CMRPC utilizes a variety of methods to collect this information, including Travel Time and Delay Studies, Intersection Turning Movement Counts (TMCs), and maintaining the Regional Travel Demand Model.

TRAVEL TIME AND DELAY STUDIES

In order to measure congestion on the region's highway facilities, Travel Time and Delay studies have been conducted on identified CMP focus roadway segments. Data is collected between 7:00 AM and 9:00 AM (known as AM Peak), and from 4:00 PM to 6:00 PM (known as PM Peak), on a randomly-selected weekday. In addition to determining average travel speeds, Travel Time and Delay studies assist in the identification of critical delay locations as well as the length of encountered delays. The "average car" technique is used in collecting the pertinent data. In this procedure, a test vehicle travels according to the driver's judgment of the average speed of existing traffic flows. A Global Positioning System (GPS) device is used to collect the travel time data. Once the data is collected, it is then downloaded into a software program called "TravTime", which was created by GeoStats. Additional information is entered, including the definition of which roadways are included in the focus segment, as well as specific checkpoint intersections that will be included in the analysis. The travel time data is then analyzed. Results may either be displayed in a tabular or graphic format. GIS can also be used to compile maps that show data beyond the capability of the TravTime software.

The most recent Travel Time and Delay study conducted by CMRPC was on Interstate 290 conducted during the summer of 2018. A study of Route 20 was completed in 2017, and Auburn Street in 2015. Results of the Travel Time and Delay studies found that on average the congested time for the studied segments was:

- Interstate 290/Interstate 395 from the Worcester City Line to the Oxford Town Line: the average congested time is 1-3 minutes particularly heading northbound in the AM Peak period.
- Route 20 from the Worcester City Line to the Oxford Town Line: the average congested time is 1-2 minutes, particularly in the PM Peak times.
- Auburn Street from Pakachoag Street to Oxford Street: the average congested time is 1-2.5 minutes. Since this is a local road, the observed speeds are considerably lower than I-290/I-395 and Route 20.

Map 25 and 26 show the observed travel speeds during the AM and PM peak times for the Travel Time and Delay studies previously mentioned.

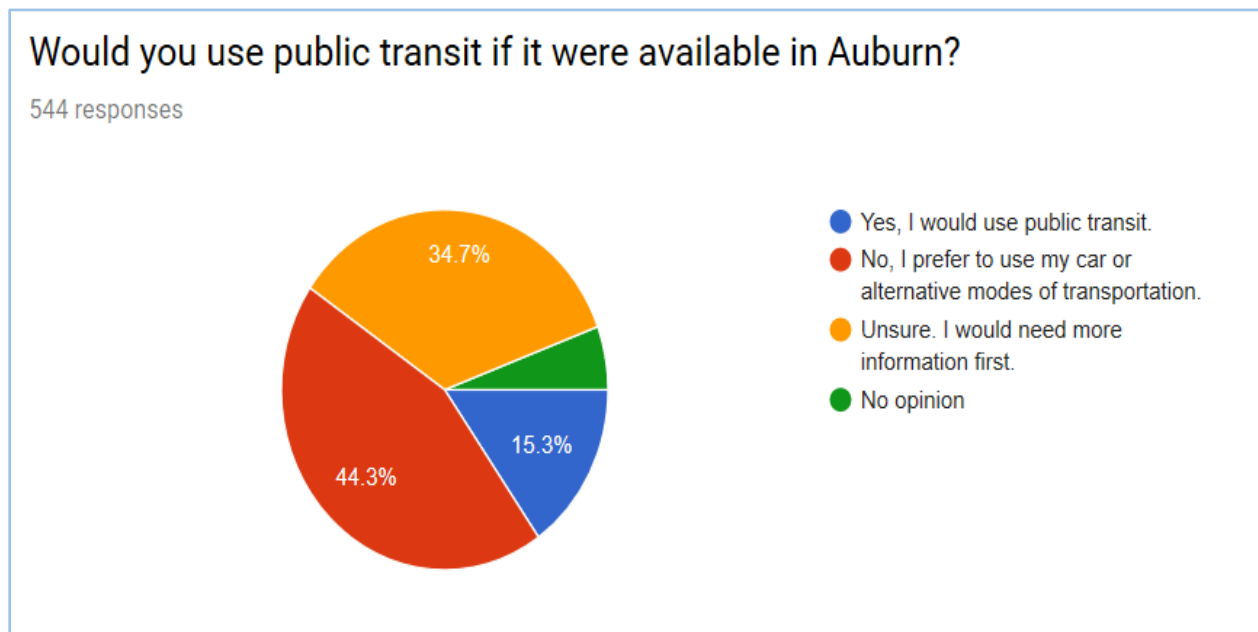
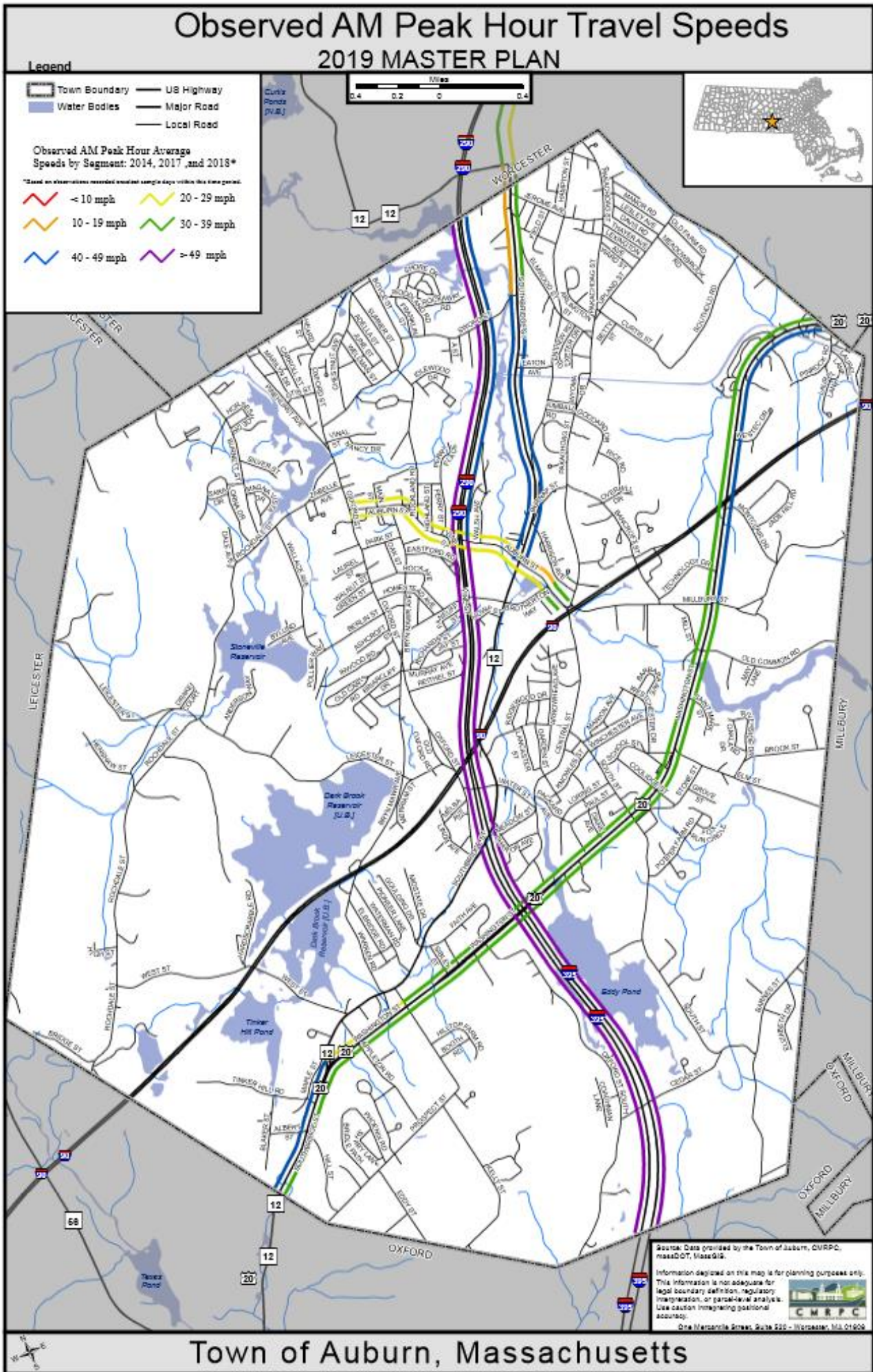
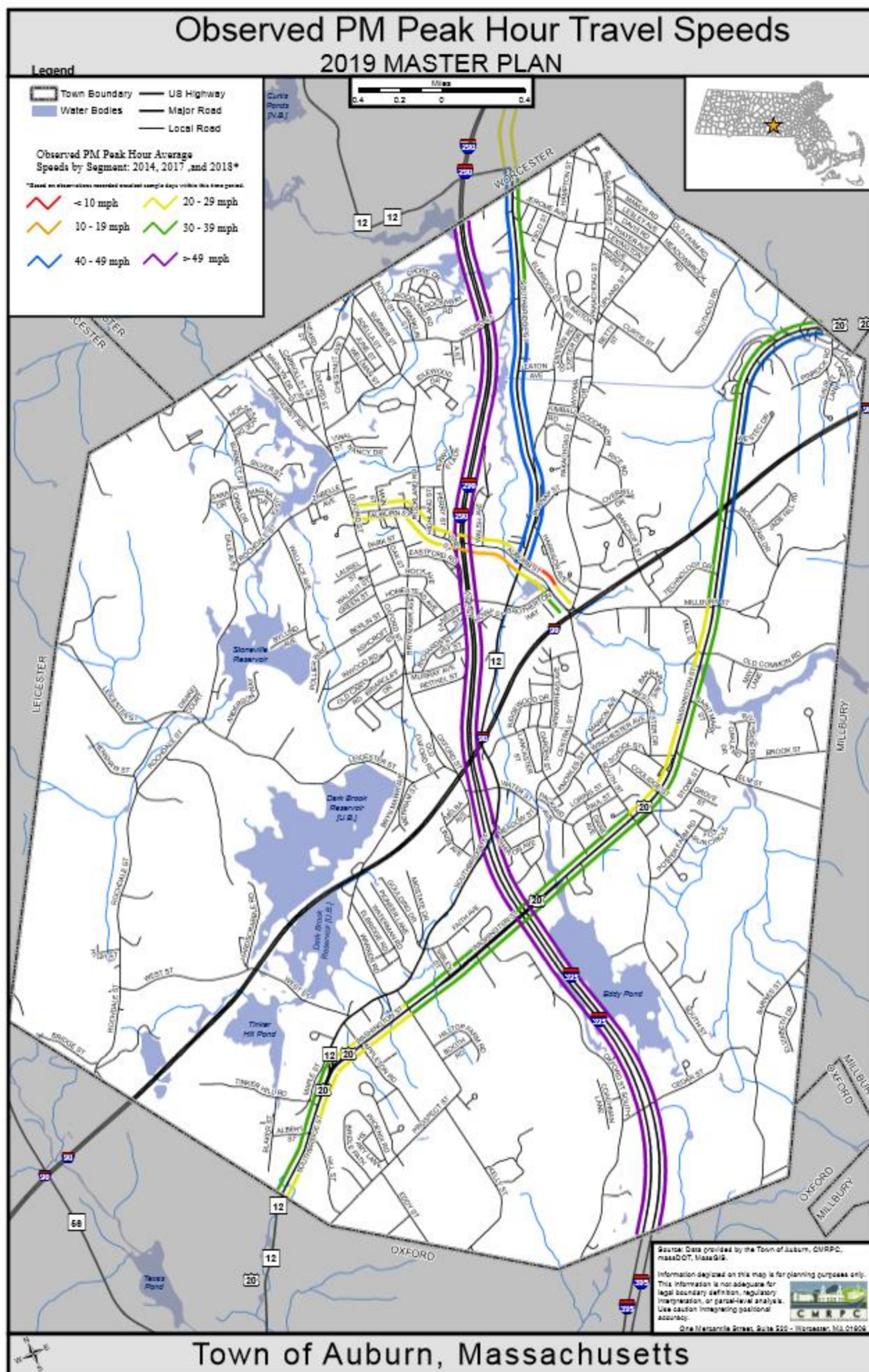


Figure 52. Master Plan Survey

Map 27. Observed AM Peak Hour Travel Speed



Map 28. Observed PM Peak Hour Travel Speed



TURNING MOVEMENT COUNT

INTERSECTIONS ENCOUNTERED DELAY

For all intersections where Turning Movement Counts (TMC) are obtained, it is possible to analyze the total delay encountered during the examined peak hour periods. A byproduct of the process that results in intersection Level of Service (LOS) ratings is the “average delay encountered for entering vehicles”. When multiplied by the number of vehicles to which the particular delay pertains, one can arrive at a total amount of delay, or time in “car-minutes.” A car-minute is one car waiting for one minute, presumably idling and producing emissions as well as adding to total social and economic costs. Five cars waiting for a minute each, or one car waiting for a total of five minutes, results in the same theoretical total waiting time cost and would be measured and quantified by a total net delay of five car-minutes.

Signalized intersections have delays of varying levels in all directions and this is accounted for when examined. “Stop” sign-controlled intersections have delay calculated only for those vehicles arriving on the minor approaches that are required to stop and those vehicles on the major approaches that often times need to wait in order to make a left turn. Generally speaking, signalized intersections often exhibit more total delay, but a busy stop-controlled location that may not presently meet the warrants for signalization can have substantial delays if volumes on the minor approaches predominately seek to cross the major approaches. Traffic signals establish orderly traffic flows and increase safety by providing the opportunity for traffic volumes to proceed on both the major and minor intersection approaches, thus balancing encountered vehicle delay. When two heavily traveled streets cross at a major signalized intersection, significant delays are often generated due to the high traffic volumes that need to be accommodated. Once signal operations are optimized, only then are geometric improvements considered, such as the construction of widened or additional travel lanes. Intersections are given a letter grade based on the length of delay experienced at the intersection. Table 36 shows how these grades are determined.

Table 36

Signalized			Un-Signalized	
Delay in	LOS		Delay in	LOS
Seconds	Grade		Seconds	Grade
< 10	A		< 10	A
10 - 20	B		10 - 15	B
20 - 35	C		15 - 25	C
35 - 55	D		25 - 35	D
55 - 80	E		35 - 50	E
> 80	F		> 50	F

Table 37 shows selected intersections in Auburn with their observed delay in minutes as described previously.

Table 37

CMRPC Turning Movement Count Locations in Auburn					
Turning Movement Count Locations	AM Peak Hour			PM Peak Hour	
	Year	Delay	LOS	Delay	LOS
Auburn St/Vine St/I-290 Off Ramp	2013	23.5	C	23.9	C
Auburn St/Millbury St/Central St/Pakachoag Rd	2010	18.3	C	37.8	E
Route 12/Auburn St	2014	20.8	C	26	C
Route 12/Prospect St	2011	5.9	A	9.3	A
Route 12/Swanson Rd/Brotherton Way	2011	57.1	E	25.8	C
Route 12/Oxford Street North	2012	16.4	B	35.9	D
Route 12/West St/Plaza	2012	67.9	E	24.6	C
Route 12/Sword St	2014	21.2	C	24.3	C
Route 20/Millbury St	2014	36.6	D	48.7	D
Route 20/Route 12 (E junction)	2017	18.5	B	16.4	B
Route 20/South St	2015	18.2	B	20.9	B

Source: Central Mass. Regional Planning Commission

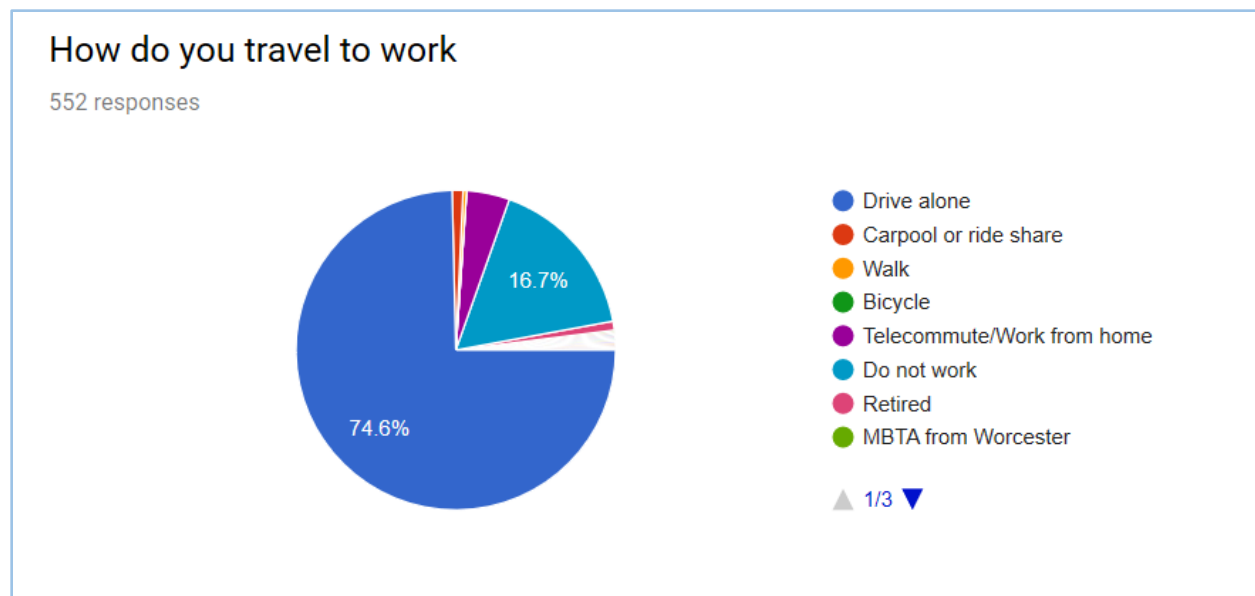
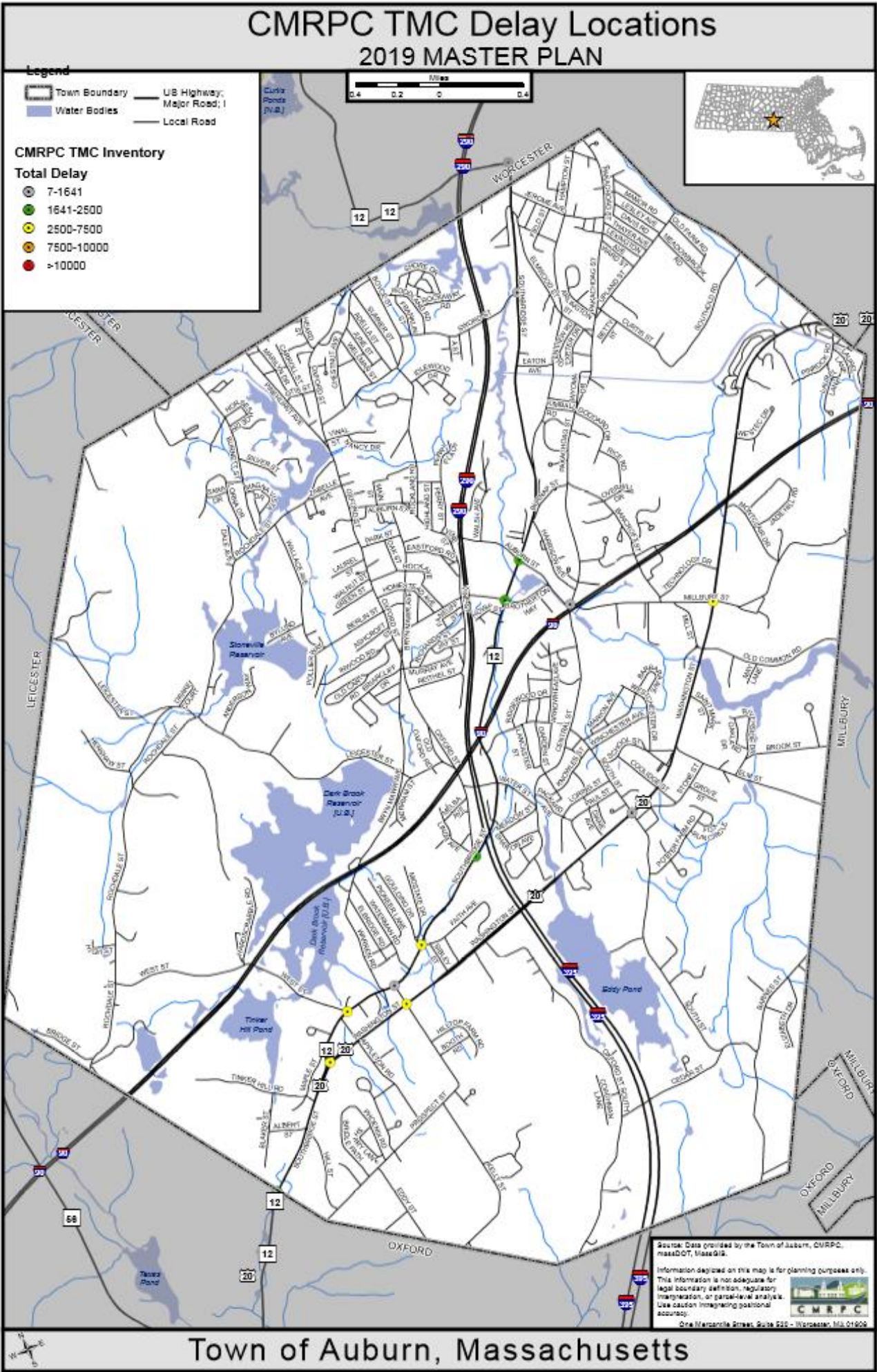


Figure 53. Master Plan Survey

Map 29. Turning Movement Count Delay Locations



REGIONAL TRAVEL DEMAND MODEL

Congested roadways are identified by CMRPC is through the Regional Travel Demand Model, which is a computer program that is able to calculate current congestion levels based on roadway design and project areas that are likely to experience future congestion.

Table 38 shows roads identified as of the most recent model run in 2017 in Auburn as currently congested:

Table 38

CMRPC Travel Demand Model Current and Future Congested Roadways				
Identified Year	Existing or Projected	Facility Name	From	To
2015	Existing	Auburn Street	Main Street	Pakachoag Street
2015	Existing	Brotherton Way	Route 12	Mall Entrance
2015	Existing	I-290/I-395	Worcester CL	Oxford TL
2015	Existing	I-90	I-290	Oxford TL
2015	Existing	Oxford Street N	Auburn Street	Pinehurst Avenue
2015	Existing	Oxford Street N	Otis Street	Heard Street
2015	Existing	Oxford Street N	Route 12	I-290 Off Ramp
2015	Existing	Prospect Street	Route 12	Route 20
2015	Existing	Swanson Road	Vine Street	Route 12
2015	Existing	Vine Street	Auburn Street	I-290 On Ramp
2015	Existing	Route 12	Oxford Street	Prospect Street
2015	Existing	Route 12	Auburn Street	Swanson Road
2015	Existing	Route 20	I-395	Southbridge Street
2015	Existing	Route 12/20	Washington Street	Main Street(Oxford TL
2040	Projected	I-90	I-290	Millbury TL
2040	Projected	Mill Street	Route 20	Millbury Street

Source: Central Mass. Regional Planning Commission

CONGESTED ROADWAYS

Utilizing the data gathered as part of the CMP program, several road segments have been identified as having some form of congestion. Those roadways are Auburn Street, US Route 20 (Washington Street), and MA-Route 12 (Southbridge Street).

Auburn Street

Auburn Street is a major east-west road about 1.25 miles in length, from Oxford Street North westerly to Pakachoag Street. Along this stretch of roadway are major intersections with Southbridge Street (MA Route 12), Interstate 290, and Bryn Mawr Avenue. Auburn Street is the main entrance point for Auburn High School and access to the Auburn Mall. For its entire length, Auburn Street is a two-lane bidirectional roadway with varying widths, with turn only lanes at certain intersections. Turning Movement Counts conducted along Auburn Street show that the roadway has congested intersections with the highest peak hour grade being a C, and the lowest an E. Information gathered as part of the Turning Movement Count program confirms data gathered from previous Travel Time and Delay studies, and results from the CMRPC Regional Travel Demand Model.

US Route 20 (Washington Street)

US Route 20 is a heavily utilized east-west corridor, beginning at the Worcester City Line in the east, and continuing into Oxford to the west. Connections are made with I-90, I-290/395, Route 12 and Route 56. From the Worcester City Line until its intersection with Coolidge Street, Route 20 is a two-lane road with turning lanes at several intersections. At Coolidge Street, Route 20 is a four-lane road until it reaches the Oxford Town Line. Route 20 runs concurrently with Route 12 from the intersection of Southbridge Street to Oxford Town Line. Route 20 was identified in the 2006 Master Plan as an area of interest for congestion, noting existing congestion levels and potential development opportunities. Recent CMP studies show that Route 20 is still heavily congested. This section of roadway is listed on the 12/20 TIP. Proposed improvements provided a raised median to separate eastbound and westbound vehicles and wider outside travel lanes. Traffic signal was installed at Albert St/Hill St intersection. Also, upgraded sidewalks.

Route 12 (Southbridge Street)

MA Route 12 (Southbridge Street) is a major north-south road running from the Worcester City Line in the north and continuing into Oxford to the south. Route 12 intersects with I-290 via Auburn Street and additional local streets. From the Worcester City Line until Auburn Street, Southbridge Street is predominantly a two-lane bi-directional roadway with four-foot shoulders on both sides of the road and a single sidewalk on the southbound side of the road. The main use on this stretch of road is commercial and industrial, with residential neighborhoods located in close proximity on numerous side streets. From Auburn Street until its merger with US Route 20, Southbridge Street is a four-lane bi-directional road with five to six-foot shoulders on both sides, and sidewalks on the southbound side of the road. Major attractions include Auburn High School, Auburn Public Library, and the Auburn Mall. There are several smaller commercial plazas along this section of roadway. In 2017, MassDOT performed several improvements to the area between Drury Square and the Worcester City Line, which included new pavement, widened roadway, provided new striping at Sword Street to provide a left-turn lane. They also upgraded sidewalks.

FREIGHT

While there are no freight facilities located within Auburn, there are several major rail yards located in the City of Worcester within close proximity. In the northern section of Auburn, there are a few clusters of warehouses, shipping, and manufacture facilities that generate freight traffic primarily in the form of trucks.

TRUCK

As part of the CMRPC Regional Traffic Counting Program, axle classification data is collected, which indicates the amount of heavy vehicle flows on the region's roadways. The following chart indicates the amount and percentage of vehicles at each location that are considered 'heavy vehicles', defined as vehicles that have six or more tires touching the road. It is important to consider where these types of vehicles are because of the requirements that trucks need such as exclusion times, bridge crossings, and turning radius. The majority of freight into and through Auburn is shipped via truck so consideration to how they move through town and the design of roads in the industrial zoning districts is important. Table 39 shows observed traffic volumes, heavy vehicle volumes, and the percent of heavy vehicles on selected roads in Auburn. Map 28 is a map of the observed percent of heavy vehicles.

Table 39

CMRPC Traffic Counts: Heavy Vehicles					
Street	Location	Total Vehicles	Heavy Volume	Heavy Percent	Year
Auburn Street	East of Oxford Street	10,012	517	5.1	2016
Auburn Street	East of Bryn Mawr Avenue	11,170	1,065	9.5	2017
Boyce Street	East of Oxford Street	1,730	124	7.1	2017
Bryn Mawr Avenue	North of Warren Road	2,052	107	5.2	2017
Bryn Mawr Avenue	South of Auburn Street	2,077	91	4.3	2017
Central Street	South of Mass Pike	4,033	371	9.2	2017
Rochdale Street	West of Leicester Street	1,799	114	6.3	2017
South Street	North of Washington Street (US-20)	5,124	237	4.6	2017
Swanson Street	West of Vine Street	3,184	247	7.8	2017

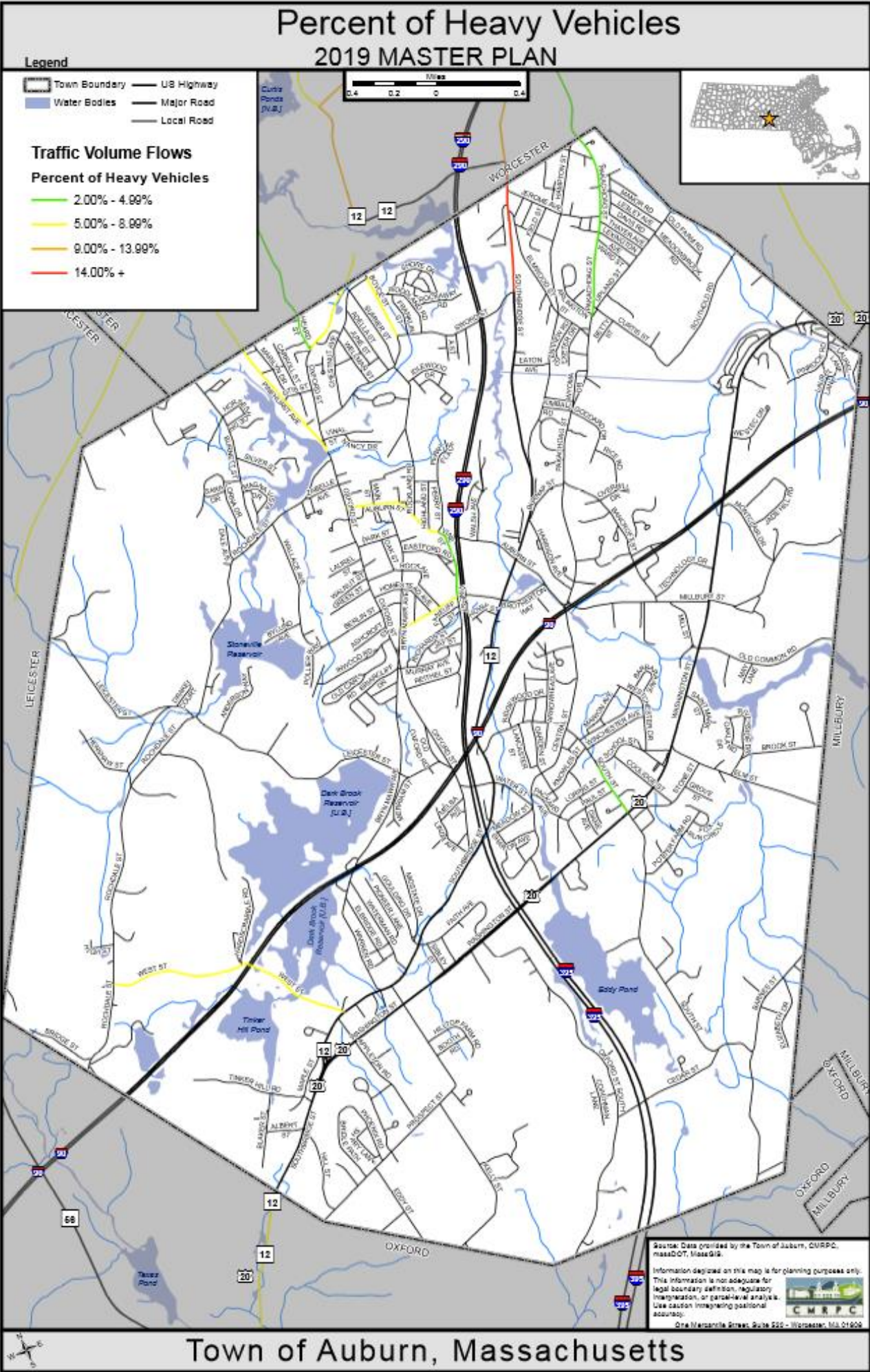
CMRPC Traffic Counts: Heavy Vehicles					
Street	Location	Total Vehicles	Heavy Volume	Heavy Percent	Year
Vine Street	South of Swanson Road	4,983	203	4.0	2017
Vine Street	South of Auburn Street	8,737	359	4.1	2017
West Street	North of Mass Pike	6,930	364	5.2	2016

Source: Central Mass. Regional Planning Commission, Regional Traffic Counting Program

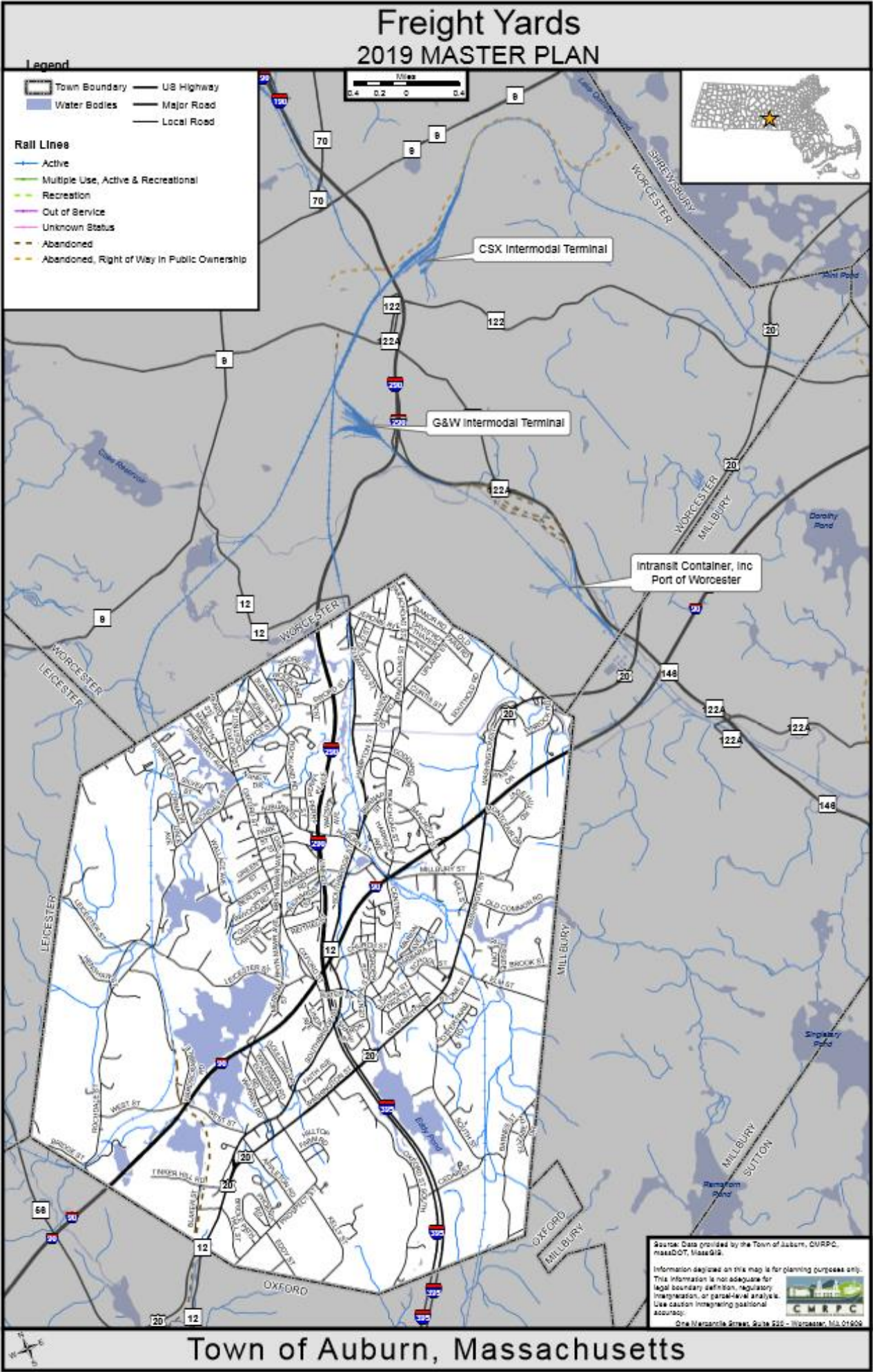
RAIL

Two rail lines run through Auburn, each is owned and operated by a different company. The eastern line is owned and operated by Genesee & Wyoming Inc. This rail line runs from the Genesee & Wyoming rail yard on Southbridge Street in Worcester, and continues into Oxford in the south. The western line is owned and operated by the CSX Corporation. This line runs from Oxford in the south to Worcester in the north, connecting to its intermodal rail yard on Grafton Street in Worcester. In April of 2015, CMRPC in collaboration with several regional partners, published “Driving Economic Growth through Freight-based Economic Development: The Worcester Regional Freight-Based Economic Development Site Selection Project” a report on selecting sites for the development of freight-based businesses. A number of sites in Auburn had been selected in part due to their proximity to rail lines. Map 29 shows the location of freight rail lines in Auburn and the location of nearby active freight yards.

Map 30. Percentage of Heavy Vehicles on Roadway



Map 31. Freight Yards



TRANSPORTATION SAFETY

Table 40 outlines the types of vehicle crashes that occurred in Auburn from 2002-2004, and 2013-2016. The 2002-2004 data was included in the 2006 Master Plan, and the 2013-2016 data is the most recent dataset available from the MassDOT Registry of Motor Vehicles (RMV).

Table 40

Total Crashes in Auburn 2002-2004 & 2013-2016							
	2002	2003	2004	2013	2014	2015	2016
Total Number of Crashes	586	576	556	643	655	609	620
Number Resulting in Fatalities	4	4	2	2	1	2	1
Number resulting in Injuries	187	213	171	136	155	141	150
Number Involving Pedestrians	2	0	0	2	3	7	1
Number Involving Bicyclist	0	0	0	1	1	3	0

Source: MassDOT Registry of Motor Vehicles

As shown in Table 40, the total number of crashes has decreased from 2013 to 2016, but the number is higher than the total crashes observed from 2002 to 2004. The number of crashes resulting in injuries and fatalities is lower from 2013 to 2016, than observed from 2002 to 2004. The increase in the total number of crashes is likely due to the increase in traffic volumes observed; particularly on major roads such as US Route 20, MA Route 12, and Auburn Street. Crashes involving pedestrians and bicyclists have risen in number from 2002 to 2004, compared to 18 in the 2013 to 2016 period. There has been a large number of trailer truck rollover crashes, but this data is not currently included in MassDOT crash reporting, thus it is difficult to pinpoint locations that may benefit from enhancements.

MassDOT performs an analysis that finds crashes located within a distance of 25 meters (82 ft.) of each other and groups them together, known as crash clusters. Similarly, if a crash cluster is found to share a crash with a nearby cluster, those clusters are merged together into a new larger cluster. These clusters are then scored based on the types of crashes that have occurred and can become eligible for Highway Safety Improvement Program (HSIP) funding if it ranks high enough in comparison to other clusters. Table 41 shows the results of this analysis for the Town of Auburn.

Table 41

Crash Clusters in Auburn 2013-2015 & 2006-2015							
	Community	Sum Crash	Fatal Crash	Injury Crash	PDO Crash ²	EPDO ³	HSIP Eligible ⁴
Auto Crash-Clusters 2013-2015 ¹							
Washington Street(US-20)/ Millbury Street	Auburn	66	0	13	53	118	Yes
Washington Street(US-20)	Auburn	27	0	9	18	63	Yes
Southbridge Street (MA-12)	Auburn	35	0	7	28	63	Yes
Washington Street(US-20)	Auburn	29	0	7	22	57	Yes
Brotherton Way/Southbridge Street (MA-12 SB)	Auburn	28	0	5	23	48	Yes
Auburn Street/Southbridge Street (MA-12 NB)	Auburn	20	0	5	15	40	Yes
Washington Street (US-20)	Auburn	15	0	6	9	39	Yes
Southbridge Street (MA-12)	Auburn	23	0	3	20	35	-
Washington Street (US-20)	Auburn	18	0	4	14	34	-
Washington Street (US-20)/Southbridge Street	Auburn	21	0	3	18	33	-
Pedestrian Crash Cluster 2006-2015							
Auburn Street/Southbridge Street (MA-12 SB)	Auburn	2	0	1	1	6	-
Bike Crash Cluster 2006-2015							
Southbridge Street (MA-12)	Auburn	2	0	1	1	6	-
Malvern Road/Hampton Street	Auburn	2	0	0	2	2	-

Source: MassDOT Highway Division *Showing only Top 10 Auto Crash Cluster locations and Top 3 Bike Crash Cluster Locations

1. Excludes crashes on Interstate Highways
2. PDO-Property Damage only
3. EPDO-Equivalent Property Damage Only weighed by fatal crashes=10, injury=5, PDO=1
4. HSIP-Highway Safety Improvement Program

AT- GRADE HIGHWAY/RAIL CROSSINGS

At-Grade Railroad Crossings are locations where railroads and roadways intersect at the same level (at-grade) and may create a potential safety hazard. The following four at-grade railroad crossings are located within Auburn with the type of warning system currently installed at each crossing.

- Sword Street – Lights
- Central Square (Auburn Street/ Pakachoag Street/ Central Street/ Millbury Street) – Gates
- Elm Street – Gates
- South Street – Lights
-

Of the at-grade crossings in Auburn that do not currently have gates, neither of them intersects high volume roads such as Route 20 or Route 12. Flashing beacons and crossbuck signs are located

at each of the crossings; the crossings at Central Square and Elm Street also have drop-down gates. The 2006 Master Plan noted that since 1975, only four reported incidents had occurred at the Central Square crossing with no injuries or fatalities. In 2016, a vehicle was struck by a slow-moving train at the Sword Street crossing. In that case, the driver commented that they did not notice the warning lights or sounds at the time of the crash. The crash did not result in any reported injuries.

TRANSIT

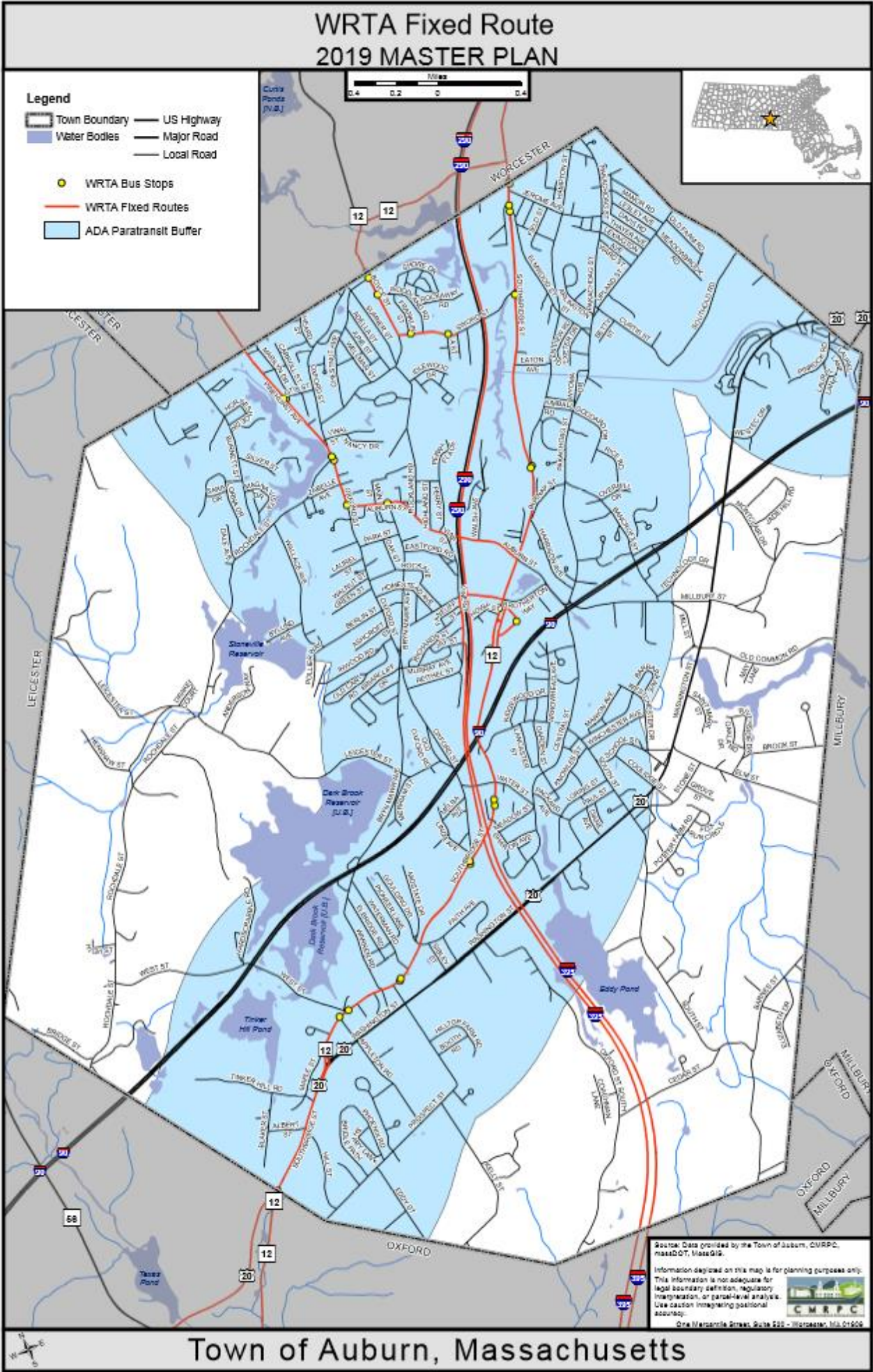
The Worcester Regional Transit Authority (WRTA) provides public transit services for Auburn and the greater Worcester region. The WRTA is one of fifteen statewide Regional Transit Authorities (RTAs) and the Massachusetts Bay Transportation Authority (MBTA) that provide public transit to its member communities.

The WRTA fixed-route service is operated in thirteen communities, and flexible Community Shuttle services in three communities. WRTA Paratransit service is provided to eligible individuals as two distinct services; Americans with Disabilities Act (ADA) complementary paratransit, and non-ADA paratransit. ADA complementary paratransit services operate within a ¾-mile ‘buffer’ surrounding the existing fixed-route and mirrors the fixed-route service hours. Non-ADA paratransit service is available for elders and people with disabilities, with service hours varying by community or eligibility.

The WRTA Hub is the focal point of its fixed route services and is located in downtown Worcester and is adjacent to Union Station where connections to the MBTA Commuter Rail, intercity bus and rail, and taxicab services are available.

Additionally, taxicab and transportation network companies provide public transportation opportunities within Auburn. Map 30 highlights WRTA fixed-route and paratransit service areas in Auburn.

Map 32. Worcester Regional Transit Authority Fixed Routes



WRTA Fixed Route

Routes servicing Auburn include Route 25, Route 27, Route 29, and Route 42. All routes provide service to and from the WRTA Hub at Union Station in Worcester. Below is a brief description of each route:

- Route 25 provides service to the Auburn Industrial Park on Sword Street, via Boyce Street. With 16 round trips on weekdays, the route starts at 6:10 AM and ends at 10:05 PM. Saturday and Sunday service is provided to the Auburn Mall as the route remains on Southbridge Street versus using Boyce and Sword Streets to the Auburn Industrial Park. With eight round trips on both days, Saturday service runs from 9:35 AM to 5:30 PM, and Sunday service starts at 10:50 AM and ends at 6:05 PM.
- Route 27 provides service to the Auburn Mall using Auburn Street, Oxford Street North, and Pinehurst Avenue. With 26 round trips on weekdays, the route starts at 5:45 AM and ends at 9:40 PM. Saturday service features 20 outbound trips, and 19 inbound trips to Auburn between 7:25 AM and 8:55 PM. Sunday service consists of seven outbound trips, and six inbound trips to Auburn from 9:00 AM to 4:40 PM. Route 27 consistently ranks as one of the top performing routes within the WRTA system. In Fiscal Year 2018, Route 27 had the third highest ridership totals out of 23 routes
- Route 29 provides service to Auburn, Charlton, and ends in downtown Southbridge. In Auburn, the route uses Southbridge Street (MA-Route 12) from the Worcester city line to the Oxford town line and stops at the Auburn Mall. With seven round trips, weekday service starts at 5:35 AM and ends at 7:35 PM. Saturday service launched in January 2016 and has six round trips starting at 8:00 AM and ending at 8:00 PM. There is currently no Sunday service.
- Route 42 provides service to Auburn, Oxford, and Webster using the same street network as Route 29. On weekdays there are seven outbound trips, eight inbound trips, and one express outbound trip from the Auburn Mall to Webster Center on weekdays from 5:25 AM to 8:25 PM. Saturday service offers seven outbound trips, six inbound trips, and one express trip from Webster Center to Worcester from 7:00 AM until 8:15 PM. There is currently no Sunday service.

Below, the following tables show the importance of WRTA transit service in Auburn. Table 42 provides the total number of passengers using each of the four routes that provide service within Auburn. Of the thirteen communities that receive fixed-route service, Auburn ranks second in terms of total passenger trip activity (112,498) and has the largest percent share of total ridership within the WRTA system (3.6 percent). Table 43 contains the total ridership and percent share within the fixed-route system of all thirteen communities.³⁰

Table 42

WRTA Fixed Route Ridership by Route in Auburn (FY2018)		
Route	Total Passenger Trips	Percent of Overall Route Ridership
25	7,989	14%
27	78,864	30%
29	14,330	24%
42	11,315	15%

Source: Worcester Regional Transit Authority

Table 43

WRTA Fixed Route Ridership by Community (FY 2018)		
Community	Total Passenger Trips	Percent of Fixed Route System
Auburn	112,498	3.6%
Brookfield	1,927	0.1%
Charlton	2,146	0.1%
East Brookfield	4,594	0.1%
Leicester	30,566	1.0%
Millbury	37,896	1.2%
Oxford	12,551	0.4%
Shrewsbury	33,403	1.1%
Spencer	37,091	1.2%
Southbridge	36,303	1.2%
Webster	44,378	1.4%
West Boylston	55,584	1.8%
Worcester	2,712,255	86.9%
Total	3,121,192	100%

Source: Worcester Regional Transit Authority

Table 44 below highlights the top five bus stops with the highest passenger activity on an average weekday basis in Auburn. Saturday and Sunday data is included where applicable. The WRTA employs a ‘flag-stop’ system in communities outside of Worcester, which allows passengers to

³⁰ Worcester Regional Transit Authority

simply ‘flag-down’ the bus in areas without a designated bus stop sign. Out of over 1,200 bus stops in the entire WRTA network, the Auburn Mall ranks third overall in average daily passenger activity.

Table 44

Top 5 Bus Stops- Daily Boarding's and Alighting's (FY 2018 Avg.)			
Bus Stop Location	Average Weekday	Average Saturday	Average Sunday
Auburn Mall	330	286	82
Auburn Street/Bryn Mawr Avenue	37	19	7
Oxford Street N/ A Street	20	10	3
Sword Street/A Street	18	-	-
Southbridge Street/Oxford Street	9	6	-

Source: Worcester Regional Transit Authority

WRTA Paratransit

ADA complementary paratransit service is available in Auburn, with the ¾-mile buffer surrounding Routes 25, 27, 29, and 42. As a result, the buffer provides geographic coverage to the majority of town. Service is available to individuals eligible under the Americans with Disabilities Act guidelines. The schedule mirrors the existing fixed-route schedules with weekday service available between 5:25 AM and 10:00 PM, Saturday service from 7:00 AM to 8:55 PM and Sunday service from 9:00 AM to 6:10 PM. ADA paratransit services are provided by both the WRTA and the Auburn Council on Aging (CoA).

Non-ADA paratransit services are available to all Auburn elders (aged 60 and over) and people with disabilities (regardless of age). Non-ADA service is generally available on weekdays between 8:00 AM and 3:00 PM. The Auburn CoA operates this service under contract to the WRTA. The CoA uses two WRTA owned and maintained accessible vans to deliver service, and the CoA is reimbursed by the WRTA for operating expenses. In Fiscal Year 2018, the Auburn CoA provided over 5,000 paratransit passenger trips³¹.

WRTA Future Outlook

The WRTA completed a Comprehensive Service Analysis (CSA)/Regional Transit Plan of its fixed-route system by a consultant team in 2015. In the CSA, individual route recommendations were proposed with a three-phased implementation strategy based on available resources and funding.

³¹ Source: Worcester Regional Transit Authority/Auburn Council on Aging

CSA Recommendations for WRTA service in Auburn included³²:

- Improving weekday frequencies on Route 25 from 60 minutes to 30 minutes;
- Extending weekday service on Route 25 to the Auburn Mall;
- Adding Sunday service on Route 25;
- Re-brand Route 27 as Route 20, and eliminate service to Auburn;
- No recommendations were included for Route 29 and Route 42.

Some of the Route 25 service recommendations referenced above were implemented by the WRTA in January 2016. Below are additional service improvements WRTA has completed since 2016 on Auburn routes:

- Added new Sunday service (8 round trips per day) to Route 25;
- Altered Sunday schedule on Route 25 to expand schedule coverage to Auburn Mall;
- Altered Sunday schedule on Route 27 to expand schedule coverage to Auburn Mall;
- Added new Saturday service (6 round trips per day) to Route 29;
- Expanded Saturday service (3 outbound, 2 inbound trips) to provide all day service on Route 42;
- Added outbound AM express trip on weekdays to Webster Center from Auburn Mall (via I-395) on Route 42

At this time, there are no active plans for additional service changes on the listed routes.

Ridesharing/Transportation Network Companies (TNCs)

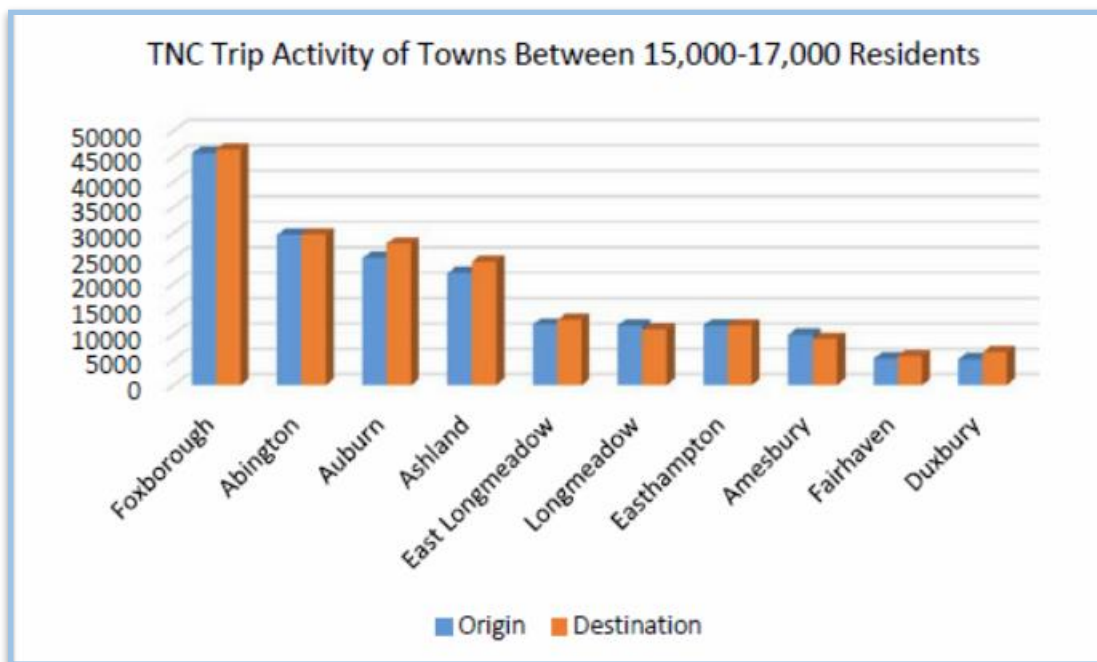
In Massachusetts, rideshare companies such as Uber and Lyft are referred to as Transportation Network Companies (TNCs). Generally, rideshare companies provide their service as a curb-to-curb on-demand ride service. Ride requests can be made using either a smartphone application or another mobile/online service, and the operator provides the trips in their privately owned vehicle.

In 2017, the Massachusetts Department of Public Utilities (DPU) released trip count data as reported by TNC providers statewide. Over 25,000 trips originated in Auburn and nearly 28,000 trips featured Auburn as its destination. Compared to other communities in Massachusetts between 15,000 and 17,000 residents (see Figure 53), Auburn had the third highest total of origin and destination trips, likely due to its proximity to Worcester³³.

³² WRTA Comprehensive Service Analysis/Regional Transit Plan (2015)

³³ 2017 Rideshare in Massachusetts: Data Report (MassDPU)

Figure 54



Source: Massachusetts Department of Public Utilities

Commuter Rail

MBTA commuter rail service to and from Boston via the Framingham/Worcester Line is available at Worcester's Union Station, about six miles from Auburn Center. Additional commuter rail station options on the same line include Grafton (12 miles from Auburn Center), and Westborough (14 miles from Auburn Center). Worcester serves as the terminus of the Framingham/Worcester Line; most trains also serve Framingham, Natick, Newton, and multiple stations in Boston – ending at Boston's South Station.³⁴ On weekdays, limited express service from Worcester to Boston is available.

As an intermodal transportation center, Worcester's Union Station is directly connected to the WRTA Hub at Union Station. Parking is available in the Union Station Garage which provides pedestrian access directly into Union station.

Intercity/Commuter Bus

Private inter-city bus providers such as Peter Pan, Greyhound, and Amtrak are not available in Auburn. The closest access to such services is located in Worcester and available from Worcester's Union Station.

³⁴ MBTA Framingham/Worcester Commuter Rail Line

MassDOT Park and Ride Lot

Located near the Mass Pike/Interstate 290 interchange, MassDOT operates a Park and Ride lot that provides opportunities for carpooling or vanpooling. The facility has over 150 parking spaces available and is free to utilize.³⁵ Access to WRTA Routes 29 and 42 are within a one-quarter mile walk and no Commuter Bus services are provided at this Park and Ride location.

FUNDING

Local road networks are a multi-million-dollar taxpayer investment that directly influences a municipality's economy and quality of life. Therefore, the prioritization of pavement system maintenance is very important. The Massachusetts Chapter 90 Program is a State funding program directed by MassDOT that reimburses towns for "maintaining, repairing, improving and constructing town and county ways and bridges which qualify under the State Aid Highways Guidelines adopted by the Public Works Commission." The funds may be used for construction and preservation work to extend the life of capital facilities, bikeways, salt sheds, road building equipment, and garages for the storage of road building equipment. Chapter 90 funds are allocated annually and based on a formula developed by the Legislative Rural Caucus of the Transportation Committee. This formula uses three weighted categories to determine the percentage of the total allocation each town will receive. The categories include Roadway mileage (58.33 percent), Population (20.83 percent) and Employment (20.83 percent).

Figure 55



Source: Massachusetts Department of Transportation

³⁵ MassDOT: Auburn Park and Ride

Based on this formula, and with a population of 16,188, employment figure of 10,662, and a road network of 96.25 miles, Auburn received \$609,252 of Chapter 90 funds in FY 2019. Figure 54 shows Auburn's Chapter 90 apportionments over the past ten years (note that the spike in 2015 represents additional State funding provided as a result of extreme winter conditions). For FY 2019, the statewide funding pool was \$200,000,000.

PRIOR PLANNING AND ENGAGEMENT EFFORTS

CMMPO Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) is a planning document that lists all highway, bridge, transit, and intermodal projects in the Central Massachusetts Metropolitan Planning Organization (CMMPO) region. The TIP is a federally mandated requirement for all Metropolitan Planning Organizations (MPOs). The TIP is a prioritized listing of all transportation investments in an MPO's metropolitan planning area for the next five federal fiscal years. Potential TIP projects are scored and selected by CMMPO staff and Advisory Committee before being endorsed by the CMMPO. Projects that are included in the TIP are programmed to receive federal-aid funding. Currently there are two projects listed on the CMMPO 2019-2023 TIP. Listed in TIP year 2021 – 607733 – Rehabilitation of Auburn Street, from Walsh Avenue to Millbury Street.

Long Range Transportation Plan (LRTP)

The Long-Range Transportation Plan (LRTP) is a planning document that describes the region's current transportation system and how that system should be maintained or modified over a 20-year horizon. The Federal planning provisions passed in August of 2005 requires the CMMPO to update the LRTP every four years, since it presides over a region that does not meet Federal air quality standards for Ozone. The LRTP document was last updated in 2016, and is updated every four years by the CMMPO staff (CMRPC Transportation Planning Department). An updated version for 2020 is currently in development.

Freight Study

In 2015, CMRPC in collaboration with the Towns of Auburn, Oxford, and the former Providence and Worcester (P&W) Railroad conducted a Freight Rail Planning Study and Feasibility Analysis. The goal of the analysis was to identify areas that could be used for freight rail based economic deployment opportunities in the participating communities. The plan identified parcels that met a variety of criteria including location, size, and zoning that could be used to house freight related uses. For more information on this study and to view it in its entirety go to <http://www.cmrpc.org/freight-rail-planningstudies>

Route 20 Corridor Profile (2009)

A corridor profile was completed by CMRPC for a section of Route 20. The corridor profile is a comprehensive document that studies in detail the segment of the roadway which includes analyses on the Congestion Management Process, Safety Analyses, Land Use adjacent to the roadway, Pavement Management System, WRTA fixed route transit service, freight and heavy vehicle movements, and MassDOT bridge management systems. All of the data collected and analyzed provides a thorough analysis of the study area, as well as projected changes to the roadway and suggestions for areas of improvements in the future.

The study describes the adjacent land use as being mixed use with commercial, light industrial, and office space. Route 20 is connected in Auburn with three other roadways in the National Highway System, Interstates 90, 290, and 395. According to the study, traffic counts showed that there were 20,000 annual daily trips (ADT) at the I-290 interchange from Route 20. This total decreases to 16,000 ADT just west of the intersection at Millbury Street, and then increases again to roughly 22,000 ADT at the Worcester city line. These high daily volumes reflect how important motorists, personal and freight vehicles, rely on Route 20 in their travels through Auburn.

While Route 20 serves as a major corridor, it is not free of incidents by commuters. The corridor profile describes the safety concerns along the roadway emphasizing the number of curb cuts and incident reports recorded by the Auburn Police Department. There are roughly 147 curb cuts at varying locations along the north and south sides of the roadway through Auburn. The corridor profile states crash rates have been demonstrated to increase with a higher driveway densities along a roadway, however Massachusetts has not adopted a driveway density standard. The corridor profile also includes a crash analysis of Route 20 and goes further in depth as to major intersections that pose high crash rates along with details to information on the events of those crashes that have occurred.

Central Thirteen-Prioritization Project

In 2012, CMRPC engaged in an effort to work with regional stakeholders to define Priority Protection Areas (PPA), Priority Development Areas (PDA), and priority transportation improvements. As part of this effort, 11 areas had been identified in Auburn. For more information on this study go to: http://www.cmrpc.org/Central_PP

ISSUES AND OPPORTUNITIES

Issue 1: Emergency vehicle access to incidents along I-290 and I-90 is impacted due to traffic backups on neighboring highways and local roads.

- Widen shoulders to allow passenger vehicles to provide right of way to emergency vehicles.

- Provide signage and incident reports to commuters ahead of incident to help divert traffic through Intelligent Transportation System (ITS).
- Work with Auburn/State Police, MassDOT, and Auburn Highway to mitigate and divert traffic at I-290, I-90, and I-395 interchanges in the event of incidents.

Issue 2: During morning peak hours (7:00-9:00 AM) and afternoon peak hours (4:00-6:00 PM) high volume areas in Auburn become congested resulting in increased delay. Ex. Auburn Street, Route 20, and Route 12.

- Improve signal timing at major intersections and cross streets.
- Add/Improve roadway and intersection striping and signage.
- Make geometric improvements to intersections where needed.
- Increase/Promote the frequency and coverage area of transit service within Auburn to provide more options of transit service to reduce congestion.

Issue 3: Auburn has a high crash-injury rate for bicycle and pedestrians.

- Prioritize and improve pedestrian safety through enforcement of traffic violations by working with the Auburn Police Department.
- Prioritize and advocate for funding to improve new and existing pedestrian and bicycle accommodations through TIP projects, MassDOT Complete Streets Program, Highway Safety Improvement Program (HSIP), etc.
- Encourage pedestrian and bicycle safety through efforts of Bay State Bike Week, Bike to Work Day, and other safety campaigns.

Issue #4: Auburn has expressed concerns about a high number of trailer truck rollovers throughout town, but readily available crash data from MassDOT does not provide adequate information on this issue.

- Work with the Auburn Police Department and DPW to identify high risk areas for trailer truck rollovers and install warning signage as needed.
- In the 2018 Massachusetts Strategic Highway Safety Plan the Large Truck- Involved Crashes, section of the Five Year Action Plan included an item to improve data quality. Auburn can collaborate with MassDOT and the Registry of Motor Vehicles to help improve the availability of this data.
- In the 2018 Massachusetts Strategic Highway Safety Plan the Large Truck-Involved Crashes, section of the Five Year Action Plan included an item to provide engineering roadway improvements. Specifically to “Continue upgrading signage and markings at high truck rollover crash locations.” Auburn has an opportunity to advocate for MassDOT to utilize this program to increase signage on their roadways.

Issue 5: Ill-equipped At-Grade Rail Road Crossings without proper markings, signage, stop gates pose a hazard to motorists and pedestrians.

- Improve/enhance signage, striping, lights, and stop gates at all at-grade railroad locations throughout the town.

Issue 6: Impacts of the continued increase of vehicle congestion on all major roads throughout the town.

- Work with MassDOT, Auburn Highway, and Auburn Police to conduct an in-depth crash analysis for major crash locations/clusters throughout the town
- Encourage/Promote/Enforce safe driving habits through signage, both fixed, mobile or solar, and the Auburn Police Department.

Issue 7: The Auburn Mall, as a high passenger activity center, does not have any passenger amenities for WRTA users.

- Determine feasibility of a transit ‘mini-hub’ at the Auburn Mall.
- Work with the WRTA, CMRPC, and the owners of the Auburn Mall to analyze the usefulness of an area at the Auburn Mall to accommodate a designated bus stop, shelter, and indoor waiting area for passengers.

Issue 8: Auburn residents rely heavily on single occupant commuting options as opposed to transit and ridesharing.

- Work with the WRTA and CMRPC to study potential transit options or identify marketing opportunities where transit may already be available.

GOALS

1. Maintain and enhance the condition of Auburn’s Transportation Network.
 - Evaluate the accessibility of Auburn for all residents.
 - Develop an ADA self-evaluation and transition plan.
 - Maintain the Auburn roadway survey program for roadway maintenance and funding needs.
 - Adjust roadway funding to maintain the condition of the network.
 - Conduct annual review of the Road Inventory File to ensure sure it is current and up to date.
 - Establish a survey program for sidewalks and ADA ramps (Complete Streets Tier 2).
 - Adjust funding to maintain the condition of the sidewalk and ADA ramp network.
 - Establish a survey program for town owned bridges.
 - Adjust funding to maintain the condition of Town-owned bridges.
 - Address/improve roadside amenities, drainage components, shoulders and sidewalks with all roadway improvement projects.

- Develop an asset management plan.
 - Advocate with MassDOT to increase maintenance on all State-owned and maintained roads that pass-through Auburn.
2. Maintain and enhance the safety of Auburn's transportation network.
- Provide a network of adequately maintained sidewalks and safe crossing areas within walking distance of neighborhoods throughout Auburn.
 - Establish the Safe Routes To Schools Program.
 - Study areas of Auburn with current and potential safety issues.
 - Plan and implement studied safety enhancements.
 - Complete a study of vehicle crash locations to identify areas of improvement.
 - Collaborate with the Auburn Police Department to conduct an in-depth collision analysis of high vehicle crash locations throughout Auburn including, but not limited to, Route 20 and Auburn Street.
 - Implement corrective actions through the town, based on the results of the collision analysis.
 - Complete a study of trailer truck rollovers in Auburn to identify locations of high risk.
 - Implement corrective actions through Auburn based on the results of the trailer truck study.
 - Work with MassDOT to add signs at interchanges to alerting truck drivers to potential hazards.
 - Implement railroad crossing upgrades and improvements where needed.
3. Improve local and regional connectivity and traffic flow.
- Maintain and improve the ability to get off and on the interstate highway system safely within Auburn.
 - Monitor and improve former location of Interstate 90 tollbooths.
 - Complete a Route 20 engineering study for the segment of highway between Route 12 and the Worcester city line to address mobility and collision analysis.
 - Optimize traffic flow within Auburn's commercial areas to maintain economic vitality and minimize cut-through traffic in neighborhoods.
 - Review the existing parking bylaw and update as needed.
 - Conduct corridor study of US-20/Washington Street between the City of Worcester/Auburn line and Millbury Street, specifically exploring feasibility of expanding from two-lane to four-lane roadway.
4. Enhance Drury Square and the vicinity of Auburn Mall as focal points for both the community and region.
- Increase the walkability of the area.

- Implement Complete Streets, for the area of Drury Square.
- Implement Complete Streets, for the area of the Auburn Mall.

5. Improve multimodal transportation access to provide better local and regional connectivity.
 - Add signage to the Midstate Drive Park and Ride facility to increase usage.
 - Work with MassDOT and state administration to investigate the feasibility of extending the commuter rail to Auburn.
 - Work with Auburn Mall property management to help handle anticipated increase of paratransit usage at the new Reliant Medical Group facility.
 - Work with the WRTA to improve accommodations, such as signage, shelters, and seating at existing bus stops.
 - Work with the WRTA to determine the feasibility of a transit ‘mini-hub’ at the Auburn Mall.
 - Work with the WRTA to increase the frequency and coverage of transit services.
 - Provide a network of adequately maintained sidewalks, bicycle storage facilities, and safe crossing areas throughout town.
 - Complete MassDOT Complete Streets Tier 2 Prioritization Plan.
 - Adopt the goals and objectives of both the CMMPO Regional Bicycle Plan and Pedestrian Plan.
 - Develop an expanded walking trail network in Auburn.
 - Enhance Auburn Pond with wayfinding signage to help increase usage.
 - Update traffic rules and regulations by adopting Preferred Truck Routes for heavy trucks.

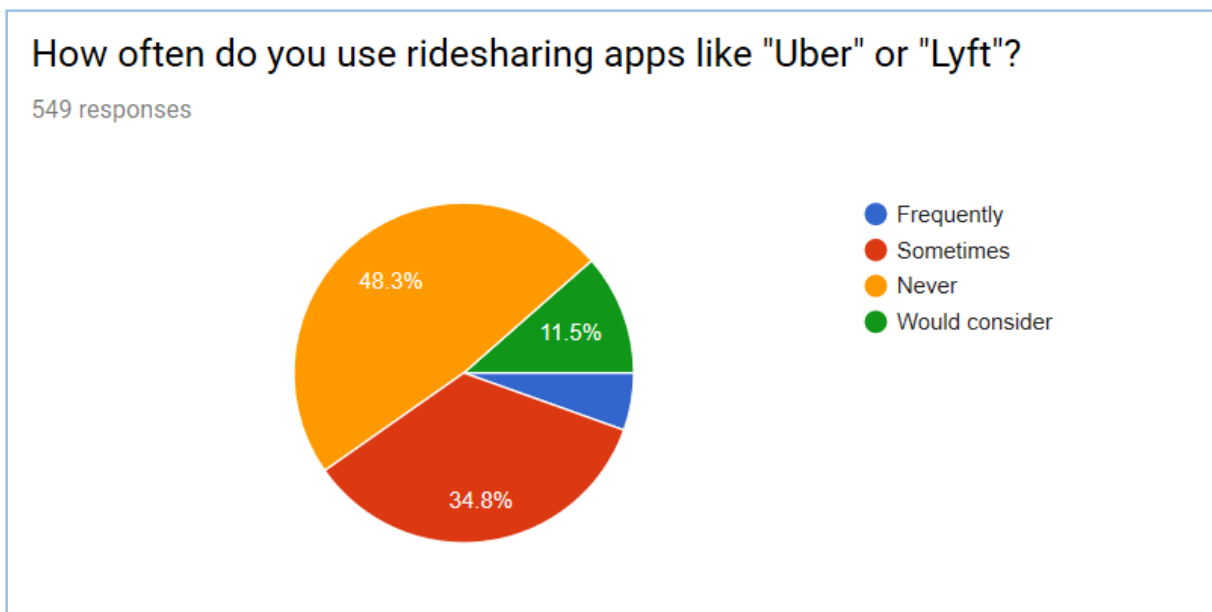


Figure 56. Master Plan Survey

NATURAL, CULTURAL & HISTORIC RESOURCES



Dark Brook Reservoir in June

INTRODUCTION

Natural and cultural resource protection is critical to the management, promotion and restoration of scenic landscapes. The Town of Auburn is a well-developed suburban community, a major transportation hub and regional commercial focal point for the area. The Town nonetheless, retains several natural-wooded areas, mostly to the towns west and south. There are several lakes, ponds, rivers and streams scattered throughout Town.



Figure 57. Canoes at Auburn High School

EXISTING CONDITIONS

Auburn's residential, commercial and industrial development, as well as the transportation network that bisects the town to all four compass points characterize the Town of Auburn. The network of interstates and highways fragment many of the town's lakes, ponds, streams, and wetlands. The divergence of these four factors make protecting the natural environment challenging and imperative to the quality of life in Town. Auburn is also home to unique cultural and historic sites. Perhaps the most well known is the Goddard launch site at Pakachoag Golf Course and the commemorative Polaris Missile located at Drury Square. Some of the data for this

chapter was sourced from the towns 2014 Open Space and Recreation Plan; the plan was updated in 2016.

Aquifer

Auburn has three Zones of Contribution (ZOC) to the public supply wells, which includes Zones I, II, and III. Due to the potentially disastrous impact of Auburn's location at the crossroads of Interstates 90, 290 & 395, as well as the high density of residential and commercial development in Town, an Aquifer Watershed Protection Overlay District Zoning Bylaw was enacted in 1985. Each ZOC is defined by standard geological and hydrologic investigations, which may include drilling observation wells, performing pumping tests, water sampling and geologic mapping. The Overlay District includes the aquifer itself, including the land above the aquifer, and the most significant recharge areas for these aquifers. The Overlay District also provides specific regulations pertaining to potentially hazardous uses or storage of materials that are permitted only via Special Permit or Variance from the Zoning Board of Appeals. Auburn's public water supply relies entirely on shallow sand and gravel wells. The majority of Auburn's Zone II Aquifer recharge zones are located within Town boundaries; there are a few points where they extend into neighboring communities; Wellington Brook extends into Oxford and where Ramshorn Brook extends into Millbury.

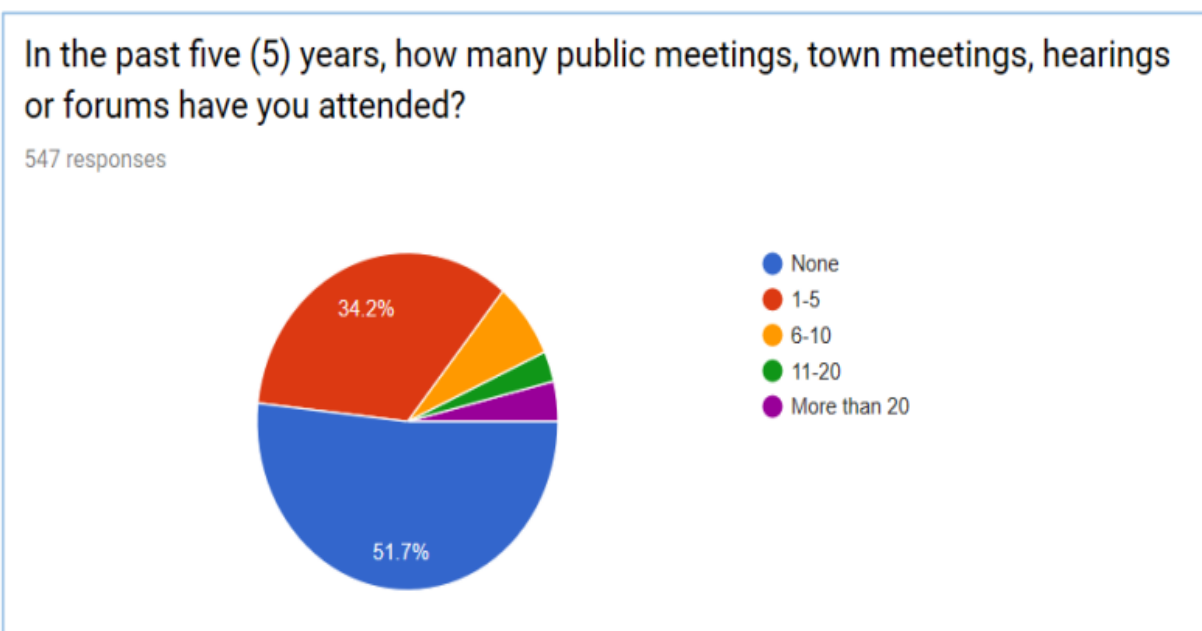
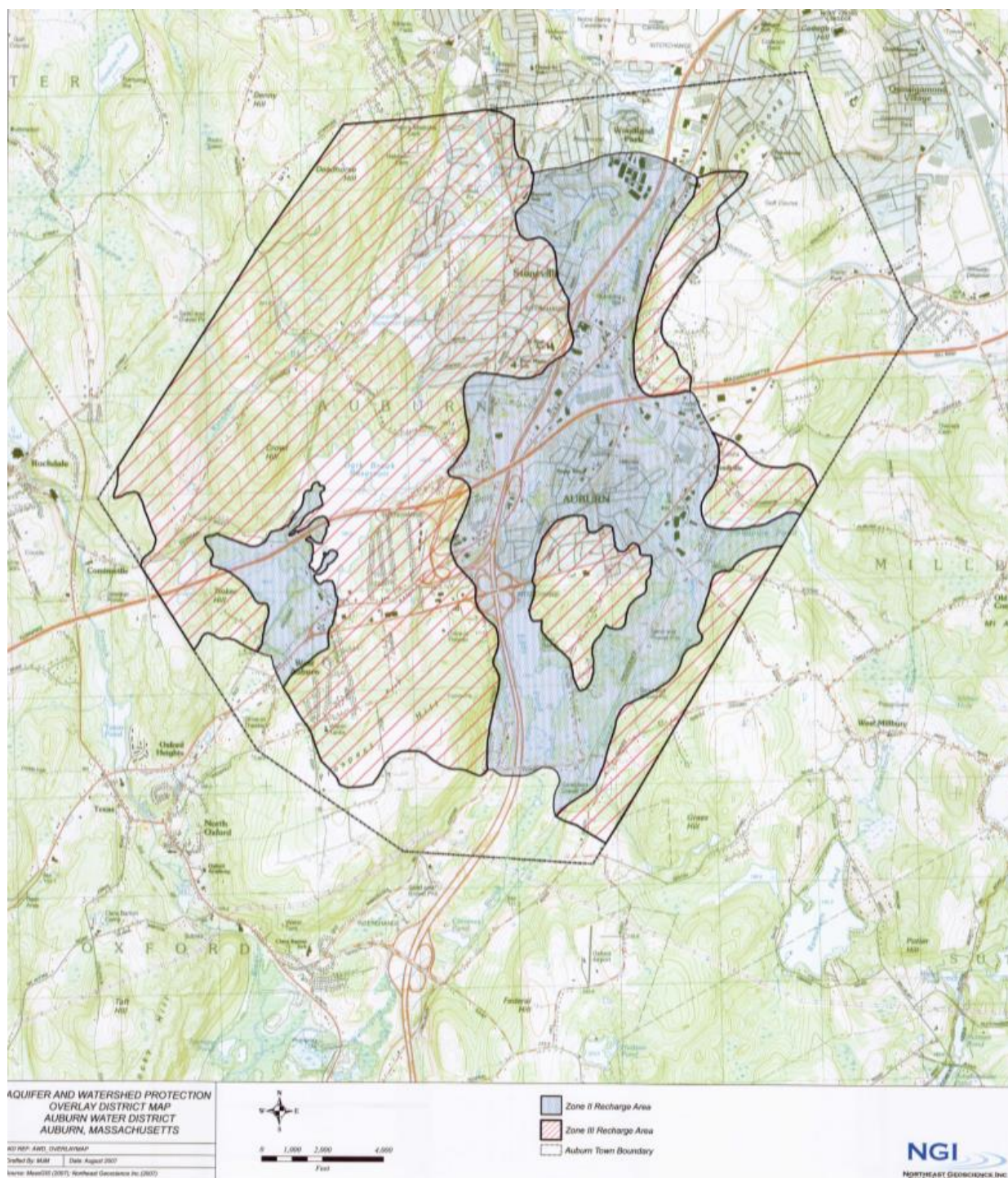


Figure 58. Master Plan Survey



Map 34. Aquifer Zone

TOPOGRAPHY, GEOLOGY, SOILS

Topography

Auburn's topography ranges from a high of 876 feet above sea level (Crown Hill) to a low of 403 feet above sea level in the vicinity of Eddy Pond. Prospect Hill (867), Deadhorse Hill (827 feet) and Tinker Hill (728 feet) are also prominent hills within Town. It should be noted, that Deadhorse Hill was the highest hill in Auburn at the turn of the last century, but years of sand and gravel removal has resulted in leveling of the hilltop.

Geology

The most recent US Geological Survey's surficial geology maps constitute Auburn's primary source of geologic information. MassGIS (the State GIS data center) further digitally enhanced these maps in 1992. The USGS surficial geology maps indicate that Auburn is underlain by five basic geologic formations:

- West Auburn (essentially the area west of the railroad tracks from Deadhorse Hill to Prospect Hill) is underlain with Ayer Granite (Triassic – late carboniferous or post carboniferous igneous rocks) from the Cenozoic period.
- Oakdale Quartzite (Carboniferous sedimentary rocks) from the Paleozoic period appears as a strip underlying Stoneville Pond, Stoneville Reservoir and Dark Brook Reservoir.
- Worcester Phyllite (Carboniferous sedimentary rocks) from the Paleozoic period appears in north Auburn between Stoneville Pond and Leesville Pond, extending to the middle of Town.
- Oxford Schist (Carboniferous sedimentary rocks) from the Paleozoic period appears in north Auburn underneath Leesville Pond, extending to the middle of Town.
- The remaining area (essentially all of east Auburn) is underlain with Gneisses and Schists of undetermined age.

Soils

According to the 1992 report, Soil Survey of Worcester County, Massachusetts – Southern Part, prepared by the USDA's Natural Resource Conservation Service (NRCS), Auburn's soil properties are generalized into five major categories. A description of these soil categories and their locations in Auburn is provided below and a graphic depiction of them can be found on Map 35, General Soils.

Paxton-Woodbridge-Ridgebury Soils: Nearly level to steep, very deep, well drained, to poorly drained soils on glaciated uplands. This soil type consists of soils on upland hills and ridges dissected by many small drainage ways. Stones cover more than 3 percent of the surface in most areas. The soils were formed in glacial till derived from schist, gneiss, and granite. In Auburn, this soil type is scattered throughout Town, with large concentrations in the vicinity of Prospect Hill, the northeast corner of Town and along the Auburn/Millbury line.

Canton-Montauk-Scituate Soils: Nearly level to steep, very deep, well-drained soils on glaciated uplands. This soil type consists of soils located on upland hills and rolling glacial till flats. It is dissected by broad drainage-ways that flatten out on the lower slopes. Stones cover more than 3 percent of the surface in most areas. The soils were formed in friable glacial till. In Auburn, this soil category appears around Tinker Hill, Deadhorse Hill, around Stoneville Reservoir and northeast of Eddy Pond.

Chatfield-Hollis Soils: Gently sloping to steep, moderately deep and shallow, well drained and somewhat excessively drained soils on glaciated uplands. This soil type consists of soils on hills and ridges that have bedrock exposures throughout. Stones cover more than 3 percent of the surface in most areas. The soils were formed in glacial till. In Auburn, this soil category is scattered throughout Town with no significant large concentrations.

Merrimac-Hinckley-Windsor Soils: Nearly level to steep, very deep, excessively drained and somewhat excessively drained soils on outwash plains. This soil type consists of soils located on broad, flat plains and in rolling to steep areas throughout the southern portion of Central Massachusetts. The soils were formed in water-sorted deposits of glacial outwash. This is Auburn's largest soil category, appearing as a large swath running north-to-south from Leesville Pond, along both sides of Dunn's Brook and Eddy Pond, all the way to the Auburn/Oxford line.

Freetown-Swansea-Saco Soils: Nearly level, very deep, very poorly drained soils on uplands, outwash plains and floodplains. This soil type consists of soils on broad flats that have small depressions. These soils are in old glacial lakes or small ponds adjacent to streams. The soil formed in organic deposits and alluvium. In Auburn, this soil type is scattered throughout Town with no significant large concentrations.

The distribution of soil types in Auburn follows a pattern typical of glacial landscapes. Glacial-till soils are found on the uplands, generally above 500 to 600 feet in elevation, and glacial outwash plains and eskers are found in the valleys at lower elevations. The Town's soils are typically very deep, and have a sandy loam texture. Sandy soils are very porous and do not retain water very well, so erosion tends to be an issue on passive recreational uses such as walking trails that contain varying elevation changes. Otherwise, the soils provide good drainage for playing fields and similar flat open areas.

Much of the Town was at one time covered with soil types considered to be prime farmland by the US Department of Agriculture. "The soils qualities, growing season and moisture supply are those

needed to sustain high yields of crops in an economic manner. Prime farmlands produce the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment. A recent trend in land use has been the loss of prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands elsewhere.”³⁶

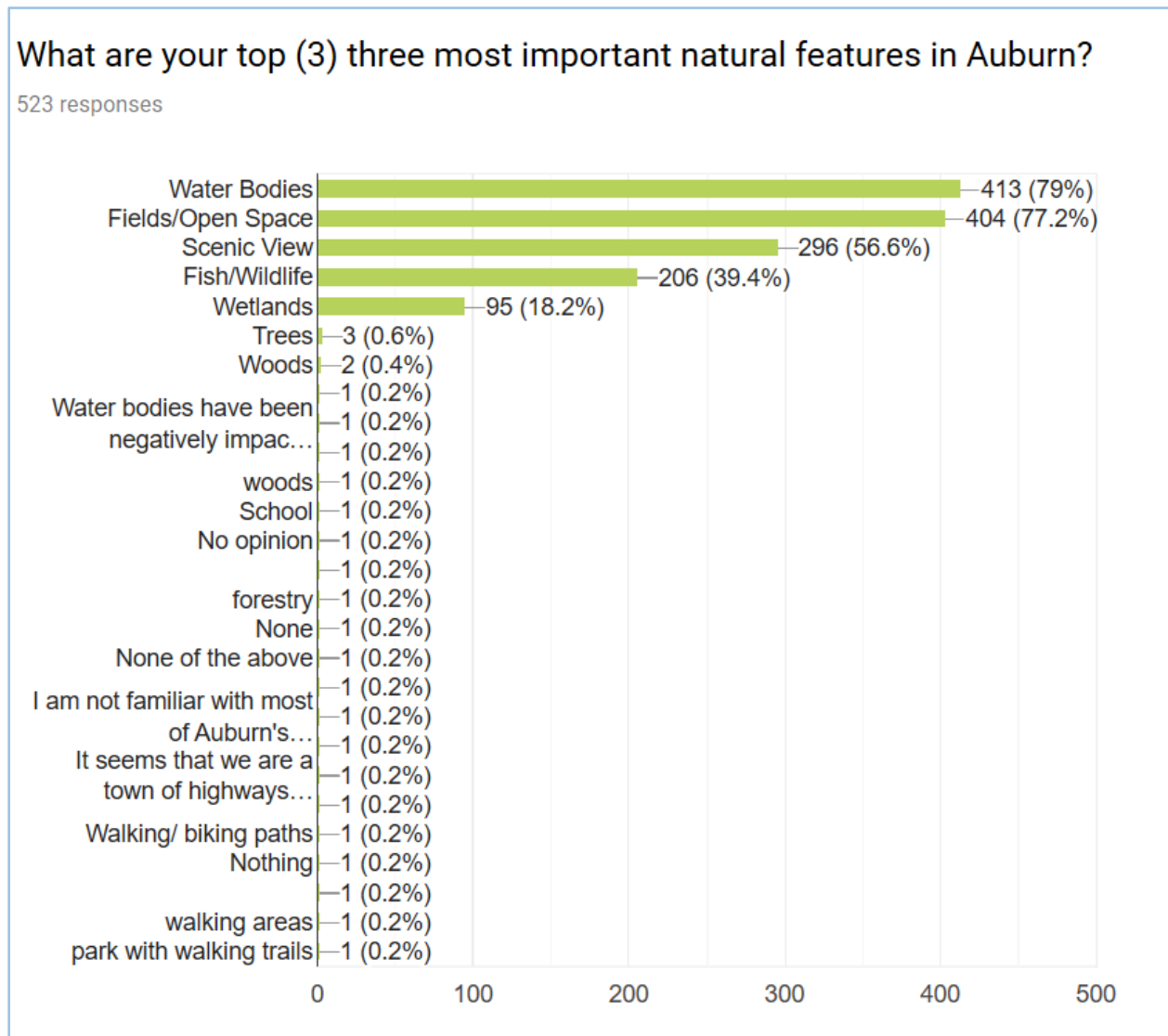
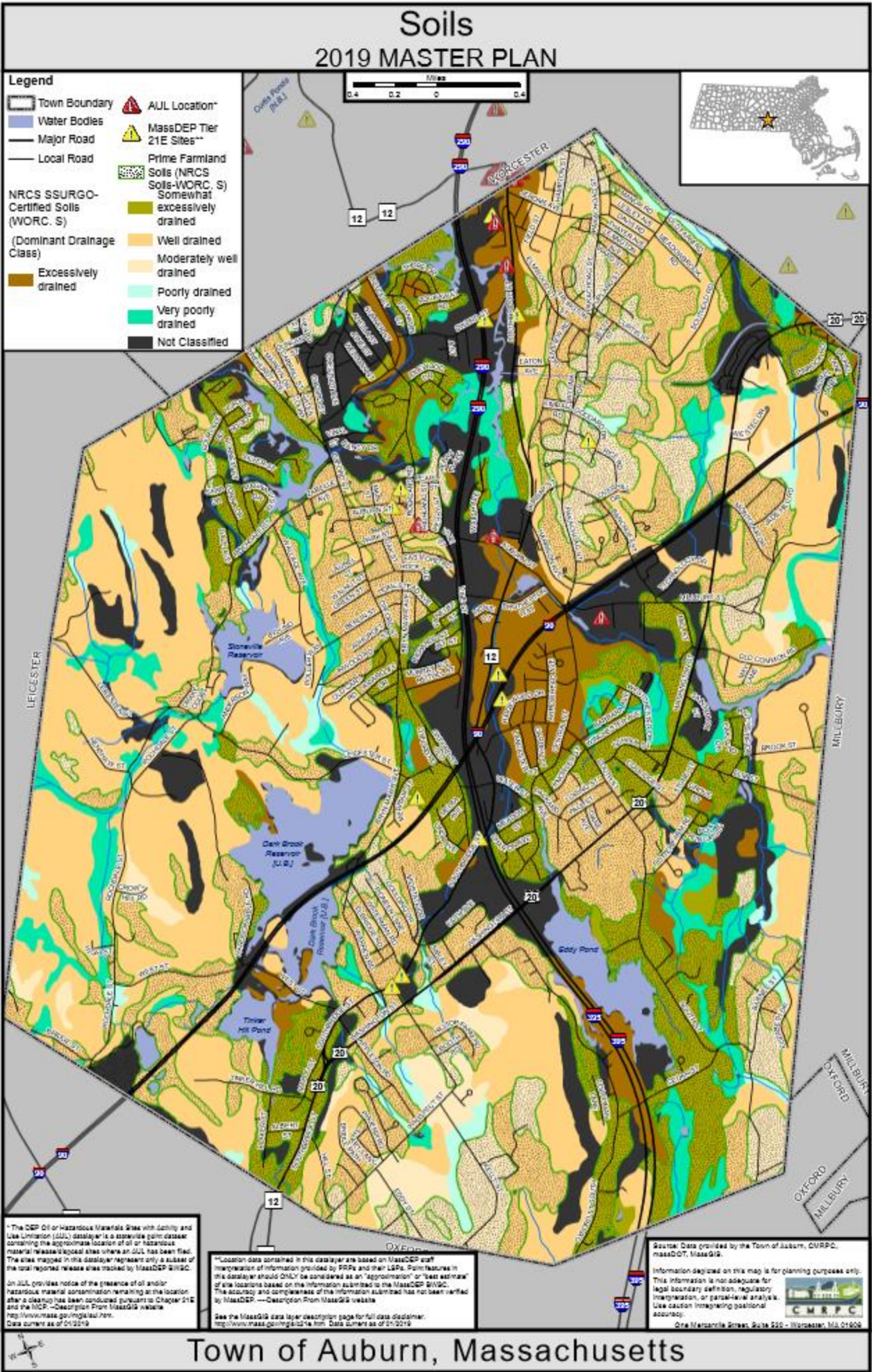


Figure 59. Master Plan Survey

³⁶ USDA Natural Resource Conservation Service (NRCS), Soil Survey of Worcester County, Massachusetts – Southern Part, 1992.

Map 35. Soil Variety



VEGETATION

An area's vegetation defines how a location is experienced and utilized. Auburn's vegetation can be divided into five resource categories.

Non-Forested Resources

Old fields and meadows are typically non-forested resources, any area defined by the absence of trees. These locations are home to diverse populations of plants, animals and birds, but are also some of the most vulnerable to invasive plant species infestations. Invasive plants can quickly take over these areas, killing native species in the process and ultimately changing the habitat and view scape.

Forest Resources

Although about 40 percent of Auburn is forested, this figure includes treed residential suburbs and misrepresents the true extent of undeveloped forest area in Auburn. The town's remaining forests are primarily located in its southern and western section. In Auburn, forested areas are typically young forests of Southern New England as few old growth trees remain in Auburn after two hundred years of agricultural development. While there are some older trees on individual properties throughout town, these are exceptions or "legacy trees." Participation in MGL Chapter 61, which protects forested areas, with only about 141.08 acres enrolled in 2016. These forested areas are threatened not only by possible development, but also by introduced pests, infestations, and air pollution, which are weakening and destroying native species.

Public Shade Trees

Public shade trees are found in all areas of Auburn, at its municipal and public service buildings, schools, parks, and cemeteries, as well as in the right of ways of many streets. These trees contribute to the public streetscape and shape how the town and its facilities relate to the public.

Agricultural Land

Less of Auburn is characterized by agricultural land today than in past years, but their contribution to the character of the town cannot be underestimated. Agricultural lands once dominated the natural landscape, and today still provide both local food and natural habitats for area wildlife. Today these lands are primarily new grow forest and open fields and are both natural and historic resources to the community. Much of the undeveloped former farmland is easily identifiable due to the many stone walls crisscrossing the land, these walls are part of our New England heritage and worthy of preservation. Private land categorized as MGL 61A is low in Auburn, with only around 390 acres enrolled in 2016. Several Chapter 61A parcels located on Southold Road, totaling approximately 50 acres, were recently the subject of a potential MGL Chapter 40B development as the landowner had entered into a Purchase & Sale Agreement with a housing developer. The

Town was concerned about the scale, location and potential impacts of such a development and ultimately voted to purchase the land by exercising their first right of refusal option. This process highlighted the need to assess/study other Chapter 61A lands within the Town of Auburn for potential use of such lands using a proactive planning approach.



Figure 60. Farm in Auburn

Wetland Vegetation

Auburn's many wetlands include a wide range of vegetation ranging from small herbaceous plants to larger, woody species and trees. These habitats provide important food sources for hummingbirds and butterflies, and include many species of rushes, waterlilies, mosses, etc. depending on the character of their varied locations.

WORCESTER DIVERSION TUNNEL/CHANNEL

A unique feature in Auburn is the Worcester Diversion Tunnel/Channel. Constructed by the US Army Corps of Engineers after Hurricanes Carol and Edna hit Central Massachusetts within two weeks of each other in 1954, causing massive flooding and devastation in Worcester's Webster Square and beyond. The diversion tunnel is controlled and operated by the City of Worcester.

The Worcester Local Protection Project, also referred to as the Worcester Diversion Project, is located in the towns of Auburn and Millbury. The project significantly reduces further threat of flooding in Worcester, where heavy flood losses have occurred to industrial, commercial, residential, and public property. Construction started in July 1957 and was completed in January 1960 at a cost of \$5.2 million. The project allows potential floodwaters originating in the Leesville Pond area to bypass Worcester by conveying them through a diversion tunnel and channel to the

Blackstone River. These floodwaters would normally flow through seven miles of river channel adjacent to a heavily developed area of Worcester.



Figure 61. Worcester Diversion Channel at US-20

The project features a gated concrete control dam built across Kettle Brook. The dam is 180 feet long with a crest elevation of 492 feet. The control dam is located about 1.25 miles upstream of Leesville Pond Dam. There is a 350-foot-long earth fill dike with stone slope protection that has a maximum elevation of 498 feet. Immediately upstream of the control dam, an ungated semicircular weir forms the entrance to the circular diversion tunnel and is 143 feet long with a maximum elevation of 487 feet. The circular diversion tunnel, measuring 4,205 feet long and 16 feet in diameter, runs under Pakachoag Hill to an open channel. The first 440 feet is built through earth, and the remainder is cut through rock. The entire length of the tunnel is lined in concrete.

Beyond, an 11,300-foot-long open channel, consisting of both earth and rock, follows the general alignment of Hull Brook and empties into the Blackstone River. Four highway bridges and a railroad bridge were built across the open channel. The highway bridges are located at U.S. Route 20, Pinrock Road, the Massachusetts Turnpike, and Greenwood Street. The railroad bridge is located near the channel's junction with the Blackstone River.³⁷

³⁷ <https://www.nae.usace.army.mil/Missions/Civil-Works/Flood-Risk-Management/Massachusetts/Worcester/>

WATER RESOURCE

There are several large man-made reservoirs and ponds spread throughout Auburn, none of which are used as drinking water sources. Public use of Auburn's waterbodies is hampered by several problems. Urban development has enveloped most of Stoneville, Leesville, and Pondville Ponds. Eddy Pond is accessible from the state boat launch and from Camp Gleason, but public access to Stoneville and Dark Brook Reservoirs is inadequate. A new wellfield at Dark Brook Reservoir makes it unlikely that the reservoir and surrounding properties will be opened up to public use anytime soon. The same access issues limit fishing in Auburn to Eddy Pond. With the closure of the beaches at Stoneville Reservoir (Rotary Beach) and Camp Gleason, there are no public swimming facilities in the Town. Rotary Beach was closed several decades ago due to high levels of bacteria in the water; Camp Gleason has turbidity issues with the water that create unsafe swimming situations. The vast majority of Auburn (roughly 80 percent of the town's land area) falls within the Kettle Brook tributary basin. A small section of south Auburn falls within the French River tributary basin, a small section of east Auburn falls within the upper reaches of the Blackstone River tributary basin and a very small section of north Auburn falls within the Middle River tributary basin.

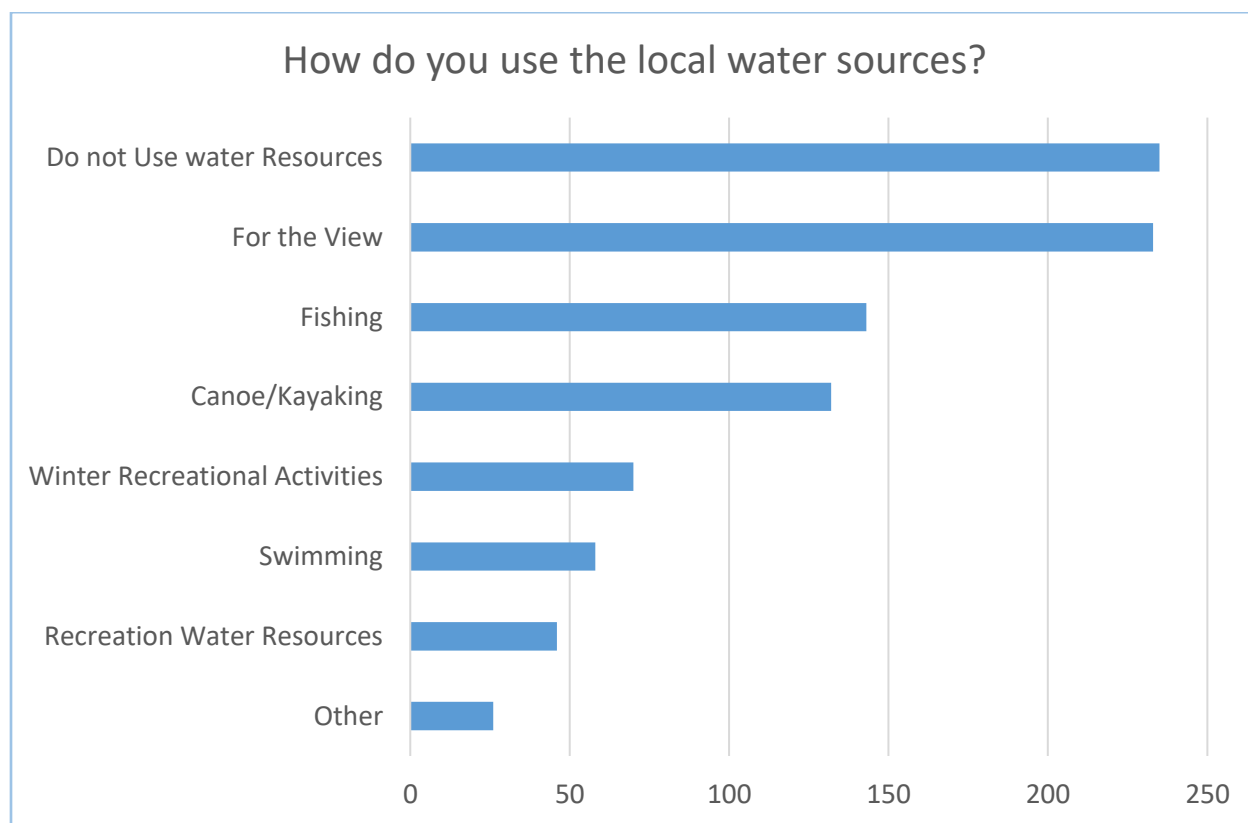
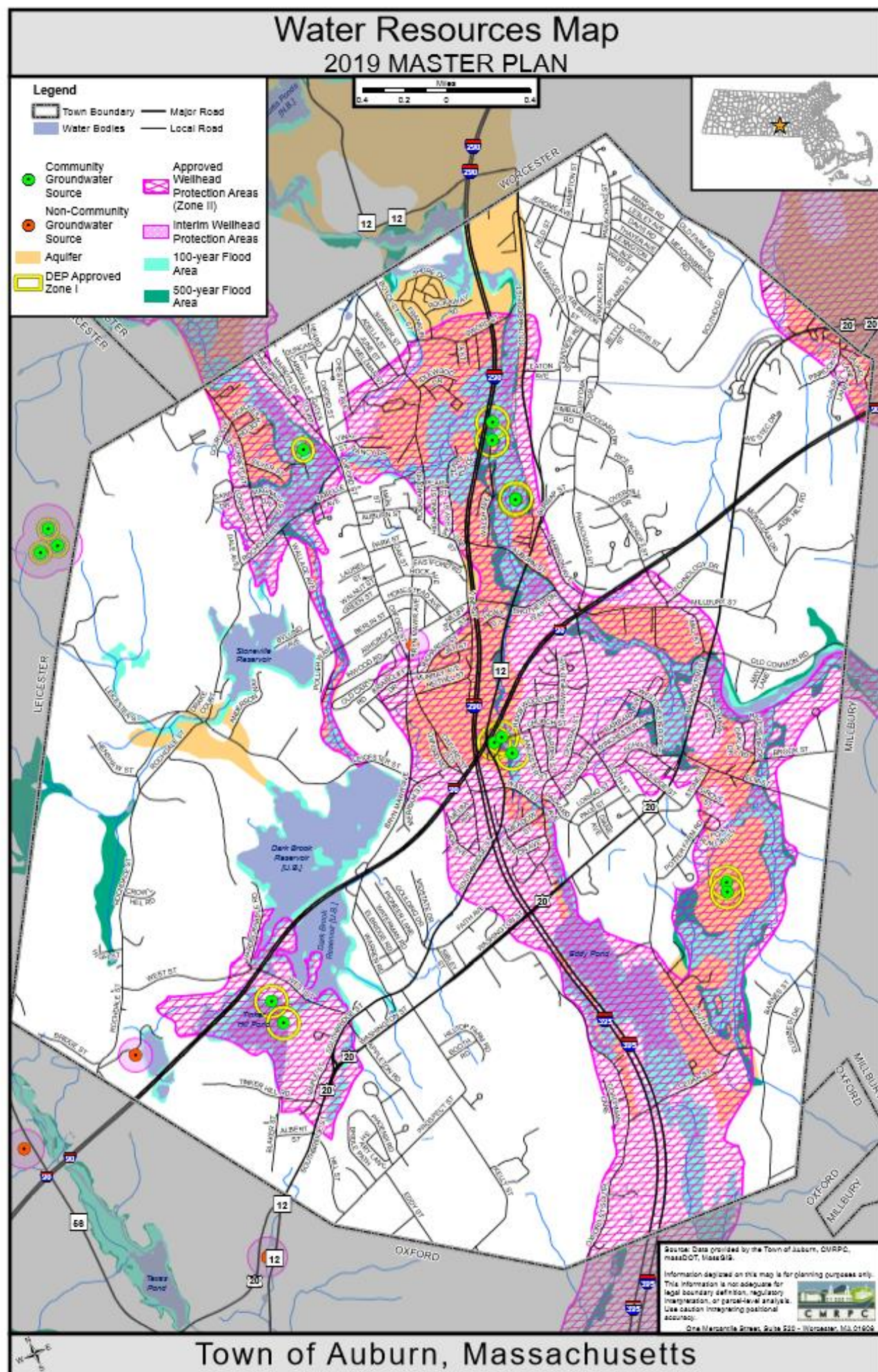


Figure 62. Master Plan Survey



The Commonwealth maintains a list of all documented Massachusetts Endangered Species Act (MESA) listed species observations. Table 45 lists the endangered species observed in Auburn. Many MESA-listed species are difficult to detect even when they are present. Natural Heritage and Endangered Species Program does not have the resources to be able to conduct methodical species surveys in each town on a regular basis. Therefore, the fact that the 'Most Recent Observation' recorded for a species may be several years old should not be interpreted as meaning that the species no longer occurs in a town.

Table 45

Rare Species in Auburn				
Taxonomic Group	Scientific Name	Common Name	MESA Status	Most Recent Observation
Butterfly/Moth	<i>Callophrys hesseli</i>	Hessel's Hairstreak	SC	2016
Vascular Plant	<i>Geum fragarioides</i>	Barren Strawberry	SC	1833
Reptile	<i>Glyptemys insculpta</i>	Wood Turtle	SC	2008
Vascular Plant	<i>Ranunculus pensylvanicus</i>	Bristly Buttercup	SC	2011
Reptile	<i>Terrapene carolina</i>	Eastern Box Turtle	SC	1988
Vascular Plant	<i>Rhododendron maximum</i>	Great Laurel	T	2011
SC-Special Concern T- Threatened				

Source: Massachusetts Division of Fish & Wildlife³⁸

INVASIVE SPECIES

Auburn is at risk to many invasive species, including the Asian Longhorned Beetle, gypsy moth, and the hemlock woolly adelgid. The Asian longhorned beetle (ALB, *Anoplophora glabripennis*) is a destructive wood-boring pest of maple and other hardwoods. ALB is believed to have been introduced into the United States from wood pallets and other wood packing material accompanying cargo shipments from Asia. A portion of the Town is currently under quarantine per order of the Massachusetts Department of Conservation and Recreation. The tree species preferred as hosts by the Asian longhorned beetle are hardwoods including several maple species (Norway, sugar, silver, and red maple), box elder, horse chestnut, buckeye, elm, London plane,

³⁸ Massachusetts Division of Fisheries and Wildlife, <https://www.mass.gov/service-details/rare-species-by-town-viewer>

birch, and willow. Part of Auburn, the City of Worcester and several other towns have been impacted by the infestation. A quarantine remains in place and public education efforts should be continued. Trees weakened by the infestation could be further damaged and impacted by natural hazards such as snowstorms and severe rain/wind events. Weakened limbs could in turn damage power lines and other infrastructure. Continued monitoring of trees should occur, especially in August, as adult beetles are most active during the summer and early fall and is the time of year when beetles are most active and mobile. The larvae that spent the previous year maturing and eating through their host trees emerge as adults and look for a new place to colonize and start the next generation.

The gypsy moth, first introduced in Massachusetts in 1869 causes tree defoliation severely affecting the health of the forest. Gypsy moth populations in Massachusetts have generally experienced cyclical patterns; large population booms are interspersed by years of low population density. The 2017 outbreak of gypsy moths is considered the worst in several decades. Drought conditions in recent years had limited the effectiveness of a soil borne fungus, *Entomophaga maimaiga*, which has helped control gypsy moth populations since the last large outbreaks of the 1980's. The 2017 gypsy moth population boom caused over 923,000 acres of damage statewide in Massachusetts.

The hemlock woolly adelgid, or HWA, is an invasive, aphid-like insect that attacks North American hemlocks. Native to Asia, HWA was introduced to the western United States in the 1920s. It was first observed in the eastern US in 1951 near Richmond, Virginia after an accidental introduction from Japan. HWA has since spread along the East Coast from Georgia to Maine and now occupies nearly half the eastern range of native hemlocks. HWA was first discovered in New York State in 1985 in the lower Hudson Valley and on Long Island. Since the initial infestation, HWA has continued to spread north to the capitol region, and west through the Catskill Mountains and the Finger Lakes Region, into western NY. Most recently, HWA was found in the Adirondack Park. Currently, 43 New York counties are infested with the invasive pest. Once hatched, juvenile HWA, known as crawlers, search for suitable sites on the host tree, usually at the base of the needles. They insert their long mouthparts and begin feeding on the tree's stored starches. HWA remain in the same spot for the rest of their lives, continually feeding and developing into adults. Their feeding severely damages the canopy of the host tree by disrupting the flow of nutrients to its twigs and needles. Tree health declines and mortality usually occurs within 4 to 10 years. This species can cause damage to forested area increasing the risk of wildfires and other natural hazards.



Figure 63. Eddy Pond-Invasive Aquatic Plants

Non-indigenous Aquatic Plants

Non-native aquatic plant species, such as the Asian water chestnut, fanwort, and Eurasian water milfoil, grow in an uncontrolled manner and force out native plants, which in turn reduces food and habitat for native fish and wildlife. Invasive aquatic plant species have become more common over the years. Examples of these species include, curlyleaf pondweed, eurasian watermilfoil, fanwort, purple loosestrife, twoleaf milfoil, and water chestnut, there are many others, but these are more widespread invasive aquatic species in the Blackstone River Watershed. One of the primary reasons invasives are able to thrive, spread rapidly, and outcompete native species is due to the environmental checks and predators that control these species in their natural settings are lacking in the ecosystems and habitat in which they become introduced. The subsequent damages they cause occur on many ecological levels including competition for food or habitat (feeding, refuge and/or spawning), direct predation and consumption of native species, introduction of disease or parasites, and other forms of disruption that lead to the replacement of the native species with the invasive species. As a result, invasives very often cause serious harm to the environment, the economy, and even human health.³⁹

Vernal Pools

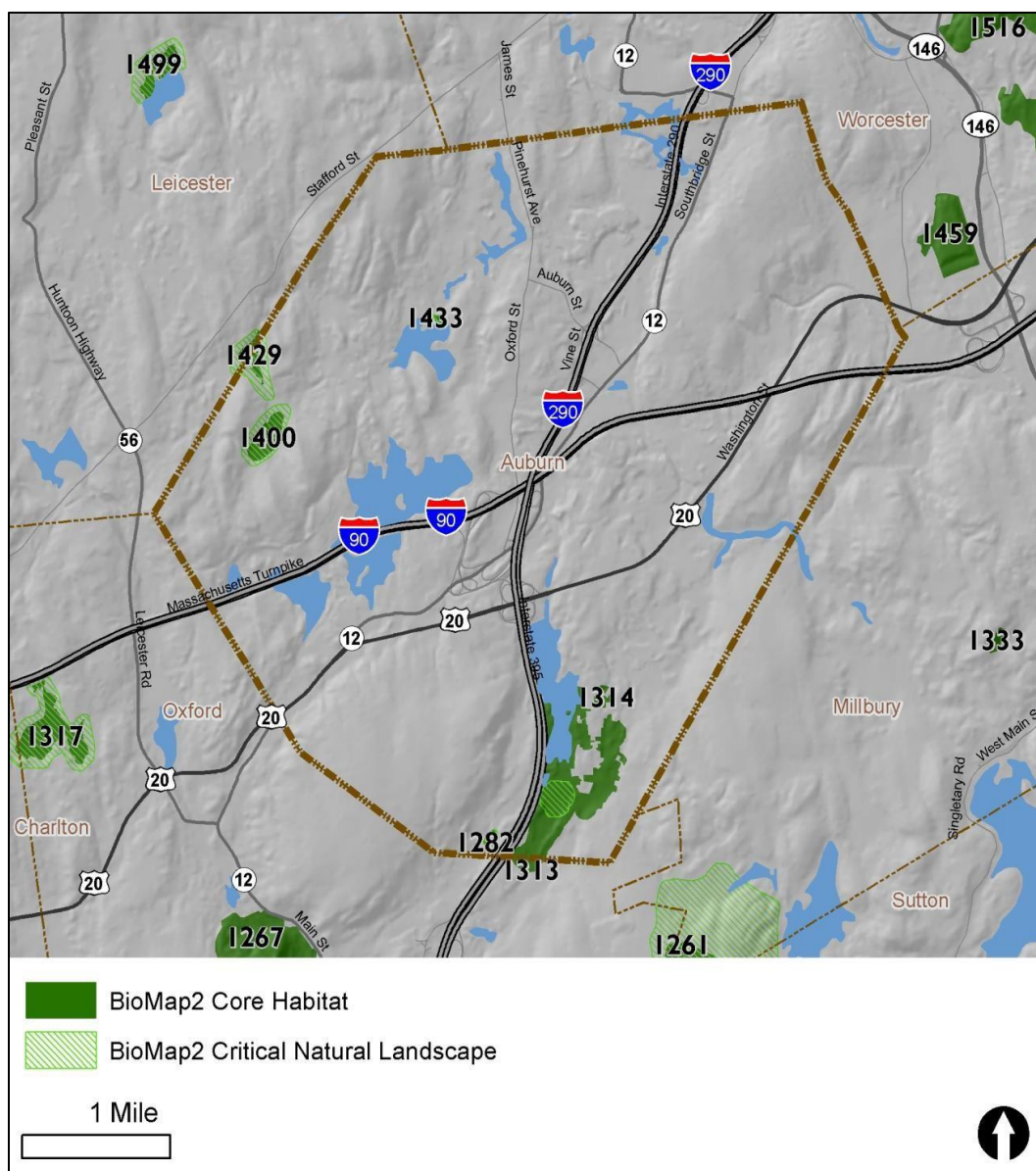
Vernal pools, also known as ephemeral pools, autumnal pools, and temporary woodland ponds, typically fill with water in the autumn or winter due to rainfall and rising groundwater and remain

³⁹ <http://www.princetonhydro.com/blog/tag/invasive-aquatic-plants/>

ponded through the spring and into summer. Vernal pools dry completely by the middle or end of summer each year, or at least every few years. Occasional drying prevents fish from establishing permanent populations, which is critical to the reproductive success of many amphibian and invertebrate species that rely on breeding habitats free of fish predators. There is one certified vernal pool in Auburn located near Pondville Pond.

BIOMAP2

The following is an excerpt from the 2012 BioMap2 study conducted by the Massachusetts Department of Fish and Game, through the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program and the Nature Conservancy Massachusetts Program.



Map 37. BioMap 2 Core Habitat

Core Habitat Summaries

Core 1282: A 5-acre Core Habitat featuring Aquatic Core and a Species of Conservation Concern

Aquatic Cores are intact river corridors within which important physical and ecological processes of the river or stream occur. They delineate integrated and functional ecosystems for fish species and other aquatic species of Conservation Concern.

Bristly Buttercup is an annual or short-lived perennial herb with small, pale yellow flowers. A habitat generalist, Bristly Buttercup grows in a variety of areas that tend to have open to filtered light and that are wet to periodically flooded. It often inhabits areas with some disturbance.

Core 1313: A 255-acre Core Habitat featuring Aquatic Core, Priority Natural Communities, and Species of Conservation Concern.

Level Bogs are dwarf-shrub peatlands, generally with pronounced hummocks and hollows in sphagnum moss. These wetland communities are very acidic and nutrient-poor because the peat isolates them from nutrients in groundwater and streams. This small example of Level Bog is found within a larger Atlantic White Cedar Swamp.

Great Laurel, a member of the Heath family, is an evergreen shrub or small tree that grows up to 10 m high. It is a plant of moist woods, swamps, and the edges of ponds.

Hessel's Hairstreak, a butterfly, is restricted to Atlantic White Cedar Swamps and Bogs, where the larvae develop on new foliage of the Atlantic White Cedar trees.

Core 1314: A 7-acre Core Habitat featuring a data-sensitive Species of Conservation Concern.

The Natural Heritage & Endangered Species Program does not release information on particularly vulnerable species.

Core 1400: A 27-acre Core Habitat featuring Aquatic Core and a Species of Conservation Concern.

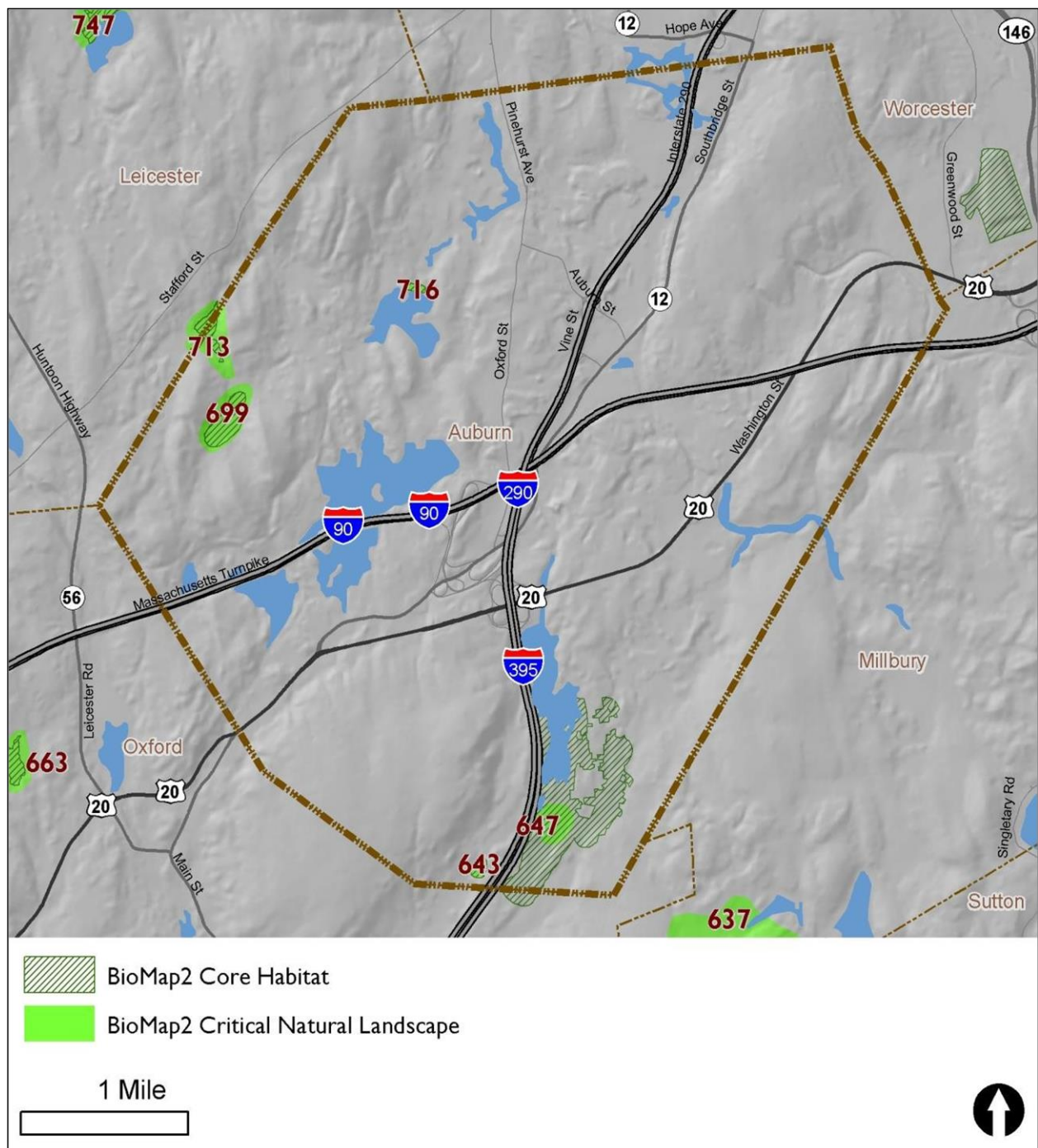
Great Laurel, a member of the Heath family, is an evergreen shrub or small tree that grows up to 10 m high. It is a plant of moist woods, swamps, and the edges of ponds.

Core 1429: A 12-acre Core Habitat featuring Wetland Core.

Wetland Cores are the least disturbed wetlands in the state within undeveloped landscapes—those with intact buffers and little fragmentation or other stressors associated with development. These wetlands are most likely to support critical wetland functions (i.e., natural hydrologic conditions, diverse plant and animal habitats, etc.) and are most likely to maintain these functions into the future.

Core 1433: A 3-acre Core Habitat featuring Aquatic Core and a Species of Conservation Concern.

Bristly Buttercup is an annual or short-lived perennial herb with small, pale yellow flowers. A habitat generalist, Bristly Buttercup grows in a variety of areas that tend to have open to filtered light and that are wet to periodically flooded. It often inhabits areas with some disturbance.



Map 38. BioMap 2 Critical Natural Landscape

Critical Natural Landscape Summaries

CNL 643: A 5-acre Critical Natural Landscape featuring Aquatic Core Buffer

A variety of analyses were used to identify protective upland buffers around wetlands and rivers. One, the variable width buffers methodology, included the most intact areas around each wetland and river, by extending deeper into surrounding unfragmented habitats than into developed areas adjacent to each wetland. Other upland buffers were identified through the rare species habitat analysis. In this way, the conservation of wetland buffers will support the habitats and functionality of each wetland, and also include adjacent uplands that are important for many species that move between habitat types.

CNL 647: A 28-acre Critical Natural Landscape featuring Aquatic Core Buffer and Wetland Core Buffer.

A variety of analyses were used to identify protective upland buffers around wetlands and rivers. One, the variable width buffers methodology, included the most intact areas around each wetland and river, by extending deeper into surrounding unfragmented habitats than into developed areas adjacent to each wetland. Other upland buffers were identified through the rare species habitat analysis. In this way, the conservation of wetland buffers will support the habitats and functionality of each wetland, and also include adjacent uplands that are important for many species that move between habitat types.

CNL 699: A 49-acre Critical Natural Landscape featuring Aquatic Core Buffer.

A variety of analyses were used to identify protective upland buffers around wetlands and rivers. One, the variable width buffers methodology, included the most intact areas around each wetland and river, by extending deeper into surrounding unfragmented habitats than into developed areas adjacent to each wetland. Other upland buffers were identified through the rare species habitat analysis. In this way, the conservation of wetland buffers will support the habitats and functionality of each wetland, and also include adjacent uplands that are important for many species that move between habitat types.

CNL 713: A 50-acre Critical Natural Landscape featuring Wetland Core Buffer.

A variety of analyses were used to identify protective upland buffers around wetlands and rivers. One, the variable width buffers methodology, included the most intact areas around each wetland and river, by extending deeper into surrounding unfragmented habitats than into developed areas adjacent to each wetland. Other upland buffers were identified through the rare species habitat analysis. In this way, the conservation of wetland buffers will support the habitats and functionality of each wetland, and also include adjacent uplands that are important for many species that move between habitat types.

CNL 716: A 3-acre Critical Natural Landscape featuring Aquatic Core Buffer

A variety of analyses were used to identify protective upland buffers around wetlands and rivers. One, the variable width buffers methodology, included the most intact areas around each wetland and river, by extending deeper into surrounding unfragmented habitats than into developed areas adjacent to each wetland. Other upland buffers were identified through the rare species habitat analysis. In this way, the conservation of wetland buffers will support the habitats and functionality of each wetland, and also include adjacent uplands that are important for many species that move between habitat types.

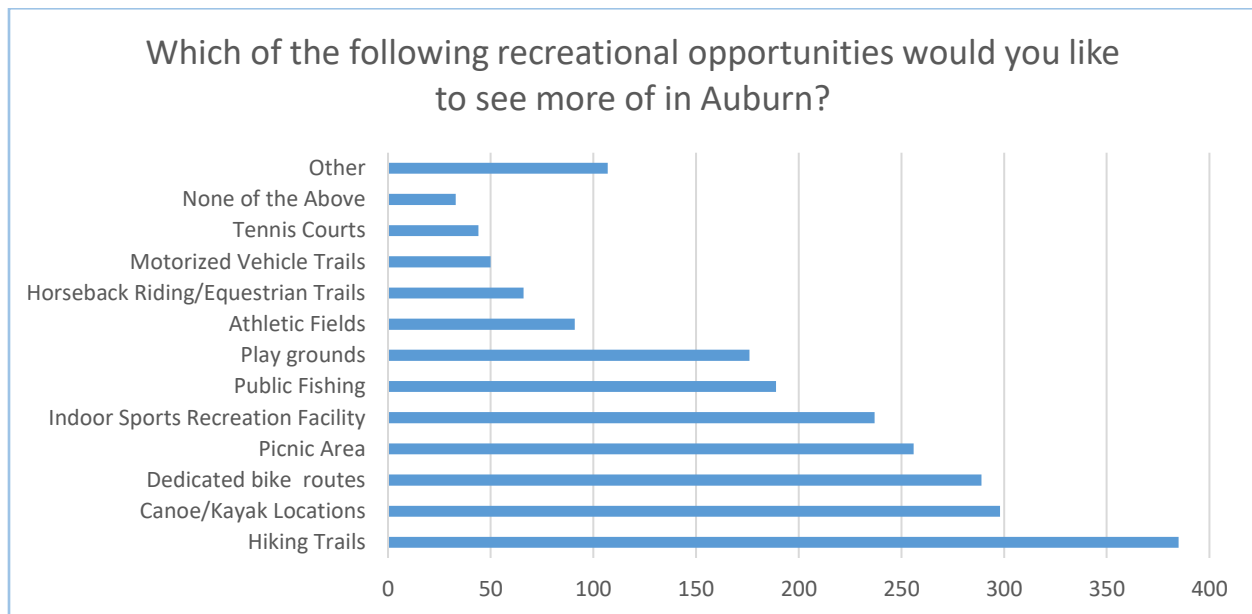
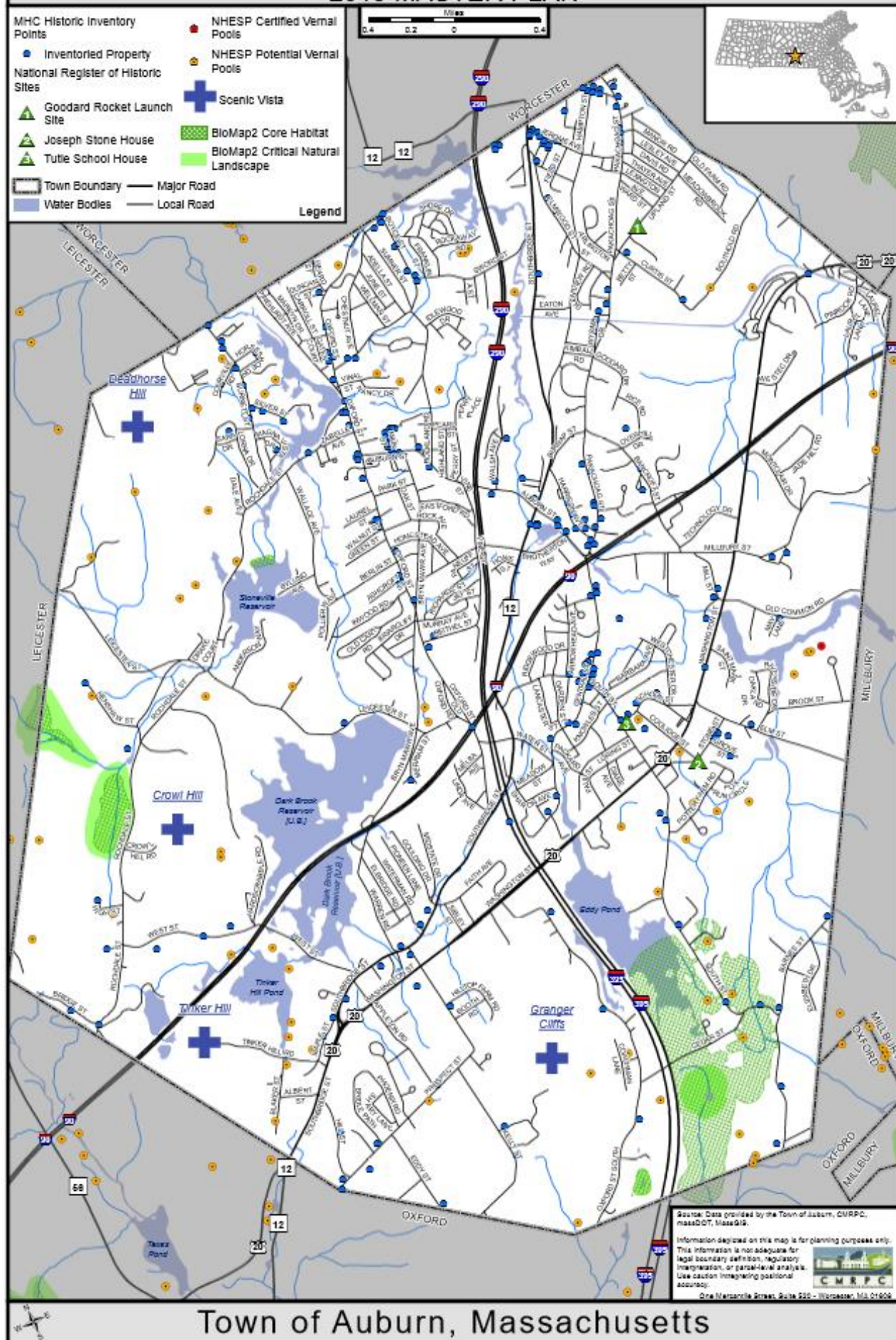


Figure 64. Master Plan Survey

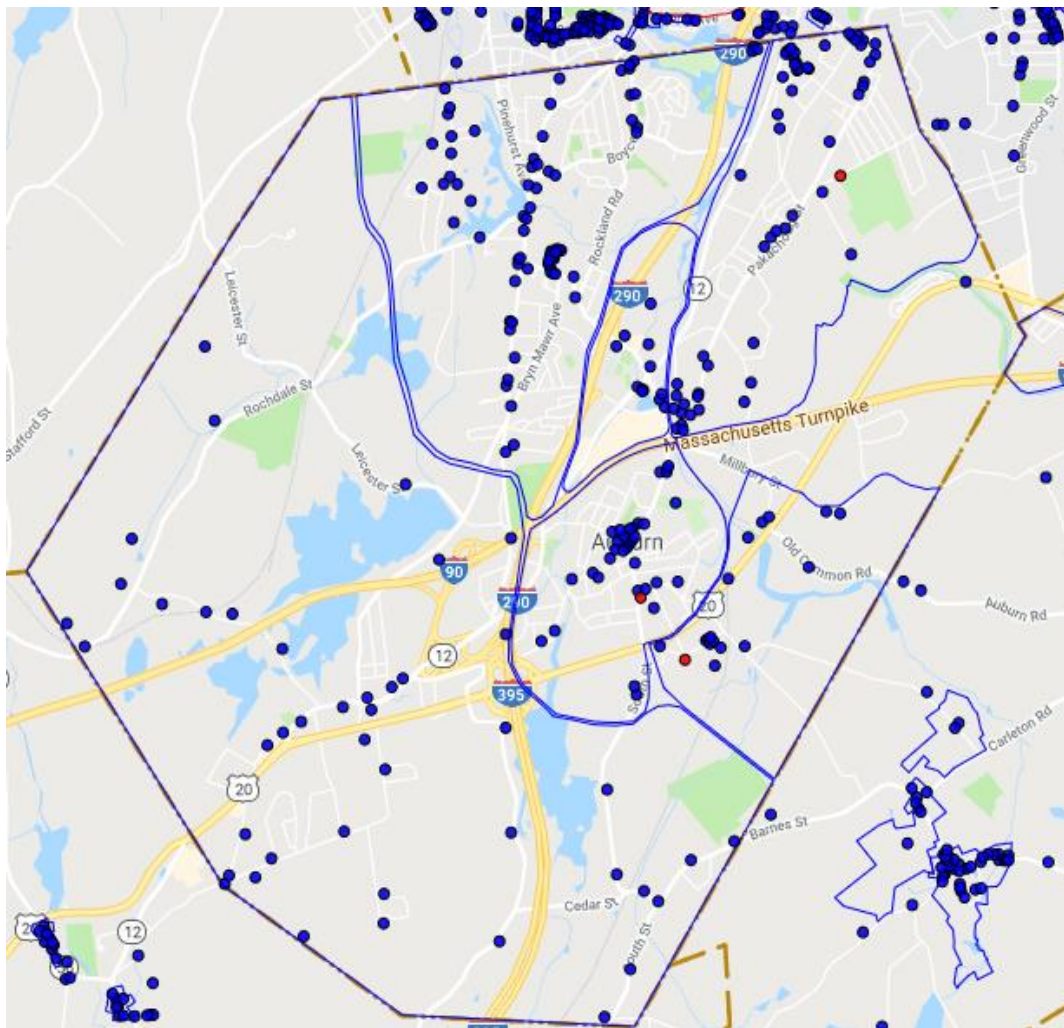
Scenic and Unique Resources Map

2019 MASTER PLAN



HISTORIC AND CULTURAL RESOURCES

The historic center of Auburn is along Central and Church Streets. The location of Town Hall, the Congregational Church and cemetery and many of the oldest houses in town dating from 1729-1899 are located along these streets. The Massachusetts Cultural Resource Information System (MACRIS) identifies 242 locations. 6 Areas, 218 buildings, 4 burial grounds, 5 objects, and 9 structures. The majority of the 242 locations are houses built in the eighteenth and nineteenth century.



Map 40. MACRIS Identified Historical Locations⁴⁰

⁴⁰ <http://maps.mhc-macris.net/>



Figure 65. Center Burial Ground circa 1877⁴¹

Goddard launch site is a National Historic landmark commemorating the site of the first successful liquid fueled rocket in 1926. There are two markers indicating the event. An obelisk at the launch site located near the ninth fairway of the Pakachoag Golf Course and a rectangular marker near Upland Street. The launch was once Goddard's Aunt Effie's farm and developed into a golf course in 1939.



Figure 66. Robert H. Goddard's first rocket at the launch site. March 16, 1926

⁴¹ Massachusetts Cultural Resource Information System search 1/2019



Figure 67. Obelisk marking the Goddard rocket launch



Figure 68. Goddard Park Polaris Missile

Civic Buildings

Few of Auburn's early civic buildings have survived to the present day. Those that do still exist date to the first half of the 20th century. Town Hall was dedicated November 12, 1896. The Selectmen's Office was dedicated as the library on June 27, 1911 a mortar stone in the front of the building, was found at the Oxford gore in 1814. Julia Bancroft School built in 1917 and Mary D Stone School built in 1927, both closed in the fall of 2015. Work is underway to preserve the historic aspects of these facilities and transform the structures into 110 units of affordable senior housing. These projects are expected to take several years to complete and preserve the buildings' exteriors while transforming the remaining structures into a very much needed senior housing. Tuttle Square School, the home of the Auburn Historical Museum, is on the National Register of

Historical Places. The museum has a wide-ranging collection of artifacts and resources that tell the story of Auburn's past. The museum is open two days a week by appointment.



Figure 69. Merriam Building - Board of Selectmen Office

HISTORIC AND NATURAL RESOURCE PLANNING

Historical Commission

The Auburn Historic Commission serves as the official municipal body responsible for historic preservation, planning and advocacy in the community. The Commission is tasked with inventorying historic properties, nominating properties for the National Register of Historic Places, educating the public of the importance of preserving historic sites, advising elected officials on historic preservation issues, coordinating preservation activities and being sure any renovations in historic areas do not damage areas deserving of preservation.

Conservation Commission

The Conservation Commission is tasked with protecting the town wetlands by enforcing the Massachusetts Wetlands Protection Act, the Rivers Protection Act and the Auburn Wetlands By-Law. The Conservation Commission aspires to minimize the impact of activities on wetlands, including public or private water supply, groundwater, flood control, erosion and sedimentation control, storm damage prevention, water pollution prevention, fisheries, freshwater shellfish, wildlife habitat, recreation, aesthetics, and agriculture and aquaculture values.

GOALS

1. Protect and enhance the quality of Auburn's surface and groundwater resources.
 - Address water quality at Leesville Pond and other waterbodies throughout Town.
 - Update the Aquifer Zoning Bylaw.
 - Increase level of protection to wells, aquifer and watersheds.
 - Stormwater Committee to develop stormwater regulations.
 - Develop Low Impact Design (LID) guidelines for new development and redevelopment.
2. Protect forests, wetlands, fields, and ponds from the harmful impacts of invasive species
 - Establish a clear set of policies and procedures for communicating regularly with property owners enrolled in the state's three current-use Chapter 61 programs to enhance the possibility of permanent conservation solutions.
 - Seek additional funding to preserve and maintain the Town's conservation lands.
 - Provide education to municipal staff about the identification, management and removal of invasive plant species.
 - Prohibit the planting of any species listed on the most recent version of the Massachusetts Invasive Plants Advisory Group.
 - Create a recommended list of plant and tree species for developers and business owners to plant during construction and upkeep of their properties with the intent to limit non-native species and reduce the risk of invasive species.
3. Protect and document Auburn's historic and cultural resources.
 - Develop a historic and cultural asset map that highlights resources around Auburn
 - Develop marketing tools for historical areas (Goddard sites) to drive awareness and boost tourism, thus capturing economic benefits of visitors.
 - Use the town's historic spaces and resources as venues for community events and arts programs.
 - Support efforts to preserve and digitize historic artifacts and documents.
4. Preserve, protect, and manage Auburn's natural resources.
 - Acquire or otherwise protect priority open space parcels from development.
 - Seek additional funding to preserve and maintain the Town's conservation lands
 - Establish a conservation agent.
 - Work with properties owners that have identified brownfields. Ensure remediation of sites are completed, when appropriate.