

**Medford Comprehensive Plan  
Appendix A**

**MEDFORD, MA  
COMPREHENSIVE PLAN  
UNDERSTANDING TODAY  
PROGRESS REPORT 6.2021**

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## INTRODUCTION TO UNDERSTANDING TODAY

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This progress report for the Medford Comprehensive Plan introduces the existing conditions for each of the elements described in *Chapter 41, Section 81D of the Massachusetts General Laws* (excluding the goals and policies statement and the implementation plan). The basis of the information in this section is a combination of information from City-sponsored reports, plans, and studies, and interviews with City staff. Further interviews and focus groups with local experts in each field will be conducted to augment the analysis as the project progresses.

An overview of Medford's people and businesses provides a base from which to understand and evaluate the discussion of mobility (transportation and circulation); economic development and housing, which are closely linked; land use; open space, recreation and natural resources; public facilities; and historic and cultural resources. Where appropriate, recommendations from recent plans have been brought forward to capture existing City initiatives.

*Note: as noted in the next, next steps will be to test and confirm which recommendations are still open and relevant actions.*

# DEMOGRAPHICS

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This section provides an overview of the people and businesses in Medford today. The data in this section has relevance for understanding the existing physical, economic, and social conditions and for projecting implications of options for future actions, policies, and investments.

## Current and Historic Trends

### Population Profile

Medford's population was 57,771 as of 2018 and has been increasing steadily between 3-4% since 2000. The Metropolitan Area Planning Council (MAPC) predicts that Medford could grow to 59,465 by 2030 based on existing rates of births, deaths, migration, and housing occupancy.

*Note: Without the release of 2020 Census tables, the team has focused on summarizing the demographic profile from the data and findings available in the Draft Housing Production Plan. Once updated data is released, final data tables for each of the subsections in the population profile will include quantitative estimates, % shares and % change over time. With this methodology, the population profile section uses Middlesex County as a comparable instead of the Boston-Cambridge-Newton MSA (the geography used in the workforce and business sections). This will be adjusted once the 2020 Census data is released.*

### *Age*

*Note: Data for 2010 is not included as it was not available in the HPP analysis. This data will be pulled along with the 2020 Census numbers.*

Medford's population is younger than that of the county and state. Approximately 31% of Medford residents are between the ages of 20-35 compared to 22% and 21% at the county and state level, respectively. Medford's young adult population has also been increasing at a greater rate than comparable geographies, growing from 25% between 2000 and 2018 (while the county and state saw an increase of about 1%). Residents aged 35-64 make up 37% of the population, while seniors make up 14% of the population. The population share of these age groups is like that of the County and state.

### Share of Population by Age Group (2000 - 2018)

Source: ACS Five-Year Estimates (2018), US Decennial Census (2000)

Age Group	2000			2018		
	Medford	Middlesex	MA	Medford	Middlesex	MA
0-19	21%	25%	26%	18%	23%	23%
20-34	25%	23%	21%	31%	22%	21%
35-64	37%	40%	39%	37%	40%	40%
65+	17%	13%	14%	14%	15%	16%

### Race and Ethnicity

*Note: A data table is not included here as the HPP does not present the comprehensive list of quantitative estimates and % shares for this sub-section. The detailed table will be added to this section at a later date.*

With a diversity index<sup>1</sup> of 53.2, Medford ranks as one of the more diverse communities in the state but falls behind the neighboring communities of Somerville (64.9), Waltham (67.3), Malden (74.2), and Everett (80.3). More than two-thirds (71%) of Medford's population identify as Non-Hispanic White, like that of the county (73%) and the state (72%). The share of residents identifying as Black, Asian, or other races has increased from 19% to 23% since 2010. The Asian population has increased most, from 7% to 11% in this timeframe (adding 2,083 residents). Approximately 5% of the city's population identify as Hispanic/Latino. This share is lower than what is observed at the county (8%) and state (12%) levels.

Geographically, the highest proportions of Black residents tend to live in the West Medford and South Medford neighborhoods near the city's transit options. Asian residents tend to live in and around the Wellington neighborhood near the Orange Line Station and in the North Medford neighborhoods along I-93.

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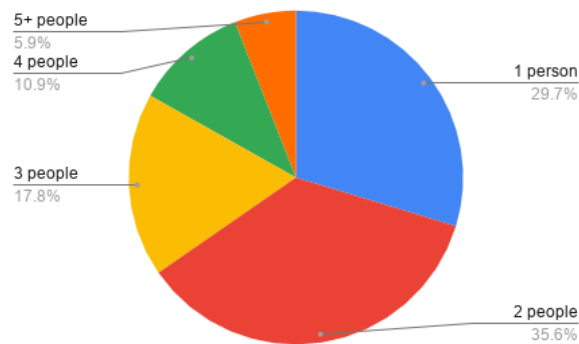
<sup>1</sup> The Diversity Index is a scale of 0 to 100 that represents the likelihood that two persons, chosen at random from the same area, belong to different races or ethnic groups. If an area's entire population belongs to one race AND one ethnic group, then the area has zero diversity. An area's diversity index increases to 100 when the population is evenly divided into two or more race/ethnic groups.

## Households

As of 2018, there were 23,016 households in Medford, a 2% increase (495 households) since 2010. The size of Medford's young adult population, relative to other communities, contributes to two housing trends. Roughly 66% of Medford's households consist of just one or two people. Further, Medford's households are less likely to be families<sup>2</sup> than those of the county or state: families comprise 56% of Medford households, 65% of county households, and 63% of state households.

### Medford's Household Size in 2018

Source: ACS Five-Year Estimates 2018.



## Income

*Note: Apart from the detailed data table, this section will include a map displaying census tract-level distribution of household income with an overlay of the census-tracts that are identified to have a strong presence of environmental justice communities, once updated census data is available. The detailed data table (or a line chart) representing the increase/decrease of household income categories for Medford, MSA and the state will be included here as % share and quantitative raw numbers.*

At \$92,363, Medford's 2018 median household income was lower than that of the county (\$97,012), but higher than that of the state (\$77,378). While 59% of Medford's households make more than \$100,000, 14% earn between \$25,000-\$49,999 and 13% earn less than \$25,000. Previous planning studies identify the cost of housing as a key issue in Medford.

Incomes are not uniformly mixed across Medford. Populations with incomes above the \$107,800 2018 Areawide Median Income (AMI) are concentrated near Middlesex Fells and the Tufts campus. Those with incomes at or below AMI and the citywide median (\$92,323) are found in larger concentrations in Medford's southern and central areas. The Very- and Extremely-low-income<sup>3</sup> households are primarily concentrated near Medford Square, near the West Medford Commuter Rail and Bus

<sup>2</sup> US Census defined a family as a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such people (including related subfamily members) are considered as members of one family

<sup>3</sup> HUD defines "very low-income" as 50% of the Area Median Income and "extremely low-income" as 30% of that in the US.

Station (where several affordable and public housing facilities exist), and in eastern Medford.

**Share of Households by Income (2018)**

*Source: ACS Five-Year Estimates (2018)*

<b>Income</b>	<b>Households in Medford</b>
Less than \$10,000	4%
\$10,000 to \$14,999	3%
\$15,000 to \$24,999	6%
\$25,000 to \$34,999	6%
\$35,000 to \$49,999	8%
\$50,000 to \$74,999	13%
\$75,000 to \$99,999	12%
\$100,000 to \$149,999	19%
\$150,000 to \$199,1000	12%
More than \$200,000	18%

Twenty of Medford’s census blocks meet the State’s definition of Environmental Justice populations, wherein more than a quarter of households are identified as low-income,<sup>4</sup> racial minorities,<sup>5</sup> or face English isolation.<sup>6</sup> These census blocks are concentrated in West Medford, Medford Square, Wellington, and South Medford.

*Educational Attainment*

Medford residents are more educated in comparison to state residents. In 2018, most Medford residents aged 25 or older had a bachelor’s degree or higher (53%) compared to 44% at the state level. While 6% had received an associate degree, 13% completed some college, and 21% achieved high school diplomas; 7% did not finish high school. This is lower than the 9% of the state population without a high school diploma.

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<sup>4</sup> Annual median household income is less than or equal to 65% of the statewide median (\$62,072 in 2010)

<sup>5</sup> 25% or more of residents identify as non-White

<sup>6</sup> 25% or more of households have no one over the age of 14 who speaks English very well

## **Workforce Profile**

As of 2019, Medford had 35,712 workers (73% of the overall population) on its civilian labor force.<sup>7</sup> Within the civilian labor force, 97% (34,722 people) were employed and 2% (990 people) were unemployed. This is slightly lower than the unemployment rates of the MSA and the state (4% each). These figures suggest a strong local economy and access to regional employment.

### *Employment Sector*

In 2019, 62% of Medford workers were in the private sector. Almost a fifth of the working population (18%) are employed in the private non-profit sector. The remaining workforce is distributed between the public sector (12%) and the self-employment sector (7%). While this breakdown is like the MSA and state, Medford's share of the non-profit sector is larger than the 13% observed in the MSA and the state, likely due to the non-profit status of Tufts University.

### **Share of Civilian Labor Force by Employment Sector (2000 - 2019)**

*Source: ACS Five-Year Estimates (2019, 2010), US Decennial Census (2000)*

Employment Sector	Medford						% Change Over Time		MSA 2019	MA 2019
	2000		2010		2019		2000 - 2010	2010 - 2019		
	Est.	%	Est.	%	Est.	%				
Total	29,024	100%	30,545	100%	34,722	100%	5%	14%	100%	100%
Private sector	19,307	67%	19,118	63%	21,662	62%	-1%	13%	67%	66%
Public sector	3,662	13%	3,808	12%	4,306	12%	4%	13%	11%	12%
Self-employed	2,033	7%	2,479	8%	2,484	7%	22%	0%	8%	9%
Private non-profit	3,983	14%	5,140	17%	6,245	18%	29%	21%	13%	13%
Unpaid workers	39	0%	0	0%	25	0%	-100%	-	0%	0%

### *Employment Industry*

In 2020, almost half (49%) of Medford's workforce (15,686 people) worked in educational services, health care and social assistance, and professional, scientific, and technical services<sup>8</sup> industries. Together, these three industries are the city's major employers, and have all increased steadily since 2000 between 4-5%. Manufacturing, wholesale trade, trade, art, entertainment and recreation,

<sup>7</sup> The US Bureau of Labor Statistics defines a region's labor force as all residents over the age of 16 currently employed and actively seeking employment. Civilian labor force is a subset of the labor force that excludes active-duty military personnel, institutionalized individuals, agricultural workers, and federal government employees

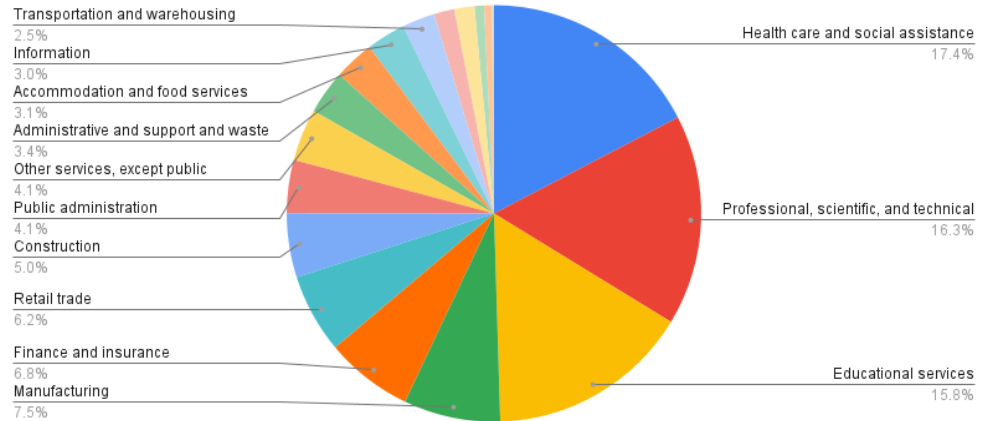
<sup>8</sup> This includes legal, accounting, payroll, architectural, design, computer systems design, scientific research, advertising, and other services.



accommodation, and food services all declined between 2000 and 2020. Retail had a more recent decline from 2010 onward, likely reflecting the growth of e-commerce.

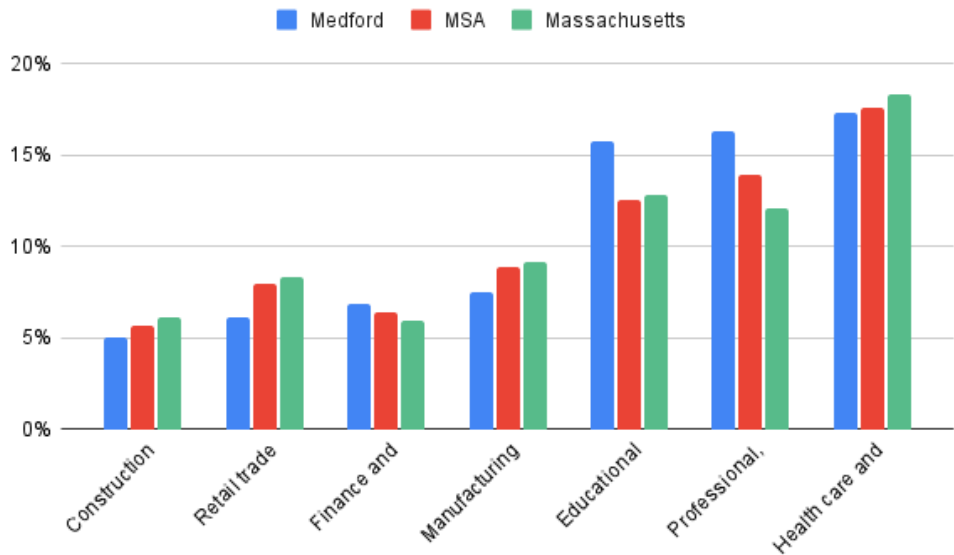
**Resident Employment Industries for Medford in 2020**

Source: US Census (2020) - Longitudinal Employee-Household Dynamics



**Share of Major Workforce Industries - Comparison with MSA and the state**

Source: US Census (2020) - Longitudinal Employee-Household Dynamics



Educational services and professional services industries contribute to about 16% of Medford’s workforce. The MSA (13% in educational services and 14% in professional services) and the state (13% in educational services and 12% in professional services) display lower shares of their workforce participating in these industries. The share of Medford’s workforce in the healthcare and social assistance industry (17%) is lower than that observed at the MSA and the state (18% each).

### *Commuting*

In 2018, the vast majority (92%) of Medford residents in the labor force worked in other communities; only 8% (2,727 residents) both lived and worked in Medford. Almost half (49%) of residents worked in Middlesex County, but Boston (in Suffolk County) is the single community with the largest number of Medford workers (31% or 10,131 people). Cambridge has the second highest number of Medford workers (10% or 3,281 people), followed by Somerville (4% or 1,333), and Woburn and Waltham (both 3%, or 1,005).

Roughly 88% (20,280 people) of the labor force that worked in Medford came from outside the city. More than half (51%) of workers came from Middlesex County. Major origin locations of workers are Boston (2,366, or 10%), Malden and Somerville (both at 5% or 1,183), and Everett City and Cambridge City (both at 3% or 709).

### *Unemployment*

Unemployment rates in Medford have fluctuated, with an increase between 4% in 2000 to 7% in 2010 (during the Great Recession) and then decreased to 2% in 2019 prior to the COVID-19 pandemic.<sup>9</sup> In 2019, the unemployment rate within the Black population (5.4%) in Medford was twice as much as that of the Non-Hispanic White population (2%) and higher than the Asian population rate at 3%. Inequities in unemployment rates across different races are displayed consistently at the county- and state-levels through the past two decades.

In contrast, Medford's Hispanic/Latino population experienced a 1% unemployment rate, a divergence trends in the MSA (7%) and the state (7%), as well as previous Medford unemployment rates in 2010 (12%) and 2000 (5%).

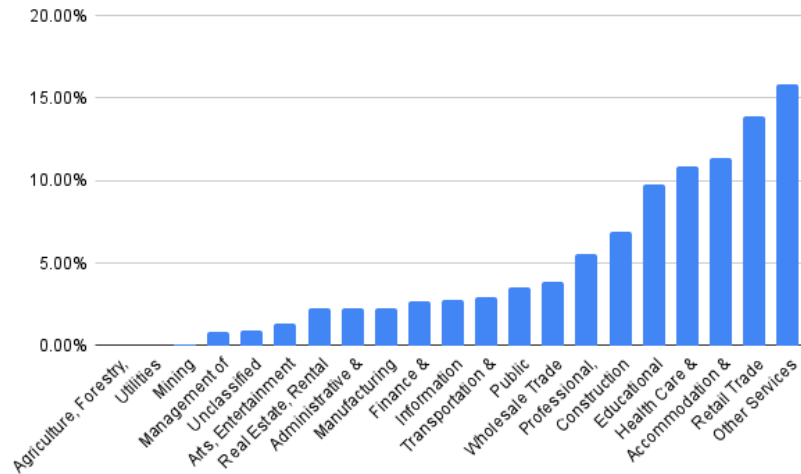
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<sup>9</sup> Due to the impacts of the pandemic, the unemployment rate rose to a maximum of 14.3% in April 2020. By April 2021, this dropped to 5.2%.

## Business Profile

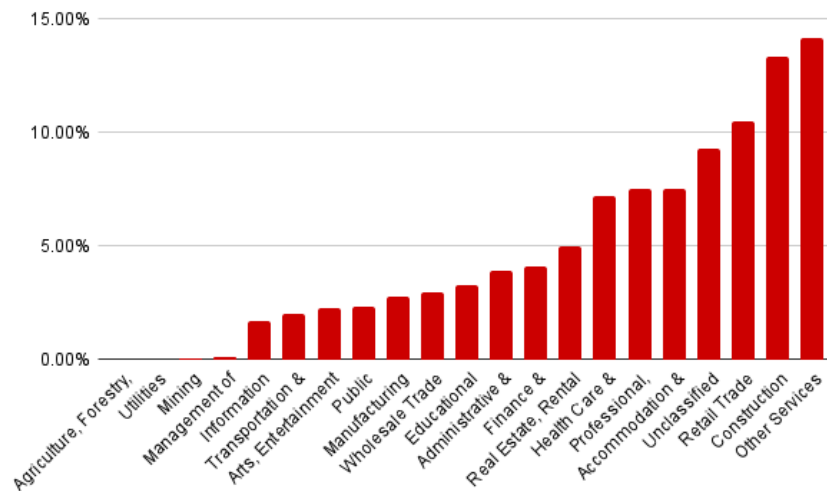
### Overall Share of Industries by Number of Employees in Medford for 2020

Source: Infogroup (2020) calculated using ESRI's data allocation method.



### Overall Share of Industries by Number of Businesses in Medford for 2020

Source: Infogroup (2020) calculated using ESRI's data allocation method.



According to 2020 business data from ESRI and Infogroup, there are 1,867 businesses in Medford that employ 20,076 people. These businesses contributed to overall sales of approximately \$4 billion dollars in 2020. The industries with the highest number of individual businesses include construction (237 establishments or 13%), retail trade (186 or 10%), professional, scientific and technical services (134 establishments or 7%), accommodation and food services (134 establishments or 7%), and health care and social assistance (128 establishments or 7%). As noted above, the construction, retail trade, and accommodation and food service industries are all major Medford employers.

### *Retail Businesses*

A leakage analysis, which compares retail spending for Medford residents at any business with the total income for Medford businesses, identifies a net outflow of \$266 million for 2020. This signals that there is significant potential for businesses to capture more spending from Medford residents and that Medford residents routinely make purchases outside of the city.

Beer, Wine, and Liquor Stores show the largest gap, with \$134 million in spending moving from Medford to other communities. General Merchandise Stores<sup>10</sup> are a distant second, with a \$20.7 million leakage.

Medford's Grocery Stores, Clothing and Accessories Stores, and Non-Store Retailers<sup>11</sup> have the largest surplus, meaning they likely attract consumers from beyond Medford's border. These are the only three industry groups that contribute to the retail surplus in the city. CVS and other big box retailers are some of the top revenue generators in Medford. They are positioned as economic assets that draw people from the surrounding area.

The Food Services, Liquor Stores, and General Merchandise Stores produced a surplus of \$150 million dollars in 2020. These retail sectors are projected to grow substantially until at least 2025.<sup>12</sup>

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<sup>10</sup> This U.S. industry comprises establishments primarily engaged in retailing new goods in general merchandise stores (except department stores, warehouse clubs, superstores, and supercenters). These establishments retail a general line of new merchandise, such as apparel, automotive parts, dry goods, hardware, housewares or home furnishings, and other lines in limited amounts, with none of the lines predominating.

<sup>11</sup> Electronic shopping, mail in orders, vending machine operations and direct selling establishments.

<sup>12</sup> Based on ESRI forecasts for 2025, which is derived from the 2018 Consumer Expenditure Surveys, Bureau of Labor Statistics.

### Top Contributing Industry Groups Contributing to Retail Surplus and Leakage

Source: BLS Consumer Expenditure Surveys (2017), Esri Business Analyst (2021)

Industry Group	Retail Gap
<b>Surplus</b>	
Beer, Wine & Liquor Stores	-\$134,081,095
Other General Merchandise Stores	-\$20,743,269
Special Food Services	-\$1,135,383
<b>Leakage</b>	
Grocery Stores	\$74,616,643
Clothing and Accessories Store	\$54,073,362
Non-Store Retailers	\$37,260,501
Motor Vehicle & Parts Dealers	\$32,340,189
Restaurants and Other Eating Places	\$28,775,235

# LAND USE

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## Introduction

Planning for and regulating land use in a municipality were the original purposes of comprehensive planning. For a growing community, the need to connect new development to existing infrastructure, services, neighborhoods, and commercial areas is critical. For existing cities, such as Medford, understanding the use of land is the key to preservation of valued community resources (historical buildings, unbuilt open space, and recreation areas) and continuing to grow in a manner that meets City goals for housing, economic development, and expanded community amenities.

With the increasing understanding of the impacts of climate change and a renewed focus on how past decisions about land use have had long-term impacts on community health and wealth, decisions about the regulation of land have become more complex. Cities have a unique opportunity to build development standards into their zoning ordinance that will help address the negative impacts of climate change and existing inequities. These standards include addressing heat islands, stormwater from increased precipitation events, and floodwaters from sea level rise that will affect the Malden and Mystic Rivers. Medford's existing linkage program offers an unusual opportunity to address some of these needs. Opportunities to rethink the types of housing permitted in Medford, and the recently adopted Inclusionary Housing Ordinance can help address the established need for housing that is affordable across income levels.

Most of Medford's built land is devoted to residential land use. As this planning process continues, understanding where and how more housing can be added is critical. Vacant parcels in all the land use categories described below offer opportunities for creative land uses that can support housing and economic development while providing areas for both stormwater retention and infiltration and pocket parks for community gathering spaces.

## Historic Development Pace

The data from the City Assessors' Office also provides the year built for the existing buildings. This information does not provide a perfect understanding of the pattern of development within the City, as some earlier buildings may have been lost and other buildings may have been significantly updated. However, the information does provide a general picture of how the City grew over time.

Three buildings from the 1600s are listed in the Assessors' data and another 16 were built during the 1700s. Of the buildings built in the 1800s, 713 remain. Together, these three centuries represent just over 5% of the City's current building stock.

The pace of building increased significantly in the early 1900s. 1910 was the year built for 2,760 structures, the highest of any single year. The second highest is 1900, with 1,564 structures and 1920 with 1,362 structures. The pace of building starts to diminish after the 1920s and slows down considerably by the turn of the century. During the 1900s, 12,555 of the structures in the database were built, just over 92.5% of the total structures in Medford. 8,584 structures, or 63% of the total structures in Medford today, were built from 1900-1929.

By contrast, only 283 structures have been built in the 21<sup>st</sup> century, just over 2% of the total structures in Medford today.

### Historic Pace of Development

*Source: City of Medford, Assessor's Office*

Timeframe	# of Buildings	% of Total
1600-1899	732	5%
1900-1929	8,584	63%
1930-1959	2,808	21%
1960-1999	1,163	9%
2000-2017	283	2%
	13,570	100%

## Historic Development Patterns

The Assessors' data is current as of 2017. *Note: Need to confirm this. That is the latest date listed for years built.*

The City has continued to approve new development and rehabilitation, including the following:

### Development in Medford: 2017-2020

Source: City of Medford

Address	Status	Year Approved	
30-36 Salem St.	Under Construction	2020	One story addition and expansion of existing structure to create 4-story, mixed-use building. First floor commercial space; 9 residential units.
278 Middlesex Ave.	Under Construction	2020	New gas station at existing BJ's Wholesale location.
541-551 Winthrop St.	Under Construction	2020	New road (Mary Kenney Way) and 10 single-family homes.
170 Governors Ave. Medford Surgery Center/Lawrence Memorial Hospital.	Under Construction	2019	Renovate and addition for ambulatory care center at existing hospital.
111 High St.	Under Construction	2019	Construction of new library in existing location
85 Station Landing	Under Construction	2018	New Marriott Hotel
61 Locust St.	Under Construction	2018	Mixed use: ground floor retail and 350 apartments (35 affordable)
87 Medford St.	Under Construction	2018	Mixed use: retail and residential (55 units)
236-240 Salem St.	Under Construction	2017	4 story residential
320 Middlesex Ave.	Under Construction	2017	Building 3 of 5 condominium buildings (first 2 completed).
590 Boston Ave.	Appealed.	N/A	40 residential units and ground floor retail space in Industrial zoning district.
4000 Mystic Valley Parkway	Under Review	N/A	Proposed 40B filed in 2020, 380 units. City's invocation of safe harbor is on appeal with the State
970 Fellsway	Under Review	N/A	Proposed 40B filed in 2020, 278 units. City's invocation of safe harbor is on appeal with the State
280 Mystic Avenue	Under Review	N/A	Proposed 40B filed in 2020, 378 units. City's invocation of safe harbor is on appeal with the State



## Existing Land Use

This analysis of the existing land uses within Medford divides land use into seven major categories with associated subcategories. The six categories are as follows:

- **Residential** – This category includes single-family, two-family, three-family, apartments, condominiums and associated land and structures, congregate housing (including dormitories and parsonages/rectories), and residential land (including accessory with improvements, developable, potentially developable, and undevelopable).
- **Commercial** – This category includes retail and restaurant, services and medical (including medical offices and the Lawrence Memorial Hospital), Office, and Commercial land (including developable, potentially developable, and undevelopable).
- **Cultural/Educational** – This category includes all schools, auditoriums, and libraries (including both municipal buildings and those related to Tufts University). It also includes historic and cultural organizations where identifiable from the records.
- **Industrial** – This category includes general industrial properties, automotive uses, lots used solely for parking, utility, and industrial land (including developable and potentially developable)
- **Commonwealth of Massachusetts** – This category include land owned by the MBTA, the Department of Conservation and Recreation, and MassHighway.

*Note: Much of this land will include Open Space and Recreation; this is further analyzed in the Open Space section.*

- **Municipal** – This category currently includes the fire stations and one other City parcel. The category includes land coded as Vacant; some of these sites have buildings.

*Note: The municipal category requires further confirmation.*

- **Land without a Land Use Code** – The majority of this land is likely to be rights-of-way.

*Note: Some uncoded land appears to include structures and privately-owned land, which warrants further investigation.*

These land use categories were evaluated on three different characteristics:

- The area of the parcel dedicated to the land use
- The total value of the land and buildings (in existing) on the parcel
- The number of built square feet
- Whether the parcel was nonconforming in terms of lot area based on the information in the Assessors' database.

In terms of acreage, the single largest use of land in the City is land without a land use code, which is assumed to be the rights of way for the street.

The next single-highest use of land is single-family residential, which is 20% of the total land and 57% of the total amount of land devoted to residential use. The next highest use of land is two- and three-family houses and apartments of fewer than four units. These grouped uses are 11% of the total land and 30% of residential land. **Residential**, including all subcategories, is 35% of the total land in Medford. It is 85% of the total assessed value of the City and its built square footage is 83% of the total square footage in the City.

**Commercial**, including all subcategories, is 5% of the total land, 7% of the total assessed value, and 8% of the total built square footage. Retail/restaurant (which includes related uses such as the two hotels) is 43% of commercial land and 44% of its total valuation. Office is second at 42% of commercial land and 46% of its total assessed valuation. Retail/restaurant has more built square footage than office at 48% to 43% of total commercial built square footage, respectively.

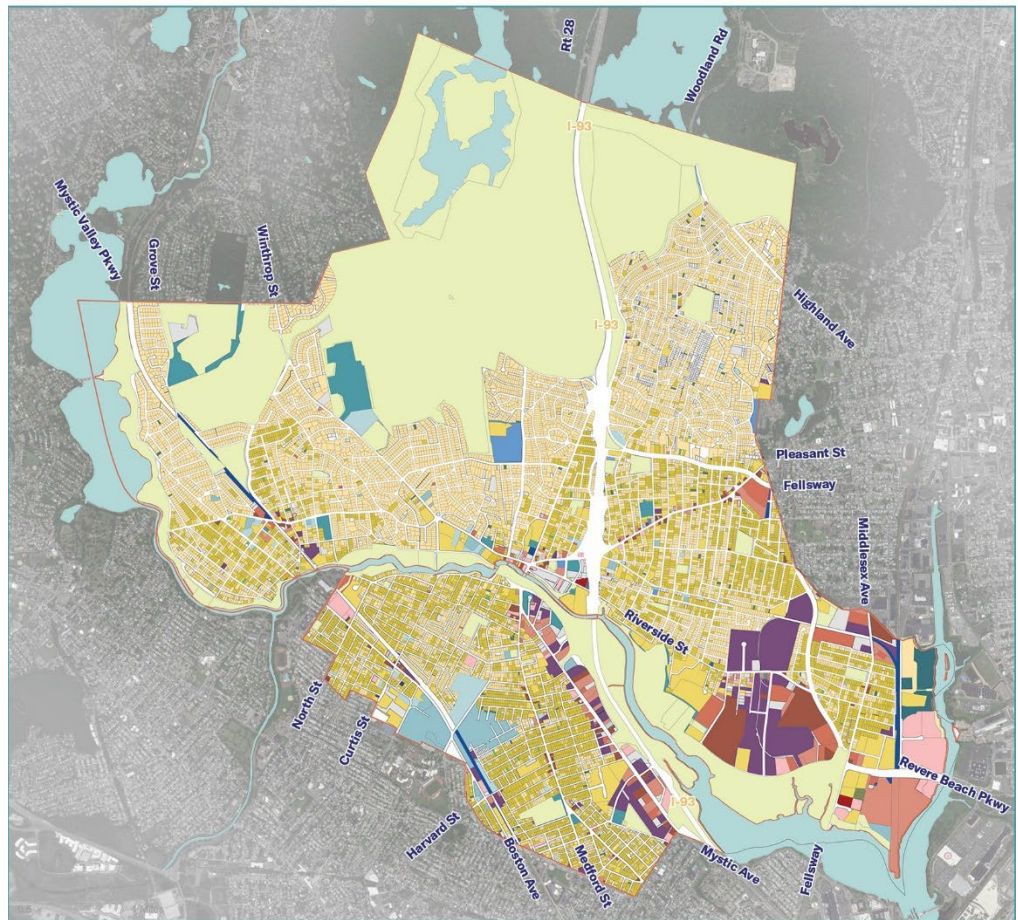
**Cultural/Educational** is 6% of the total land, 4% of the total assessed valuation, and 4% of the total built square footage. This category also includes vacant land attributed to Tufts University.

**Industrial** is 3% of the total square footage of land in the City, 3% of its total assessed value and 5% of its total square footage. This reflects the lower value of industrial properties relative to residential or commercial and the underutilization, relative to assessed value, of uses such as surface parking lots.

Land in use by the **Commonwealth of Massachusetts** is 3% of the total square footage of land in the City, and, because state-owned land is not generally taxable, less than 1% of its total assessed value and less than 1% of its built square footage.

Land in use by the **City of Medford** is 4% of the total square footage of land in the City, and, because this land is also not taxable, 1% of its total assessed value and less than 1% of its built square footage.

## Land Use in Medford



- |   |  |
|---|--|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #4682B4; border: 1px solid black;"></span> Cultural/Education        | <span style="display: inline-block; width: 15px; height: 10px; background-color: #FFD700; border: 1px solid black;"></span> Residential - medium density     |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #008080; border: 1px solid black;"></span> Hospital                  | <span style="display: inline-block; width: 15px; height: 10px; background-color: #FFA500; border: 1px solid black;"></span> Residential - high density/group |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #FF4500; border: 1px solid black;"></span> Hotels                    | <span style="display: inline-block; width: 15px; height: 10px; background-color: #FF8C00; border: 1px solid black;"></span> Residential - mixed-use          |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #4B0082; border: 1px solid black;"></span> Industrial                | <span style="display: inline-block; width: 15px; height: 10px; background-color: #8B4513; border: 1px solid black;"></span> Commercial/Retail                |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #008080; border: 1px solid black;"></span> Municipal/Government      | <span style="display: inline-block; width: 15px; height: 10px; background-color: #D2691E; border: 1px solid black;"></span> Automotive                       |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #FF6347; border: 1px solid black;"></span> Office                    | <span style="display: inline-block; width: 15px; height: 10px; background-color: #F0E68C; border: 1px solid black;"></span> Open Space                       |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #4169E1; border: 1px solid black;"></span> Public Service            | <span style="display: inline-block; width: 15px; height: 10px; background-color: #A9A9A9; border: 1px solid black;"></span> Vacant                           |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #FFD700; border: 1px solid black;"></span> Residential - low density |  |

### Total Land Use in Medford

Source: City of Medford, Assessors' Office

Land Use Categories	Area (sq. ft.)	% of Total
<b>No LUC</b>	<b>90,209,518</b>	<b>37%</b>
<b>Residential</b>		
Single-family	48,286,369	20%
2-3 Family and Apartments <4 units	25,598,170	11%
Multifamily (4+ units)	7,301,368	3%
Residential Land	3,249,834	1%
Congregate Housing	1,007,700	0%
<i>Total Residential</i>	<b>85,443,440</b>	<b>35%</b>
<b>Commercial</b>		
Retail/Restaurant	5,165,938	2%
Services and Medical	935,757	0%
Office	5,065,572	2%
Commercial Land	932,910	0%
<i>Total Commercial</i>	<b>12,100,177</b>	<b>5%</b>
<b>Cultural/Educational</b>	<b>15,502,072</b>	<b>6%</b>
<b>Industrial</b>		
General Industrial	5,027,056	2%
Industrial Land	64,228	0%
Automotive	1,594,743	1%
Parking Lots	209,353	0%
Utility	899,821	0%
<i>Total Industrial</i>	7,795,201	3%
<b>Commonwealth of MA</b>	<b>21,228,266</b>	<b>9%</b>
<b>City of Medford</b>		
Municipal	1,453,319	1%
Municipal land	7,279,448	3%
<i>Total City of Medford</i>	<b>8,732,767</b>	<b>4%</b>
<b>Grand Total</b>	<b>241,011,441</b>	<b>100%</b>

### Total Assessed Value in Medford

Source: City of Medford, Assessors' Office

Land Use Categories	Total Assessed Value (\$)	% of Total
<b>No LUC</b>	<b>\$708,900</b>	<b>0%</b>
<b>Residential</b>		
Single-family	\$4,010,140,400	38%
2-3 Family and Apartments <4 units	\$3,305,251,700	31%
Multifamily (4+ units)	\$1,594,651,500	15%
Residential Land	\$29,799,300	0%
Congregate Housing	\$77,976,600	1%
<i>Total Residential</i>	<b>\$ 9,017,819,500</b>	<b>85%</b>
<b>Commercial</b>		
Retail/Restaurant	\$290,050,300	3%
Services and Medical	\$89,948,900	1%
Office	\$334,127,000	3%
Commercial Land	\$15,856,900	0%
<i>Total Commercial</i>	<b>\$729,983,100</b>	<b>7%</b>
<b>Cultural/Educational</b>	<b>\$448,763,600</b>	<b>4%</b>
<b>Industrial</b>		
General Industrial	\$180,671,800	2%
Industrial Land	\$987,900	0%
Automotive	\$81,018,000	1%
Parking Lots	\$5,780,800	0%
Utility	\$5,184,400	0%
<i>Total Industrial</i>	<b>\$273,642,900</b>	<b>3%</b>
<b>Commonwealth of MA</b>	<b>\$27,524,800</b>	<b>0.3%</b>
<b>City of Medford</b>		
Municipal	\$ 14,480,100	0%
Municipal land	\$ 52,078,100	0%
<i>Total City of Medford</i>	<b>\$66,558,200</b>	<b>1%</b>
<b>Grand Total</b>	<b>\$10,565,001,000</b>	<b>100%</b>

### Total Built Square Footage in Medford

Source: City of Medford, Assessors' Office

Land Use Categories	Total Built Square Footage	% of Total	# of Nonconforming Parcels
<b>No LUC</b>	<b>0</b>	<b>0</b>	<b>28</b>
<b>Residential</b>			
Single-family	24,991,883	40%	3,753
2-3 Family and Apartments <4 units	23,316,169	37%	1,183
Multifamily (4+ units)	2,832,074	5%	121
Residential Land	5,064	0%	562
Congregate Housing	722,876	1%	7
<i>Total Residential</i>	<b>51,868,066</b>	<b>83%</b>	<b>5,626</b>
<b>Commercial</b>			
Retail/Restaurant	2,319,760	4%	26
Services and Medical	439,427	1%	5
Office	2,086,883	3%	9
Commercial Land	-	0%	42
<i>Total Commercial</i>	<b>4,846,070</b>	<b>8%</b>	<b>82</b>
<b>Cultural/Educational</b>	<b>2,447,461</b>	<b>4%</b>	<b>19</b>
<b>Industrial</b>			
General Industrial	2,451,187	4%	13
Industrial Land	-	0%	7
Automotive	589,156	1%	12
Parking Lots	-	0%	3
Utility	13,420	0%	6
<i>Total Industrial</i>	<b>3,053,763</b>	<b>5%</b>	<b>41</b>
<b>Commonwealth of MA</b>	<b>44,325</b>	<b>0.1%</b>	<b>14</b>
<b>City of Medford</b>			
Municipal	91,605	0%	0
Municipal land	-	0%	166
<i>Total City of Medford</i>	91,605	0%	<b>166</b>
<b>Grand Total</b>	<b>62,351,290</b>	<b>100%</b>	<b>5,976</b>

Table 3 includes a calculation of the number of parcels that are nonconforming to their zoning districts. The Assessors' Office includes a column for the minimum lot size based on the zoning district in which the parcel is located. This minimum was compared to the size of the parcel. Most of the nonconforming lots are unbuilt.

While no immediate conclusions are appropriate, undersized lots could present an opportunity to address some of the land use challenges likely to be identified by this planning process. If the only restriction on building is the nonconformity of the lot size, it may be possible to repurpose those lots for pocket packs, stormwater storage and management, infill housing, or other uses that could fulfill City goals.

## Land Use Regulations

The City of Medford is undergoing a recodification process to its Zoning Ordinance.

*Note: This analysis is based on the existing ordinance (2019) and will be updated based on conversations with the City and the progress of the recodification process during this planning process.*

The City has the following standard zoning districts:

- Recreational Open Space (ROS) – Residential
- Single Family 1 (SF-1) – Residential
- Single Family 2 (SF-2) – Residential
- General Residence (GR) – Residential
- Apartment 1 (APT-1) – Residential
- Apartment 2 (APT-2) – Residential
- Apartment 3 (APT-3) – Residential
- Commercial 1 (C-1) – Commercial
- Commercial 2 (C-2) – Commercial
- Industrial (I) – Industrial
- Office (O) – Office/light manufacturing
- Mixed-use (MUZ) – Office and commercial

The residential districts are defined by the allowable density of residential development, for example, single-family detached homes are permitted in SF-1, SF-2, GR, APR-1, and APT-2, but not APT-3. Tall multifamily dwellings (up to 75 feet/six stories) are allowed in APT-2, APT-3, and C-1.

The primary difference between C-1 and C-2 is the ability to apply for a special permit from the City Council for uses in C-2 that are not permitted in C-1. This includes some auto-oriented uses and adult uses. Manufacturing is permitted in C-2 by special permit for the Board of Appeals (and is by right in Industrial, Office, and MUZ, with conditions).

Parking and loading requirements are incorporated into the Table of Use regulations.

The table of dimensional standards governs dimensions by both district and use, rather than just district. For example, detached single-family dwellings have one set of dimensional standards in the SF-1 district and another for the remaining districts. The only difference is the area per dwelling unit; the other standards remain the same.

Unlike the other districts, the MUZ District has a dedicated section with development standards, including requirements for landscaped open space; floor area ratio; setbacks that accommodate buildings on multiple lots and relationships for multiple buildings in a single development; and parking and loading requirements. Additional standards have been removed from the ordinance.

The zoning map referenced in the ordinance is dated April 13, 1965.

The City has three special permit-granting bodies: City Council, the Community Development Board, and the Board of Appeals. In the Table of use regulations, SPC identifies a use that required a special permit from the City Council and SPA identifies a use that requires a special permit from the Board of Appeals. “Yes” indicates that a use is permitted by right in that district; “No” means the use is forbidden in that district. The Community Development Board is the Planning Board and handles site plan review, a special permit under Medford’s zoning ordinance, and subdivision control, including subdivisions for which approval is not required.

The City has a linkage fee that provides funds for capital improvements to parks and public recreational facilities as a condition of approval for projects that meet certain thresholds: nonresidential projects of 10,000 SF or more and residential project that create six or more dwelling units (or six or more buildable lots). Other thresholds include the need for a density bonus, variance, special permit, or zoning map amendment for non-exempt projects of 5,000 square feet or more.

Recent amendments to the zoning code include an ordinance for marijuana establishments adopted in November 2020 and an inclusionary housing ordinance adopted in February 2019. The City did extensive work on the Mystic Avenue Corridor in 2018. Although the proposed zoning was withdrawn, the results of the study will be reviewed as part of this planning process.



## Land Use Recommendations

*Note: This will be populated with additional recommendations as the land use implications from the other plan topics are further explored during this process.*

The following recommendations are from an initial conversation with City staff and will guide the next stage of analysis. The analysis will confirm, modify, or augment this list.

The City is undertaking a recodification process that will address outdated language and a lack of internal consistency in some section. The recodifications is expected to be complete in summer 2021. This planning process will review the results in depth to identify areas of specific additional change. Some potential areas of change include the following:

- Develop an overall vision for land use within the City, considering squares, corridors, open spaces, and areas that are primarily residential.
- Identify appropriate housing types between four-family and the more recent large developments to address a missing segment of housing typology and affordability.
- Consider incorporating mixed-use into Medford's corridors and square while addressing the need to preserve commercial space (especially ground floor) and areas that are not well-served by public transit.
- Consider how land use controls can help create cohesive development along the corridors.
- Balance as-of-right uses with appropriate land use controls.
- Consider updating industrial areas to address new types of industry that can mix with other land use types.
- Address inconsistencies between current and past land use and current zoning ordinance (for example, proposed Office 2 district).
- Consider allowing smaller, infill housing on nonconforming lots to add to housing stock.
- Re-evaluate proposed zoning changes to Mystic Avenue and consider how this corridor relates to the rest of the city.
- Review linkage requirements and fees.
- Evaluate current level of density in areas served by or to be served by transit and consider both an increase in density and how that increase will interact with areas of lower density.
- Review process for site plan/special permit approval and consider whether the process can be streamlined.
- Review impact of inclusionary housing ordinance and consider changes, such as cash-in-lieu for units or partial units.

# ECONOMIC DEVELOPMENT AND HOUSING

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## Introduction

Economic conditions in Medford reveal a growing and increasingly regional city with many existing assets and opportunities for further development across eight central business districts, each with its own unique character. Prominent institutions, including Tufts University, anchor the city's cultural and economic identity. Already a regionally oriented city with 92% of employed residents working in other municipalities, Medford's prominence in the Boston metro area will expand further with the GLX expansion into the city's Hillside district. Within Medford, a thriving economic base led by the construction, retail, and professional service sectors brings in more than \$4 billion in annual sales. These and other assets serve as a strong foundation for future economic development across Medford.

The city faces various challenges and opportunities for development, many of which have been identified through previous planning processes. Citywide, zoning remains a barrier for new development, particularly in the eight business districts where multifamily and mixed-use residential development is prohibited. Recent efforts to incorporate zoning changes, such as *the 2018 Mystic Avenue Rezoning Proposal*, failed in response to community concerns. City leadership has targeted several underutilized parcels for redevelopment – particularly surrounding transit hubs and corridors – but many of these plans remain unrealized. Walkability and bikeability have improved over time but gaps in amenities for pedestrians and cyclists remain. There is an ongoing need for improved bike lanes and sidewalks, safe traffic crossings, public seating, and attractive green space and lighting to encourage access to small businesses and economic growth in commercial districts.

Affordable housing is an ongoing challenge in Medford. There are as many as 7,500 more low-income households than there are subsidized units. Recent initiatives have made strides to increase the affordable housing stock, like inclusionary zoning provisions and the addition of more than 1,000 affordable units to the development pipeline. Barriers to affordable housing include the lack of multi-family zoning and the 'missing middle' of housing options such as duplexes and townhomes.

Economic development is increasingly tied to social justice, as jurisdictions around the country now recognize the links between racial inequity and economic outcomes. Medford recently declared its commitment to social justice with the release of its *2020 Social Justice Roadmap*, specifically identifying housing and economic development as areas of high priority for social justice-oriented developments. Many previous plans and recommendations in Medford have not contained an explicit focus on social justice goals. New data on social justice indicators will be required to integrate this vision with ongoing economic development efforts.

## Community Development Initiatives

### Business Support Initiatives

Various local, state, and federal assistance programs are an important part of economic development in Medford. These programs provide critical funding, technical assistance, and other resources to Medford businesses. With these resources, businesses in Medford (especially small and minority/women-owned [MWBE] businesses) can grow and expand along multiple axes, including infrastructure, workforce development, online presence, and other business development efforts.

As the primary entity which represents and advocates for local businesses, the Medford Chamber of Commerce is the city's leader of business development. Many of Medford's businesses are Chamber of Commerce members and their leaders sit on various committees, including Communications, Government Affairs, and Strategic Planning. Through membership on committees and resources provided by the Chamber of Commerce, businesses are provided with a platform to engage with high-level government officials to advocate for solutions to their concerns. The Medford Business and Economic Development Committee (BEDC), a temporary mayoral committee created by former Mayor Burke in 2016, was another important resource that has an ongoing impact in Medford. This committee was tasked with finding ways to advance economic development across Medford and produced a comprehensive report with analysis and recommendations. Although the committee was dissolved after publishing this report, many of its recommendations have been implemented through municipal action over the past five years.

At the state level, two entities support business development in Medford: MassDevelopment, the state's finance and development agency, which invests in businesses and enterprises across the state; and the Massachusetts Growth Capital Corporation (MGCC), which offers similar services to MassDevelopment with a focus on small businesses, MWBEs, and low- and moderate-income communities. Ongoing state support is available for entrepreneurs and MBE (minority-owned business enterprise) and WBE (women-owned business enterprise) businesses in Medford. The Massachusetts Supplier Diversity Office grants certifications to businesses owned and operated by racial minorities and women. To date, there are 16 certified MWBEs in Medford (eight MBE and eight WBE). There are many other minority- and women-owned businesses in Medford that do not have MWBE certification, as this certification has little value to businesses that do not offer services that are procured by the government.

Massachusetts has several programs for small businesses and entrepreneurs. MassDevelopment offers the Collaborative Workspace Program which provides grants to coworking spaces who effectively support small businesses. MGCC's Small Business Technical Assistance Grant funds technical training and assistance for small businesses, especially those run by women, minorities, and veterans. MGCC is also in the process of establishing the Biz-M-Power program, which will link entrepreneurs with crowdfunding sources to launch their businesses and match capital raised through crowdfunding. Currently, the City does not offer dedicated funding and workforce development resources for small and MWBE

businesses. While state-level programs to support these enterprises are robust, the absence of local resources tailored to Medford businesses is a potential barrier to accessing support for some local enterprises.

A wealth of resources to support businesses emerged during the COVID-19 pandemic. Medford created its own Small Business Assistance Grant and Microenterprise Relief Grant Programs which committed up to \$10,000 per eligible small business impacted by COVID-19 to help cover the financial strain of rent/mortgage payments and utility costs. The City committed \$325,000 for distribution to small businesses across two rounds of funding through these grant programs. MassDevelopment and MGCC each offered COVID-19 relief programs, for which Medford businesses were eligible. Many of the federal Small Business Administration (SBA) programs were also available to Medford businesses during this crisis, including the Paycheck Protection Program, the Shuttered Venue Operators Grant, the Restaurant Relief Fund, the Economic Injury Disaster Loan, and debt relief for impacted businesses.

### **Green Line Extension (GLX)**

MBTA's Green Line in Boston runs throughout the city, from Boston College/Cleveland Circle/Riverside/Heath Street to the West and South to Lechmere in the Northeast, with stops in key downtown Boston locations. In 2017, the MBTA awarded a \$2.3 billion contract to relocate Lechmere Station and extend the Green Line Northwest to Medford, with six new stops added. The extended Green Line, scheduled to open in December 2021, will end at College Avenue in Medford. This stop, at the intersection of College and Boston Avenues, will directly serve the Hillside business district and is adjacent to the main campus of Tufts University.

Hillside has the potential to expand into a transit-oriented neighborhood built around the new Green Line stop. Although much of the current housing is single-family, there are several vacant or underutilized lots with development potential. The area's proximity to Tufts University, which also owns many nearby properties, creates an opportunity for partnerships between the City and Tufts to support amenities and attractions that fully optimize the benefits of the GLX. Due to the Complete Streets program, an initiative funded by the Massachusetts Department of Transportation to make streets safe and accessible for all travel modes and people of all ages and abilities, the area also has strong bike and pedestrian infrastructure, making it one of Medford's most walkable districts.

The primary challenge stemming from the GLX project is connectivity with Medford's other districts. The three largest districts for commercial activity (Medford Square and East Medford/Wellington) are not within walking distance of the Green Line stop. While grant funding received from the state for the Complete Streets program improved pedestrian infrastructure in Hillside, much of Boston Avenue near the stop remains unfriendly to pedestrians due to poor lighting, a lack of greenery and seating, and safety concerns.

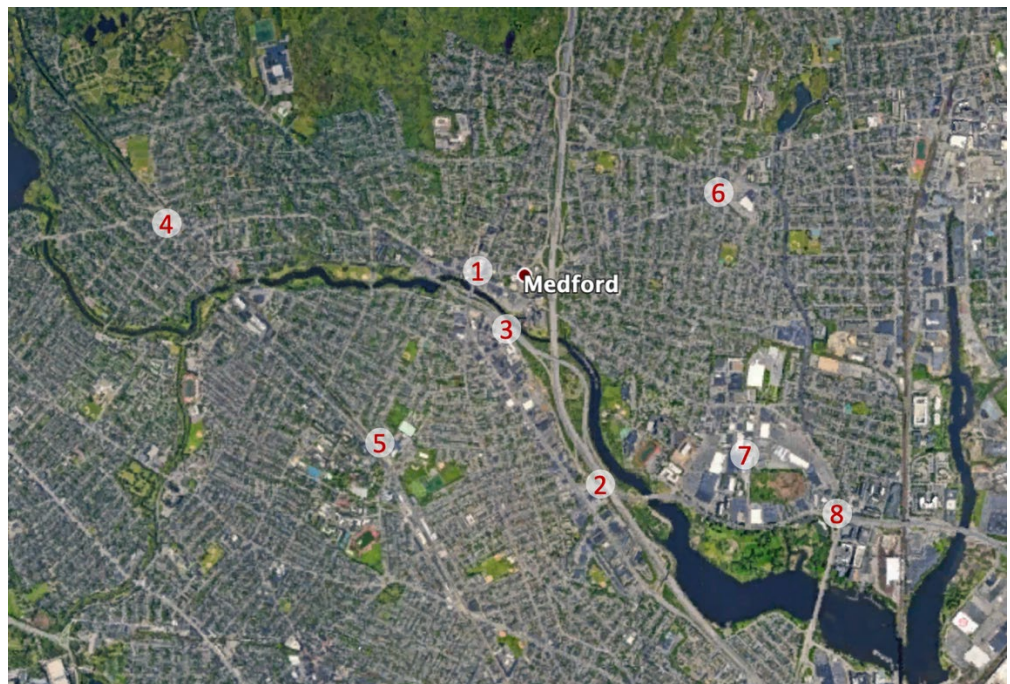
## Locations of Interest

### Neighborhood Business Districts

Much of Medford's economic activity takes place in eight central business districts across the city. Each of these districts has a distinct character and economic profile, as well as various assets and opportunities for improvement (as detailed in the table below). Many past economic development initiatives have focused on one or more of these districts, although they do not represent all of Medford. Many social, cultural, and economic assets exist elsewhere in the city.

### **Medford Neighborhood Business District Map**

*Source: Google Earth.*



### Medford Neighborhood Business District Key Characteristics

Source: Esri Business Analyst (2021).

Geography	Businesses	Employees	Total Sales
Medford Square (1)	327 (18%)	2,855 (15%)	\$365,000,000 (9%)
South Medford (2)	110 (6%)	526 (2%)	\$82,000,000 (2%)
Mystic Avenue Corridor (3)	120 (6%)	775 (4%)	\$215,000,000 (5%)
West Medford (4)	79 (4%)	509 (2%)	\$85,000,000 (2%)
Hillside (5)	70 (4%)	265 (1%)	\$37,000,000 (<1%)
Haines Square (6)	158 (8%)	802 (4%)	\$271,000,000 (6%)
East Medford (7)	67 (3%)	2,087 (10%)	\$561,000,000 (14%)
Wellington (8)	121 (6%)	1,704 (8%)	\$330,000,000 (8%)

*Note: Each figure is represented as a raw number and a percentage of Medford totals. Figures in this table represent economic activity within a five-minute walk of the center of each business district and do not necessarily represent all economic activity in each district. There is also some overlap in figures shown for adjacent districts.*

### *Medford Square*

As the historic and geographic center of Medford with a thriving commercial base, Medford Square is the most prominent of the city's business districts. With several mixed-use commercial arteries including Main Street, Salem Street, Riverside Avenue, and High Street branching out from the Square's central intersection, this district is a hub of restaurants, retail amenities, office space, and civic institutions – and one that has become more pedestrian friendly in recent years.

Medford Square's several assets include its historic character and commercial amenities that attract locals and visitors alike. Its proximity to the Mystic Riverfront is an attraction for visitors and offers potential for future waterfront activation. The City has been exploring potential for mixed-use development of three City-owned parking lots; however as of 2021, no plans have been announced.

The Square also has ongoing challenges, highlighted in previous plans. Zoning regulations currently prohibit mixed-use development. Recent changes have improved walkability and pedestrian safety, but heavy car traffic, large parking lots, a lack of amenities such as seating and a focus of ground-floor offices instead of retail space remain a deterrent to pedestrians. Medford Square's residents have a median household income of about half of Medford as a whole, partially due to the presence of a large Medford Housing Authority public housing complex, indicating potential socioeconomic vulnerability among those who live in this district.

### *South Medford/Mystic Avenue Corridor*

South Medford and the Mystic Avenue Corridor are adjacent business districts along Mystic Avenue between Main Street and the I-93 interchange. Although these are distinct districts, they share much of the same character and opportunity. These districts are oriented to the car traffic along Mystic Avenue and I-93. The area is largely commercial and industrial, scattered with parking lots but few pedestrian amenities. Businesses in these districts are mainly industrial and service-oriented, with an abundance of auto-related uses such as dealerships and mechanics.

A key opportunity in this corridor is its connectivity to other districts and the Boston metro region via car and bus transit, as well as the forthcoming Green Line stop in nearby Hillside. The thriving auto-oriented services in the area attract customers and earn revenue.

Both districts' primary challenge is zoning, as they are currently zoned for industrial uses and do not allow residential use. A 2019 proposal to rezone Mystic Avenue to allow for expanded residential, commercial, and civic uses was withdrawn following public controversy. Aside from the zoning challenge, these districts lack pedestrian and cyclist amenities such as bike lanes and sidewalks, benches, and wayfinding signage.

### *West Medford*

West Medford consists of a commercial and civic stretch along High Street between Grove and Allston Streets. This district is lower density and contains a stretch of small businesses, like restaurants and coffeeshops, as well as prominent civic institutions, like Brooks Elementary School and the Sanctuary United Church of Christ. Additionally, the regional MBTA West Medford stop is at the intersection of High Street and Playstead Road.

Transit connectivity is West Medford's greatest asset: the MBTA stop and bus line along High Street provide both local and regional access. Relative to Medford's other districts, West Medford is also comparatively walkable, with sidewalks in both directions, frequent pedestrian crossings and a low speed of traffic along High Street. The district's connectivity and low density make it a prime site for transit-oriented infill development. Several lots, including the Walgreens and United States Postal Service buildings, have been identified by the City since at least 2016 as ideal sites for mixed-use redevelopment, although no formal plans or proposals have yet been created for these sites.

Finding new uses for these underutilized parcels is the primary challenge facing West Medford. As a multimodal transit hub, this district has potential for increased density and transit-oriented development features. The district would also benefit from increased amenities for cyclists and pedestrians, as much of High Street lacks bike lanes and public seating.

### *Hillside*

Hillside is a small but important district along Boston Avenue next to the campus of Tufts University. Populated primarily with small businesses (along with a few national chains) catering to students and faculty at the university, Hillside is the most residential area of Medford's main districts. This stretch of Boston Avenue is flanked by the Tufts campus to the south and railroad tracks to the north, which will be the route of the GLX as of December 2021. The Medford stop of the extended Green Line will be in Hillside at the intersection of Boston Avenue and College Avenue. Hillside is also undergoing bike and pedestrian improvements through the Complete Streets program.

*Note: The completion of GLX has been delayed. We should update again as we approach plan completion and remember that this plan may be complete after the GLX is operational.*

The Green Line stop will soon be Hillside's greatest asset, creating regional connectivity and making Hillside Medford's transit hub. This increased access will create opportunities for everything from transit-oriented development along Boston Avenue to possible partnerships between the City and Tufts for a life sciences innovation district in Medford.

The streetscape along Boston Avenue remains unfriendly to pedestrians, particularly due to a lack of street lighting and greenscape elements. The district's



other primary challenge is its low density and lack of connectivity with Medford's other business districts, which may reduce the positive impacts of the Green Line Extension.

### *Haines Square*

Haines Square is a commercial strip along Salem Street just south of the intersection with Fellsway Parkway consisting of big box retail and small restaurants and services. Thriving local restaurants and shops complement the large Target complex to create a dynamic retail environment.

This mix of commercial amenities is Haines Square's greatest asset: it is Medford's only business district offering both big box and local commercial amenities in one location. Additionally, bus routes along both Salem Street and Fellsway Parkway create transit connectivity to other parts of Medford.

The primary challenge faced by Haines Square is a lack of pedestrian safety and amenities: the intersection of Salem Street and Fellsway Parkway is dangerous for drivers and pedestrians alike, and Salem Street lacks important pedestrian features like greenspace and parklets, public seating, and safe crosswalks (per a recent study by students at Tufts University). There is also a large parcel currently owned by MBTA and used as a bus parking lot between the big box complex and the small businesses to the south. The City has identified this parcel as a target for redevelopment and activation, though no specific vision has yet been developed.

### *East Medford*

The East Medford Commercial/Industrial Area is a sprawling commercial and industrial complex located on Medford's eastern border. Consisting primarily of big box retail interspersed with small industrial businesses, this area is dominated by parking lots and large commercial buildings, with a few hotels and condominiums along the edges.

The thriving commercial attractions in this area are an asset, as they attract shoppers from within and outside of Medford. This district is also adjacent to Assembly Row and the Encore Boston Harbor hotel and casino, two large commercial attractions in Everett. Although not in Medford, these amenities create traffic to East Medford and are opportunities for City partnership on housing and economic development initiatives. Other East Medford assets include the adjacent Mystic Riverfront and Fellsway Park as well as several potential sites for a future life sciences innovation district.

Like other areas, this district's main challenge is zoning, which allows for commercial and industrial uses but prohibits residential development. Although East Medford has been identified as a potential mixed-use community site, zoning remains a barrier to implementation. The lack of walkability and pedestrian amenities is another challenge, as this district is neither accessible from surrounding areas nor walkable within for pedestrians.

## *Wellington*

Wellington is Medford's newest business district. Adjacent to East Medford, Wellington is currently known as Wellington Circle, a large interchange of several highways including Fellsway Parkway and Mystic Valley Parkway that sits at the southeast corner of the East Medford complex. The City has identified this interchange as an optimal site for future infill development that would transform an under-activated network of highway ramps into a mixed-use, transit-oriented residential village. An asset in Wellington is capital investment from the Encore Boston Harbor casino, which is currently funding a study to determine the feasibility of this site transformation. The primary barrier to realizing this vision is Wellington's importance to car commuters; dismantling the Wellington Circle interchange would create significant traffic disruption that would have local and regional impacts.

## **Anchor Institutions**

Tufts University is one of Medford's leading institutions. A prestigious liberal arts university in the Hillside neighborhood, Tufts is a driving force in Medford's economy. The nearly 12,000 students and 3,500 staff at the University are important customers in Medford's business districts, especially the restaurants and shops in Hillside. Tufts also produces many graduates who return to Medford and contribute to the city's economic growth through real estate development and other sectors. Tufts itself is a major player in the real estate development sphere as the owner of property around campus, including many single-family homes. There are also opportunities for future development in the relationship between the City and Tufts, including a potential innovation district for the life sciences sector. As Medford prepares for the opening of the Green Line stop in Hillside, directly across the street from the Tufts campus, the University has the opportunity to partner with the City on transit-oriented development, pedestrianization, and other improvements. A challenge for Medford is that Tufts is not required to pay property taxes due to its exempt status as a university. The University does make a voluntary Payment-in-Lieu-of-Taxes (PILOT) to Medford, but this arrangement must be renegotiated on a regular basis.

The Chevalier Theatre in Medford Square is another important institution with historical and cultural significance. First opened in 1939, the Chevalier is a spacious 1900-seat auditorium that is a source of pride and entertainment for Medford residents. The Theater continues to thrive as a venue for performances and events of all kinds, attracting locals and visitors alike. Aside from its prominence as an institution in Medford, the Chevalier is a catalyst for many of the small businesses in Medford Square, as visitors to the Theater often patronize other surrounding amenities before or after events. The Theater remained closed for most of 2020 and early 2021 due to the COVID-19 pandemic; although there are shows planned for early fall of 2021, City officials believe that the financial and social impacts of the pandemic have harmed the Theater's livelihood.

Two other important institutions are the Encore Boston Harbor casino and Assembly Row, both of which are in neighboring Everett. The Encore is a large hotel and casino complex along the Mystic River that opened in 2019, covering 33 acres

and boasting more than 650 rooms. Assembly Row is a nearby commercial plaza between the Mystic River and I-93 with a variety of shops, restaurants, hotels, and other commercial attractions. Although not within Medford city limits, both institutions' proximity to Medford create potential for commercial spillover of visitors for Medford attractions. Additionally, the Encore is funding an ongoing study to analyze the feasibility of redeveloping Wellington as a mixed-use village. Although there is potential for these attractions to draw restaurant and retail crowds away from Medford, revenue growth of nearby Medford businesses in recent years suggests that these enterprises are helped more than harmed by the presence of the Encore and Assembly Row.

## **Previous Economic Development Efforts**

Several reports and plans in recent years have recommended various initiatives to advance economic development across Medford, particularly in the eight business districts described above. In 2016, a report by former Mayor Burke's Business and Economic Development Committee identified key challenges and opportunities in these districts, setting the tone for a new phase of development efforts centered around walkability, housing, greenspace, and density. Other leading plans have focused on improving aspects of specific business districts (see the *2017 Medford Square Master Plan* and *2019 Medford Square Feasibility Study*, *2018 Mystic Avenue Rezoning Proposal*, and *2021 Salem Street Study*).

Implementation of recommendations from previous initiatives has been mixed. Medford's Complete Streets program upgraded walkability and bikeability in seven locations. A study is underway to determine the feasibility of redeveloping Wellington Circle into a mixed-use community. The ongoing Green Line Extension project will connect Medford's Hillside district to Boston's public transit system by the end of 2021. However, many recommendations outlined in earlier initiatives have yet to be realized. Examples include rezoning initiatives in districts like the Mystic Avenue Corridor, development on underutilized parcels in Medford Square and West Medford, and walkability improvements across the city.

## Real Estate Profile

Medford's industrial, office and retail real estate markets have generally followed regional trends in recent years. Overall, the industrial and office markets have improved since the 2008 recession, with moderate declines during the COVID-19 pandemic. The retail market was in a gradual decline prior to the pandemic and was not significantly impacted during this period.

### Real Estate Key Indicators

Source: CoStar Realty Information Inc. (2021).

Indicators (as of June 2021)	Industrial		Office		Retail	
	Medford	Boston Metro Region	Medford	Boston Metro Region	Medford	Boston Metro Region
Market rent	\$14/SF	\$12.50/SF	\$32/SF	\$41/SF	\$21/SF	\$24/SF
12-month change in market rent	+\$1/SF	+\$0.5/SF	+/- \$0/SF	+/- \$0/SF	-\$0.50/SF	-\$1/SF
Vacancy Rate	6%	5%	11%	10%	1%	3%
12-month net absorption	-224,000 SF	+416,000 SF	+35,000 SF	-7,000,000 SF	-60,000 SF	+151,000 SF
5-year new construction	0 SF	7,500,000 SF	140,000 SF	11,500,000 SF	300,000 SF	6,600,000 SF

Overall, Medford's industrial real estate market (which includes warehouses, laboratories, manufacturing facilities, and other similar buildings) has grown gradually over the past decade generally in line with regional trends. This market the midst of a gradual post-COVID rebound. After a large spike in the industrial vacancy rate in 2020 (up to more than 20% from around 5% in early 2020), vacancy returned to 6% as of June 2021. Although net market absorption (the net change in available real estate) over the past year remains negative by about 224,000 square feet (SF), it is trending in a positive direction after a significant decrease in 2020 of nearly 300,000 SF. Medford's industrial vacancy rates and absorption are slightly lower than the averages across the Boston metro region, which report a total vacancy under 5% and stronger absorption in the past year (about 400,000 SF absorbed).

Industrial market rents in Medford are at a 10-year high at more than \$14/SF, a figure which saw no significant changes during the pandemic and is slightly higher than the regional average of approximately \$12.50/SF. Higher rents may be due to the steady supply, as no new industrial buildings were completed in Medford between 2014 and 2021. There are several proposed life science-related industrial development projects in the pipeline in Medford, though none have yet been formally approved.

Office real estate has followed a similar growth trend over the past decade in both Medford and the broader Boston metro region. Approximately 140,000 SF of office

space has been built in Medford from 2016 to 2021. Office vacancy rates in Medford have declined from 13% to about 11% between June 2020 and June 2021, though this rate stalled during the pandemic, remaining constant for much of 2020. Rents have been largely stagnant at around \$32/SF since late 2018; however, asking rent in Medford spiked to more than \$40/SF just before the pandemic before dropping by more than 50% to about \$20/SF in 2020. This dissonance suggests localized instability in the office market during and after the pandemic. As with industrial space, these trends follow similar patterns to the Boston region but with a slightly higher vacancy rate and lower market rent in Medford than the broader region.

Medford's retail real estate is the weakest area of the city's market segments studies herein. Approximately 300,000 SF of retail space was built in Medford between 2016 and 2021. Although retail vacancy rates have remained constant year over year at just over 1%, market rents and absorption have both been in a gradual but steady decline since before the pandemic. These metrics have similarly declined throughout the Boston metro region over the same period. Overall, Medford's retail market did not change significantly throughout the pandemic, though market rents experienced a slight increase in 2021. Outside of space created in mixed-use developments, there is little retail construction in Medford's pipeline. Medford's retail vacancy rate is lower than the region (1% vs. 3%), though market rents remain lower in Medford (\$21/SF in Medford compared with \$24/SF across the region).

## Housing

In Spring 2021, the City released a draft version of its Housing Production Plan (HPP). This plan looks at the community's current housing needs and outlines strategies to create a mix of housing types for diverse populations. This section summarizes HPP's goals, findings, recommendations, and implementation considerations.

Affordable housing is a challenge in Medford. The city faces rising housing costs, constrained housing supply (especially for small households), geographic inequities, and development constraints including regulatory barriers, restrictive environmental conditions and infrastructure capacity. These issues are directly connected to the following:

- There is a mismatch between the large share of the city's younger population and the low share of multi-family housing (67% of the overall housing stock compared to the 90% in Somerville, 82% in Everett, and 77% in Watertown). The HPP recommends building smaller units (particularly studios or one-bedrooms) to free up larger units for larger households.
- There are roughly 7,500 households eligible for assistance that do not receive it because of a lack of housing supply in Medford. Almost 42% of Medford households (9,265) may be eligible for subsidized housing because they earn 80% or less than the AMI (\$66,150 for a family of four in the greater Boston area). However, there are only 1,726 units (7.2%) listed on the city's Subsidized Housing Inventory<sup>13</sup> (SHI).

Medford adopted Inclusionary Housing provisions in February 2019 that require new residential developments to include affordable units. Any project that adds ten or more housing units is subject to the inclusionary zoning requirements, including assisted living facilities. Between 10% and 15% of new units must be affordable depending on the size of the development. All affordable units must be affordable to households at or below 80% of AMI. These units must be developed on site and at the same pace as market rate units and must provide equal desirability and access to public amenities. Unlike some municipalities, Medford does not offer an in-lieu fee option that allows a developer to pay a fee to avoid the requirement, meaning all new developments with ten or more units are required to comply. As of June 2021, no new affordable units had yet been produced through the Inclusionary Zoning provision.

Housing development over the last four decades is scattered throughout the city, with concentrations in southeast Medford near Wellington and in the North Medford/Fulton Heights neighborhoods. Despite upcoming mixed-use, multi-story developments in Haines Square, South Medford and East Medford, the city still experienced low overall housing growth in recent decades. The rate of local housing production (6%, or 1,387 additional units since 2000) is lower than the 10% increase in Middlesex County and Massachusetts over the same period. Medford's 10% multi-family vacancy rate (382 vacant units) is larger than the 7% vacancy

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<sup>13</sup> SHI is a measure for the community's stock of low-or moderate-income housing for the purposes of the Comprehensive Permit Law.

observed for the same in the Boston region. This indicates lack of supply and results in pressure on housing prices. Medford has a higher proportion of renter households (43%) than do the county or state (both 38%). With a \$2,534 market rent per unit (increased from \$2,481 in 2020) and \$459,000 market sale price per unit (increased from \$442,000 in 2020), housing is too expensive for both owners and renters. As of 2019, based on the mortgage payments made by Medford residents, there is more than a \$280,000 gap between what a household earning the median income could afford and the median price for a single-family home in Medford. For renters, there is more than a \$500 gap between the median rent and what renter households could afford each month.

While only 0.41% of the city's overall area is zoned as mixed-use, over 30% of the land is zoned for single-family residential. Required setbacks, height limitations, and minimum off-street parking requirements are some of the biggest barriers to new multi-family housing development and the creation of affordable units. Other factors that limit the feasibility of housing production in Medford include development constraints in historic districts; protected open spaces; and the remediation sites that remain as an outcome of the city's long history of industrial activity and contamination.

The City has identified that Medford's housing stock features has what planners describe as a 'missing middle': a lack of housing options between single-family homes and multi-family apartment buildings, which includes duplexes and townhomes. According to the Metropolitan Area Planning Council (MAPC), more than two-thirds of Medford residents live in either a single-family home or a building with five or more units. Only 32% of residents live in structures with two to four units. These units can traditionally be common as starter homes for families or as living quarters for college student populations.

Medford's current housing goals are consistent with the Comprehensive Permit Act – a law that places regulations on the development of affordable housing in Massachusetts. Consistent with local and regional needs, the plan aims to achieve a mix of housing types for families, individuals, people with special needs, and the elderly. Proposed efforts will include planning for rental, homeownership, and other occupancy arrangements. Currently, 42% of residential structures are single-family, 27% are two-unit structures, 13% have three to 19 units, and only 18% have more than 20 units.

Medford needs 671 more SHI units to achieve the state's affordability goal of 10% affordable housing. The HPP recommends the creation of 120 affordable units annually towards this goal.<sup>14</sup> This 10% goal will help the City achieve the FHA 'safe harbor'<sup>15</sup> status. Directed by the above regulations from the state, the goals of the HPP are to address housing needs, promote a diverse and intergenerational city, foster sustainable and safe housing, integrate affordable housing options, preserve

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<sup>14</sup> There are 1,087 proposed units already in the development pipeline.

<sup>15</sup> A safe harbor is recognized by the Department of Housing and Urban Development as a standard that meets the Fair Housing Act design and construction requirements.

existing affordable housing, expand local capacity to implement housing initiatives, and promote transparency.



# MOBILITY

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## Introduction

Easy access to transportation infrastructure creates a vibrant city by facilitating economic development and a comfortable living environment. Preferred transportation modes for residents within the City of Medford have been changing for the last few centuries with advancements in technology and changes in travel patterns. These shifts have led to a patchwork of multimodal infrastructure that should be reconsidered as an interconnected network tied to a comprehensive strategy for mobility needs and improvements.

While Medford and partners have completed many studies and investigations on transportation and mobility issues in Medford, the City lacks this comprehensive strategy and set of guiding principles. In addition, the community needs to be aware of and feel confident in work done to date. This would allow the City to move into an implementation phase which will help to transform Medford's mobility for the coming century.

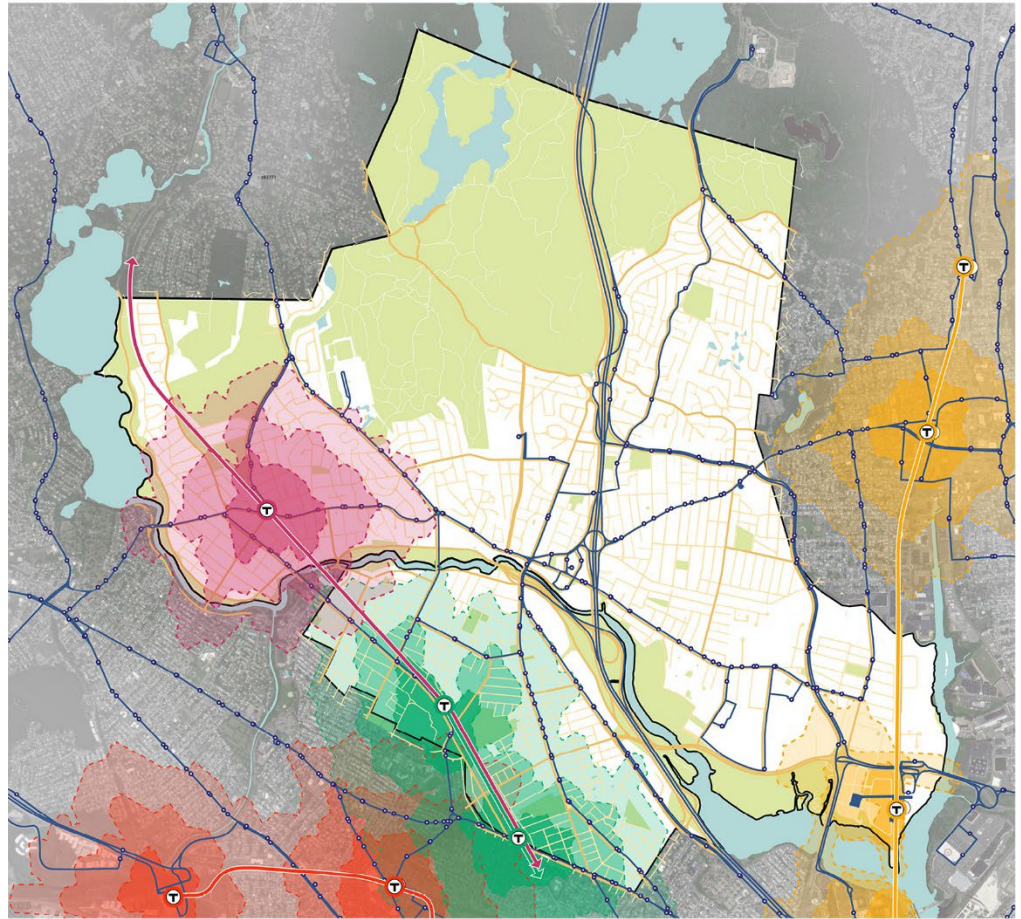
## Public Transit

Medford is in the core of the MBTA’s service area and is served by multiple modes of public transportation. Rapid transit (the Orange Line at Wellington Station) provides speedy connections to downtown Boston, Melrose, and Somerville. The Lowell Commuter Rail line, which cuts through the western half of the community, stops at West Medford Station and provides direct, non-stop access to North Station in Boston. The Green Line Extension (GLX) will provide additional connections between South Medford and Somerville, Cambridge, and Boston through new light rail in the current rail corridor. Two GLX stations, Ball Square and Tufts University, will be within walking distance to several Medford neighborhoods.










Many local bus routes provide connectivity within Medford and from the city to the surrounding area. However, while eight bus routes serve Medford Square, only one terminates in the area. Though all routes stop at a common location, multiple studies and reports have noted the lack of a central hub in Medford Square for transfers in a comfortable and coordinated manner. Routes serving Medford are listed in the table below. Routes connect primarily to key business districts and transit hubs, including Arlington Center, Davis Square, Sullivan Square, Wellington Station, and Malden Center.

<b>Medford MBTA Bus Routes (excluding those serving only Wellington Station in an easterly direction into Everett)</b>	
80 Arlington Center - Lechmere Station	89 Clarendon Hill or Davis Station - Sullivan Station
94 Medford Square - Davis Station	95 W. Medford/Arlington Center - Sullivan Station
96 Medford Square - Harvard Station	99 Woodland Road - Wellington Station
100 Elm Street - Wellington Station	101 Malden Station - Sullivan Station
108 Linden Square - Wellington Station	134 North Woburn or West Medford - Sullivan Station

## Medford Mobility Map



2019 American Community Survey 5-Year Estimates, City of Medford GIS data

-  City Boundaries
-  Bus Transit Lines
-  Bus Transit Stops
-  MBTA Lines
-  MBTA Stops
-  1/4 Mile Walkshed
-  1/2 Mile Walkshed
-  3/4 Mile Walkshed
-  Commuter Rail Stop

## Citywide Roadway Usage

Roads remain the primary spine of Medford’s mobility system. These roads are owned by a variety of government agencies at the state and local level, and support several modes of travel, such as automobile travel, bicycling and pedestrian connections, as well as emerging mobility trends and modes, such as micro-transit services.

All goods imported to and exported from Medford are brought by roadways via delivery trucks. Medford is well connected to the regional roadway network, as it is bisected by I-93 which has multiple exits in the community. However, the location of I-93 causes significant land-use and mobility challenges within the community. Medford must work with the state to balance the benefit of I-93 with the challenges its location causes.

With the increasing adoption of Complete Streets Policies in the region, the City of Medford issued a *Complete Streets Policy* in May 2016 that applies to the redesign of roadways within City boundaries, excluding I-93 and existing pedestrian and bicycle paths. The *Complete Streets Policy* states: Complete Streets are designed and operated to provide safety and accessibility for all the users of our roadways, including pedestrians, bicyclists, school bus riders, motorists, commercial vehicles and freight haulers, emergency vehicles and for people of all ages and abilities... The purpose of Medford’s Complete Street’s Policy, therefore, is to accommodate all road users by creating a road network that meets the needs of individuals utilizing a variety of transportation modes.<sup>16</sup>

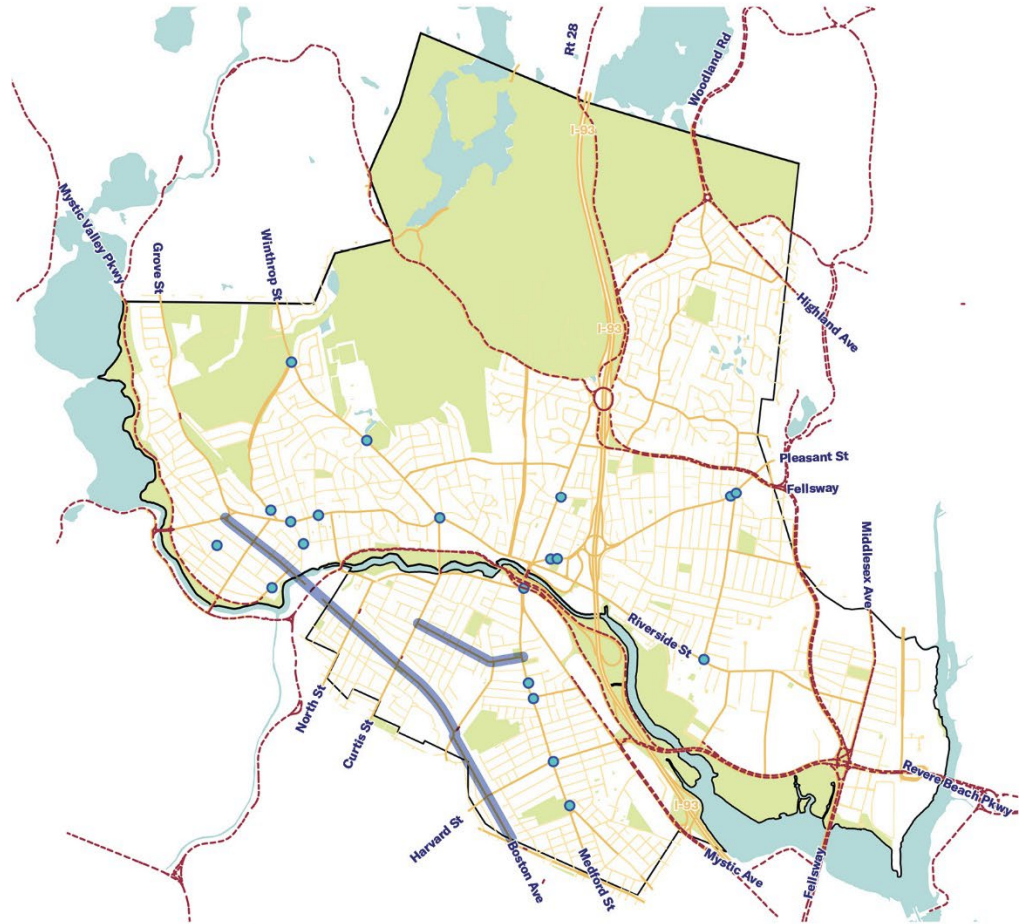
The goals of Medford’s street designs are to balance the needs of all users and provide safe, comfortable spaces. The redesign of a street should evaluate the existing walkability, level of comfort for bicyclists, parking usage, transit travel, and automotive travel to provide a road network best able to serve the residents. All future design must comply with this Complete Streets Policy. This existing policy will influence future development and improvements on the road network. In addition, the City will need to “develop and maintain a comprehensive map and inventory of pedestrian and bicycle facility infrastructure that will prioritize projects to reduce gaps in the sidewalk and bikeway network.”<sup>17</sup>

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<sup>16</sup> City of Medford, *Complete Streets Policy*, 2016, p. 1.

<sup>17</sup> City of Medford, *Complete Streets Policy*, 2016, p. 4.

## Bike and Pedestrian Facilities



City of Medford GIS data; MassDOT GIS data

- City Boundaries
- Complete Streets
- Complete Intersections
- MassDOT Potential For Everyday Biking Routes

Note: Pull in bike lanes and bike routes, and any other bike facilities available

Medford's *Complete Streets Policy* identifies the walkability of streets as an important mode of transportation within the City. Historically, commuting by foot would have been a priority in city development, as evidenced by the growth of tightly knit squares surrounded by residences and commercial areas within pedestrian distance. With the increase in motorized transportation, Medford, like most American cities, went through a period in which infrastructure improvements were focused on the needs of vehicles. In contrast, current best practices and local interests are in favor of pedestrian connectivity and safe on- and off-street environments with key connections.

Medford currently has an overall Walk Score (walkscore.com) of 67, which indicates that it is "somewhat walkable" and considers access to local amenities and the quality of sidewalks. The most walkable neighborhoods are South Medford, Medford Square, and Medford Hillside. North of Medford Square the city becomes hilly and primarily residential. Sidewalks are available on most residential streets but are missing from sections of multi lane and high-volume roads which provide key connections and some transit access.

Outdoor recreational spaces play significant roles in multi-modal transport. Many of the community's parks are within residential neighborhoods, allowing residents and visitors to have relatively easy access to local walking paths, including the Fells Reservation and Mystic River. Local water bodies are especially important to pedestrian infrastructure. The Mystic River and its tributaries connect Medford to surrounding cities and towns; development of a continuous trail access along the Mystic River is ongoing. However, non-motorized infrastructure away from the water's edge receives less attention. Pedestrians and bicyclists travelling between parks face continuous car traffic, especially from I-93.

The *Bicycle Infrastructure Master Plan* was completed in March 2016 to address the increased interest in bicycling over the past decade, increased advocacy by the biking community, and lack of existing infrastructure. The Medford Bicycle Advisory Commission (MBAC) defines its goals in the report as "to encourage those who live, work and travel in Medford, Massachusetts to adopt cycling as a way to get around our city. We are doing this by educating road users on how to ride and drive safely, advising city officials on bicycle-friendly road designs, and providing opportunities for members of the community to participate."<sup>18</sup> The existing bike network within Medford is fragmented, and this report identifies areas for improvement. If implemented, the recommended improvements would support the *Complete Streets Policy*. Recommendations include:

*Note: Need feedback from City on which of the following have been completed.*

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<sup>18</sup> Medford Bicycle Advisory Commission, *Bicycle Infrastructure Master Plan*, , 2016, p. 3.

### **Boston Avenue**

- Install sharrows and Bicycles May Use Full Lane signs.
- Install a bicycle signal control and left turn markings for Harvard Street intersection.

### **Colby Street**

- Install contra-flow bicycle lanes between Princeton Street and Yale Street, which is one way.
- Install wayfinding signage at both entrances to the path.

### **College Avenue and Walnut Street**

- Install a combination of sharrows and bike lanes on College Avenue.
- Install a contra-flow bicycle lane and signage on Walnut Street to provide southbound bicycle travel from South Street to Summer Street.
- Install a contra-flow bicycle lane and signage on Summer Street to provide eastbound bicycle travel from Walnut Street to College Avenue.

### **Commercial Street**

- Install bicycle lanes where the road is wide enough to accommodate them.
- Install sharrows in the narrow portion of the road or investigate removal of parking to accommodate a bike lane.

### **East Fells Multi-Use Path**

- Install a continuous multi-use path set off five feet from each of these streets, where appropriate, and use sharrows or bike lanes where not appropriate.
- Install wayfinding signage on nearby streets so bicyclists know how to get to the path.

### **Forest Street**

- Consider special treatments to assist bicyclists with difficult turns onto Webster Street and Valley Street.
- Investigate the potential removal of one side of parking to make space for bicycle lanes.

### **Fulton Heights East-West Connector**

- Investigate the installation of an uphill bicycle lane on Fells Avenue from Murray Hill Road to Watervale Road, on Fulton Spring Road near the Fellsway, and near Fulton Street and Vista Street from Fulton Spring Road to the top of the hill.

### **George Street**

- Install lane markings to differentiate between travel and parking lanes.
- Investigate a Complete Streets approach to George Street that might include removal of parking on one side of the street, bike lanes, and traffic calming measures such as raised crosswalks.

### **High Street**

- Re-create Winthrop Circle to be a modern rotary.
- Investigate the removal of one side of parking between Winthrop Circle and Main Street; add a bike lane or separated bike lane.
- Implement a multi-modal re-design of the Main Street intersection.

### **Main Street**

- Remove parking on one side of the street or spot widening to allow room for an on-street or separated bicycle lane.
- Improve crosswalks that include curb extensions and raised crosswalks.
- Reconfigure the existing angled parking as back-in angle parking, which research has shown to be much safer.

### **Mystic Avenue**

- Evaluate Mystic Avenue as a candidate for a Complete Streets makeover.

### **North Street**

- Turn North Street into a bicycle boulevard, which is a lightly traveled street that provides a good alternative to a busier street for bicycle traffic. This could be accomplished with sharrows and Bicycles May Use Full Lane signs, along with appropriate wayfinding.

### **Route 16**

- Implement a multi-modal re-design to accommodate cyclists and pedestrians in concert with improvement plans being developed by state agencies.
- Implement a multi-modal re-design of Harvard Street where it feeds into Route 16 to accommodate bicyclists.
- Implement a multi-modal re-design of Wellington Circle at the Route 28/Route 16 intersection Westbound, add bike lane from Rt.16/Harvard Street split up to the Main Street exit and possibly beyond (but taking care to address bicyclists crossing the off-ramp).



## **Route 28, Fellsway/Fellsway West**

- Investigate the possibility of bike lanes or a combination of bike lanes and sharrows along the entire length of both portions of Fellsway, paying particular attention to treatment at intersections.
- Investigate the possibility of a contraflow bike lane on Valley Street to provide a convenient connection under I-93. Since Valley Street joins Fellsway West at a curve, the turning movement will require careful design treatment

## **Areas of Mobility Study and Interest**

Transportation planners and engineers in Medford have looked closely at many specific locations in the community for potential interventions that could improve traffic and roadway conditions. These have ranged from detailed studies to traffic analyses related to potential development sites.

The Medford Square Priority Roadways Improvement Study was completed in 2018 as “part of the MPO’s [Metropolitan Planning Organization] series of ongoing studies that address safety, mobility, and access on the Boston region’s priority roadways.”<sup>19</sup> The roads studied are within the Medford Square area and contain signalized intersections, pedestrian crossings, and many additional driveways and intersections. Some sections of street do not have sidewalks, and none have dedicated bike lanes or shoulders within the area. Traffic congestion through Medford Square is a frequent occurrence. As such, the study proposes short term and long-term improvements related to bike lanes, sidewalks, signalized traffic ramps, or intersections. Suggested improvements include:

*Note: Need feedback from City on which of the following have been completed.*

### **Salem Street**

- Install “No Turn On Red” on Main Street and modify pedestrian signal phasing at the central intersection to allow pedestrians to cross Main Street entirely without having to wait in the middle.
- Install sharrows at appropriate distances on the right and left lanes of Salem Street and on the right lane of Riverside Street.

### **Main Street Corridor**

- Install striped sharrows at appropriate locations on both streets south of the intersection of Main Street and Mystic Avenue.
- Support development of the South Medford Connector, a multi-use path on the south bank of the Mystic River that would connect to Mystic Greenways.

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<sup>19</sup> Boston Region Metropolitan Planning Organization, *Medford Square Priority Roadways Improvement Study*, 2018, p. 3.

### **Mystic Valley Parkway**

- Relocate the obscured “Pedestrian Crossing Ahead” warning sign on Route 16 eastbound to a more visible location (about 100 feet eastward).
- Convert the westbound right-turn only lane to through and right-turn shared, add northbound left-turn bay, and upgrade the traffic signal system.

### **Winthrop Street**

- Enforce no parking on the southbound approach of Winthrop Street.
- At the Winthrop Street intersection, relocate the bus stop on High Street westbound further from the traffic circle (at least 50 feet eastward).

### **High Street Corridor**

- Clearly define allowable parking areas and regularly maintain the pavement markings of parking spaces.
- Examine and fix crosswalk curb cuts that are not compliant with the American with Disabilities Act (ADA).

Several Road Safety Audit (RSA) reports have been completed within the City of Medford. These documents describe the existing conditions at a given intersection and provide improvements and recommendations. If implemented, these improvements would contribute to the Complete Streets Policy by providing a safer road network. The most recently completed RSAs include:

### **Fellsway (Route 28) & Riverside Avenue, November 2019**

- Install improvements, such as pavement markings and traffic signs, to address its status as an eligible crash cluster for the years 2014-2016.

### **Roosevelt Circle (I-93 at Fellsway West/Route 28), March 2019**

- Install better pedestrian markings, bicycle lanes, and enhanced roadway geometry to address the two crash clusters in the area.

Traffic studies are often completed in advance of development proposals. Within Medford, many traffic studies have been completed over the previous five years, documenting the existing condition of traffic around the sites, and the likely impacts of development. The list below includes developments for which traffic studies were recently completed:

- 320 Middlesex Avenue, October 2014
- 61 Locust Street, March 2016 & March 2018
- 236-240 Salem St, 17 Everett Street, 4-6 Court Street, January 2017
- Mystic Village, August 2018
- 515, 523 Winthrop St, November 2018
- 590 Boston Avenue, December 2018
- 251, 253, 255 Main Street, May 2019
- 700 Congress St, May 2019
- 4000 Mystic Valley Parkway, December 2019
- 595 Broadway, January 2020
- 970 Fellsway, January 2020
- 278 Middlesex Avenue, April 2020
- 30-36 Salem Street, April 2020
- 280 Mystic Avenue, June 2020

In addition, MassDOT is currently undertaking a study to examine the Wellington Circle area, with an aim to provide multimodal improvements around the station area and complex intersection at the edge of Medford.

## Parking

Like many communities, parking remains a major concern for Medford residents. As emphasized by the *Parking Policy and Enforcement Commission Report* submitted to the Mayor in March 2021, parking burdens and availability are not equal across the City of Medford. Parking issues revolve around both residential parking and commercial parking.

Residential parking within the City of Medford broadly falls within two categories: densely populated areas with limited off-street parking and areas where off-street parking (driveways, garages) is readily available.

In most areas where private parking is available, a parking program is not needed to regulate the use of Medford's curbsides. However, residential areas that are densely settled or have inadequate private parking options require a parking program for on-street parking to ensure equitable access. This situation is most common in the South Medford and Hillside neighborhoods, where households possess more cars than available on-street parking spaces can support.

As documented by the Commission report, on-street parking is currently managed through a contract with a private entity, ParkMedford, outsourced to Republic Parking System (REEF Parking). ParkMedford enforces parking limits and availability across 987 metered spaces and approximately 3,700 residential and business permits. Currently, a residential parking permit costs \$10 per year per

vehicle and includes two visitor passes. Visitor passes are available for households without vehicles as well. Residential street parking rules vary from street to street; some do not require permits at all. This patchwork regulatory system is challenging for enforcement and especially difficult to navigate for residents.

*(Note: Does City have the ParkMedford street map?)*

The Commission reports that “Republic/REEF Parking has not provided ‘the best possible parking experience’ for Medford residents.”<sup>20</sup> When surveyed as part of the Commission Report, many residents and businesses expressed criticism of enforcement, meters, and kiosks. Community members are more broadly concerned with the availability of parking and visitor parking, as well as coming GLX stations in South Medford and Hillside, and whether current regulations will inappropriately encourage commuter parking to access the rail stations. The Commission has noted that the City may benefit from running a centralized, in-house program to more easily collect unpaid fees and enforce regulations.

Parking for businesses is most pertinent in the Medford Square area. As shown by the report’s survey, many businesses were concerned that an inadequate availability of street parking would have a negative impact on local businesses. The Medford Square area has metered parking available, but no free 15-minute parking or pick up zones. Some businesses have employee parking available, but many do not. In 2005, the parking garage located in Medford Square collapsed, eliminating a significant amount of parking. The Medford Square Garage Feasibility Study was prepared for the City of Medford in October 2010 to evaluate the potential for a new garage on the same site as the previous structure. Survey responders favored the construction of a new parking garage on the former site. However, the garage has not been built and the lot remains empty.

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<sup>20</sup> Commission on Parking Policy and Enforcement, *Parking Policy and Enforcement Commission Report*, 2021, p. 11)

As part of the Commission's report, the following recommendations were made pertaining to the parking situation within Medford:

- Create, appropriately fund, and staff a Department of Transportation
- Create a Parking Program Review Board
- Pursue action as allowed in the contract with Republic/REEF Parking to collect the \$1.6 million to \$2 million in outstanding parking fees
- Work to collect a minimum of 50% of the outstanding fees
- Implement a new residential parking program
- Create communication for residents living on private ways
- Start enforcing basic parking rules
- Improve communications, permit requests, and payments for all parking matters on the City's website and in brochures
- Allow residential parking on main/ emergency streets as part of the residential permit parking program
- Create a function-specific visitor residential permit parking program
- Standardize the terms of street-by-street residential permit parking program
- Create a 15 minutes-free parking option in defined business districts
- Deploy a new kiosk/meter program
- Expand the metered parking and enforcement program
- Consider expanding and increasing rates for all-day parking near the GLX and West Medford MBTA stations
- Assess tiered pricing for residential parking permits for residences with more than two registered vehicles
- Identify, enhance, and enforce dedicated business parking spaces, areas, and lots in each business district
- Find additional parking in unknown/hidden City property and parking lots and consider additional dynamic/ creative parking options, including a feasibility of a parking garage in Medford Square
- Partner with the Chevalier Theatre to create a communication plan for events
- Look to and plan for future needs for electric vehicle charging stations in business districts and residential neighborhoods
- Anticipate and plan for a rapid shift to transit-oriented development

# **OPEN SPACE, RECREATION AND NATURAL RESOURCES**

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## **Introduction**

Medford has a rich diversity and range of regional open space destinations and beloved neighborhood parks. The scale of the City's park system (over 1800 acres!) is unmatched and should be celebrated. Equitable access to open space, recreation, and natural resources is an important element for this Comprehensive Plan to address. This memorandum provides an overview of the open space, recreation, and natural resources systems and will outline how our open spaces can contribute to a vibrant, beloved public realm.

This memorandum leans heavily on findings from the 2019-2026 Open Space and Recreation Plan (OSRP) and is also supplemented by data from The Trust for Public Land, observations from an Agency Team bike ride through Medford, information from the City of Medford's Recreation department's website, demographic data from MassGIS, and resources from the Mystic River Watershed Association.

Throughout the COVID-19 pandemic, parks and open space in communities around the country have become a welcome respite from the pandemic. The COVID-19 pandemic has forced parks to become critical public health infrastructure as people were recommended to stay home and practice social distancing. The value of parks and open spaces is more recognized than ever before. Among a long list of benefits, access to parks and open space helps to maintain physical and mental health, improves quality of life, and deepens sense of community. Medford is fortunate to have such an extensive parks and open space system, with strong connections to neighboring cities and towns. As Medford emerges from the COVID-19 pandemic, this comprehensive plan should build on the momentum of the past year to further enhance their open spaces, recreation, and natural resources.

## Summary of the Open Space Plan

The 2019-2026 Medford Open Space and Recreation Plan (OSRP) serves as an update to the 2011 OSRP to reaffirm goals of serving the active recreation needs of all residents throughout Medford. This plan also serves as a role model for incorporating climate vulnerability and green infrastructure recommendations into an Open Space and Recreation Plan. Through engagement of the community and key stakeholders, the consultant team and City developed goals, objectives, and actions, built on an inventory of parks and open space in Medford.

### Goals:

1. Establish connections to and along the City's natural resources.
2. Expand / diversify recreational programming for the City within the existing open space resources.
3. Improve the ecological quality of the City.
4. Develop a system for park facility management / maintenance.
5. Strengthen Medford's climate change resilience through park and open space design and preservation.
6. Make deliberate efforts to engage Environmental Justice populations.

### Identity: Parks and Recreation

Medford's parks and open space are a wonderful resource for residents and visitors alike. Many of the parks are nestled within neighborhoods, taking on the character of their respective surroundings. Residents and visitors can also enjoy easy access to the regional resources of the Fells and Mystic River. There is a rich diversity of park types, from neighborhood parks and recreation fields to plazas, cultural and historical landmarks, and regional natural resources.

The Agency team conducted a bike tour to experience Medford's parks and open space. Though half of the parks (22) are in fair condition (according to the OSRP inventory), they appear to be well loved and frequently used. Over a quarter of the parks were considered by the inventory to be in good condition, but these parks varied in their actual condition. The parks considered to be in poor condition have a lot of potential for improvement.

## **Open Space Typologies**

### *Neighborhood Parks*

Nestled within residential neighborhoods, these parks welcome proximate residents and families. Neighborhood Parks serve their immediate community by offering a variety of amenities, often including a combination of passive and active recreation. Playgrounds, tot lots, sports fields, and basketball courts are among the most common amenities in this typology, however; some Neighborhood Parks offer a pool and a community garden. Examples of Neighborhood Parks include Tufts Park, Barry Park, Victory Park, and Veteran's Memorial Park.

### *School Fields*

With few exceptions, the Park Division manages all active recreation facilities (school-based or not) in the city. These fields attract sports leagues with Medford residents and visiting teams from neighboring cities and towns. The presence and on-going maintenance of these amenities encourages and promotes active recreation and public health among Medford residents. This open space typology is different from neighborhood parks in that these spaces are not accompanied by other amenity types. Examples of school fields include the Edgerly Sports Complex at Medford High School and Alumni Fields at Tufts University.

### *Plazas*

Public and highly visible, plazas welcome residents and Medford visitors alike. This type of open space is generally located in heavily trafficked parts of the city and serves as a paved public space for people to gather for civic, religious, or commercial reasons. Examples include Riverside Plaza, Krystle Campbell Peace Garden, and Rose M. Sloane Garden.

### *Cultural and Historical Landmarks*

These open spaces serve as markers for historical landmarks and places of cultural significance. Generally, they are recognizable and serve as wayfinding tools and are critical to creating a unique sense of place in Medford. Examples include Medford Honor Roll Park, and Royall Park, and Oak Grove Cemetery.

### *Regional Natural Resources*

Regional Natural Resources are important to the ecology and resilience of the city. Many of these open spaces are managed by the Department of Conservation & Recreation (DCR) and are naturalized open spaces with biking and hiking trails. Examples include the Mystic River Reservation and Middlesex Fells Reservation.

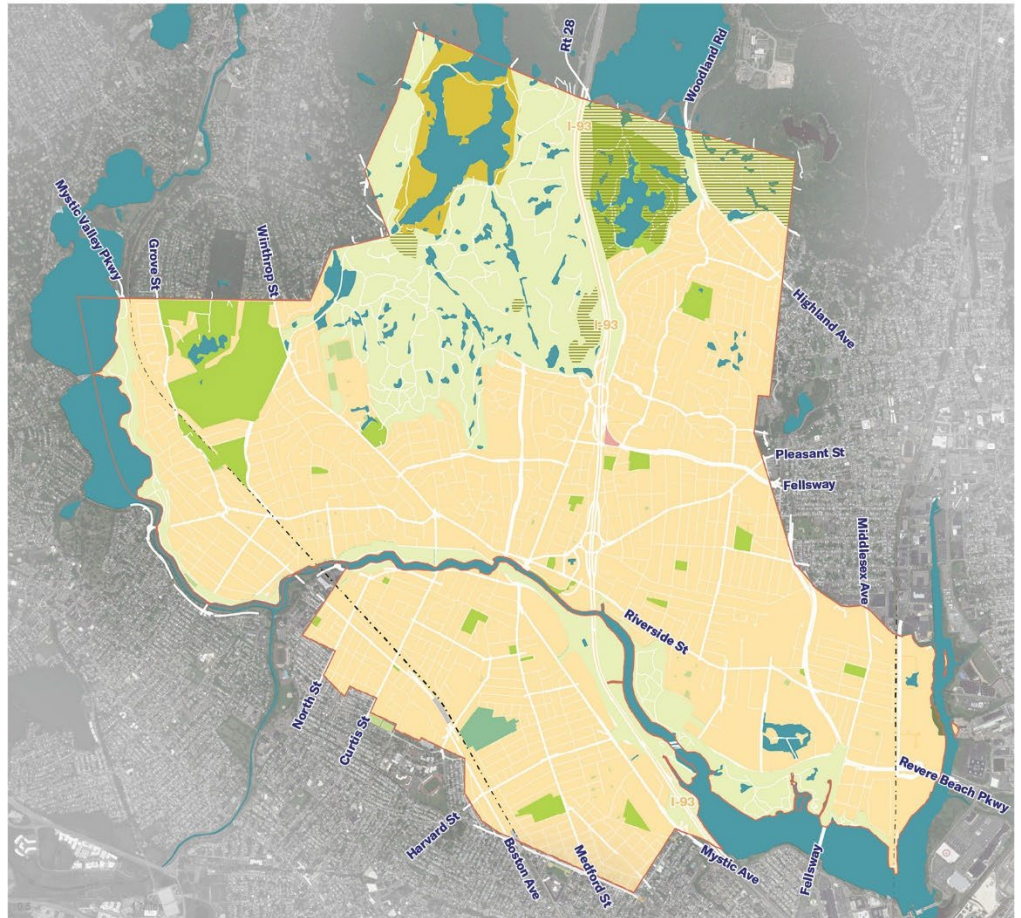


## Copy of inventory from OSRP

The inventory matrix from the OSRP includes 44 sites covering 1,822.79 acres of open space and recreation land owned and managed either by the City of Medford, the Department of Conservation and Recreation (DCR), or private entities. The column headings of the inventory are defined below:

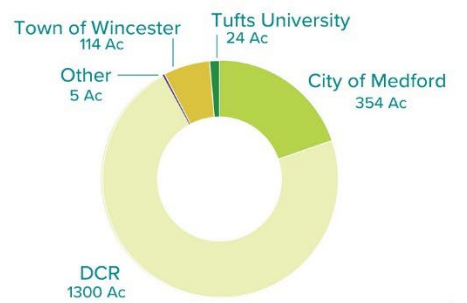
- **Name** – Names the open space site.
- **Owner** – Indicates the owner of the property.
- **Manager** – Indicates the agency or department responsible for managing and maintaining the property.
- **Current Use** – Details the main use for the site and its facilities.
- **Condition** – Identifies the site condition (excellent, good, fair, or poor). City-owned open spaces and parks were surveyed to obtain a general sense of the condition of the property and any facilities located on it.
- **Recreation Potential** – Indicates the recreational use of sites. For land not used for recreational purposes, potential for recreational activities is identified. Conservation land is generally deemed to have limited recreation potential except for passive recreation such as hiking and walking. Some small tax title lands and sensitive environmental areas are presumed to have no recreational potential.
- **Funds Used** – Identifies the funds used for the acquisition of or upgrades to the site, including grant funds.
- **Zoning District** – Identifies the zoning district in which the site is located.
- **Level of Protection** – Indicates if the site, either by virtue of its ownership, existence of deed restrictions, or by the fact that it has received state or federal funding, is protected against conversion to some other use. Levels of protection are described in more detail in the OSRP.
- **Public Access** – Indicates if the public can access the site. All City- and State-owned sites are publicly accessible.
- **Acres** – Gives the site's acreage or an approximation in cases where specific information was not attainable. One acre is 43,560 square feet or 1/640 of a square mile.

# Open Space in Medford

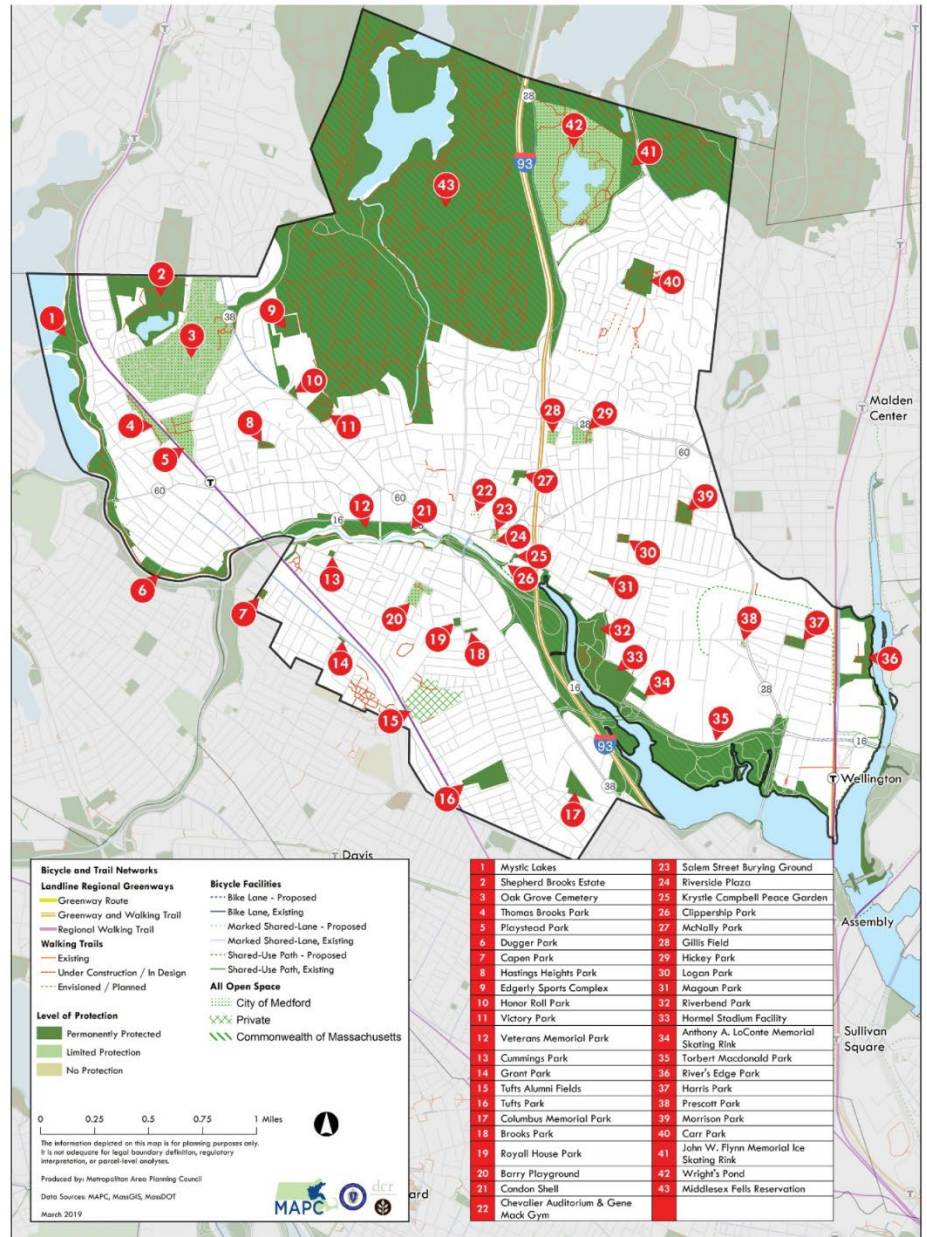


City of Medford GIS data

- City of Medford
- DCR
- Town of Winchester
- Other
- Tufts University
- Rare Species Habitat



# 2019 Open Space and Recreation Plan



2019 Open Space and Recreation Plan

Name	Owner	Manager	Current Use	Condition	Recreation Potential	Funds Used	Zoning District	Level of Protection	Public Access	Acres
<b>Public Lands - Parks and Playgrounds</b>										
<b>Barry Park/Playground</b>	City of Medford	City of Medford Park Division	Baseball, basketball, tennis, tot lot	Good	No changes planned at this time	CDBG, City	F2	Limited	Yes	4.3
<b>Medford Honor Roll Park</b>	City of Medford	City of Medford Park Division	Historical/Cultural	Good	None	City	SF1	Article 97	Yes	0.9
<b>Tufts Park</b>	City of Medford	City of Medford Park Division	Softball, soccer, basketball, tot lot, pool, <i>community garden*</i> , <i>playground*</i> , <i>picnic shelter*</i>	Fair	No changes planned at this time	CDBG	GR	Article 97	Yes	10.6
<b>Royall Park</b>	City of Medford	City of Medford	Historical/Cultural	Fair	None	CDBG	SF2	Article 97	Yes	0.76
<b>Brook Park</b>	City of Medford	City of Medford Park Division	Passive	Fair	Used for passive recreation	City	APT1	Article 97	Yes	0.36
<b>Hastings Heights Park</b>	City of Medford	City of Medford Park Division	Passive	Fair	Used for passive recreation	City	SF1	Article 97	Yes	1.3
<b>Harris Park/Playground</b>	City of Medford	City of Medford Park Division	T-ball, tennis, basketball, tot lot	Good	No changes planned at this time	CDBG, City, L&W, CPA	GR	Article 97	Yes	2.8
<b>Hickey Park/Playground</b>	City of Medford	City of Medford Park Division	Baseball, softball, tennis, basketball, tot lot	Fair	No changes planned at this time	CDBG, City	GR	Limited	Yes	4.4
<b>Playstead Park</b>	City of Medford	City of Medford Park Division	Baseball, Basketball, soccer, tennis, tot lot	Fair	No changes planned at this time	City	SF1	Limited	Yes	12.3
<b>McNally Park</b>	City of Medford	City of Medford Park Division	Softball, tot lot	Excellent	No changes planned at this time	PARC, City	APT2	Article 97	Yes	1.7
<b>Gillis Field</b>	City of Medford	Little League Association	Baseball	Poor	No changes planned at this time	CPA, Private	APT1	Limited	Limited	1.9
<b>Prescott Park</b>	City of Medford	City of Medford Park Division	Passive	Good	Used for passive recreation	City	GR	Limited	Yes	0.25
<b>Capen Park/Hillside Memorial Park</b>	City of Medford	City of Medford Park Division	Basketball, tot lot, spray park	Fair	No changes planned at this time	USH, Private	GR	Article 97	Yes	0.77
<b>Morrison Park/Playground</b>	City of Medford	City of Medford Park Division	Baseball, tennis, basketball, tot lot	Fair	No changes planned at this time	CDBG	GR	Article 97	Yes	4.4

Name	Owner	Manager	Current Use	Condition	Recreation Potential	Funds Used	Zoning District	Level of Protection	Public Access	Acres
<b>Carr Park</b>	City of Medford	City of Medford Park Division	Baseball, tennis, basketball, tot lot	Poor	No changes planned at this time	USH	SF2	Article 97	Yes	11.5
<b>Columbus Memorial Park</b>	City of Medford	City of Medford Park Division	Baseball, softball, basketball	Good	No changes planned at this time	CDBG	GR	Article 97	Yes	5
<b>Clippership Park</b>	City of Medford	City of Medford Park Division	Passive	Good	Used for passive recreation	PARC & EDI	C1	Article 97	Yes	1.52
<b>Victory Park</b>	City of Medford	City of Medford Park Division	Soccer, basketball, tennis, tot lot	Fair	No changes planned at this time	USH, City	SF1	Article 97	Yes	6.12
<b>Thomas Brooks Park</b>	City of Medford	City of Medford Park Division	Passive	Good	Used for passive recreation	State	SF1	Limited	Yes	6.6
<b>Cummings Park</b>	City of Medford	City of Medford Park Division	Basketball, tot lot	Fair	No changes planned at this time	CDBG	GR	Article 97	Yes	0.45
<b>Grant Park</b>	City of Medford	City of Medford Park Division	Historical/Cultural	Fair	None	City	C1	Article 97	Yes	0.21
<b>Magoun Park</b>	City of Medford	City of Medford Park Division	Basketball, tot lot	Good	No changes planned at this time	Our Common Backyards, CDBG	SF2	Article 97	Yes	1.3
<b>Logan Park/Playground</b>	City of Medford	City of Medford Park Division	Tot lot, passive recreation	Fair	No changes planned at this time	City	SF2	Article 97	Yes	1.3
<b>Veterans Memorial Park</b>	DCR - Division of State Parks and Recreation	City of Medford Park Division	Baseball, softball	Fair	No changes planned at this time	City, DCR	ROS	Article 97	Yes	9.6
<b>Dugger Park</b>	DCR - Division of State Parks and Recreation	City of Medford Park Division	Basketball, soccer, tennis, tot lot, spray park	Poor	No changes planned at this time	CDBG	ROS	Article 97	Yes	3.2
<b>Riverbend Park and Hormel Stadium</b>	City of Medford	City of Medford Park Division, Hormel Commission	Baseball, soccer, football, running track, tot lot, community garden	Good	No changes planned at this time	CDBG, PARC	ROS	Article 97	Yes	46.5

Name	Owner	Manager	Current Use	Condition	Recreation Potential	Funds Used	Zoning District	Level of Protection	Public Access	Acres
<b>Medford High School (Edgerly Sports Complex)</b>	City of Medford	City of Medford Park Division	Basketball, volleyball, swimming pool, turf field, theatre	Good	No changes planned at this time	City	SF1	Article 97	Limited	7.5
<b>Wright's Pond</b>	City of Medford	City of Medford Park Division	Swimming with bath house and concessions	Poor	No changes planned at this time	City	ROS	Article 97	Limited	147.5
<b>Krystle Campbell Peace Garden</b>	City of Medford	City of Medford Park Division	Historical/Cultural	Excellent	None	City, Private, Fed, PARC	C1	Article 97	Yes	0.44
<b>Riverside Plaza</b>	City of Medford	City of Medford Park Division	Passive/Cultural	Excellent	None	City, L&W	C1	Article 97	Yes	0.3
<b>Mystic Lakes State Park</b>	DCR - Division of State Parks and Recreation	DCR - Division of State Parks and Recreation	Passive/Recreation	Fair	DCR	State	ROS	Article 97	Yes	56.7
<b>Conservation Lands</b>										
<b>Condon Shell/ Winthrop St. Community Garden (Mystic River Reservation)</b>	DCR - Division of State Parks and Recreation	City of Medford Park Division	Conservation and cultural	Fair	DCR	EDI	ROS	Article 97	Yes	7.5
<b>Middlesex Fells Reservation</b>	DCR - Division of State Parks and Recreation	DCR - Division of State Parks and Recreation	Hiking, biking, conservation	Fair	DCR	DCR	ROS	Article 97	Yes	1156
<b>Brooks Estate</b>	City of Medford	Medford-Brooks Estate Land Trust (M-BELT)	Conservation	Poor	None	CDBG, State, Private	ROS	Article 97	Yes	49.8
<b>Torbert Macdonald Park (Mystic River Reservation)</b>	DCR - Division of State Parks and Recreation	DCR - Division of State Parks and Recreation	Passive/Recreation	Good	DCR	DCR	ROS	Article 97	Yes	70
<b>Massachusetts Water Resources Authority</b>	MWRA	MWRA	Conservation/Water Supply	Fair	None	MWRA	ROS	Article 97	No	41
<b>Cemeteries</b>										
<b>Salem Street Burying Ground</b>	City of Medford	City of Medford Park Division	Historical/Cultural	Fair	None	MA Preservation Fund	C1	Limited	Yes	0.81

Name	Owner	Manager	Current Use	Condition	Recreation Potential	Funds Used	Zoning District	Level of Protection	Public Access	Acres
<b>Oak Grove Cemetery</b>	City of Medford	City of Medford Park Division	Historical/Cultural	Fair	None	CPA	SF1	Limited	Yes	109
<b>Indoor Recreation</b>										
<b>Anthony A. LoConte Memorial Skating Rink</b>	DCR - Division of State Parks and Recreation	HS Athletic Dept., City of Medford Park Division	Skating, Hockey	Good	No changes planned at this time	State	I	Article 97	Yes	N/A
<b>John W. Flynn Memorial Ice Skating Rink</b>	DCR - Division of State Parks and Recreation	Friends of the Flynn Rink	Skating, Hockey	Improvement project underway	No changes planned at this time	State	ROS	Article 97	Yes	N/A
<b>Chevalier Auditorium and Gene Mack Gym</b>	City of Medford	City of Medford Recreation Department	Recreation and Medford Youth Center	Fair	Variety of indoor activities	City	SF2	Article 97	Yes	N/A
<b>Private Lands</b>										
<b>Tufts Alumni Fields</b>	Tufts University	Tufts University	Playing fields	Fair	Used for active recreation	Private	GR	None	Limited	19.5
<b>Cousens Gym</b>	Tufts University	Tufts University	Indoor gym	Fair	Used for active recreation	Private	GR	None	Limited	N/A
<b>River's Edge Park</b>	Preotle Lane Assoc.	Preotle Lane Assoc.	Conservation	Good	Used for active recreation	Private	O	Conservation Restriction on 4.9 acres MGL ch. 184 §31-33	Yes	16.7

\* The Agency Team added these uses after their bike ride.

### **Summary of amenities, recreation programs**

There many active recreation facilities distributed throughout Medford ranging from tot lots and playgrounds serving the neighborhoods to city-wide facilities such as the Hormel Stadium Facility adjacent to Riverbend Park. Large City-owned facilities like Wright's Pond, Carr Park and Playstead Park provide several active recreational opportunities to residents and visitors including swimming, baseball, soccer, basketball, and tennis. While active recreation facilities make up over half of the open space owned by the City, historic and conservation lands, some of which are used for passive recreation, make up approximately 43%. These include Oak Grove Cemetery, the historic Salem Street Burial Ground, Macdonald Park, as well as smaller areas like Royall Park, and Grant Park.

Tot lots (15), basketball courts (14), baseball fields (9), and historical markers (9) are the most common amenity types in Medford's parks. With limited exceptions, the Park Division manages all active recreation facilities (school-based or not) in the city.

OSRP focus group meetings suggested a diversity of issues and programming related ideas, including an obstacle course, longer pool seasons, more outdoor movies, yoga classes, grills for cooking, more programming around the Mystic River and the Mystic lakes such as kayak rentals, and more. Participants of prior meetings indicated a lack of programming for teens and expressed desire for additional information and outreach regarding programming in Medford's parks and recreation facilities.



Amenity/Use	Number of Parks with that amenity*
Baseball	9
Basketball	14
Tennis	8
Soccer	5
Softball	5
T-ball	1
Football	1
Running Track	1
Volleyball	1
Skating/Hockey	2
Tot lot	15
Pool	2
Spray park	2
Turf field	1
Theatre (includes Chevalier)	2
Community Garden (includes Condon Shell/Winthrop St. Community Garden)	2
Bath house	1
Concessions	1
Passive	9
Historical	6
Cultural	8
Conservation	5
Hiking	1
Biking (just counts Fells)	1

\* Excludes Tufts Alumni fields and Cousens Gym because they do not specify which amenities/uses they have.

## Ownership Patterns

### *City-Owned Open Space*

According to the Open Space and Recreation Plan, the City of Medford maintains a variety of parks and open spaces totaling more than 390 acres, about a quarter of which is protected in perpetuity. These spaces are spread throughout the city, including small tot lots and playgrounds serving the various neighborhoods, as well as larger, city-wide facilities and several school-based recreation facilities. The City's Park Division manages and maintains most of these spaces in the city or shares responsibility with a non-profit partner.

**Protection Level:** About 25% of City-owned land is considered protected in perpetuity.

### *State-Owned Open Space*

*Note: State also owns land on south bank of Mystic River, alongside I-93 off/on ramp*

The Open Space and Recreation Plan also outlines the relationship between the State of Massachusetts and the City around state lands. The State of Massachusetts owns about three quarters of all open space in the city. The Department of Conservation and Recreation (DCR) owns and manages Middlesex Fells Reservation and Macdonald Park (Mystic River Reservation). Veterans Memorial Park, Dugger Park, LoConte Memorial Skating Rink, Riverbend Park and Condon Shell are owned by DCR but managed by the City's Park Division. Flynn Memorial Ice Skating Rink is also owned by DCR but is managed by a nonprofit group, Friends of the Flynn Rink. The Massachusetts Water Resources Authority (MWRA) owns 41 acres in North Medford for water protection purposes.

**Protection Level:** All State-owned land is considered protected in perpetuity.

### *Privately-Owned Open Space*

Private organizations, like Tufts University and River's Edge Park, own approximately 36 acres of recreational land in the City. River's Edge Park is the only Conservation Restriction (MGL ch. 184 §31-33) in Medford and there are no Agricultural Preservation Restrictions.

## Community

Even with slowed population growth, land in Medford is at a premium. According to the U.S. Census the city grew 1.9%, behind the state's growth of 5.3% between 2010 and 2019. During that same period, housing prices have skyrocketed, demands for developable land have become even more competitive, and vacancy rates are down. Many entities are advocating for their visions for the future of the city, from city government to developers, environmental organizations to hazard mitigators, to commercial districts, business owners, and residents.

Despite this pressure on land, Medford remains a city where 99.7% of residents are within a 10-minute walk to a park. Compared to the “Top 10 Cities” named by Trust for Public Land, Medford has a higher percentage of parkland as a percent of adjusted city area than most of the Trust for Public Land’s “Top 10 Cities.” With 34% of its land slated as parks, it ranks above Irvine, California (27.2%). With over 1,800 acres of land, this equates to about 31.4 acres of open space per thousand residents, with an equitable distribution of parks and open spaces within walking distance of every household. For more information about community demographics, refer to the section above on Economic Development and Housing.

## Summary of Trust for Public Land findings

### Access By Age

Demographic	# of people within a 10-minute walk	% of that demographic
Children	11,875	99.7%
Adults	37,677	99.7%
Seniors	10,425	99.5%

*Demographic information is derived from ESRI 2020 Demographic Forecast Block Groups data.*

### By Race/Ethnicity

Demographic	# of people within a 10-minute walk	% of that demographic
White*	40,687	99.6%
Black*	6,320	99.8%
Asian*	6,392	99.7%
American Indian*	95	100%
Pacific/Hawaiian*	7	-
Other Race*	1,004	100%
Mixed Race*	1,740	99.7%
Hispanic	3,732	99.8%

*\* Excludes those that report Hispanic origin (which is captured separately from race by the U.S. Census)*

*Demographic information is derived from ESRI 2020 Demographic Forecast Block Groups data.*

## **By Income**

<b>Demographic</b>	<b># of people within a 10-minute walk</b>	<b>% of that demographic</b>
Low Income	6,587	99.7%
Middle Income	6,453	99.8%
High Income	11,158	99.7%

*Demographic information is derived from ESRI 2020 Demographic Forecast Block Groups data.*

## **Public Health**

The COVID 19 pandemic reinforced that parks and open spaces are critical infrastructure. Open space and parks not only provide a wide range of benefits for active living, gathering, and recreation. Access to parks can contribute public health benefits, enhanced property values, and improved environmental quality including air quality, water quality, and the mitigation of urban heat island effects. Public health benefits include reducing the incidence of childhood obesity by providing safe places for kids to be active. Open spaces and parks also serve as important meeting places for neighbors to get to know one another.

Much research has been done to understand the impacts of exposure to green spaces. According to a growing body of research, open space and parks can have a positive effect on overall health, birth weight, stress, depression and anxiety, hyperactivity disorder, postoperative rehabilitation, obesity and type II diabetes, various infectious diseases, cardiovascular disease, respiratory disease, and all-cause mortality.<sup>21</sup>

Medford's tree canopy is another significant contributor to increased public health benefits and is expanding, thanks to the Forestry Division. The division is dedicated to planting over 100 trees each year. In 2020 alone, the division planted 120 new trees.

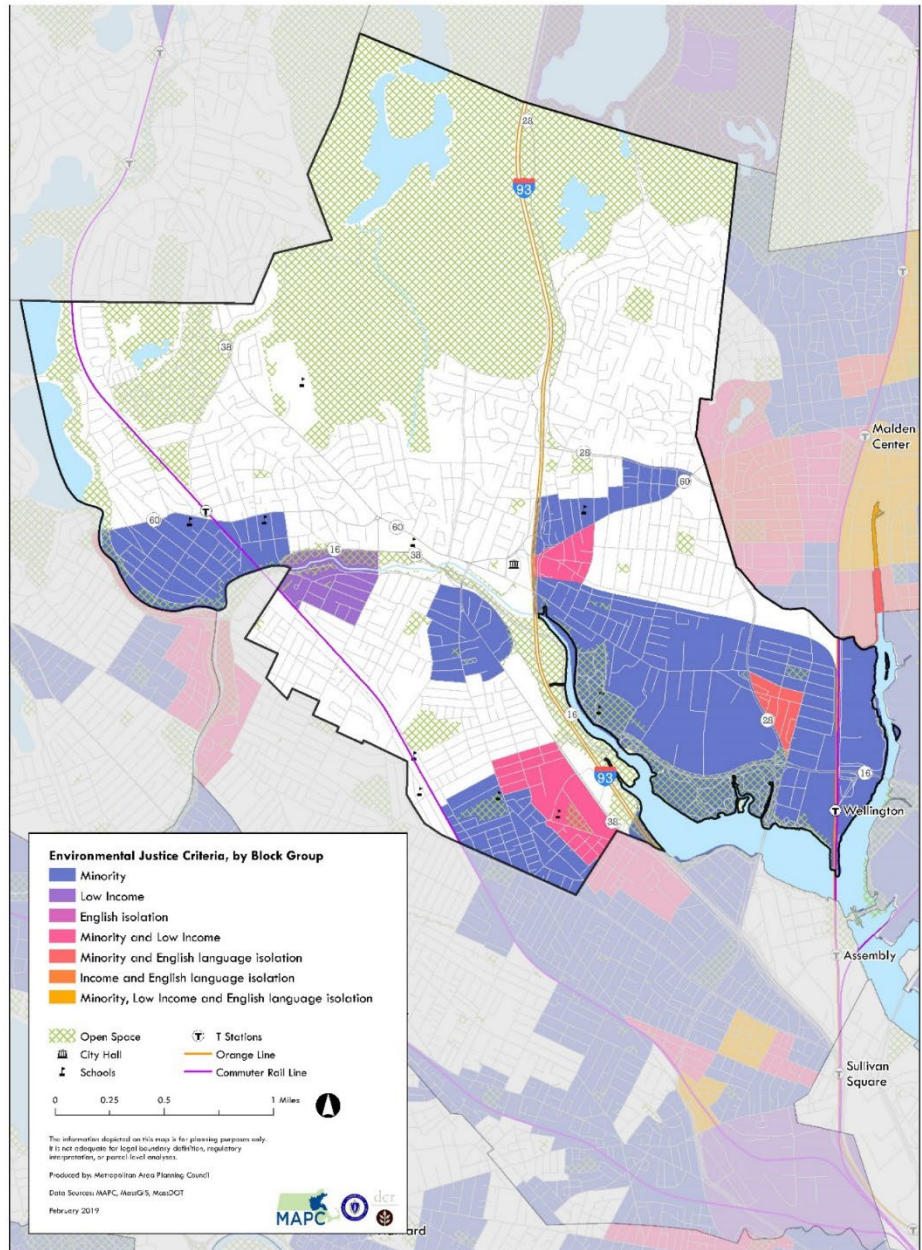
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<sup>21</sup> <https://iopscience.iop.org/article/10.1088/1748-9326/ab7f64/pdf>

## **Environmental Justice Communities**

According to the OSRP, Medford is one of 137 communities in the Commonwealth of Massachusetts that includes one or more Environmental Justice (EJ) populations, as identified through analysis by MassGIS. More information on EJ populations is included in the demographic introduction to these progress reports. According to 2010 census data, 20 block groups within Medford that meet one or more of the environmental justice criteria, including foreign-born, minority population, and income. A map of the environmental justice block groups from the OSRP, in relationship to existing open space, follows.

## Environmental Justice Communities



2019 Open Space and Recreation Plan

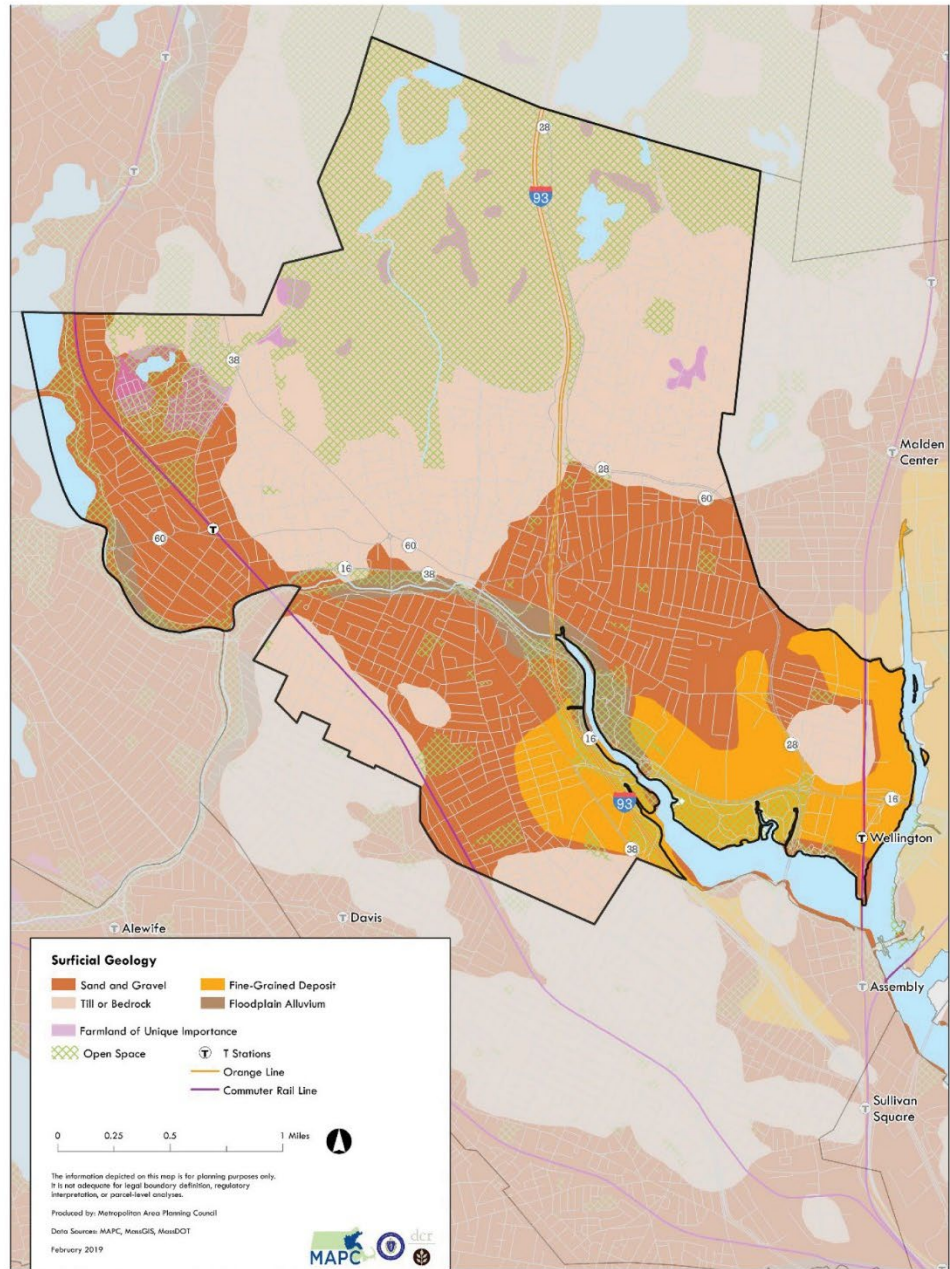
## **Natural Resources**

### **Ecology and Soils**

According to the OSRP, the ecology of Medford can be divided into three characteristic zones: the northernmost section of the City is made up of rough, stony, hilly land with poorly drained swampy areas between the hills; the central area is an outwash plain, heavily developed and urbanized and bisected by the Mystic River, which was once tidal, but is now damned further down river in Everett and Boston. The southernmost section of the city is characterized by softer rocks and drumlins.



## Surficial Geology

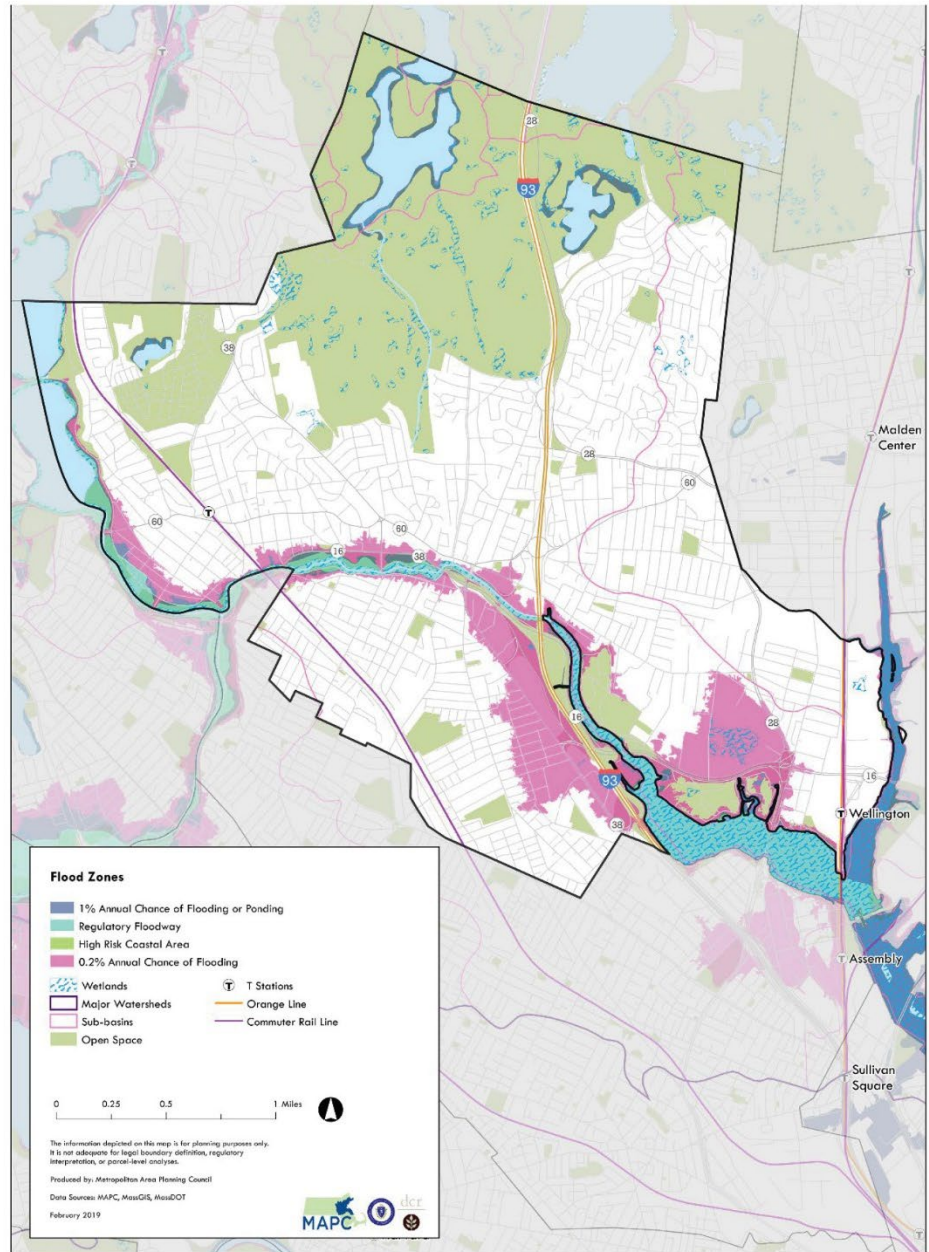


2019 Open Space and Recreation Plan

## **Watershed**

Medford is situated entirely within the boundaries of the Mystic River watershed, which is part of the Boston Harbor watershed. The most densely populated and urban watershed within New England, the Mystic River watershed continues to be in poor health, though federal, state and local organizations are stewarding efforts to remediate the river by improving water quality, reducing the impacts on legacy infrastructure and restoring shorelines.

## Flood Zones



2019 Open Space and Recreation Plan

## Sensitive Areas

*Note: The comprehensive plan will continue to review GIS data and other sources for additional information about sensitive environmental data.*

### *Connectivity*

A major water resource and connector, the Mystic River and its tributaries—Alewife Brook and the Malden River—provide important connections through Medford and to surrounding cities and towns. In Medford, the Mystic Greenways trails run through public lands and conservation lands, owned mostly by the Division of State Parks and Recreation (DCR) and managed by the City of Medford Park Division. There is progress towards continuous trail access along the Mystic River. Existing and in-progress trails connect through these parks (arranged from upstream to downstream):

- **Mystic Lakes State Park** – in-progress trails along the Upper and Lower Mystic Lakes extend into Winchester.
- **Duggar Park** – there may be a gap in connectivity along the Mystic River in West Medford that is also not in-progress or envisioned. The in-progress trail instead crosses the river on High Street and continues on the Arlington and Somerville side. Dugger Park’s condition is also rated as poor (in the inventory). *Note: The Mystic Greenways Map shows a gap in trails along Duggar Park, but Google Maps shows a dotted trail, labeled “Mystic River Path” through Duggar Park. We will need to resolve this discrepancy as part of the comprehensive plan.*
- **Veterans Memorial Park** – the trail on the Arlington/Somerville side of the Mystic River connects to a newly paved trail along Veterans Memorial Park as the Mystic Valley Parkway (route 16) crosses over the river. Before coming back into Medford, the trail also connects to Alewife Brook Parkway in Somerville and Cambridge.
- **Condon Shell/ Winthrop St. Community Garden (Mystic River Reservation)** – the trail also crosses Winthrop St. to pass through the Mystic River Reservation and in-progress trails go through Medford Square on either side of the river. Pedestrians and bikers currently have difficulty passing through Medford Square, so these in-progress trails will provide an important connection when they are complete.
- **Clippership Park** – the trail passes through the newly constructed Clippership Park in Medford Square, with in-progress trails planned to connect Clippership Park with Riverbend Park on the other side of I-93.
- **Riverbend Park & Hornel Stadium** – existing trails extend along the north bank of the river in Riverbend Park. On the southern bank of the river, in-progress trails will also provide connections along the existing off-ramp of I-93.
- **Torbert Macdonald Park** – where the Mystic River starts to open up, on the north bank, the trail continues from Riverbend Park through Torbert Macdonald Park. It also connects over the river to the existing trail on the Somerville side of the river.
- **River’s Edge Park** (owned and managed by Preotle Lane Assoc.) – along the Malden river, there are both existing and planned trail access, on either side

of the river (extending to Malden and Everett). Trails connect from Torbert Macdonald Park, around Wellington train station, and northward to River's Edge Park. Trails are envisioned to extend northward to Malden Center and Oak Grove.

Medford's trail system and connectivity are centered around Mystic River and its tributaries. Away from the water, it becomes more difficult for bicyclists and pedestrians to move from park to park. There is a lot of car traffic, especially from I-93, and the roads are not as welcoming to bicyclists as they are in surrounding communities. Bike lanes and shared roads are not too common, although there are proposed changes described in the 2016 Bicycle Infrastructure Master Plan. Medford became part of a regional bike share system in 2019, with the dock-less Lime bikes, but half a year later, Lime left the Greater Boston area, leaving Medford with no public bike share system.

In addition to the bicycle and pedestrian trails along the banks of the rivers, there are also opportunities to get onto the water in Medford, as well as Winchester, Somerville, and Malden. On the Mystic Lakes, Tufts' Bacow Sailing Pavilion and the Medford Boat Club allow people to get out onto the lakes. At the Mystic River Reservation near Medford Square, Paddle Boston-Medford provides access to the water through public boat rentals. Further downstream, past I-93, Riverside Yacht Club, Mystic Wellington Yacht Club, and Tufts' rowing club also provide boating access to the Mystic and Malden Rivers. Located in the surrounding cities, additional rowing centers, yacht clubs, and canoe/kayak rental centers also allow for connections to the rivers. A further inventory of private and public water access points may be needed as part of this comprehensive plan.

DCR published a DCR Parkways Master Plan in August 2020. "The Plan articulates a vision for an interconnected network of walkways and bikeways throughout metro Boston that provide residents of all ages and abilities with access to recreational destinations and healthy transportation opportunities."<sup>22</sup> In the metro Boston area, Medford has the third highest mileage of DCR parkways (10.0 miles), after Boston (25.4 miles) and Quincy (11.6 miles). In Medford, the focus areas of the Middlesex Fells Reservation and Mystic River Reservation, and the roads that run through them, are owned and managed by DCR. DCR's recommendations include short-term improvements and long-term capital investments for these focus areas. These projects and recommendations have been summarized at the end of this section.

Parkways were originally intended for recreation travel. In the 1800s, they started as access roads within parks or roads connecting parks to each other. An increase in car travel throughout the 1900s led to the use of parkways as routes for local and regional vehicle traffic, pushing out walking and biking uses. The goal of 2020 DCR Parkways Plan is to make parkways throughout the metro Boston area more pedestrian- and bike-friendly. Parkways inherently have many overlaps between mobility and open space, recreation, and natural resources.

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<sup>22</sup> DCR, *Parkways Master Plan*, August 2020, p. 1.

## **Resilience**

The Climate Action Plan (CAP) 2021 Retrospective is a look-back at the progress Medford has made toward the priorities identified in the 2001 Climate Action Plan—the first and last time Medford developed a CAP. The Retrospective tracks Medford’s progress largely against carbon emissions reduction efforts—looking at things like improvements to municipal buildings, lighting retrofits, expansion of renewables, greening of transportation and municipal fleets, as well as the new policies and programs that have been implemented to advance the city’s climate action efforts—community outreach, participation in organizations, recycling initiatives, and more.

The retrospective notes that “Later this year, the city will publish a more comprehensive report, Medford’s Climate Action and Adaptation Plan 2021, which will outline in more detail the city’s proposed actions and strategies to tackle climate change and shape an equitable society.” This plan will provide more information on which direction the City wants to go with its sustainability and resilience goals, compared to the Retrospective, which just lists what the City has done in the 2000s.

*Note: As part of this comprehensive plan, it will be useful to learn more about the CAAP through a focus group or interview.*

Notable achievements in the last 20 years:

- Creation of the Office of Energy & Environment.
- Implementing the municipal energy efficiency policy.
- Making municipal buildings more energy efficient and expanding use of renewables.
- Adopting stretch code to make other buildings more energy efficient.
- Retrofitting streetlights to LEDs.
- Taking strides to green the municipal fleet.
- Enhanced waste and recycling programs, including current effort to expand composting options.
- Expanding transportation options – better bike paths, shared use paths, GLX, etc.
- Expanding the tree canopy (there is still room for more progress).
- Expanding partnerships, community education campaigns, etc. to increase adoption of sustainability initiatives.

The Retrospective does not provide much detail about the City’s efforts over the past 20 years, beyond a brief update on the key changes listed above. The City has looked for opportunities to incentivize various behaviors with the public and make changes to municipal buildings/fleets where it was financially possible. They have also made some smaller policy/code changes over time (such as opting into the stretch code – a locally mandated code or alternative compliance path that is more aggressive than the base building code, resulting in buildings that achieve higher energy savings). Overall the City has not relied on legal recourse including fines or penalties to require any changes related to their environmental/climate action

goals. The City aspires to make more progress, more quickly on all the goals listed above.

The Resilience Hubs document, published June 2020, is a review of the most vulnerable areas of the City to climate change, highest populations of socially vulnerable residents, and existing resources for socially vulnerable populations. The report mapped all those against each other and used it to identify priority areas of the City where a resilience hub would be beneficial, and then did community engagement to identify specifically what services should be provided to best support the community. It outlined some potential existing community organizations that could host the resilience hub in the priority areas and then also provided some guidance on what the resilience hub would do—in terms of how it operates, and the services it provides.

The Resilience Hubs document is an analysis of the climate resilience impacts (which comes from the Climate Change Vulnerability Assessment (CCVA)) compared to the location of concentrated vulnerable populations in the City. It uses this context to identify places to create or adapt a resilience hub that would better support vulnerable populations, especially in neighborhoods more likely to experience negative impacts from climate change.

## Previous recommendations

The 2019 Open Space and Recreation Plan provided a Seven-Year Action Plan — a matrix of objectives and actions for each of the six goals. In the OSRP, the matrix includes the columns of Objectives/Actions, Responsible Parties, Time Frame, and Potential Funding Sources. Only the Objectives/Actions and Time Frame are included in this document.

The 2020 DCR Parkways Master Plan also provided specific recommendations for the focus areas of the Middlesex Fells and Mystic Valley. The matrix for those recommendations includes the location, issue(s), recommendation, and any additional information. These recommendations have many overlaps with the section above on Mobility.

2019 OSRP Seven Year Action Plan:

Objectives/Actions	Time Frame
Goal 1: Serve the active recreation needs of all residents throughout Medford by expanding its open space resources and upgrading the conditions of existing facilities	
Objective 1.1: Provide each neighborhood with a safe open space that provides multi-generational opportunities for recreation	
Action 1.1.1: Implement improvements identified for various parks such as installing new or fixing benches or bleachers, installing new or improved walkways, etc. as identified in this plan (see list following this Action Plan Matrix)	Short- to long-term
Action 1.1.2: Continue to reach out to seniors and people with disabilities to understand their recreation needs and how they can best be met	Ongoing
Action 1.1.3: Expand programming and intentional spaces for teens at parks and recreation centers	Short-term
Objective 1.2: Meet community needs for organized and informal team and individual sports	
Action 1.2.1: Consider ways in which the field permitting process can be streamlined and coordinated	Short-term
Action 1.2.2: Publicize schedules for field use so that users can identify openings that can be used for informal, non-organized league use	Short-term
Objective 1.3: Meet the needs of all citizens through universal design	
Action 1.3.1: In order to improve accessibility to the City's parks and open spaces, the City should adopt the principles of universal design to ensure that they are accessible to all regardless of age or ability.	Ongoing
Action 1.3.2: Ensure community gardens are accessible to residents of all abilities by continuing to integrate universal design principles and programming	Ongoing



Objectives/Actions	Time Frame
Objective 1.4: Extend playing hours for adult leagues and facilitate Youth League night-time play	
Action 1.4.1: Look for opportunities to provide lighting at playing fields in a manner that does not impact adjacent neighborhoods (i.e. lighting that is compliant with the condo International Dark-Sky Association Community Friendly Sports Lighting Program)	Mid-term
Action 1.4.2: Conduct a lighting audit to ensure that the best practices are implemented to ensure that recreation, public safety and energy efficiency goals are met	Mid-term
Objective 1.5: Provide a clean, safe playground for each neighborhood that provide a variety of play spaces and experiences	
Action 1.5.1: Upgrade playground equipment, benches and picnic facilities at parks as identified in this plan	Short- to long-term
Action 1.5.2: Provide shade structures and covered picnic areas at heavily used parks and playgrounds	Short- to long-term
Objective 1.6: Extend the playing season and minimize use limitations due to wet conditions	
Action 1.6.1: Where needed, regrade playing fields to both prevent pooling and manage stormwater runoff away from fields but onsite	Ongoing
Action 1.6.2: Where needed, integrate green infrastructure measures to mitigate stormwater runoff	Mid-term
Goal 2: Establish connections to and along the City's natural resources	
Objective 2.1: Create a multi-use path system along the Mystic River and Malden River	
Action 2.1.1: Improve and expand open space opportunities along the Mystic and Malden Rivers, including potential linear parks with accessible multi-use paths to existing open spaces	Mid-term
Action 2.1.2: Provide needed safety and accessibility improvements including sidewalk renovations, updated crosswalks, and more curbcuts	Ongoing
Action 2.1.3: Improve pedestrian and bicycle connections between parks and open spaces within Medford and in the region	Ongoing
Action 2.1.4: Work with DCR to improve/restore the pedestrian bridge and the park between the pedestrian bridge and Main Street	Mid-term

Objectives/Actions	Time Frame
Objective 2.2: Provide access to the water for pedestrians, personal water crafts, and as an alternative route for transportation	
Action 2.2.1: Look for opportunities to expand water access locations and activities, particularly along the Mystic River	Mid-term
Objective 2.3: Prioritize DCR's Mystic River Master Plan findings and leverage common goals	
Action 2.3.1: Look for ways to promote and advance projects promoted by DCR and MyRWA including the Clippership Connector, South Medford Connector, MacDonald Park, Mystic Lakes Linear Park, Wellington Greenway, Wellington Connector, and Condon Shell	Short- to long-term
Action 2.3.2: Work with DCR and improve communications to work collaboratively to meet mutual goals	Ongoing
Goal 3: Expand / diversify recreational programming for the City within the existing open space resources	
Objective 3.1: Expand community garden sites within the City to serve more moderate to low income neighborhoods	
Action 3.1.1: Partner with community groups in Medford to develop a strategy for maintaining and expanding community gardens	Ongoing
Objective 3.2: Ensure that passive recreation opportunities are available throughout the City	
Action 3.2.1: Look for opportunities to add passive recreational activities such as installing picnic tables, establishing walking paths, and creating gathering spaces	Mid-term
Action 3.2.2: Look for opportunities to provide programming at parks such as movie nights, adding exercise equipment, yoga or other fitness classes, etc.	Ongoing
Objective 3.3: Provide separate and distinct open space resources for residents with dogs who are not allowed off-leash in many of the City's parks	
Action 3.3.1: Consider additional sites for new dog parks	Short-term
Action 3.3.2: Provide bags and related supplies and signage to encourage dog owners to pick up after their dogs	Short-term
Goal 4: Improve the ecological quality of the City	

Objectives/Actions	Time Frame
Objective 4.1: Expand the urban forest canopy	
Action 4.1.1: Preserve mature trees and strategically plant new trees to provide public health and environmental benefits	Ongoing
Action 4.1.2: Along frequently traveled pedestrian routes, add benches and sufficient shade tree plantings	Mid-term
Action 4.1.3: Develop succession plans for tree plantings in existing parks	Ongoing
Objective 4.2: Restore wetlands within the riverfront areas to create better ecological function and native habitat	
Action 4.2.1: Regrade and revegetate river banks to prevent erosion	Mid- to long-term
Objective 4.3: Manage the presence of exotic invasive vegetation in ecologically significant landscapes	
Action 4.3.1: Plant only native plants as existing parks are renovated and new ones are developed	Ongoing
Action 4.3.2: Remove invasive plants and replace with native ones	Ongoing
Objective 4.4: Deploy stormwater management pilot projects throughout the City to improve water quality	
Action 4.4.1: See specific design recommendations in the Climate Resilience Appendix to this plan	Ongoing
Objective 4.5: Protect water quality and important natural resource areas and buffer zones	
Action 4.5.1: See specific design recommendations in the Climate Resilience Appendix to this plan	Ongoing
Goal 5: Develop a system for park facility management/maintenance	
Objective 5.1: Improve the overall quality of Medford's existing inventory of open spaces and facilities	
Action 5.1.1: Install or construct restroom facilities (temporary or permanent) that meet ADA accessibility guidelines, particularly at the City's most heavily used parks and those with playgrounds and ballfields	Ongoing
Action 5.1.2: Research additional funding resources for the maintenance and upgrading of parks and recreation facilities to relieve the financial burden on City departments	Ongoing

Objectives/Actions	Time Frame
Action 5.1.3: Establish metrics to assess how the City implements the goals and objectives of this Plan (i.e. miles of walkways built, new open space acquisitions, facilities improved, etc.)	Ongoing
Objective 5.2: Educate the residents as to the resources available throughout the city-wide open space system	
Action 5.2.1: Develop a coordinated online schedule for all playing fields so that potential users can determine field availability	Short-term
Action 5.2.2: Expand the webpages for the Recreation Department and Park Commission to include maps and detailed descriptions of the City's parks and open spaces, bikepaths, water access opportunities, etc.	Short-term
Action 5.2.3: Develop a consistent universally designed signage and wayfinding system to direct people to the City's parks and open spaces, especially from adjacent roadways and walking paths	Mid-term
Action 5.2.4: Improve communication between various City commissions, departments, and other entities such as with volunteer stakeholder groups and sports leagues	Ongoing
Objective 5.3: Facilitate the management of playing fields to protect their condition	
Action 5.3.1: Encourage the establishment of Friends groups to help oversee park conditions and report vandalism by utilizing and promoting SeeClickFix	Ongoing
Action 5.3.2: Schedule park cleanup days and encourage neighborhood and sports league participation	Ongoing
Objective 5.4: Support programming that supports public art and use of public outdoor venues throughout the City	
Action 5.4.1: Integrate arts and culture into the design of open spaces by creating opportunities for performing arts and the display of artwork	Short-term
Action 5.4.2: Work with residents, teens, and neighborhood groups to identify pop-up opportunities for the arts and culture	Short-term and Ongoing
Action 5.4.3: Commission artists to develop destination artworks along bicycle paths and routes to promote wayfinding and encourage use of bike and pedestrian trails	Short-term and Ongoing

Objectives/Actions	Time Frame
Objective 5.5: Leverage permit fees as income for parks maintenance	
Action 5.5.1: Re-evaluate the permit fee schedule to determine how it can effectively cover ongoing maintenance expenses	Short-term
Action 5.5.2: Work toward establishing a dedicated park maintenance fund created in part from permit fees rather than having those fees go into the general fund	Short-term
Goal 6: Strengthen Medford’s climate change resilience through park and open space design and preservation	
Objective 6.1: Perform ecological restoration and maintain the ecological integrity of Medford’s natural areas to maximize natural systems’ benefits, such as cooling, sequestering carbon, avoiding and capturing stormwater, and mitigating air pollution	
Action 6.1.1: See specific design recommendations in the Climate Resilience Appendix to this plan	Ongoing
Objective 6.2: Include design improvements in park renovations that incorporate strategies that mitigate climate change risks of urban heat island, stormwater runoff, inland flooding, and riverine/coastal flooding	
Action 6.2.1: See specific design recommendations in the Climate Resilience Appendix to this plan	Ongoing
Objective 6.3: Prioritize new parks and open space acquisitions in locations where climate change mitigation can address risks such as extreme heat, inland flooding, and coastal flooding.	
Action 6.3.1: See specific design recommendations in the Climate Resilience Appendix to this plan	Ongoing
Objective 6.4: Increase park access and distribution for neighborhoods where residents are most vulnerable to climate change	
Action 6.4.1: See specific design recommendations in the Climate Resilience Appendix to this plan	Ongoing

**2020 DCR Parkways Master Plan:**

Location	Issue(s)	Recommendation	Additional Info
Focus Area 2: Middlesex Fells			
Fellsway			
From Wellington Circle to Fellsway West	No bicycle accommodations	As a short-term measure, install buffered bike lanes.  With construction, consider adding floating bus stops and raising the bike lane to sidewalk level to enhance visibility at driveways and minor side streets.  Reconstruct all signalized intersections at protected intersections.	This recommended facility would extend northward onto Fellsway West as far as Fulton Street, which has the same typical cross section as Fellsway.  See Figure 5-7 -- Figure 5-9 for proposed typical cross sections.
Wellington Circle	Long pedestrian crossing distances and wait times  No bicycle accommodations	Conduct a comprehensive pedestrian and bicycle access study for the Wellington Circle Area.	
Intersection of Wellington Road	Skewed intersection	Tighten curb radius to slow vehicle speeds exiting Fellsway onto Wellington Road.	
Intersection of Riverside Avenue	No bicycle or pedestrian accommodations	In the short-term, implement a protected intersection using vertical separation alternatives and striping. In the long term, make changes permanent through reconstruction.	

Location	Issue(s)	Recommendation	Additional Info
Intersection of Central Avenue/Medford Street	<p>Accessibility</p> <p>No bicycle accommodations</p> <p>Opportunity to improve wayfinding and connectivity to/from Northern Strand Trail</p>	<p>Upgrade accessibility, close the driveway entrance at the northeast corner of the intersection, and make additional modifications to improve pedestrian and bicycle safety.</p> <p>Consider strategies to provide wayfinding for bicyclists to/from the Northern Strand Trail.</p>	
Intersection of Fellsway/Fellsway West/Fellsway East	<p>Opportunity to improve existing pedestrian facilities</p> <p>No bicycle accommodations</p> <p>Skewed intersection</p>	<p>As a short-term measure, add striping in conjunction with corridor recommendations to mitigate conflicts between bicyclists and turning vehicles.</p> <p>Consider the desirability and feasibility of reconstructing the intersection as a modern roundabout. As an alternative, reconstruct with narrower intersection geometry, separated bike lanes, and shorter pedestrian crossing distances.</p>	
Fellsway West			
From Fellsway to Fulton Street	No bicycle accommodations	<p>As a short-term measure, install one-way separated bike lanes on both sides using striping and vertical separation.</p> <p>With construction, consider adding floating bus stops and raising the bike lane to sidewalk level to</p>	This recommended facility would extend southward onto Fellsway as far as Wellington Circle, which has the same typical cross section as Fellsway West. See Figure 5-10 – Figure 5-12.

Location	Issue(s)	Recommendation	Additional Info
		<p>enhance visibility at driveways and minor side streets.</p> <p>Reconstruct all signalized intersections at protected intersections.</p>	
Intersection of Fulton Street	Long crossing distances	Reconstruct as a protected intersection. Provide clear and legible connection from westbound separated bike lane on Fellsway West to the proposed two-way separated bike lane approach to Valley Street.	
	Opportunity to improve bicycle connectivity	Construct two-way separated bike lane on southern side of Fellsway West extending westward from Fulton Street to connect with proposed contraflow bike lane on Valley Street.	Connection to proposed Valley Street contraflow bike lane requires coordination with the City of Medford. The need for this connection is identified in the Town of Medford Bicycle Infrastructure Master Plan.
From Fulton Street to Roosevelt Circle	No bicycle accommodations	Construct a two-way separated bike lane along eastern edge of northbound Fellsway West. Transition to a shared use path north of Ridgeway Rd.	



Location	Issue(s)	Recommendation	Additional Info
Roosevelt Circle	<p>Sidewalk improvements needed</p> <p>No bicycle accommodations</p> <p>High-crash location</p>	<p>As a short-term measure, install lane striping, advanced yield lines and signage. Consider the desirability and feasibility of including bicycle facilities with restriping.</p> <p>Long-term, upgrade the existing sidewalks around Roosevelt Circle to shared use path standards. Consider modifications to slow vehicle entry/exit speeds and reduce crashes.</p>	
From Roosevelt Circle to Elm Street	No bicycle accommodations	<p>As a short-term measure, install bike lanes in the northbound direction and buffered bike lanes in the southbound direction.</p> <p>With construction, build a shared use path.</p>	The shared use path could follow the alignment identified in Figure 5-10 and Figure 5-11.
Intersection of Elm Street	<p>Opportunity to improve pedestrian facilities</p> <p>No bicycle accommodations</p> <p>Potential for high-speed collisions.</p>	<p>As a short-term measure, add pavement markings and vertical separation to Fellsway West approaching Elm Street in the northbound direction to:</p> <ul style="list-style-type: none"> <li>• slow vehicles turning right onto Elm Street,</li> <li>• designate a path for northbound bicyclists through the intersection, and</li> <li>• provide a through lane and a right turn lane.</li> </ul>	

Location	Issue(s)	Recommendation	Additional Info
		<p>Consider the desirability and feasibility of reconstructing the intersection as a modern roundabout. As an alternative, tighten geometry and consider signalization.</p>	
<p>From Elm Street to Sheepfold Driveway</p>	<p>Opportunity to improve existing bicycle facilities</p> <p>Opportunity to restore parkland</p> <p>Excessive vehicle speeds</p>	<p>Consider the following alternatives exist for long-term improvements to this segment of Fellsway West:</p> <ol style="list-style-type: none"> <li>1. Widen the existing shared use path and add a buffer from the roadway. Narrow the roadway and add intermittent traffic calming devices, either raised or horizontal deflection, to keep traffic speeds low.</li> <li>2. Consider the desirability and feasibility of closing the segment between Parkway Road (Medford) and the Sheepfold Driveway to vehicle traffic. The roadway would become a vernacularstyle road open to walking and bicycling.</li> </ol>	<p>Alternative 2 may be feasible considering that Interstate 93, which runs parallel to Fellsway West, can provide an alternative vehicle route. Trial closures, coupled with an open streetstyle event, could be used to measure the impact of a permanent closure. The road could become a new focal point for the Middlesex Fells and enhance connectivity between the eastern and western portions of the reservation.</p>

Location	Issue(s)	Recommendation	Additional Info
Intersection of New South Street	Traffic from northbound Fellsway West utilizes parking access road as a cut through to South Street eastbound	Tighten intersection geometry and consider reversing the direction of New South Street to eliminate cut through traffic, functioning only as access for the reservation parking.	
Intersection of South Street	Missing pedestrian crosswalks  Pedestrian desire line indicated by goat paths	Add a crosswalk across the eastern approach to the intersection.  Consider adding a sidewalk extending from the southeast corner of the intersection southward to New South Street.	See Figure 5-12.
<b>South Border Road</b>			
From Roosevelt Circle to Mystic Valley Parkway	No bicycle accommodations	As a short-term measure, install bike lanes.  With construction, study the feasibility of constructing a shared use path along the northeast side of the roadway. Alternatively, build one-way raised separated bike lanes with mountable curbs along both sides.	Several topographical pinch points exist along the corridor which may limit the feasibility of bike lanes on the entire length of the corridor. If there is room for a bike lane in only one direction, priority should be given to providing a bike lane in the uphill direction.
Governors Avenue, Jeremiah Circle, Cross Fells Trail, South Dam Road, and Leslie Road	No pedestrian crossing opportunities	Construct new crosswalks connecting to trail system on east side of the roadway at these locations.	

Location	Issue(s)	Recommendation	Additional Info
Elm Street			
Intersection of Haines Street	<p>Accessibility</p> <p>No crosswalk</p> <p>Long crossing distance</p> <p>Skewed intersection</p>	Tighten intersection geometry, add crosswalk along parkway. Consider closing Haines St entrance.	
Baxter Street and Aquavia Road (southern end)	No pedestrian crossing opportunities	Construct new crosswalks	
Intersection of Woodland Road/Highland Avenue	<p>Opportunity to improve existing pedestrian facilities</p> <p>No bicycle accommodations</p> <p>Opportunity to restore parkland</p>	Reconstruct existing rotary as a modern roundabout with a smaller footprint. Replace the existing sidewalks and include separated bike lanes.	
South Street			
Length of corridor	No bicycle accommodations	<p>As a short-term measure, install bike lanes.</p> <p>Coordinate future planning and reconstruction efforts for Pond Street/Woodland Road.</p>	
New South Street and Pond Street	<p>Skewed intersection geometry</p> <p>No pedestrian crossing opportunity</p> <p>Long crossing distances</p>	Add new crosswalks across South Street to provide park access at these cross streets.	

Location	Issue(s)	Recommendation	Additional Info
North Border Road and Park Street			
From Fellsway West to Fallon Road	Opportunity to improve pedestrian access	As a short-term measure, install bike lanes.	
	No bicycle accommodations	With construction, consider a shared use path on the south side of North Border Road to connect with the proposed shared use paths on Fellsway West and Pond Street. Transition to bike lanes at Fallon Road extending northward. Construct a shared use path spur underneath Interstate 93 between North Border Road and the Bear Hill Trail.	
From Fallon Road to Marble Street	No bicycle accommodations	Install bike lanes	“No Parking” signage may be necessary.
Fellsway East			
From Fellsway (Medford) to East Border Road (Malden)	No bicycle accommodations	As a short-term measure, install bicycle facilities with striping. A variation of standard bike lanes, buffered bike lanes, and separated bike lanes are feasible depending on the variable roadway cross-section.  With construction, build separated bike lanes. Consider a sidewalk level bike lane to enhance visibility at driveways.	A road diet is required between Savin Street and East Border Road. Minor parking modifications may be needed.

Location	Issue(s)	Recommendation	Additional Info
Intersection of Pleasant Street	<p>Accessibility</p> <p>Long crossing distances</p> <p>No bicycle accommodations</p>	<p>Upgrade intersection to current accessibility standards and add pavement markings and vertical separation to mitigate conflicts between vehicles and bicyclists.</p> <p>With construction, shorten pedestrian crossing distances and protected intersection elements.</p>	
Intersection of Highland Ave	<p>Additional intersection control needed</p> <p>High crash location</p>	<p>As a short-term measure, add striping to guide bicyclists through the intersection and advanced yield markings.</p> <p>Study the feasibility of signalization or geometric improvements.</p>	
Intersection of East Border Road	<p>Long crossing distances</p> <p>Vehicle slip lanes</p> <p>Opportunity to improve trail access</p> <p>No bicycle accommodations</p>	<p>Reconstruct with tighter geometry, remove slip lanes, and add left turn lanes. Add a crosswalk to the trailhead on the western side. Consider how bicyclists transition from proposed separated bike lanes to proposed shared use path.</p>	

Location	Issue(s)	Recommendation	Additional Info
From East Border Road to West Wyoming Avenue	No bicycle or pedestrian accommodations	<p>As a short-term measure, install bike lanes.</p> <p>With construction, study the feasibility of constructing a shared use path along the west side of the roadway.</p>	<p>Several topographical pinch points exist along the corridor which may limit the feasibility of bike lanes on the entire length of the corridor. If there is room for a bike lane in only one direction, priority should be given to providing a bike lane in the uphill direction.</p> <p>Extending northward from East Border Road, there are topographical constraints as the roadway climbs a hill. Consider paving Jerry Jingle Road as an alternative route to a shared use path directly parallel to the roadway on this segment. See Figure 5-15 for alternative shared use path routings.</p>
	Unmarked trail crossings	Add marked crosswalks at key trail crossing locations indicated in Figure 5-15.	
Intersection of Washington Street	High crash location	<p>Make short-term striping modifications to address crash hotspot. Consider:</p> <ol style="list-style-type: none"> <li>1. Adding a southbound left turn lane onto Washington Street, narrowing the northbound travel lane</li> </ol>	

Location	Issue(s)	Recommendation	Additional Info
		approaching the intersection, or 2. Restricting southbound left turns onto Washington Street.	
Intersection of Lynn Fells Parkway	Opportunity to improve access to trails  Additional crosswalks needed  No bicycle accommodations	Install new crosswalks and curb ramps at all approaches to the intersection. Remove the unsignalized crosswalk 150 ft. north of the intersection, which will be replaced by a signalized crosswalk at the intersection. Add pedestrian connection to the trailhead at the southwest corner. Add a new shared use path connection to the existing shared use path parallel to Pond Street. Consider removing southbound right turn slip lane.	See Figure 5-13.
<b>East Border Road</b>			
Length of corridor	Opportunity to strengthen low-speed, low-volume character of parkway	Implement traffic calming and consider full/partial closures to slow speeds and reduce volumes. Consider centerline removal and advisory bike lanes.	
Intersection of Blomerth Street	Accessibility  Long crossing distances  No pedestrian crossing provided	Upgrade intersection to current accessibility standards. Extend curbs to tighten intersection geometry.	



Location	Issue(s)	Recommendation	Additional Info
Intersection of Woodland Road	Accessibility  Opportunity to strengthen access to reservation	Add a crosswalk across East Border Road and across the Woodland Road approach.	
Focus Area 4: Mystic Valley			
Mystic Valley Parkway Segment 2 – Bacon Street (Winchester) to High Street (Medford)			
From Bacon Street to bridge over Aberjona River	No bicycle accommodations	As a short-term measure, formalize the shoulder as a bike lane.  Long-term, build a two-way separated bike lane on west side of parkway between Aberjona Bridge and Beacon St. Transition a shared use path south of Aberjona Bridge.	A separated bike lane parallel to the sidewalk is recommended in this location due to the presence of residences.
From bridge over Aberjona River to High Street	No bicycle accommodations	As a short-term measure, formalize the shoulder as a bike lane.  Long-term, build a shared use path along west side of parkway. Retain and stabilize existing dirt path as walking/jogging route.	A wide path is recommended where feasible to accommodate demand. The roadway should be narrowed to encourage lower vehicle speeds.
Pine Ridge Road, Ravine Road, and Arlington Street	No pedestrian crossing opportunities	Construct new crosswalks across the parkway connecting local side streets and residential area to the east with the parkland along Mystic Lakes.	

Location	Issue(s)	Recommendation	Additional Info
Traffic circle at High Street (Medford) and Mystic River Road	<p>Accessibility</p> <p>Pedestrian access to parkland needs improvement</p> <p>Unclear vehicle yielding priority</p>	<p>As a short-term measure, add pavement markings to channelize vehicle movements and clarify yielding priority. Include bike lanes and pavement markings to guide bicyclists through the intersection.</p> <p>Add crosswalks and curb ramps across west and north side of intersection and upgrade existing crosswalks and ramps.</p> <p>Evaluate the intersection for additional geometric modifications to improve safety for all users.</p> <p>Consider converting the northernmost 125 ft. of Mystic River Road approaching the intersection to parkland. See page 12 for more information.</p>	<p>Converting the intersection to a modern roundabout may require expanding the footprint into parkland and/or right-of-way.</p> <p>Coordinate as needed with the City of Medford.</p>
Mystic Valley Parkway Segment 5 – Alewife Brook Parkway (Somerville) to the crossing near the Medford Square Footbridge (Medford)			
Intersection of Alewife Brook Parkway	Pedestrian and bicycle connectivity gap	Upgrade the existing circle to a modern roundabout and include shared use crossing on all approaches.	

Location	Issue(s)	Recommendation	Additional Info
From Boston Ave to Auburn Street	MBTA Haverhill/Lowell Line commuter rail overpass creates a pinch point on the shared use path on the north side of Alewife Brook Parkway.	Consider options to provide a wider shared use path through the commuter rail overpass. Alternatives include:  1. Removing one travel lane from the parkway to provide a wider shared use path. 2. Constructing a new box or arch culvert through the railroad embankment north of the parkway to provide a shared use path bypass.	A traffic analysis is recommended to determine the feasibility of Alternative 1.
Auburn Street Bridge	Accessibility upgrades needed  Vehicle slip lanes  Long signal phases  No bicycle accommodations	At the intersection on the south side of the river, remove eastbound right turn slip lane and widen the crosswalks and curb ramps to accommodate pedestrians and bicyclists.  At the intersection on the north side of the river, consider closing vehicle access to/from Auburn Street on the in order to shorten signal length and improve safety.  Consider removing a travel lane in the westbound direction going over the bridge to make space for a bicycle facility.	
From Auburn Street to the crossing near the Medford Square Footbridge	No bicycle accommodations  Wide vehicle lanes	As a short-term measure, install buffered bike lanes.  With reconstruction, build separated bike	Ensure that the facility connects with existing and planned facilities at the crossing

Location	Issue(s)	Recommendation	Additional Info
		lanes using the same cross section.	near the Medford Square Footbridge.
Intersection of Winthrop Street	<p>Shared use path connectivity needs improvement</p> <p>Accessibility upgrades needed</p>	<p>Continue the shared use path from its current terminus at the southwest corner of the intersection to connect with the Mystic River Path west of the pedestrian bridge over Meetinghouse Brook. In conjunction, upgrade intersection accessibility, signal equipment, and geometry. Alternative alignments are:</p> <ol style="list-style-type: none"> <li>1. Along the east side of the community garden to connect with the existing path just west of the pedestrian bridge</li> <li>2. Along the eastern side of Winthrop Street to connect with the existing path terminus at the southwest corner of the community garden.</li> </ol>	

Location	Issue(s)	Recommendation	Additional Info
Mystic River Road			
Length of corridor	No bicycle accommodations  No sidewalks	Retain the low-speed, informal nature of the street.  As a short-term measure, consider advisory bike lanes. Between Arlington Street and Harvard Ave, add a southbound contra-flow bike lane with shared lane markings in northbound direction. Allow parking on northbound side.  Consider additional traffic calming features.	
Intersection of High Street and Mystic Valley Parkway	Parkland bisected by roadways	Consider closing the northernmost 125 ft. of Mystic River Road to traffic and restoring it as parkland. This change would simplify operations and reduce potential conflicts. A bicycle bypass should be provided.	Access to residences on the street would be provided via other streets in the network.
Intersection of Arlington Street	Skewed Intersection	Square off intersection. This can be achieved with low-cost interim materials.	
Intersection of Fairfield Street	Poor crosswalk condition and visibility adjacent to playground	Reconstruct crosswalks and consider other traffic calming to improve playground access.	

# HISTORIC AND CULTURAL RESOURCES

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## Historical Context

Sources: Medford on the Mystic. By Carl Seaburg and Alan Seaburg, Boston Globe, City of Medford

Founded in 1630, Medford was established as a city in 1892 and among the oldest settlements in the Commonwealth of Massachusetts and the US.

The Pawtuckeket people are the native occupants of the area. Sachem (leader) Wonoquaquam, also known as Sagamore John, located his lodge on what is now Tufts College Hill. The Pawtuckeket People managed the land through controlled burns, forest management, and a network of trails - their successful management contributed to the lands' appeal to British colonists. The name Medford is thought to have come from "the ford by the meadow" or "Meadford" thus commemorating the importance of the fordable part of the Mystic River located just west of present-day Medford Square.

The original area of Medford was owned by Mathew Cradock, the first Governor of the Massachusetts colonies. Although Cradock never saw it, he employed men to develop his land into a plantation. After his death, the plantation passed to his heirs and then was sold en masse in 1652 to Edward Collins. The area was designated a "peculiar" which signified that it was private property and not a properly incorporated town. Collins began selling pieces of land to others after 1656. In 1684, Medford was granted the right to raise its own money by the General Court. In 1892, Medford became incorporated as a city.

Medford's population grew steadily through the early 18<sup>th</sup> century with successful farming and shipbuilding. During the 18<sup>th</sup> century, not all Medford residents were free. The "slave wall" on Grove Street is a brick wall capped with thin stone slabs and a granite post at the southern end. The Royall House and Slave Quarters is an active museum in Medford today. Revolutionary war patriot Sarah Bradlee Fulton lived here. General George Washington visited here during the Revolutionary War, while Paul Revere came through on his famous ride, waking up Medford residents with "the British are coming!"

Innovations in infrastructure and industry in the early 19<sup>th</sup> century supported rapid growth. The Middlesex Canal, railroad, Cradock Bridge, and electricity all contributed to Medford becoming a bustling "Streetcar Suburb" of expanding Boston. Medford industry produced tiles, crackers, bricks, rum, and ships.

The 20<sup>th</sup> century saw the growth of West Medford into a vibrant African American neighborhood and the peak population of Medford at 65,000 in 1950. Shortly after, interstate 93 finishes construction in 1953.

## Historic and Cultural Inventory

The Medford Historic Commission surveyed about half of Medford between 2010 and 2017, including West Medford, Hillside, Medford Square, East Medford, and

south Medford. The *City of Medford Community Preservation Plan* states that these inventories will be more reflective of Medford’s historic architecture than MACRIS.

*Next step: Meet with Historic Commission to discuss progress since 2017; update inventory lists in City of Medford Community Preservation Plan (2017).*

## Historic Buildings and Sites

### *Municipal*

- City Hall
- Fire stations (Salem Street, Riverside, Medford Street, and Ames Street)
- Curtis School
- Chevalier Theatre
- Brooks Estate
- Salem Street Burying Ground
- Oak Grove Cemetery (including Cross Street Cemetery)

### *Non-municipal*

- Isaac Royall House and Slave Quarters (National Historic Landmark)
- Peter Tufts House (National Historic Landmark)
- Medford Historical Society and Museum
- Middlesex Canal (National Register of Historic Places)

### *Former Schools Adapted for Reuse (Office and/or Residential)*

- Old Medford high School
- Hervey, Gleason, Sarah Bradlee Fulton, Swan, Kennedy, and Franklin Schools
- The Dame School

No.	Name	Location	Year Built	Notes
1	Albree Hall Lawrence House	353 Lawrence Road	c. 1720	
2	John B. Angier House	129 High Street	1842	
3	Bigelow Block	Corner of Forest & Salem Streets	1886	
4	Charles Brooks House	309 High Street	c. 1765	
5	Jonathan Brooks House	2 Woburn Street	c. 1780's	
6	Shepherd Brooks Estate	275 Grove Street (includes Shepherd Brooks Manor, Carriage House & 50 acres of open space, including Brooks Pond)	1880 (earlier bldg. built 1859)	Medford-owned, in partnership with M- BELT, a 501c3 Non-Profit

No.	Name	Location	Year Built	Notes
7	Cradock Bridge	Main Street at Mystic River	1637	Original bridge was wood; current bridge being rebuilt 2015-2018
8	Paul Curtis House	114 South Street	Early 1800's; enl. 1839	"Grandfather's House" from the famous poem by Lydia Maria Child
9	Fells Connector Parkways	Fellsway Parkways across Medford		Extends into Malden
10	George P. Fernald House	12 Rock Hill Street	c. 1895	
11	Jonathan Fletcher House	285 High Street	c. 1835	
12	Grace Episcopal Church	160 High Street	1869	Designed by H.H. Richardson
13	Isaac Hall House	43 High Street	c. 1720	Paul Revere stopped here
14	Lawrence Light Guard Armory	980 High Street	1891	
15	Joseph K. Manning House	35-37 Forest Street	1875	
16	John M. McGill House	56 Vernon Street	1902	
17	Medford Pipe Bridge	Over Mystic River between High Street & Mystic Valley Parkway	1897	Pedestrian Bridge
18	Mystic Dam & Gatehouse	Between Lower & Upper Mystic Lakes	1864-1865	
19	Edward Oakes House	5 Sylvia Road	c. 1728	
20	Old Medford High School	22 & 24 Forest Street	1894-1896	Converted to condos in 1980's, includes Chevalier Theater
21	Park Street Railroad Station	20 Morgan Avenue	1894	
22	Richard Pinkham House	24 Brooks Park	c.1850	
23	Revere Beach Parkway	Starts at Wellington Circle heads west	1896-1904	
24	Isaac Royall House & Slave Quarters	15 George Street	c. 1692, exp. 1733-1737	Owned & operated as a museum by 501c3 Non-Profit
25	Salem Street Burial Ground	Medford Square - Riverside & Salem Street	c. 1683	Original Wade family plot acquired by Medford in 1717
26	Slave Wall	Grove Street, approx. 58-168, part of Thomas Brooks Park	1765	Wall constructed by Brooks family slave named Pomp
27	Peter Tufts House	350 Riverside Avenue	1677-1678	Oldest house in Medford



No.	Name	Location	Year Built	Notes
28	U.S. Post Office	20 Forest Street	1937	Public Works Administration era structure
29	Unitarian Universalist Church & Parsonage	141 & 147 High Street	1894 Church, parsonage 1785	Parsonage also known as Osgood house
30	John Wade House	253 High Street	c. 1784	
31	Jonathan Wade House	13 Bradlee Road (Medford Square)	c. 1689	

Source of Table: City of Medford Community Preservation Plan (2017), pp. 21-22.

### **Buildings with a Historic Preservation Restriction**

- Royall House
- Books Estate
- Charles Brooks House
- Peter Tufts House
- Richard Pinkham House
- Salem Street Burying Ground
- Grace Episcopal Church
- Unitarian Universalist Church

### Cultural Buildings and Sites

- Medford Public Library
- Marsha Caron Theatre at Medford High School
- Middle school auditoriums (2)
- Condon Band Shell
- West Medford Community Center
- Willis Avenue Community Center
- Medford Senior Center
- Medford Boys & Girls Club

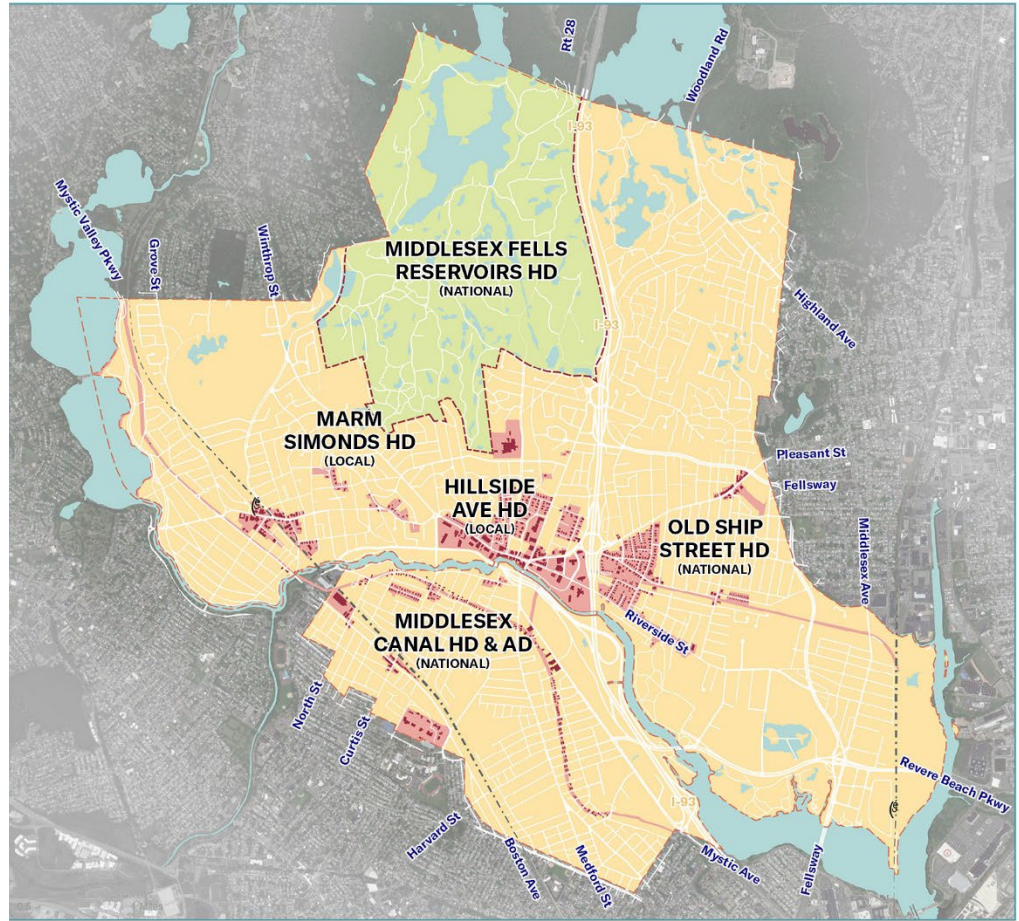
### Districts and Areas

- Freedom’s Way Natural Heritage Area (Malden then west along Route 2 into New Hampshire)

No.	Name	Location	Year Built	Notes
1	Hillside Ave Historic District	Fifteen properties, generally late 19 <sup>th</sup> century, on both sides of Hillside & Grand View Ave, Medford Square	Mostly late 19 <sup>th</sup> century residences	<b>City of Medford-designated Historic District</b> and National Historic District (under jurisdiction of Medford Historic District Commission)
2	Old Ship Street Historic District	Both sides of Pleasant Ave. from Riverside Avenue to Park Street	c. 1803 - 1855	<b>National Historic District</b> (not under jurisdiction of Medford Historic District Commission)
3	Marm Simonds Historic District			<b>City of Medford-designated Historic District</b> (under jurisdiction of Medford Historic District Commission)
4	Middlesex Canal Historic and Archeological District	Encompasses full 27-mile length of Canal from Merrimack River to Boston	1801-1803	<b>National Historic District</b> (not under jurisdiction of Medford Historic District Commission)
5	Middlesex Fells Reservoirs Historic District	Portion of Middlesex Fells extending into Stoneham		<b>National Historic District</b> (not under jurisdiction of Medford Historic District Commission)

*Next step: Follow up with the City/Historical Commission to see if 21 Tourao Avenue was completed as a single-building National Historic District and if others were added/ Also check on proposed Medford Square Historic District.*

## Medford Historic Districts



-  MHC Local Historic District
-  National Register of Historic Places
-  City Boundaries
-  Transit Lines
-  Water

## **Events**

- Circle the Square (summer)
- Arts Across Medford (fall)
- Mystic River Celebration
- Haines Square Festival
- West Medford Open Studios
- Medford Farmers Market
- Doc Kountze Arts Festival (former?)
- City-led Community Day, Harvest Your Energy Festival, Patriots Day, Memorial Day, December Holiday Celebration

## **Community groups/Institutions**

- Chevalier Theater Commission
- Coalition for Arts, Culture, and a Healthy Economy in Medford (CACHE)
- Community Garden Commission
- Medford Arts Council (Medford Cultural Council?)
- Medford Brooks Estate Land Trust
- Medford Community Coalition
- Medford Conversations Project (?)
- Medford Historical Commission
- Medford Historical Society and Museum
- Medford Historic District Commission
- Royall House and Slave Quarters
- Tufts University
- West Medford Community Center
- Open Space-related groups
  - DCR
  - Freedom's Way National Heritage Corridor
  - Friends of Fellsmere Heights
  - Friends of the Middlesex Fells
  - Medford Health Matters
  - Medford Bicycle Advisory Committee
  - Medford Park Commission
  - Mystic River Watershed Association
  - Mystic Wellington Yacht Club
  - Walk Medford

## Recommendations for Arts and Culture

The following policy-level recommendations were drawn from the *Mayor Burke Cultural Affairs Recreation Committee Report* (2016), p. 7. The action steps in the report had timelines ranging from 30 days to 6 months and may be outdated.

- Consistent championing of the role of arts, culture, and recreation in our daily lives.
- Strategic approaches (rather than ad hoc) to developing the city's infrastructure and revising its master planning to incorporate creative place-making and forward-looking uses of open space, historic properties, and natural resources.
- Policy changes that make arts, culture, and recreation a high priority in all aspects of the City's operations, including planning and especially communications
- Additional full-time personnel in support of the arts, recreation (programs and facilities), and communication.
- Increased investment in and a capital improvement plan for city-owned or city-managed arts, culture, and recreational facilities, with a marketing plan to promote stewardship, pride, and innovation in programming.
- Seeking new or previously untapped sources of revenue for arts, culture, and recreation, including grants such as those through the Massachusetts Cultural Facilities Fund, the Massachusetts Public Library Construction Program [with which a site visit recently was held to discuss the 2016 grant schedule], and linkage moneys.

The following policy-level recommendations were drawn from the *Medford Mayoral Transition Committee Report (January 2020)*, pp. 14-15.

There are several concrete steps the Mayor can consider in support of the arts:

- Build a bridge between the business community and the artist community. Beautifying the squares is a consistent economic development priority. Vacant storefronts or existing businesses and privately-owned public spaces would be enhanced through a more concrete partnership between the nonprofit artist community, the Chamber of Commerce and private business.
- Ensure City Hall includes someone responsible for serving as a liaison with the arts community. The coordination of approvals, location and logistics for arts programming is critical. While the City is under budget constraints and it is not clear whether a fulltime art liaison is affordable, assigning a specific point of contact to support the arts as part of their role is essential. This person would help to ensure artists installations continue to exist in City Hall. The role could exist in the Mayor's office, but could also exist in the Office of Community Development (OCD) where many peer cities organize this work as part of an interdisciplinary team. Locating the work in OCD could support greater placemaking emphasis and more strategic planning with arts and culture central to that thinking.
- Medford Arts Council distributes grants to artists made possible through financial support from the Mass. Cultural Council and an appropriation from the City of Medford. There is a strong desire to continue this partnership in support of the arts to provide funding throughout the City. The Medford Arts

Council has been able to take a strategic approach to its grantmaking. This is a potential model for how to approach prioritization of scarce program dollars in the city.

- Support a permanent home for the arts. A feasibility study has been commissioned to study the potential to transition the Hegner Center, located at 15 Maple Park Ave. near Gillis field into an arts center. There appears to be consensus within the arts community to support this location. The arts community has asked the new Administration to be clear about the path forward on Hegner's future, including questions about procurement and legal structure for a ground lease or other transfer. The long-term operating costs of the Arts Center would not be a City responsibility under the current Hegner proposal.
- Embrace performance arts to activate public spaces and engage young people. Dance and music are amazing opportunities for youth development. While the Medford Recreation Department has done great work in its short history, expanding programming well beyond active sports and swimming is a worthy goal.

*Note: Next step: Confirm relevance of recommendations and actions with City staff and focus groups.*

## Recommendations for Historic Preservation

The following policy-level recommendations were drawn from the *City of Medford Community Preservation Plan* (2017), pp. 32-33.

- **Brooks Estate:** Full implementation of the Master Plan for the City-owned Brooks Estate prepared by the Medford Brooks Estate Land Trust (MBELT). The Master Plan calls for the complete restoration of the Shepherd Brooks Manor (presently about 60% complete) and the complete reconstruction of the Carriage House into a multi-purpose function facility that will generate revenue for the maintenance of the buildings and landscape and pay back the City of Medford's investment, including interest, over a 20-year period. The Master Plan also calls for rebuilding the access drive, restoration of the landscape, improved walking trails, invasives removal, restoring a historic vista between the Manor and Brooks Pond, and common-sense forest management. The execution of the Master Plan will greatly expand public access to the Brooks Estate and the types of public uses that the buildings and property can accommodate. Two of the most urgent needs are to stabilize and restore the Carriage House, and to reconstruct the access road to the Manor and Carriage House and open up the Grove Street entrance to the Estate.
- **Other City-owned Properties:** Several of the City's buildings are historic structures and may require preservation. CPA funds could help to ensure that work is carried out on these buildings in such a way that preserves their historic features. There are also sculptures, memorials, or other elements within the Oak Grove Cemetery that need restoration.
- **Documents, Records, and Artifacts:** Both the City and non-profit museums including the Historical Society and the Royall House and Slave Quarters have significant collections of documents, artifacts, and records. City

resources are in several places, including the basement of City Hall, the Library, schools, and departmental offices. The resources in City Hall and the Library are not adequately stored and are in particularly vulnerable condition, susceptible to mold and flooding. It is difficult to access records and documents because of their fragile condition and the lack of a catalog or inventory. The planned construction of a new public library could provide an opportunity to create a storage facility to preserve historic documents, as well as to make them available and accessible to the public.

- **Nonprofit Organizations:** Medford's two historical museums both have needs to preserve their buildings and improve handicapped accessibility, and to ensure the preservation of artifacts and records.
- **Other Historic Community Assets:** Protect historic properties from demolition or loss of historic features, restore historic features of privately-owned buildings or properties where they are visible or accessible to the public, or restore walls or other features of public realm which might be owned by DCR or one or more private owners.

*Note: Next step: Confirm relevance of recommendations and actions with City staff and focus groups.*

## PUBLIC FACILITIES

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*Note: Data available so far is summarized here. With some additional information and updates (and the City's ok), pages 10-17 of the City of Medford Capital Improvement Plan FY2021-2026 could be added to the section on Services and Facilities. See additional notes below on next steps for confirming or updating some of this information.*

### Energy Efficiency

The City has received grants for more than \$1.25 million for energy efficient upgrades to its facilities. This includes funding from the Green Communities program (DOER).

*Note: A next step is to discuss whether more upgrades are required with City staff and the schedule for those upgrades.*

### Inventory of City Facilities

#### Buildings

Name	Address	Year Built/ Renovated	Approx. Sq. Ft.
City Hall	85 George P. Hassett Drive		
Police Department Headquarters	Main Street	2020	35,000
Fire Station No. 1, Headquarters	120 Main Street	1963	14,390*
Fire Station No. 2, West Medford Station	26 Harvard Avenue	1986	5,489
Fire Station No. 3, Salem Street Station	276 Salem Street	1920/1990	6,774
Fire Station No. 4, Wellington Station	435 Riverside Avenue	1932/1990	8,428
Fire Station No. 5, South Medford Station	0 Medford Street	1992	14,003
Fire Station No. 6, Fulton Heights Station	2 Ames Street	1932/1990	8,352
Library	111 High Street	Anticipated May 2021	
DPW Yard	21 James Street		
Senior Center	101 Riverside Avenue		
Oak Grove Cemetery Buildings	230 Playstead Road	1930s	
Chevalier Theater	30 Forest Street	1939	
Brooks Estate	Grove Street	1880s	
Brooks Elementary School	388 High Street	2003	100,000



Name	Address	Year Built/ Renovated	Approx. Sq. Ft.
Christopher Columbus Elementary School	37 Hicks Avenue	2003	100,000
John J. McGlynn Elementary School	3002 Mystic Valley Parkway	2001	100,589
Milton Fuller Roberts	35 Court Street	2003	100,000
John J. McGlynn Middle School	3004 Mystic Valley Parkway	2001	99,411
Madeleine Dugger Andrews	3000 Mystic Valley Parkway	2001	100,000
Medford High School	489 Winthrop Street	1970/2005	445,491
Medford Vocational Technical High School	489 Winthrop Street	1970/2005	84,509
Curtis-Tufts Alternative School	437 Main Street	1939	18,800

\*Fire Department only; Entire building is 32,993, encompassing the former space for the 911 Combined Call Center and Police Department (both of which have since moved into the newly-built Police Headquarters).  
(Source: City of Medford Capital Improvement Plan FY2021-2026, pp. 10-11)

*Next Step: interview appropriate City staff about building conditions and needs.*

## Non-building

### Information Technology Infrastructure

City Hall is the primary data center for municipal departments. The City has a fiber optic network and associated equipment for full connectivity for municipal employees. The Medford Public Schools has its own infrastructure, and each school has a single fiber optic connection. Equipment and software license for classroom needs are connected to the school systems.

According to the *City of Medford Capital Improvement Plan FY2021-2026*, both systems have surveillance equipment and redundancy for connectivity. The description of the school's technology references the District's Disaster Recovery Plan. The description of the City's technology does not reference such a plan.

*Next Step: confirm if the City has a Disaster Recovery Plan.*

### Vehicles and Equipment

The *City of Medford Capital Improvement Plan FY2021-2026* does not list all the vehicles but does note that the Department of Public Works has over 100 vehicles. Police and Fire are the only two other departments listed as having vehicles. All three departments have additional equipment required for the services they provide; the type of equipment is described but the quantities are not listed.

## Open Space

The *City of Medford Capital Improvement Plan FY2021-2026* lists the open space facilities owned or managed by the City; these are described in terms of use and ownership in the section on Open Space and Recreation.

<b>Name</b>	<b>Size (acres)</b>	<b>Amenities</b>	<b>Address</b>
Anthony A. LoConte Memorial Skating Rink	N/A	Skating, hockey	97 Locust Street
Barry Park/Playground	4.3	Baseball, basketball, tennis, tot lot	74 Summer Street
Brook Park	0.36	Passive	220 Main Street
Brooks Estate	49.8	Conservation	275 Grove Street
Capen Park/ Hillside Memorial Park	0.77	Basketball, tot lot, spray park	199 Capen Street
Carr Park	11.5	Baseball, tennis, basketball, tot lot	Winslow Avenue
Chevalier Auditorium and Gene Mack Gym	N/A	Recreation and Medford Youth Center	30 Forest Street
Clippership Park	1.52	Passive	Clippership Drive
Columbus Memorial Park	5	Baseball, softball, basketball	Hicks Avenue
Condon Shell/ Winthrop Street Community Garden	7.5	Conservation and cultural	2501 Mystic Valley Parkway
Cummings Park	0.45	Basketball, tot lot	17-21 Lyman Avenue
Dugger Park	3.2	Basketball, soccer, tennis, tot lot, spray park	Mystic River Road
Gillis Field	1.9	Baseball	124 Fulton Street
Grant Park	0.21	Historical/cultural	Boston Avenue @ Winthrop Street
Harris Park/Playground	2.8	T-ball, tennis, basketball, tot lot	226-238 Middlesex Avenue
Hasting Heights Park	1.3	Passive	Allston Street @ Vernon Street
Hickey Park/Playground	4.4	Baseball, softball, tennis, basketball, tot lot	340-390 MA-28
Krystle Campbell Peace Garden	0.44	Historical/cultural	101 Riverside Avenue
Logan Park/Playground	1.3	Tot lot, passive recreation	28 Logan Avenue
Magoun Park	1.3	Basketball, tot lot	22 Cushing Street

Name	Size (acres)	Amenities	Address
McNally Park	1.7	Softball, tot lot	35 Webster Street
Medford High School (Edgerly Sports Complex)	7.5	Basketball, volleyball, swimming pool, turf field, theatre	489 Winthrop Street
Medford Honor Roll Park	0.9	Historical/cultural	489 Winthrop Street
Morrison Park/Playground	4.4	Baseball, tennis, basketball, tot lot	149 Central Avenue
Oak Grove Cemetery	109	Historical/cultural	230 Playstead Road
Playstead Park	12.3	Baseball, basketball, soccer, tennis, tot lot	100 Playstead Road
Prescott Park	0.25	Passive	4 <sup>th</sup> Street @ MA-28
Riverbend Park and Hormel Stadium	46.5	Baseball, soccer, football, running track, tot lot, community garden	90 Locust Street
Riverside Plaza	0.3	Passive/cultural	River Street @ Riverside Ave
Royall Park	0.76	Historical/cultural	191 Main Street
Salem Street Burying Ground	0.81	Historical/cultural	MA-60 @ River Street
Thomas Brooks Park	6.6	Passive	75 Grove Street
Tufts Park	10.6	Softball, soccer, basketball, tot lot, pool	437 Main Street
Veterans Memorial Park	9.6	Baseball, softball	Mystic Valley Parkway @ Winthrop Street
Victory Park	6.12	Soccer, basketball, tennis, tot lot	437 Winthrop Street
Wright's Pond	147.5	Swimming with bath house and concessions	123-157 Elm Street

The *City of Medford Capital Improvement Plan FY2021-2026* does not list the veterans' squares, monuments and plaques that the City updates. Other facilities include the following:

Name	Owned by	Managed by
Middlesex Fells Reservation	Commonwealth of Massachusetts	Commonwealth of Massachusetts
Macdonald Park (Mystic River Reservation)	Commonwealth of Massachusetts	Commonwealth of Massachusetts
Veterans Memorial Park	Commonwealth of Massachusetts	City of Medford Park Division

<b>Name</b>	<b>Owned by</b>	<b>Managed by</b>
Dugger Park	Commonwealth of Massachusetts	City of Medford Park Division
LoConte Memorial Skating Rink	Commonwealth of Massachusetts	City of Medford Park Division
Riverbend Park	Commonwealth of Massachusetts	City of Medford Park Division
Condon Shell	Commonwealth of Massachusetts	City of Medford Park Division
Flynn Memorial Ice Skating Rink	Commonwealth of Massachusetts	Friends of the Flynn Rink
Alumni Fields	Tufts University	Tufts University
River's Edge	Private (Conservation Restriction)	Private

## **Roads, Bridges, and Related Transit Infrastructure**

The *City of Medford Capital Improvement Plan FY2021-2026* lists the types of streets and the two bridges owned by the City. The text notes that there are many culverts but does not list their locations.

<b>Bridge Name</b>	<b>Facility Carried</b>	<b>Feature Intersected</b>	<b>Structure Type</b>	<b>Year Built/Reconst'd</b>
	Boston Ave	Mystic River	Arch-Deck	1900
Cradock Bridge	Rt 38 / Main St	Mystic River	Arch-Deck	1880/2018

Street types are as follows:

- Local streets (2/3 of roads)
- Collector roads (13% of the roads)
- Arterial roadways (18%)
- Interstate highways (3%)

## **Drainage Infrastructure/Storm Water Management System**

The City has a citywide drainage model that is used to simulate the impact of current and future predicted storms. Flooding is listed as a significant concern and includes folding from both extreme rainfall events and high coastal surge conditions. The system has 115 miles of storm drain pipes and over storm water outfalls into the Mystic and Malden Rivers. The City is part of the Mystic River Watershed.

## **Dams**

The *City of Medford Capital Improvement Plan FY2021-2026* lists three dams; it is unclear if there are others. The document notes that failure of the dams would result in significant damage from flooding.

- Wright's Pond Dam (City of Medford)
- Amelia Earhart Dam (Department of Conservation and Recreation)
- Mystic Lakes Dam (Department of Conservation and Recreation)

## **Water and Sewer Systems**

The Massachusetts Water Resources Authority (MWRA) provides potable water and sanitary sewer services. The City owns 120 miles of water line and another 120 miles of sewer pipe. The City has a water pumping station (Doonan Street), 1,400 hydrants, 15,000 water meters, and about 10,000 water gate valves.

## **Capital Needs Assessment**

The *City of Medford Capital Improvement Plan FY2021-2026* identifies \$157.8 million in projected capital needs across all departments. This represents 264 projects and includes planning for the Medford High School, construction/rehabilitation of Fire Headquarters, maintenance and improvements

to City streets and sidewalks, the rehabilitation and enhancement of public grounds, parks, and recreational facilities, and the replacement of water mains.

The projected costs are summarized by fiscal year, with the highest dollar figure in the current fiscal year. This is not achievable, and future capital plans will need to consider both the need for the project and ability to fund it when prioritizing projects across the five year time horizon.

## Initial Findings and Recommendations

*Note: The bulleted findings and recommendations are taken directly from the City of Medford Capital Improvement Plan FY2021-2026.*

The *City of Medford Capital Improvement Plan FY2021-2026* lists a series of findings and recommendations developed by the Collins Center, who assisted the City with the preparation of the report.

## Findings

- There is no citywide facilities management or maintenance function. Departments are largely responsible for their own facilities, including routine maintenance and advocacy for major maintenance and improvements. Often, department staff do not have the background necessary for this task.
- Facilities management in the City is not approached holistically, so there are missed opportunities for facilities investments to support organizational priorities and goals, to appropriately prioritize projects, and to achieve economies of scale (i.e. cost savings).
- Decentralized responsibility (and budgets) for facilities management has resulted in maintenance needs sometimes competing with other operational priorities for funding, often resulting in deferred maintenance and “band-aid” repairs.
- Unlike some other proposed capital projects, the facilities capital project submittals were significantly lacking in detail, including scope of work and cost estimates.
- Departments have, over time, been conditioned to accept a “band-aid” approach to capital planning. A recurring theme from staff was that planned improvements were abandoned in favor of new projects. As a result, they “take what they can get” and move on rather than advocate for more beneficial long-term investment.

## Recommendations

- The City should create a Facilities Management Division, led by a professional facilities manager. The Division should oversee maintenance efforts citywide, with either tradespeople on staff or as needed by contract.

- The Division should be involved in City strategic planning efforts insofar as goals and priorities can be supported by investments in facilities. [Projects not aligned with City goals and priorities should be rethought.]
- Facilities management should integrate with the overall risk management program to ensure code compliance and safety for staff and members of the public.
- A comprehensive needs assessment (including accessibility audit) is an immediate priority and should be conducted as soon as possible. This can provide the basis for the Division's work for the next decade or more.
- With a Facilities Management Division and a robust capital planning process, the City should ensure that major projects are integrated with other City needs and priorities and vice-versa.
  - As major facilities projects (whether new construction or reconstruction) are being conceptualized and designed, other City functions, including Building, IT, Community & Economic Development, Engineering, and Energy and Environment, should be involved to ensure the investment aligns with other City needs and priorities and that all applicable codes and anticipated technological needs are met.
  - This should also extend to the development review process to ensure that opportunities to leverage private sector projects to benefit public facilities are not missed.
- The new Economic Development Director should work closely with the Facilities Division, Parks Division, and Engineering Division to ensure that facilities projects (and infrastructure projects generally) that are necessary to support economic development efforts are scoped and prioritized appropriately.
  - An economic development plan for certain anchor sites, such as the Chevalier Theater and the Hormel/LoConte/Riverbend site, should be considered.