Leominster Digital Equity Plan

May 2025

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1. Introduction to Digital Equity Planning

The City of Leominster received technical assistance from the Montachusett Regional Planning Commission, funded by the Massachusetts Broadband Institute (MBI), under the Municipal Digital Equity Planning Program, to draft a municipal digital equity plan.

The goal of achieving digital equity within a community is one that aims to ensure everyone has equitable access and opportunities to the digital information and technology needed for full participation in society, democracy, and the economy through a process known as digital inclusion. The focus is on bridging digital gaps associated with the availability of high-speed broadband internet service and digital devices, affordability of internet service and devices, and overall adoptability of those services and devices. Increasing access and removing barriers affecting digital inclusion and equity requires a fuller understanding of those barriers, and how they affect certain segments of the population, particularly within varying geographic areas such as urban centers, suburban neighborhoods, and rural regions.

In certain areas or among certain segments of the population, bridging the digital divide by increasing "access" may mean developing programs that address affordability issues or language barriers that limit access to services and devices. In other areas, it may focus on increasing "adoptability" among aging adults over 60, through digital literacy classes intended to build confidence, trust, and overall comfort-levels through lessons in basic computer use and online safety and security. In more rural areas, where residential internet services are limited and publicly accessible spaces with reliable connectivity are few and far between, it may focus on expanding service to remote locations, creating public workspaces, increasing staffing and hours to those spaces, or, providing convenient, connected outdoor workspaces in places where hours or staffing are limited.

Regardless, increasing digital inclusion, or bridging the digital divide to achieve digital equity requires an understanding of the existing challenges and barriers that may be preventing inclusion, creating the divide, or limiting equity. Without a comprehensive understanding of the conditions, it is impossible to identify what is needed to address and overcome those conditions. The primary purpose of Digital Equity Planning is to evaluate the existing conditions around digital equity, define the community "needs" required to overcome any challenges or barriers contributing to digital inequities or limiting digital inclusion, and, finally, to develop strategies, goals, and actions

required to increase digital inclusion, bridge the digital divide, and achieve digital equity. Achieving Digital Equity is the vision and desired outcome of this planning process.

1.1 Digital Equity

The Challenge, The Opportunity, and The Vision

The first two decades of the 21st century have been defined by the emergence of global economies, increasing private enterprise, wide-scale technological and tele-communications advancements, including an increase in personal, internet-enabled mobile computer devices (aka cell phones or smart-phones), the development of digital social media and "user-generated content", the rise of artificial intelligence and machine learning, drastic climatic and ecological changes related to global warming, a global pandemic leading to the death of over 6-million people worldwide and causing major disruption to the global economy, and an increase in the world population from 6.1 billion to 8.2 billion people (as of October 2024). This seems like a lot of change in such a short time – and it is – but human knowledge, technology, and information, specifically *digital* information, is growing at an exponential rate like never before. Consider this: More than half the world's population, approximately 4 billion people, now have access to the internet and own a cell phone. Further, in 2010 former Google CEO, Eric Schmidt, noted that the entire written works of humanity (in all languages) prior to 2003, was estimated to be about 5 exebytes of data. At that time, in 2010, it was estimated that an equivalent amount, 5 exebytes, of digital information was created every two days! [1,2] Now, in 2024, only 14 years later, the amount of data created every day is estimated to be 400 exebytes! (That is equivalent to 400 million terabytes of data.) [3]

In 2020 alone, internet users generated 64.2 zettabytes of data, which is more than the number of stars in the universe.

Since 2020 and the COVID-19 pandemic, people rely more than they ever have before on broadband internet and online, web-based platforms for employment, education, healthcare, shopping, dining, business development, news and information, and everyday living. This reliance is now a dependency of necessity, rather than a matter of convenience or conscious choice as may have been considered just a few short years ago. To put today's daily internet usage and data creation into perspective, in 2024, there are 5 billion internet searches

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[1] "Digital in 2018: World's internet users pass the 4 billion mark". We Are Social. 30 January 2018.
[2] "Eric Schmidt: Every 2 Days We Create As Much Information As We Did Up To 2003". 4 August 2010.
[3] https://explodingtopics.com/blog/data-generated-per-day

performed daily; Every minute of each day there are over 500,000 photos shared on Snapchat; Even more astoundingly, there are 156 million emails sent every minute of every day, an amount that equates to 250 billion or more emails sent per day, or over 91 trillion per year!

To understand the importance of digital equity and the purpose of this planning process, it is necessary to know the answer to two questions: "What is Digital Equity?", and "Why is Digital Equity Important?".

What is Digital Equity?

Digital equity efforts seek to ensure everyone has the same access and opportunities to the information technology needed for full participation in society, democracy, and the economy. The focus is on bridging the affordability of internet service and devices, building skills to use programs and equipment, increasing trust, and overcoming language or other barriers that keep individuals from fully participating.

Why is Digital Equity Important?

Access to broadband internet and digital devices through equitable availability, affordability, and adoptability is essential for people to participate in society, the economy, and democracy, and to receive essential services, education, and job opportunities. It is a necessity of everyday life and living.

Digital equity aims to address the digital divide, which is the gap in access to digital services and devices that poses certain barriers or challenges to some people more than others. Digital equity can be achieved or improved by:

- Ensuring equal access to technology, such as devices, software, and the internet
- Providing training for educators to help students of all ages use digital tools
- Developing digital literacy in schools and other public institutions
- Preparing all people, including lower-income households, aging adults, incarcerated individuals, Veterans, individuals with disabilities, individuals

Digital Equity Defined...

"The condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services."

National Digital Inclusion Alliance

Key components of digital equity include:

Internet Connection: Do all populations experience internet connection that is affordable, fast, and reliable? Can all populations access the internet?

Devices: Do all populations have devices that are adequate, needs-appropriate? Are devices affordable or otherwise accessible?

Literacy and Skills: Do all populations have the ability to use technology and the internet to achieve their needs? Do concerns around trust, privacy, and safety exist?

EQUALITY   EQUITY

NDIA
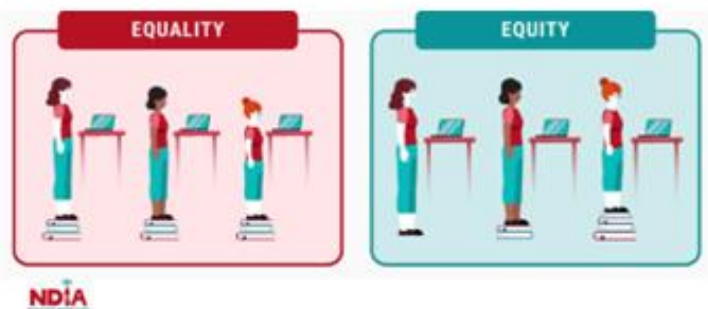
with language and literacy barriers, individuals who are members of a racial or ethnic minority group, and rural residents, for success in the digital age

1.1.1 The Challenge: The Digital Divide

Digital Equity Gaps Impact:

- Social Connectivity
- Workforce Readiness
- Civic Participation
- Healthcare Access
- Educational Opportunities
- Financial Resources

Inequitable access to the internet, sometimes referred to as the digital divide, is related to issues with internet supply (i.e., availability and affordability of broadband service connections), internet demand or adoptability (i.e., utilization or adoption of those services), and digital literacy and technology (access to and affordability of digital devices and technologies, and digital skills, confidence, and convenience, and comfort levels associated with use of such devices).[4] This plan examines the existing conditions of the Town of Leominster, with a focus on social and economic demographics of populations or groups determined to be most susceptible to digital inequity.

The purpose of the plan is to better understand the "Digital Divide" that exists within the community and among its residents and neighborhoods, and particularly among certain populations or groups determined to be most susceptible to digital inequity. Overall, factors of internet availability, affordability, and adoptability, all play a role in determining an individual or group's access to reliable high-speed broadband internet and digital devices and technologies. The purpose of this plan is to understand barriers and challenges to digital inclusion, and to develop strategies, goals, and actions capable of narrowing the digital divide by increasing inclusion and thereby enhancing digital equity.

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[4] U.S. Census Bureau, SEHSD Working Paper Number: 2019-15, *Deconstructing the Digital Divide: Identifying the Supply and Demand Factors That Drive Internet Subscription Rates*, Micheal J.R. Martin

1.1.2 The Opportunity: Digital Inclusion

The importance of access to reliable broadband internet service and overall access thorough availability, affordability, and adoptability of digital technologies and devices has been recognized by local, state, and Federal officials as well as digital equity advocacy organizations. It has become clear that broadband connectivity and digital literacy are increasingly critical to how individuals—participate in the society, economy, and civic institutions of the United States, and access health care and essential services, especially for obtaining education and building careers. There are high societal and economic costs associated with digital inequality and exclusion. A person's opportunity for economic success, educational achievement, health and wellness, social well-being, community involvement, and civic engagement are

dependent upon access and proficiency related to broadband internet and digital technology, devices, and skills. Digital exclusion can materially, socially, and physically harm and hinder an individual's personal and financial status and situation. Inequalities associated with other socio-economic, demographic factors can increase such exclusions and exacerbate existing wealth and income gaps and lead to further challenges and barriers to successfully accomplishing the necessary tasks of daily life in the pursuit of one's own livelihood and inalienable rights of living.
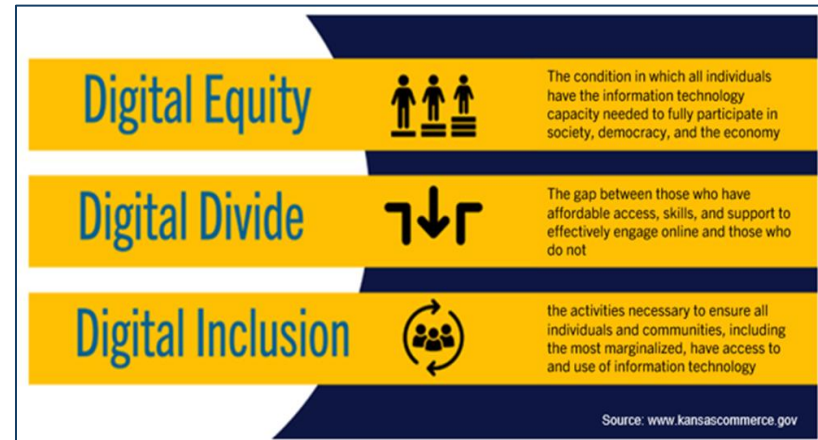
1.1.3 The Vision: Digital Equity

Sustained investment toward identifying and understanding the causes contributing to digital inequity is necessary to increase digital inclusion and achieve an equitable digital environment to prevent further exclusion and individual and societal degradation. Achieving Digital Equity is a matter of social and economic justice and is worthy of its pursuit.

The vision for broadband and digital equity in the Commonwealth of Massachusetts was established within the *Massachusetts Internet for All Plan*, and contends that:

> *"Every resident in Massachusetts has high-speed, high-quality internet availability and can confidently adopt and use the internet regardless of who they are or where they live. This universal connectivity will ensure that everyone has the support they need to enjoy full personal, civic, and economic digital participation throughout their lives with safety and security."*

1.2 The Digital Equity Act

The Digital Equity Act [47 USC 1721(8)] of 2021[5] calls for the establishment of certain "covered programs" that focus on empowering those most impacted by the digital divide, referred to as "Covered Populations". The term "covered programs" means the State Digital Equity Capacity Grant Program established under section 1723 of the Digital Equity Act and the Digital Equity Competitive Grant Program established under section 1724 of the Act.

The primary intent and purpose of such programs is to increase internet access and the adoption of broadband among covered populations through activities such as those intended to:

- Develop and implement digital inclusion activities that benefit covered populations
- Facilitate the adoption of broadband by covered populations in order to provide educational and employment opportunities to those populations
- Implement digital literacy training programs for covered populations that cover basic, advanced, and applied skills other workforce development programs
- Make available equipment, instrumentation, networking capability, hardware and software, or digital network technology for broadband services to covered populations at low or no cost
- Construct, upgrade, expend, or operate new or existing public access computing centers for covered populations through community anchor institutions
- Undertake any other project and activity that the Assistant Secretary finds to be consistent with the purposes for which the Program is established

As an initial step in the development of such programs for digital equity improvements, like with most publicly funded planning initiatives, a community engagement and public involvement process was established and implemented to document existing conditions, identify challenges, barriers, or limitations contributing to digital exclusion or inequality among covered populations, assess related community needs, and develop meaningful, attainable goals and feasible, implementable actions or activities capable of reducing the digital gap, thereby increasing digital inclusion, and improving or achieving digital equity. The resulting Digital Equity Plan is intended to provide a strategy to enhance digital equity community-wide, and particularly among certain "covered populations" of the Digital Equity Act. These specific segments of the population are described and defined in **sec 1.3.**

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[5] https://uscode.house.gov/view.xhtml?hl=false&edition=prelim&req=granuleid%3AUSC-prelim-title47-chapter16-subchapter2

1.3 Covered Populations of the Digital Equity Act – Definitions

The eight covered populations of the Digital Equity Act of 2021 listed above are defined in greater detail below[6]:

1.3.1 Individuals who live in Covered Households

The. term "covered household" means a household, the taxable income of which for the most recently completed taxable year is **not more than 150 percent** of an amount equal to the poverty level, as determined by using criteria of poverty established by the Bureau of the Census.

1.3.2 Aging Individuals

The term "aging individual" has the meaning given the term "older individual" in section 102 of the Older Americans Act of 1965 (42 U.S.**C.** 3002), within which the term "older individual" means an individual who **is 60 years of age or older**.

1.3.3 Incarcerated Individuals

The term "incarcerated individuals" refers to inmates at state and county jails and correctional facilities, other than individuals who are incarcerated in a Federal correctional facility.

1.3.4 Veterans

The term "veteran" has the meaning given the term in section 101 of title 38, United States Code.

1.3.5 Individuals with Disabilities

The term "disability" has the meaning given the term in section 3 of the **Americans with Disabilities Act of 1990** (42 U.S.C. 12102).

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[6] Actual proportions of residents covered by each of the eight covered populations relative to and Leominster's total populations are provided within Section 5, Existing Conditions.

1.3.5 Individuals with a Language Barrier

The term "individuals with a language barrier" includes any individuals who are subject to a communication barrier among people who are unable to speak or write in a common language including those who are English learners and any individuals who have low levels of literacy regardless of whether or not their spoken and /or written language is English or another language.

1.3.6 Individuals who are Members of a Racial or Ethnic Minority Group

The term "individuals who are members of a Racial or Ethnic Minority Group" includes all individuals who are members of any racial or ethnic minority group other than non-Hispanic Whites who constitute the majority (58.4%) in the United States.

1.3.7 Individuals who Primarily Reside in a Rural Area

The term "rural area" has the meaning given the term in section 601(b)(3) of the Rural Electrification Act of 1936 (7 U.S.C. 950bb(b)(3)). A town other than a city or town that has a population of greater than 50,000 inhabitants.

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2. Digital Equity Values & Best Practices

2.1 Digital Equity Values

Equitable access to broadband internet varies across demographic groups based on geographic location, race, age, income, education, and other related factors. Physical, geo-spatial, and socioeconomic challenges and barriers associated with these factors have resulted in noticeable gaps in equity related to broadband access, affordability, and adaptability at local, regional, and national scales. Similarly, broadband service and cost-based gaps also exist at each of these scales and often correlate to the same demographic factors specified above. These gaps, and their associated challenges and barriers are often exacerbated in rural areas at the community and regional scales. The rural communities of Northwest Worcester County of the Montachusett Region are no exception and perhaps are a prime example of how Digital Equity gaps affect certain groups or segments of the population within rural areas.

With local and regional partners, in consultation with the Montachusett Regional Planning Commission, under the Massachusetts Broadband Institute's Municipal Digital Equity Planning program, the City of Leominster is undergoing a Digital Equity Planning process to better understand the needs of their communities and the region. The outcome of the planning process will be a Digital Equity Action Plan that will identify a regional vision, associated goals and implementable actions, to improve broadband internet access, enhance digital equity, and increase digital literacy among residents, businesses, and institutions.

As with many other communities, broadband internet accessibility and connectivity issues currently exist and are related to various factors, including gaps in reliable internet availability, the, local and regional socioeconomic demographics affecting income and opportunity, higher-than average services costs, affordability and convenient access to devices and technology, gaps in digital literacy training, accessibility issues, and the lack of digital resources and programs preclude access for many individuals. Further, the populations of
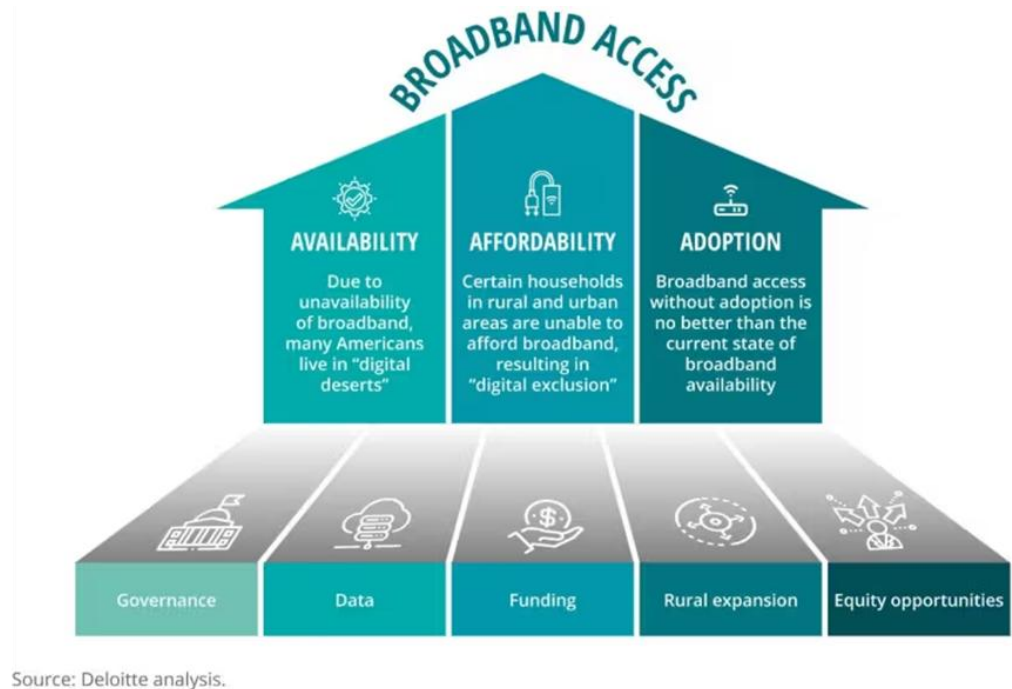
communities and the surrounding region include a high proportion of individuals representing a covered population of the Digital Equity Act[7].

The overall purpose of Digital Equity Planning is to understand the existing conditions around internet access and digital technology, specifically those related to, availability, affordability, and adoptability of broadband internet and digital devices with a focus on certain covered populations of the Digital Equity Act.

2.2 Broadband Internet Access

Broadband internet "access" encompasses the "**Three A's of Digital Equity**", availability, affordability, and adoptability relative to broadband internet service, digital devices, and digital technologies. Identifying challenges and barriers related to broadband internet access (i.e., availability, affordability, adoptability) within underserved, rural communities, like Ashburnham, and understanding the needs of the residents to overcome those challenges and barriers is both critical and essential, and the primary purpose of this Plan.

According to the U.S. Census Bureau, the digital divide was an omnipresent issue in 2018,[8] continued to be an
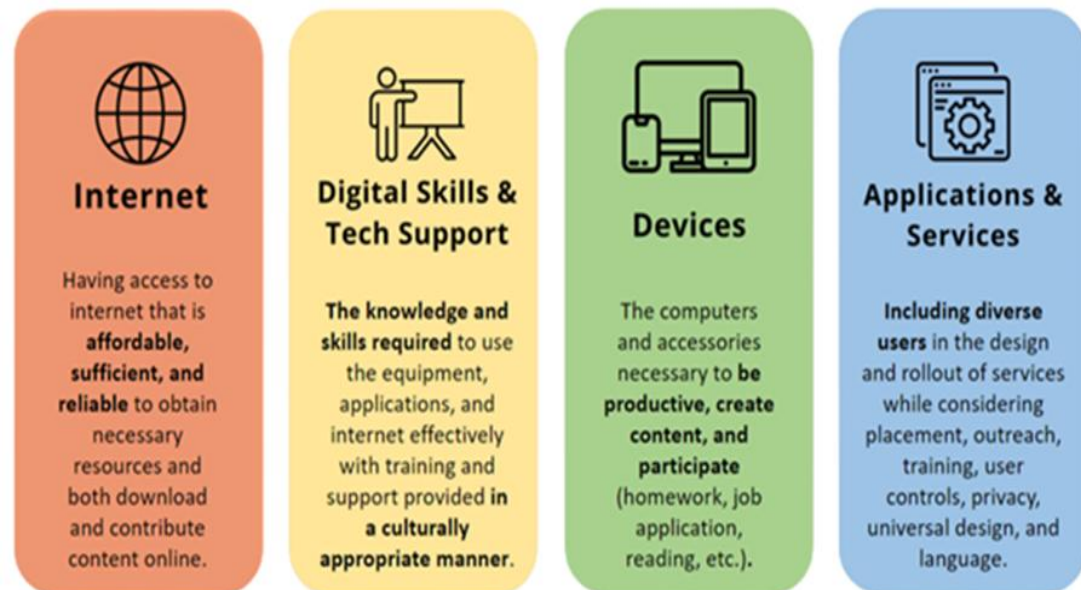
BROADBAND ACCESS

AVAILABILITY — Due to unavailability of broadband, many Americans live in "digital deserts"

AFFORDABILITY — Certain households in rural and urban areas are unable to afford broadband, resulting in "digital exclusion"

ADOPTION — Broadband access without adoption is no better than the current state of broadband availability

Governance | Data | Funding | Rural expansion | Equity opportunities

Source: Deloitte analysis.

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[7] https://www.congress.gov/bill/117th-congress/house-bill/1841/text
[8] https://www.census.gov/content/dam/Census/library/working-papers/2018/demo/SEHSD-WP2018-12.pdf

issue in 2019,[9] and the factors disproportionately affecting certain segments of the population were exacerbated and highlighted by the Covid-19 pandemic in 2020[10], resulting in the passage of the Digital Equity Act in 2021.

Prior to the pandemic, most evaluations of internet access and use focused on survey data on internet subscriptions, however, these assessments often failed to consider availability, or whether Internet Service Providers (ISPs) provided service to a given area. Since passage of the Digital Equity Act, research, evaluations, and investments have attempted to understand and address the digital divide in a more comprehensive and inclusive way, by considering not only internet subscription rates,

Internet

Having access to internet that is **affordable, sufficient, and reliable** to obtain necessary resources and both download and contribute content online.

Digital Skills & Tech Support

The knowledge and skills required to use the equipment, applications, and internet effectively with training and support provided **in a culturally appropriate manner.**

Devices

The computers and accessories necessary to **be productive, create content, and participate** (homework, job application, reading, etc.).

Applications & Services

Including diverse users in the design and rollout of services while considering placement, outreach, training, user controls, privacy, universal design, and language.

Source: Elements of Digital Equity, City of Seathle: www.seattle.gov/tech

but actual access to broadband internet services based on measures and metrics of availability, affordability, and adoptability (inclusive of knowledge, skills, abilities, and willingness to adopt internet services, technology, and devices).

While past and recent studies indicated that throughout the nation, most geographic areas had high-speed fixed broadband service available, that service was not universally or equitably available among all segments of the population or within certain areas. For example, there were noticeable differences in availability and quality of service (i.e., types of technology, and levels of reliability or speeds), particularly between urban and rural areas, and among factors related to income, race and ethnicity, language and literacy, and geographic areas where percentages of the population represented by those factors were greater. Nationally, some states have high availability throughout, while regionally, availability varies from one county to the next. Locally, even greater variation exists at the Census Tract level, as shown within the U.S. Census Bureau's Digital Equity Act Population Viewer Map, and that variation often correlates to the socio-economic demographic factors referenced above. Income is often an indicator of internet service availability and strongly correlated with

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[9] https://www.census.gov/content/dam/Census/library/working-papers/2019/demo/sehsd-wp2019-15.pdf
[10] https://www.census.gov/library/stories/2022/05/mapping-digital-equity-in-every-state.html

affordability and adoptability of service types. However, geography cannot be overlooked when understanding and addressing the Digital Divide, as the rural location of an area is often one of the greatest predictors or limiting factors of internet availability.

Since 2020 and the COVID-19 pandemic, people rely more on broadband internet and online, web-based platforms for employment, education, banking, social interaction, and access to essential services and information than they did even a few short years ago. Broadband internet is more important now than ever, and is as important, or even more important in rural areas as it is within more developed, suburban and metropolitan areas.

2.3 Broadband Internet Availability

Internet availability can be assessed in terms of the number of Internet Service Providers (ISPs) serving and providing direct, connections to the internet at households, businesses, or institutions within a certain location or area. Further, it can be assessed based on the type of internet service provided (e.g., Fiber-optic, Cable, and Fixed Wireless Internet), and the average and maximum speed of that service (i.e., Digital Data Upload & Download Speeds measured in Megabytes per second [Mbps]).

A location, or more specifically, an address, that has "service" access to Broadband Internet service by an ISP is considered a *Serviceable* location. According to the Federal Communications Commission (FCC), as of March 14, 2024, the minimum "benchmark" for high-speed fixed broadband internet is now 100 megabits per second download speed and 20 megabits per second upload speed – a four-fold increase from the 25/3 Mbps benchmark set by the FCC in 2015[11]. This new minimum speed benchmark increase is now consistent with standards established by the National Telecommunications and Information Administration (NTIA), Broadband Equity Access and Deployment (BEAD) program and multiple U.S. Universal Service Fund programs. Under these established standards, locations with fixed broadband internet service "that meets or exceeds 100 Mbps download speed and 20 Mbps upload speed", are considered "*Served*". Alternatively, according to the standards set by the NTIA BEAD Program under their Internet for All initiative, addresses "with broadband service below 100 Mbps download speed and 20 Mbps upload speed but higher than 25 Mbps download speed and 3 Mbps upload speed" are considered "*Underserved*". And finally, again, according to the NTIA BEAD standards, any address location

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[11] FCC News, Office of Media Relations, Press Release dated March, 14, 2024: https://docs.fcc.gov/public/attachments/DOC-401205A1.pdf

without access to any broadband service or "with broadband service below 25 Mbps download speed and 3 Mbps upload speed" is considered "***Unserved***". [12]

A community specific evaluation of internet availability is provided within **Section 5.1.1** of this Plan.

2.4 Broadband Internet Affordability

According to a recent report published by the National Skills Coalition[13], thirty-two percent of U.S. households are subscription vulnerable, meaning they are unable to afford and maintain an internet service subscription. This gap contributes to differences in learning experiences, as 65 percent of families with income levels below the poverty threshold reported that a lack of access to broadband internet prevented their children from participating in school and completing schoolwork because their child had no option other than to participate through a mobile device. Among families with income levels below the national median and with access to broadband, 56 percent stated the service was too slow, and among families with home access to a computer, 59 percent stated their device runs too slowly or does not work. Sixty-five percent of families with incomes below the national poverty level, 66 percent of Hispanic parents, 75 percent of families headed by immigrant Hispanic parents, and 56 percent of Black parents with incomes below the national median reported technology-related disruptions to their children's learning. It should be noted that these figures, representing socio-economically influenced digital gaps, could be even higher. For example, according to that same National Skills Coalition report, *The Roadmap for Racial Equity*, Spanish-language-dominant Americans are less likely to report having high-speed internet at home.

One of the greatest measures to improve internet affordability following the Covid-19 pandemic was the Affordable Connectivity Program (ACP), a Federally funded internet subsidy program which was available to income eligible households until June 1, 2024, when funding officially expired. To better understand the program's impact, the FCC surveyed ACP recipients in December 2023. According to the survey, 77% of respondents say losing their ACP benefit would disrupt their lives by making them change their plan or drop internet service entirely.

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[12]NTIA BEAD Program, Program Documentation:
https://www.ntia.gov/funding-programs/internet-all/broadband-equity-access-and-deployment-bead-program
[13] Johnson, M., Bashay, M., Bergson-Shilcock, A., Richardson, M., & DeRenzis, B. (2019). *The roadmap for racial equity.* National Skills Coalition. https://nationalskillscoalition.org/resource/publications/the-roadmap-for-racial-equity/

Approximately three-fourths report using their internet service for work, health care appointments, job applications and schoolwork. Finally, when asked how losing their ACP benefit would affect them, many say they would need to cut other basic expenses such as food or gas if they had to pay $30 more out of pocket for their internet. Others say they would drop their internet service. [14]

A community specific evaluation of internet affordability is provided within **Section 5.1.1** of this Plan.

2.5 Broadband Internet Adoptability

Digital adoptability and connectivity are a combined measure of people accessing and utilizing the internet (particularly broadband internet) and digital devices at home. Some factors that can be assessed to "measure" digital connectivity are: Average Household Size, Percentage of the Population Working from Home, Percentage of Households with Digital Computing Devices, Percentage of Households with Internet, Percentage of Households with Broadband Internet (defined as download/upload speeds above 100/20 Mbps, and Broadband Internet Usage vs. Availability (percentage of households which have a Broadband Internet connection to their home that actually subscribe to a Broadband Internet Service).

Of the estimated 15–16 million K-12 learners who have insufficient broadband access or access to devices to support learning at home, approximately 6 million face adoption barriers apart from availability and affordability. Learners who have immigrated to the U.S. and learners from multilingual homes face unique challenges in getting connected and engaging with learning once connected. Children with disabilities, who disproportionately live in low-income households, experience additional technology barriers, such as outdated equipment, non-accessible web content, inaccessible online platforms and course materials, and a lack of in-person support to engage with technology tools for learning.

Even with increasing technology usage in the classroom, few professional learning opportunities focused on effective technology use in the classroom are provided to educators. Further, the National Center for Education Statistics has found that on average, educators working with low-income and rural learners are the least likely to receive access to training on effective technology use in instruction. Combined, these barriers further contribute to the digital divide.[15]

A community specific evaluation of internet adoptability is provided within **Section 5.1.1** of this Plan.

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[14] https://www.ncsl.org/state-legislatures-news/details/without-federal-program-whats-the-outlook-for-affordable-broadband

[15] U.S. Department of Education, Office of Educational Technology, Advancing Digital Equity for All: Community-Based Recommendations for Developing Effective Digital Equity Plans to Close the Digital Divide and Enable Technology-Empowered Learning, Washington, DC, 2022. (https://tech.ed.gov/advancing-digital-equity-for-all/)

2.6 Alignment with Existing Efforts Through Strategic Visions

In line with the National Telecommunications and Information Administration (NTIA), Internet for All program's Digital Equity Plan Guidance, this Digital Equity Plan recognizes and will strive to align with existing local and regional efforts, goals, plans, and enhanced outcomes related to the following critical aspects of society:

	Economic and Development Workforce Development Goals, Plans, and Outcomes
	Educational Outcomes
	Health Outcomes
	Civic and Social Engagement
	Delivery of other Essential Services

As recommended by NTIA, this Plan also encourages continued and ongoing assessment of existing conditions using measurable objectives aimed at reducing the digital divide through the implementation of the strategies, goals, and actions identified within this Plan to further digital inclusion and equity relative to the following related categories or sectors:

To become a municipal leader in digital equity and inclusion a City, through the work of dedicated leaders, or digital equity "champions", the National League of Cities recommends focused investment in solutions related to two important Digital Equity categories, Digital Equity Infrastructure and Digital Equity Programs:

City Leaders: Areas of investment for achieving Digital Equity Solutions

Digital Equity Infrastructure-based Solutions:	Digital Equity Program-based Solutions
• City-owned conduit	• Affordable (and free) home internet
• Dark Fiber	• Public networks and connections
• Lit Fiber	• Affordable and free devices
• Community (Municipal) Broadband	• Digital Navigators (trainers)
• Fixed Wireless Network	• Digital Literacy Training & Skills Building
• Wireless Mesh Network	• Tech-Support

The following **Section, 2.7** offers a set of Best Management Practices and a Strategic Approach or Frameworks to guide Leominster's City Leaders in their effort to enhance digital equity and inclusion City-wide and to successfully implement the goals and actions set forth in **Section 6**.

2.7 Best Practices for Municipalities

Below is a comprehensive list of "best practices" for Municipal Officials and Community Leaders, including Town Administrators, Select Board Members, Commission Members, Purchasing Agents, Grant Writers, Planners, Heath Agents, Parks & Recreation Departments, School Administrators and Teachers, and others:

2.7.1 Municipal Digital Equity Best Management Practices

Below is a comprehensive list of "best practices" for Municipal Officials and Community Leaders, including Mayors, City Council Members, Board & Commission Members, Purchasing Agents, IT Directors, Grant Writers, Planners, Heath Agents, Parks & Recreation Departments, School Administrators and Teachers, among others:

- Develop and adopt policies and measures to accelerate broadband deployment and adoption and increase access to reliable high-speed internet in public spaces to achieve Digital Equity.

- Request all Departments to identify and implement strategies that integrate Digital Inclusion into ongoing services and programs.

- Participate in a Regional Digital Equity Coalition or Leadership Group to coordinate plans and actions to achieve economies of scale and optimal impact.

- Recognize remote workers and embrace the value of broadband access as workforce development strategy and climate resiliency measure.

- Incorporate Digital Equity Planning into Master Planning, and Land Use and Economic Development related plans to promote digital inclusion and improve quality of life for residents.

- Maintain a map of unserved and underserved areas and households and digitally disadvantaged neighborhoods with preferred broadband strategic corridors and identified public assets to accelerate broadband deployment.

- Incorporate high-speed Internet infrastructure into all public projects, especially major transportation, affordable housing, parks & recreation, and public utility projects.

- Develop a robust "green technology ecosystem" to refurbish and reallocate retired computing devices and for donation to unconnected low-income households participating in adoption programs. Encourage all public departments and local businesses and larger employers to participate in the program and donate retired devices.

- Provide online access to all policies, plans, ordinances, and services information, including remote participation in public meetings.

- Deliver online as many public services as possible "online" to reduce vehicle trips and improve efficiency, productivity, and convenience.

- Develop and continue to support digital literacy programs and digital navigation services to residents at public facilities, particularly libraries, senior centers, Veterans services centers, community centers, maker spaces, digital labs, internet cafes and third space/remote work hubs.

2.8 Strategic Approach to Digital Equity & Inclusion

To pursue and uphold the Best Management Practices outlined above, which are aimed at enhancing digital equity and inclusion throughout a community and among its covered population groups, it is important to develop overarching strategies for key sectors or components of digital equity and inclusion. Below are common, overarching strategies related to six primary sectors or components of Digital Equity and Inclusion. Consideration of these recommended strategies relative to the six identified sectors, or components of Digital Equity and Inclusion will help to provide context and an organizational framework to assess the associated challenges, barriers, and needs evaluated and assessed within **Sections 4**, (**Existing Conditions**) and **Section 5** (**Community Needs**) of this plan, and will ultimately provide a set of guiding principles for establishing meaningful **Goals and Actions** (**Section 6**) to address those challenges, barriers, and needs, which is the primary purpose of this Plan.

2.8.1 Leadership (Champions)

The first step in pursuing enhancements to digital equity and inclusion is to establish a team of digital equity leaders, or champions within the City of Leominster. These leaders, many of whom were likely involved in the development of this Plan, will continue to assess and evaluate the existing conditions and community needs around broadband internet access and digital literacy and inclusion in the short-term and over time.

The leadership group should participate in local or regional digital equity and inclusion coalitions or working groups and meet regularly (at least quarterly) to advance the goals of the Digital Equity Plan and guide the Plan's evolution over time. It will be critical to ensure that the Mayor, City Council, and Planning Board are well-informed of the Digital Equity

Expand community outreach and strengthen partnerships.

Plan's key goals and objectives, and that they may continue to seek funding for digital equity initiatives and treat the implementation of this Plan's recommended goals and actions as a priority.

Leaders should stay coordinated with regional, state, and federal stakeholders in digital equity, including the Massachusetts Broadband Institute and Montachusett Regional Planning Commission. They should continue to track and monitor development of the statewide BEAD initiative and other funding and engagement opportunities and seek recognition through programs like the Digital Inclusion Trailblazers award program. In addition to their ongoing pursuit of digital equity and inclusion, the city should also recognize and celebrate Digital Inclusion Week, in October of each year, through hosting local events or by promoting and joining other local, regional, state, or national events.

Further, Digital Equity Leaders should coordinate with state and Federal legislators to ensure that funding mechanisms for Community Cable Access T.V. providers are preserved and that they evolve and advance in conjunction with the evolution and advancement of the provision and consumption of streaming media and digital services and in the face of declining cable T.V. subscriptions.

2.8.2 Community Engagement & Partnerships
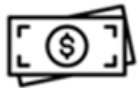
Identify a core team of digital equity champions, **pursue increased funding,** and become a **leader in digital equity.**

The City of Leominster should continue to improve upon the City's processes for engaging with the community and building digital equity and inclusion partnerships. This should be considered when disseminating information (physically and virtually), collecting feedback, and announcing public events, especially related to digital equity and inclusion. When disseminating information or promoting events around digital literacy, it is often overlooked that some segment of the population you are intending to serve may not have a computer or internet subscription or are not comfortable receiving information digitally. For this reason, the City should consider existing alternative (traditional) methods of outreach and engagement such as physical postings, yard-boards, digital notification displays, posting in the Senior Center Calendar/Newsletter, in tax bills or water bills, and on Leominster Television (LTV). Digital methods of outreach, such as social media and new, innovative methods like video "shorts" or other digital media content created for posting on City's Social Media accounts should be used but should not be the sole method of communicating with the public. Hybrid methods of engaging with the community to deliver important information or notices, such as though automated "code-red" calls or text messages should also be used but should not be the primary or sole means of communication.

Leaders, particularly those who are City staff or appointed and elected officials, should evaluate municipal websites, media, and communications to ensure that they are accessible to all users, and all Internet-enabled devices including cell phones and tablets. Refer to the U.S. Department of Justice Civil Rights Division's guidance on web accessibility and compliance with the Americans with Disabilities

Act (ADA) and strive to meet the standards for information and communication technology (ICT) under section 508 of the Rehabilitation Act and Section 255 of the communications Act.

Leaders should create a Digital Equity & Inclusion webpage on the City's websites and draft a one-page circular identifying digital equity goals & priority actions and providing access to the full Digital Equity Plan within each community. Other digital equity and inclusion resources, such as digital literacy and skills building opportunities should also be listed on the webpage(s), and the locations where they are offered should be provided. The webpage should also list contact information for local and regional digital equity leaders (champions) and trainers (navigators).

Finally, the City of Leominster's Digital Equity Leaders should maintain and improve relationships with community partners dedicated to increasing digital equity throughout the City and the Montachusett Region. Such partners, or stakeholders may include the libraries, local boards and committees, local/regional non-profits, civic organizations, business owners, other social services organizations, local Cable Access stations, including LTV, Fitchburg Access Television (FATV) Lunenburg Public Access (LPA) Television, Gardner Educational TV (GETV), Sterling-Lancaster Community Television (SLCTV), and Templeton Community Television (TCTV).   The Youth Innovation Center/MOC, inc., UMass Lowell Digital Equity Partnership, Mount Wachusett Community College, and MassHire North Central Mass Career Center, the Boys & Girls Club, and Leominster Public Schools should also be listed as an important regional digital literacy and inclusion resources. Further, other organizations and community assets providing digital literacy and inclusion programs or services or considered Digital Equity "Champions" or "Navigators", especially those providing improved access broadband internet, affordable devise, and digital literacy training, should also be listed.

2.8.3 Access to Broadband Internet and Digital Devices

The City of Leominster should strive to establish and build upon existing coordinated partnerships to expand access to broadband internet and affordable devices. One way to accomplish this goal is to improve access to the internet and internet connected workstations and devices in public spaces like the Leominster Public Library, City Hall, Leominster Senior Center and Veterans Center, and at other public areas and meeting spaces, including outdoor public spaces and City parks and playgrounds. Another option is to continue to offer hotspots and provide additional hotspots through an enhanced reservation-based loaner program. Such a program can be facilitated by the Public Library but may also offer hotspots reservable through the City Hall, Leominster Senior Center (Councils on Aging), and potentially through partnerships with the Housing Authority and the Boys & Girls Club. Similarly, access to digital devices and workstations like laptops, computers, printers, video-conferencing stations, and other technology and equipment (such as music, art, audio, and video, equipment and programs) should be acquired and made available at the Public Library.

Promote access to affordable devices and broadband internet.
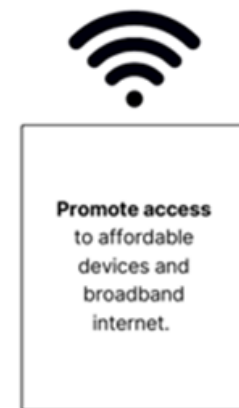
Additionally, the City should continue to support, promote, and enhance their Public Library, Senior Center, and Veterans' Center as digital resources and "digital inclusion hubs", where computers and reliable high-speed internet and digital devices, services, and programs can be accessed by the public. These spaces should feature modern, well-maintained laptops, computers, hotspots, copiers, scanners, printers, and audio-video equipment in line with community needs and available for free use or loan by the public.

The City and their digital equity partners should aim to strengthen connections with groups who facilitate device donation programs and provide free or discount refurbished devices to households who need them. They should also consider developing partnerships with Leominster Schools, Monty Tech, MOC, and Boys & Girls Club amongst many others, who could potentially provide opportunities for digital literacy training, refurbishing devices, and potentially establish additional partnerships and/or a regional network for digital device refurbishment and distribution.

2.8.4 Digital Literacy Training & Opportunities

Strengthen digital literacy throughout the community

The City of Leominster should continue to create, strengthen, and expand digital literacy opportunities and partnerships throughout the community and the Montachusett Region. The City, and its local and regional partners, should engage with and promote the certification of qualified, local Digital Navigators (digital literacy trainers, educators, and support specialists), or collaborate with a qualified Digital Navigator to offer digital literacy courses at their Public Library, Senior Center (Council on Aging luncheons), Veterans Center, and at other public community gathering locations.

There is strong demand for increased digital literacy class offerings and an expanded curriculum focused on specific needs of urban residents of Gateway Cities and Environmental Justice Areas, and specifically "covered populations" of the Digital Equity Act. General tech-help for all ages, but particularly aging adults over 60, and general tech-help and skill-building related to various applications from business, everyday living, to digital art, media, music, and crafting and hobbies are also essential needs. Information and training focused on accessing and using digital services and public administration applications like public transit and transportation, online shopping and food/grocery home-delivery, Veterans Assistance benefits, retirement and social security benefits, Medicare, healthcare appointments, medical results, registry of motor vehicles online applications, renewals, and admirative forms, and many other online activities and requirements, are also of great need. Many of the most pressing and desired needs of the community for digital literacy training topics are identified within later sections of this Plan and supported by the results of the public survey.

The City should seek to contract with a local digital navigation training consultant (Digital Navigator) or establish necessary coordinated partnerships to ensure that digital literacy training and skills building opportunities are available to residents of the City and surrounding region. The City and its partners should also seek to offer training for local residents, leaders, and staff at Community Anchor Institutions

to become certified Digital Navigators following the National Digital Inclusion Alliance's (NDIA) Digital Navigator Model, a proven method of digital literacy training, skills-building, and inclusion.

2.8.5 Addressing the Needs of Covered Populations

Provide targeted support for vulnerable segments of the community, including students, adults seeking jobs, and seniors.

The City of Leominster should provide targeted support for vulnerable segments of the community, including lower income households, individuals with disabilities, individuals with language barriers and lower levels of literacy, students, young-adults, adults seeking jobs, aging adults over 60, Racial & Ethnic Minority Groups, Individuals with a Language Barrier, and Veterans.

The City should prepare covered populations to avoid scams and remain safe from common online risks, such as hackers, identity thieves, and (increasingly common) online scams by providing dedicated training to aging adults over 60, students, and other community members.

The City, in consultation with a Digital Navigator or other Digital Literacy stakeholders and partners, should develop an online submission form and call-in system to log tech-help questions and develop an on-site tech-help office hours program at the Public Library, Senior Center, Veterans Center, and Housing Authority community rooms. In addition, the City should offer and expand upon digital literacy courses through consultation with a Digital Navigator or in partnership/consultation with the MassHire North Central Mass Career Center, UMass Lowell Digital Equity Partnership, MWCC, and other potential partners focused on inclusion and overcoming specific barriers and challenges faced by covered populations.

2.8.6 Commercial & Economic Community Development

The City should promote local economic development opportunities related to digital literacy and inclusion and encourage digital/internet-focused entrepreneurship, home businesses, and professional development.   In partnership with the MassHire Central Mass Career Center, UMass Digital Equity Partnership program, and/or a consulting Digital Navigator, residents and students should be encouraged to develop web-based applications, tools, and business models that benefit the provision of services and improved livability and well-being in Gateway Cities and among their communities and neighborhoods. Similarly, they should encourage jobseekers of all ages and backgrounds to become qualified Digital Navigators, or digital literacy trainers. Such efforts can be supported through enhanced vocational tech education, and as part of the ongoing community-based digital literacy training recommended and supported by this Plan.

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3. Digital Equity Planning & Engagement Process

Community engagement was an essential component of the development of the City of Leominster Digital Equity Plan. Answers to a comprehensive stakeholder questionnaire, input from stakeholder interviews, feedback from Core Team members, information gathered at focus group meetings, responses to the statewide public survey (and a local survey), and comments and feedback provided by the public at various community engagement events informed the existing conditions evaluation and community needs assessment as well as helped to define the visions, goals, actions and strategies documented within this Plan.

3.1 Digital Equity Core Team Working Group

To develop an effective community engagement strategy, provide information about potential stakeholders, local resources, and community assets, a Core Team of municipal officials was formed. This Core Team also played a primary role in guiding the planning process and informing the development of meaningful goals and actions. In addition, they offered insights into key stakeholders and groups to engage and provided guidance and input on the development of the Plan over the course of several meetings, interviews, and inquiries.

Members of the Core Team listed in **Table 3-1** met on:

- August 14, 2024
- September 11, 2024
- November 20, 2024
- February 11, 2025

Table 3-1 Leominster Digital Equity Planning Core Team Working Group Participants	
Name	**Position/Role**
Elizabeth Wood, AICP	Director of Planning & Development
Amanda Curtis	Economic Development Coordinator
Nadia Friedler	Head of Adult Services - Library
Laurane Brooks	COA Director
Jeff Roberge	Executive Director, Mass Hire North Central Career Center
Scott Kurland	Executive Director, LTV
Roy Nascimento/Tyler	President & CEO, North Central MA Chamber of Commerce
Richard Voutour	Veteran's Services
John Person	Area Director, MassAbility
Timothy Johnstone	New Vue Communities

3.2 Public Engagement

MRPC staff implemented a two-step stakeholder engagement process that included a questionnaire and follow-up interview. A particular goal of this planning process was to engage individuals and organizations representing covered populations within the community who are particularly impacted by the digital divide. Key community engagement activities included:

- Survey distribution
- Stakeholder interviews
- Community pop-up events
- Focus Group Meetings
- Digital Equity Core Team Working Group Meetings

A public presentation of the Plan was made to the Leominster City Council at their meeting on May 27th, 2025. A 14-day comment period from May 12th to May 27th was also announced in conjunction with the public presentation.

3.2.1 Statewide and Local Digital Equity Surveys

At regular intervals in 2023 and 2024, outreach emails were distributed, and announcements were made at MRPC meetings and events to encourage everyone in our region to fill out the Statewide Digital Equity Survey.

During the Planning Process, MRPC received some feedback that the statewide survey demographics of those that took the survey appeared not to be representative of covered populations. In the Fall of 2024, a local survey was distributed to address response rates to the statewide survey. The survey was translated to:

- Spanish
- Portuguese
- Hmong
- Haitian-Creole
- French

In addition, hard copy surveys and collection boxes were provided in the following locations in Leominster:

- City Hall
- Library
- Senior Center
- Spanish American Center

Notice of the survey with information on how to take it was included in 2 rounds of water bills as well as the October 2024 citywide newsletter. A total of 317 residents took the State

Survey, and 466 took the local survey. Survey results are discussed in greater detail and presented within **Section 5** of this plan.

3.2.2 Community Events and Pop-ups

MRPC attended several community events to promote the Digital Equity Planning project and gather public input to the Plan, by promoting the local Digital Equity survey.

Table 3-2 Community Events		
Event (Location)	**Date**	**Activity**
National Night Out	8/6/24	Survey & DEP Information
Leominster Cannoli Festival	10/14/24	Survey & DEP Information
Spanish Heritage Festival	9/27/24	Survey & DEP Information
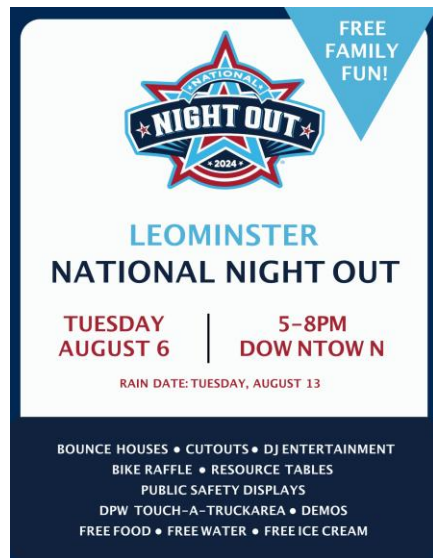
3.3 Stakeholder Engagement

3.3.1 Stakeholder Questionnaires & Interviews

The MRPC Team distributed stakeholder questionnaires and facilitated several follow-up interviews with digital equity stakeholders identified as part of the planning process. The questionnaire and interviews focused on digital services and programs (including public internet, workstations, and digital literacy programs) offered by each stakeholder-organization, department or facility, and any key challenges and opportunities related to their day-to-day work. It also aimed to identify the critical needs of the clients that they served, particularly as they pertained to certain Covered Populations. **Table 3-3** lists those interviews and stakeholder questionnaires received.

Stable 3-3 Stakeholder Questionnaires &/ Interviews			
Organization/Department/Board	**Date Completed**	**Interviewee**	**Questionnaire Completed**
Leominster Public Library	8/01/24	Alexander Lent	Y
Leominster Public Library – Adult Services	10/16/24	Nadia Friedler	Y
Council on Aging/Senior Center	9/25/24	Laurane Brooks	Y
Leominster Veteran's Agent	7/17/24	Richard Vautour	Y
Leominster TV	10/09/24	Scott Kurland	Y
LUK, Inc.	8/16/24	E McMillan	Y
Wachusett District Veterans' Services	6/12/24	Cory Hasselman	Y
Clear Path for New England Veterans	5/31/24	J Vance	Y
MassHire North Central Career Center	11/26/24	Jeff Roberge	Y
Mount Wachusett Community College	12/ /24	Jason Zelesky	
Making Opportunity Count (MOC)	12/18/24	Migdalia Velez	
Spanish-American Center	12/18/24	Sonia Rodriguez	
	12/18/24	Zwanieke Visser	

3.3.2. Focus Group Meetings & Round Table Discussions

The MRPC team conducted focus group meetings to discuss the needs of specific covered populations served by the respective stakeholder organizations or entities.

Table 3-4 Focus Group Meetings & Round Table Discussions		
Focus Group Meetings	**Date**	**Covered Population or Focus Group**
Montachusett Veterans Outreach Center	6/12/2024	Veterans, and Aging Adults, Covered Households, Racial & Ethnic Minority Groups, Individuals with a Language Barrier, Individuals with a Disability
Social Services Roundtable	12/11/ 2024	Aging Adults, Veterans, Covered Households, Individuals with a Language Barrier, and Individuals with a Disability
Multilingual Social Services Roundtable	12/18/2024	Aging Adults, Veterans, Covered Households, Individuals with a Language Barrier, and Individuals with a Disability

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4. Existing Conditions

Equitable access to broadband internet varies across demographic groups based on geographic location, race, age, income, education, and other related factors. Physical, geo-spatial, and socioeconomic challenges and barriers associated with these factors have resulted in noticeable gaps in equity related to broadband access, affordability, and adaptability at local, regional, and national scales. Similarly, broadband service and cost-based gaps also exist at each of these scales and often correlate to the same demographic factors specified above.

The following Existing Conditions Analysis evaluates certain aspects of the City of Leominster's population demographics with specific regard to the eight (8) Covered Populations of the Digital Equity Act. The analysis highlights vulnerabilities and inequities regarding internet access relative to availability, affordability, and adoptability – the three pillars of digital equity and broadband internet accessibility.

In addition to providing information about available broadband internet services and devices, the analysis also aims to identify and evaluate the barriers and challenges experienced by people, especially covered populations, relative to broadband internet service accessibility or availability, adoption, and affordability. Further, it assesses not only people *with* access to, or using such services or devices, but also those portions of the populations ***without*** access or use of or otherwise lacking fixed broadband service and or lacking computers or other devices. It aims to better understand the barriers and challenges of populations not using the internet, and populations not using a device. Sometimes those challenges or barriers extend beyond access, affordability, or digital literacy levels, and at times are related to a person's willingness to adopt such technology (services and devices, alike), rather than their ability or access. The analysis also includes references to community needs; however, an in-depth analysis of those needs can be found in **Chapter 5** of this Digital Equity Plan.

Much of the data for this analysis was obtained from input from the members of the **Leominster Digital Equity Planning Core Group**, stakeholder interviews, the Massachusetts Broadband Institute (MBI) survey results, FCC Data, the Leominster DE Survey, and other local

and regional data and information, including the Massachusetts Division of Local Services' Data Analytics and Resources Bureau, and US Census data.

4.1 Community Context

Demographic trends throughout a geographic region or within a community can impact local internet service demand and technology support needs. Understanding the demographic profile, socioeconomic indicators, and distribution and proportion of covered populations, is essential to understanding and evaluating the needs of a community, and a critical component of any planning process which aims to identify strategies and actions for addressing those needs, especially when a primary focus of the Plan is achieving equitable outcomes.

Located in Northeastern Worcester Count, Leominster is comprised of 28.8 sq. mi. and is home to 43,620 residents. The median income in the community is $75,620, which is below the Worcester County median income of $86,258 and state median income of $94,488. Over 9.1% of residents in the city live below the poverty line, which is slightly lower than the Worcester County average of 10.6%. Of its residents, 71% report as white alone, 14% Hispanic, 6% Black and 2% Asian with 5% being of two or more races. The unemployed rate in Leominster as of May 2024 was estimated at 3.9%, below Worcester County's 5.0%. Of residents over the age of 25, US Census data shows 90.3% have completed a high school education, with 33.1% obtaining bachelor's degrees or higher.[16]

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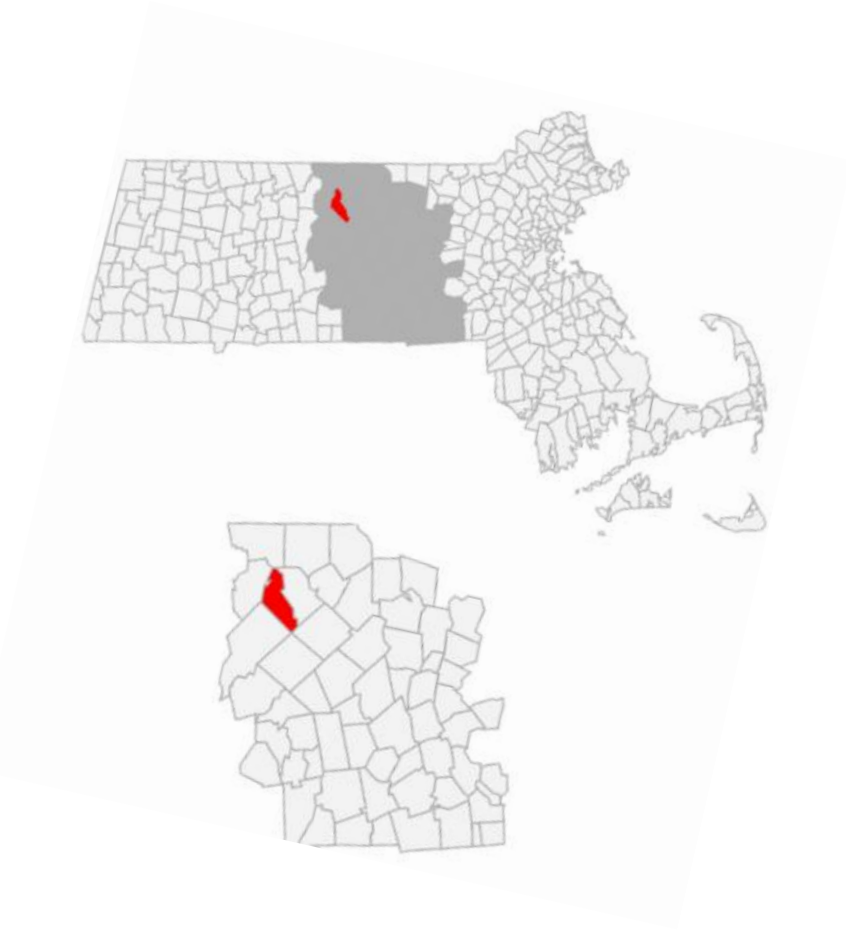
[16] U.S. Census Bureau, https://data.census.gov/ (Accessed October 24, 2024)
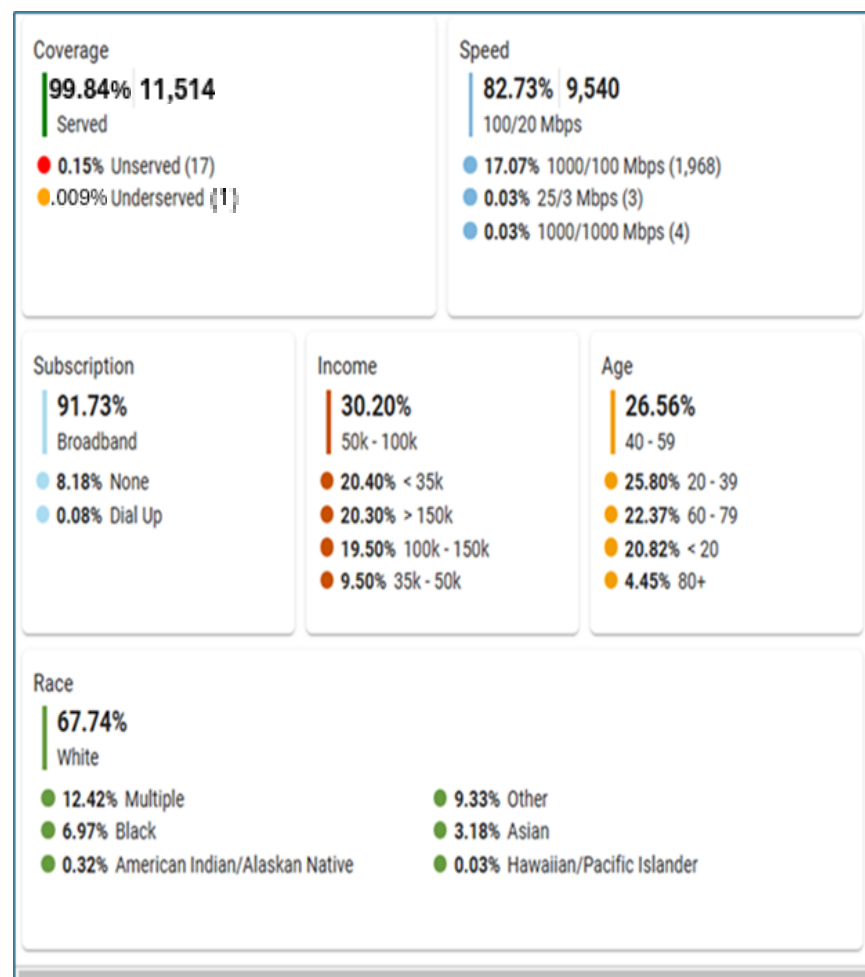
4.2 Assessing Digital Equity in Leominster

4.2.1 Digital Equity Indicators

Figure 4-1 is a summary of Digital Equity Indicators for Leominster.[17] According to the 2022 ACS 5-year estimates, computer and internet use in Leominster is comparable to the county and statewide averages with **99.84%** of all **households** in the city have broadband internet coverage availability with **91.73%** of those **households** having a broadband internet subscription.

The Digital Equity Act Population Viewer[18] compiled by the US Census includes five (5) layers depicting pertinent information to help determine existing conditions and digital equity needs in Leominster in specific areas of the city. In Leominster, there is a noticeable relationship between the percentage of the population lacking a computer or broadband internet connection within a given Census Tract, or neighborhood, and percentage of people within that area belonging to one of the "covered" population groups of the Digital Equity Act. The percentages of the population belonging to at least one of the eight covered populations of the Digital Equity Act within Leominster's neighborhoods (i.e., Census Tracts) ranges from 53.7% to 79.3% of the population and 66.4 % of the residents, city-wide. This means that even the areas with the lowest percentage of "covered" residents, still exceed more than half the population of that area. This is important given that covered populations identified within the Act are assumed to be at greater risk of digital

Figure 4-1:Digital Equity Indicators - Leominster

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[17] Massachusetts Broadband Map: https://mapping.massbroadband.org/map (Accessed July 9, 2024.)
[18] The Digital Equity Act Population Viewer, https://mtgis-portal.geo.census.gov/arcgis/apps/webappviewer/index.html?id=c5e6cf675865464a90ff1573c5072b42 (Accessed July 9, 2024)

inequities. Taking that into consideration, it becomes evident that at least 50% of the residents in every neighborhood (Census Tract) of Leominster, and 66.4% of people city-wide are at an increased risk of digital inequity contributing to a "digital divide" among people and places. Such a digital divide affects opportunities, capabilities, and overall accessibility relative to availability, affordability, and/or adoptability) of broadband internet and digital technology and devices.[19] To further explore neighborhood-based and city-wide population percentage data for various covered population groups within census tracts, a matrix with a city-wide summary is presented as **Table 4-1** below. The corresponding Leominster Census Tract Map illustrates the locations of those most effected by digital inequities.
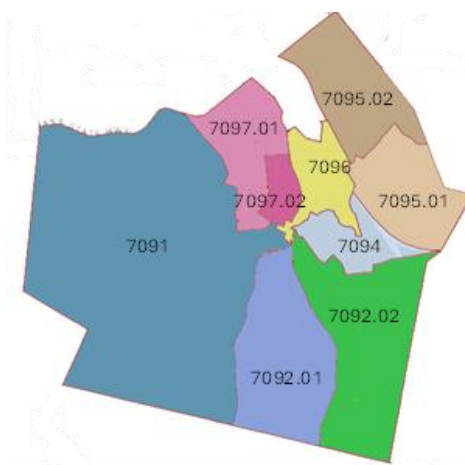

Table 4-1 Covered Populations by Census Tract										
Census Tract#	Population	% Total covered populations	% Covered Population (150% of the poverty level)	% Aging Adults (over 60)	% Veterans	% Population with one or more disabilities	% Language Barrier	% English Learners	% Ethnic/Racial Minority	% Population lacking internet or a device
7091	4137	55.7	13.2	22.3	5.7	9	19.8	7.6	18.3	9.3
7092.01	7183	62.7	14.9	22.6	4.4	12.2	14.4	5.8	25.4	6.5
7092.02	7495	79.3	26	24.6	5.6	10.8	24.4	16.6	37.8	4.3
7094	5343	77.5	38.5	20.3	6	23	21.7	14.9	37.8	21.5
7095.01	2148	53.7	6.4	23.7	5.7	6.6	13.4	2.2	16.1	3.5
7095.02	5952	59.8	9	23.7	6.9	8.7	17.8	7.3	34.3	5
7096	2674	71.7	22	13.7	3.5	20.3	26.6	17.2	39.7	7.4
7097.01	6127	68	20.1	24.7	5.9	15.8	22.2	12.9	34.2	18.1
7097.02	2497	69.2	17.9	27.6	5.9	14.4	15.3	2.8	21.4	14.3
Citywide	43556	66.4	18.7	22.6	6.6	13.4	19.5	9.7	29.4	10.04

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[19] It is assumed that the inequities experienced by covered populations of the Digital Equity Act pose certain challenges and barriers that limit people's ability to safely and conveniently participate in the necessary day-to-day activities of living which are now so closely aligned with, and dependent upon access to broadband internet and internet-connected, digital, computing devices.

Leominster residents had a relatively high eligibility for the Affordable Connectivity Program (ACP) among other cities statewide. However, of the 8,271 households eligible for that program, only 2,159 (26%) households were enrolled in the program.[20] Unfortunately, the ACP program is now closed, and funding for previously enrolled households has ended. This means that the 2,159 households that met the need-based eligibility criteria to receive lower-cost internet service and were enrolled in the program and receiving lower-cost internet, are no longer receiving those savings. While the ACP program has ended, and its future is uncertain, other low-cost internet programs may still be available to residents. For a list of such programs see the National Digital Inclusion Alliance's "Honor Roll of Low-Cost Internet Plans" webpage at the following address: https://www.digitalinclusion.org/low-cost-internet-plans/

4.3 Covered Populations of the Digital Equity Act

4.3.1 Covered Households

Individuals who live in the term "covered household" means a household with the taxable income of which for the most recently completed taxable year is not more than 150 percent of an amount equal to the poverty level, as determined by using criteria of poverty established by the US Census Bureau.

According to recent estimates of Covered Households from the US Census Bureau, there are **18,474** households in Leominster. **Figure 4-2** provides a summary of household and income-based demographics for Leominster's households.

Figure 4-2: Household and Income-based Demographics in Leominster, MA.[1]

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[20] https://www.educationsuperhighway.org/no-home-left-offline/acp-data/
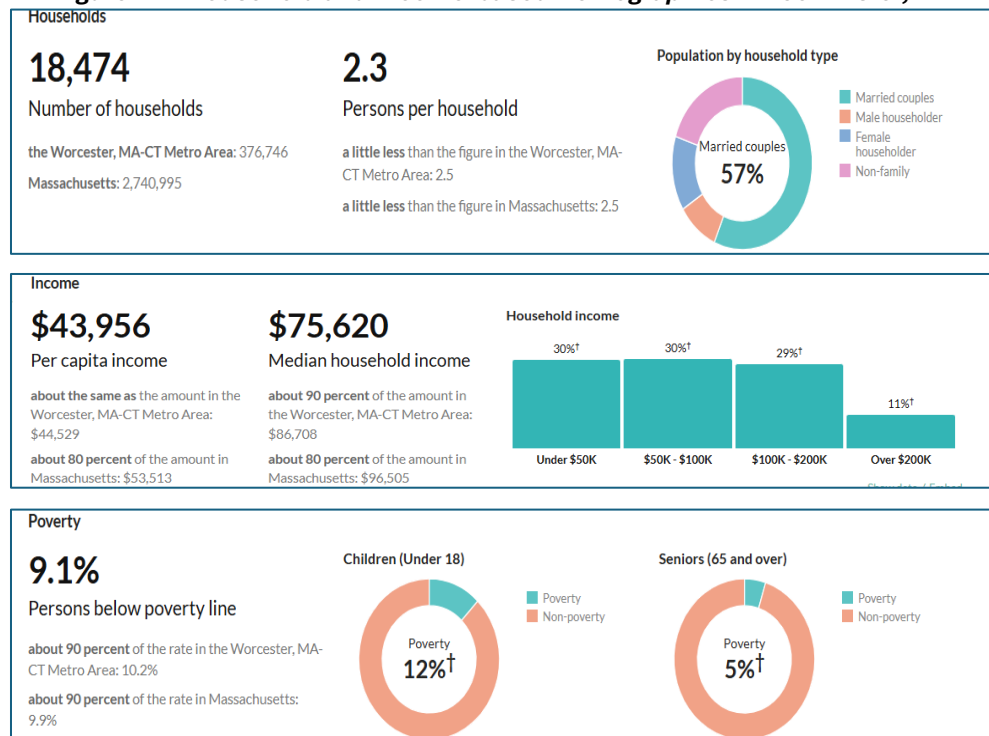
4.3.2 Aging Adults

The term "aging individual" has the meaning given the term "older individual" in section 102 of the Older Americans Act of 1965 (42 U.S.**C.** 3002), within which the term "older individual" means an individual who is 60 years of age or older.

Figure 4-3: Age Demographics in Leominster, MA.

Figure 4-3 shows that Leominster has an ageing population, with 26% of its population being 60 or older as of 2022. The population as a whole is seeing a rise in age with the median age increasing from 36 to 43 from 2010 to 2022.[21]
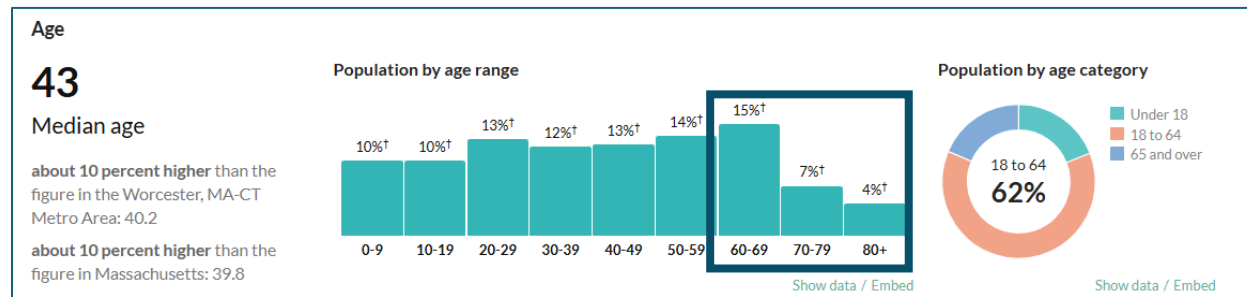
Outreach conducted through regional stakeholders identified the primary needs of Leominster's aging population as affordability, internet safety & cybersecurity training, and one on one internet navigation training and assistance. A common concern was a fear of online scams and a certain level of distrust for some aspects of digital technology and its uses or misuses. Expanded services in areas such as device usage, navigation of common software platforms, general computer skills, and comfort and trust of digital devices and technology would aid this population as well.

It was noted in several interviews that internet and device access are crucial for seniors to access telemedicine, financial services and banking, and other online services that are now part of daily life. For medical patients and people of all ages with disabilities, especially for people represented by multiple covered populations, such as aging adults with disabilities, aging adults who are veterans, or aging veterans who have one or more disabilities, etc., digital equity through enhanced digital literacy and advocacy is essential to successful and comfortable living. Further, older adults who have mobility or transportation limitations that make it difficult for them to visit healthcare providers' offices, telemedicine—the provision of healthcare remotely using ICTs—offers a convenient means of accessing healthcare services, but only if they are knowledgeable and comfortable using such technologies. There are currently barriers to healthcare access in

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[21] U.S. Census Bureau

the region that affect residents of all ages. More advocacy and equity in digital access through affordability, availability, and adoptability, and therefore better digital access to healthcare for aging adults is of utmost importance, especially considering the growing popularity of web-based platforms for provider communication, medical records, scheduling, and receiving test results.

4.3.3 Incarcerated Individuals

Incarcerated individuals are inmates at state and county jails and correctional facilities, other than individuals who are incarcerated in a federal correctional facility. The closest facility to Leominster is the Souza-Baranowski Correctional Center in Lancaster, MA. While there are technically no incarcerated individuals in Leominster, there are several agencies helping those moving into Leominster with the transition of being released from prison.

4.3.4 Veterans

The term "Veteran" has the meaning given the term in section 101 of title 38, United States Code.

Figure 4-4: Veteran Status in Leominster, MA.
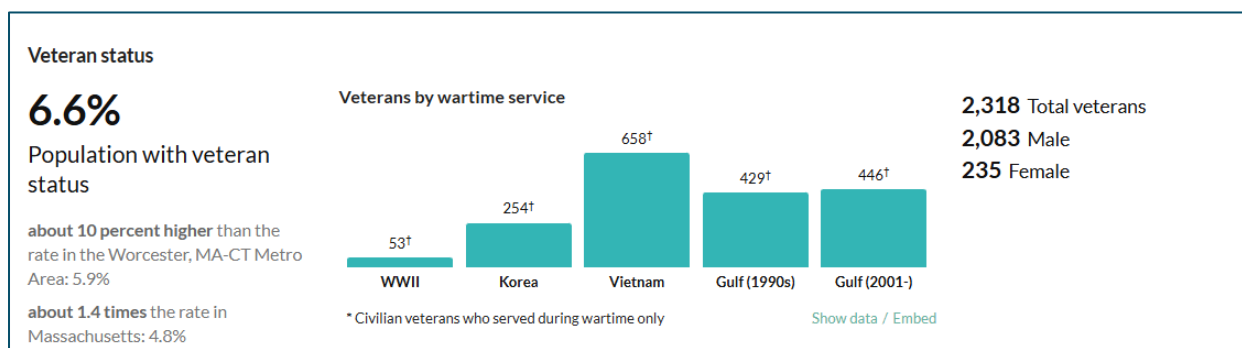
As **Figure 4-4** depicts, Veterans make up 6.6% of Leominster's 18 and older population.[22] Veterans are valued within the region and honored for their service. However, many lack financial resources to afford the internet, and, despite the presence of local and regional Veteran's organizations and service programs, most do not currently offer veteran-specific digital equity, literacy, and affordability programs.

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[22] U.S. Census Bureau

A Digital Equity Veterans Focus Group meeting for the Montachusett Region was recently convened by the Montachusett Regional Planning Commission as part of the planning process for this Plan and for other Digital Equity Plans being prepared for municipalities within the Montachusett Region. The meeting was hosted by the Montachusett Veterans Outreach Center, MVOC. Veteran's Services Officers from Montachusett communities were invited to share their stories, ideas, needs, and visions for increased digital equity for the region's veterans.

Stories depicting digital inequities experienced by Veterans in Leominster include:

> *"A Vietnam Veteran has been going to Home Depot for years and receiving a veteran discount. Now, the Veteran's discount is only accessible to persons with an online account."*

> *"The only way you can get a Veterans ID card is online"*

> *"There is a need for access and some Veterans now have to have an email even if they do not use it."*

While the internet service in Leominster is adequate in terms of speed and reliability, many Veterans do not have access due in part to many factors such as cost, age (digital literacy), housing insecurity and unemployment. Veterans often access the internet at the Leominster Library, Leominster Veterans Memorial Center, MassHire North Central Career Center (for job search), Barnes & Noble, and local coffee shops.

The Leominster Veterans Memorial Center provides a Wi-Fi guest network for guests but is using a 20-year-old desktop and encourages Veterans to use the library's "hot spot" program when available, which can be problematic as the program is very popular and the devices are in high demand. Many Veteran's services require access to the internet such as obtaining a Veteran's ID card and registering and accessing VA benefits, necessitating access to the internet and devices.

MVOC provides services for over 700 Veteran's annually, most of whom reside in the Montachusett Region and includes a limited amount of Veteran's housing. MVOC offers free Wi-Fi access for veterans at their Gardner office. Internet service is also available (free) to some residents and digital literacy classes are offered, however increased digital literacy programming is needed and desired by the organization and those they serve.

4.3.5 Individuals with Disabilities

The term "disability" has the meaning given the term in section 3 of the Americans with Disabilities Act of 1990 (42 U.S.C. 12102). Many residents of the northwest Montachusett Region have one or more disabilities. Leominster has 673 individuals with one or more disabilities, making up 11% of the total population.[23]

Of those over 18 – 64 years of age, the Massachusetts Office of Disability (MOD) provides data on specific difficulties. **Figure 4-5** further identifies the specific difficulties that may create barriers and have negative consequential impact on an individual's ability to achieve digital literacy and as such needs to be taken into account when strategies are devised to meet the goals of this plan.

Figure 4-5: ADA, Specific Challenges in Leominster, MA.
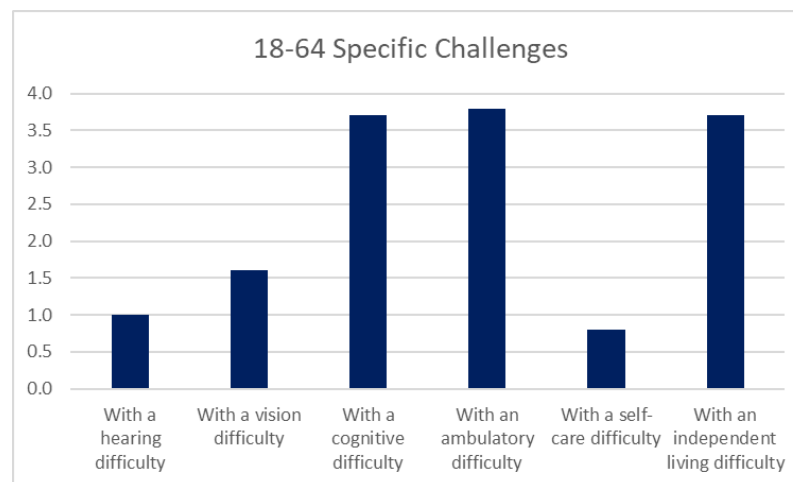
4.3.6 Individuals with a Language Barrier

The Census definition of a Limited English Proficient (LEP) person is "...a person who speaks another language other than English at home and does not speak English well or not at all." A recent study examined the 2021 American Community Survey – 5 Year Estimates and was able to determine that approximately 5.02% (or 11,848 individuals) of the MRPC population age five and older (236,131 individuals) speak English less than very well (ELTVW). This is therefore considered the Limited English Proficiency (LEP) population for the region. Most of these individuals reside in Clinton, Fitchburg, Harvard, and Leominster. Each of these communities has a LEP population percentage that exceeds the Montachusett regional average of 5.02%. **9.47%** of the Leominster population speak less than very well English as shown in **Table 4-2.**

Table 4-2: LEP – Montachusett Region[24]			
	Total Pop. Age 5+	**Speaks English Less Than Very Well**	**% Speaks English Less Than Very Well**
Leominster	**40,844**	**3,868**	**9.47%**
MRPC Region Total	236,131	11,848	5.02%
United States Total	310,302,360	25,535,259	8.23%

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[23] State of Massachusetts, *Overall Disability* (Accessed July 9, 2024)
[24] *Source: 2021: ACS 5-Year Estimates Detailed Tables; Table ID: C16001*

4.3.7 Individuals who are Members of a Racial or Ethnic Group

The resident population of Leominster primarily identifies as white and white alone, with a larger percentage of white residents as the national average with 71% and 60.1% respectively, and slightly higher percentage than the state (68.9%).[25] 13.9 % of Leominster's population is Hispanic, 5.9% are black, and 3% are Asian. Additionally, 5.1% of the population are of two or more races or ethnicities and 14 % of Leominster's residents are foreign born. As many as 29.9% of Leominster's residents are covered under the Digital Equity Act as members of a racial or ethnic minority group. (see **Figure 4-6)**

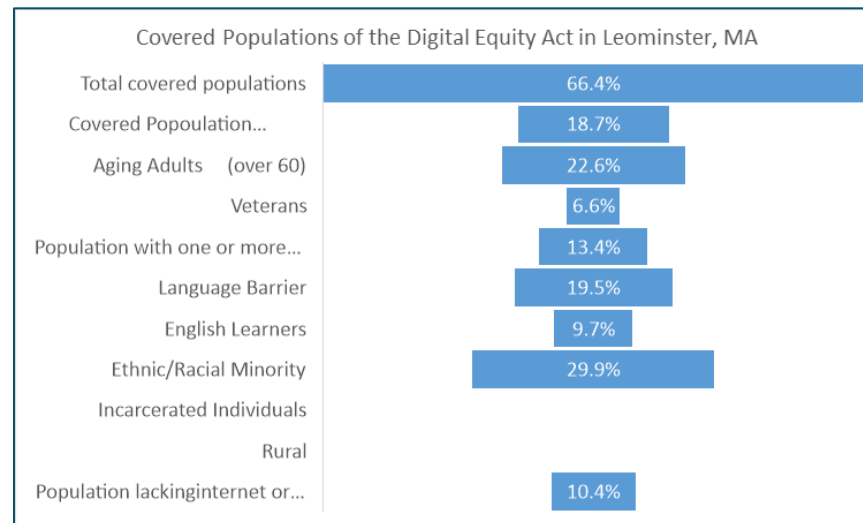*Figure 4-6: Ethnic/Minority and Foreign Born - Leominster*

4.3.8 Individuals who Primarily Reside in Rural Areas

The term "rural area" has the meaning given the term in section 601(b)(3) of the Rural Electrification Act of 1936 ([7 U.S.C. 950bb(b)(3)](#)). While Leominster does not meet the definition of "Rural Area", several towns within the Montachusett Region do, making those residents part of a "covered population" group.

4.3.9 Distribution of Covered Populations

Figure 4-7 below shows a summary of the city-wide percentages of the population for various indicators compiled by the US Census Bureau Digital Equity Act Population Viewer. The Digital Equity Act Population Viewer[26] includes five (5) layers depicting pertinent information to determine existing conditions and needs concerning digital equity in the City of Leominster. In many areas throughout most of Leominster and neighboring Fitchburg, less than 75% of the population is considered a "covered" population of the Digital Equity Act. However, Census Tract 7094[27] located within a more densely developed area surrounding downtown Leominster approximately 75.0% to 79.9% of the population exists as a "covered" population.

Figure 4-7: Covered Populations in Leominster,

Covered Populations of the Digital Equity Act in Leominster, MA

Total covered populations	66.4%
Covered Popoulation...	18.7%
Aging Adults (over 60)	22.6%
Veterans	6.6%
Population with one or more...	13.4%
Language Barrier	19.5%
English Learners	9.7%
Ethnic/Racial Minority	29.9%
Incarcerated Individuals	
Rural	
Population lacking internet or...	10.4%

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[26]Digital Equity Act Population Viewer https://mtgis-portal.geo.census.gov/arcgis/apps/webappviewer/index.html?id=c5e6cf675865464a90ff1573c5072b42 (Accessed July 8, 2024)
[27] Census Tract 7094 contains 75.0% to 79.9% of the population as a "covered" population of the Digital Equity Act.

Figure 4-8 shows a summary of the percentages of the Leominster pop-Ulation that may or may not be included in the covered populations but nonetheless rely on adequate internet accessibility and digital literacy skills. The work from home category is the percentage of those in the over 18 workforces residing in Leominster. Percentages are compiled by using US Census Bureau information. Additionally, medical, educational, commercial and industrial ventures rely heavily on digital literacy capabilities.

Figure 4-8 – Other Groups of Significance

4.3.10 Digital Equity and the MRCEDS[28]

The greatest threat identified by economic development leaders in the Montachusett region by a wide margin is the quality of aging infrastructure throughout the region. Included is digital equity and access. Many agreed that the quality of telecommunications and digital equity (ensuring equal access to / use of information and communication technologies) was a major opportunity for the region. Respondents recognized that "**internet access is playing a larger role in everyday life, as it is required to work from home, schedule doctor appointments, access financial institutions, and promote overall business in general**."

4.4 Digital Connectivity

A relatively high percentage of Leominster's households currently subscribe to broadband internet service, at **91.7%.** According to the U.S. Census, the proportion of residents subscribing to a broadband internet subscription Leominster is slightly lower than the national (93%) and higher than the statewide (90%) averages.[29] Since 2020 and the COVID-19 pandemic, people rely more on broadband internet and online, web-based platforms for employment, education, banking, social interaction, and access to essential services and information than they did even a few short years ago. Whie there has been an increase in the number of homes with broadband internet since pre-covid times, there is still not full coverage in the city. Broadband internet is more important now than ever, and identifying challenges and barriers related to broadband access and understanding the needs of the residents to overcome those challenges and barriers is both critical and essential, and the primary purpose of this Plan.

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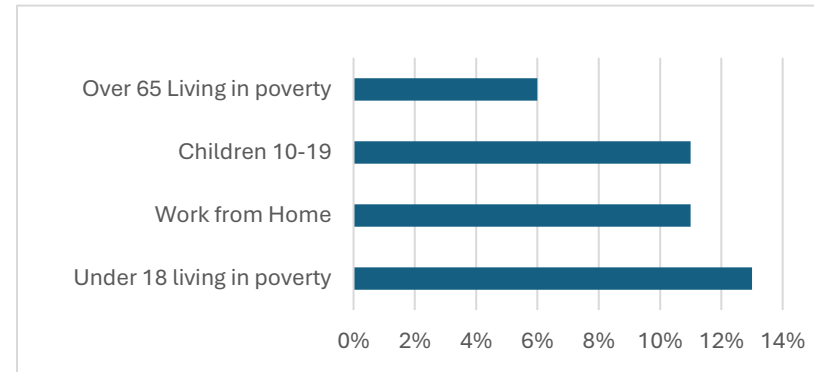
[28] Montachusett Regional Comprehensive Economic Development Strategy – MRCEDS 2024
[29] U.S. Census Bureau

4.4.1 Internet Availability, Service and Connectivity

Internet Availability

Internet Availability can be assessed in terms of the number of Internet Service Providers (ISPs) serving and providing direct, connections to the internet at households, businesses, or institutions within a certain location or area. Further, it can be assessed based on the type of internet service provided (e.g., Fiber-optic, Cable, and Fixed Wireless Internet), and the average and maximum speed of that service (i.e., Digital Data Upload & Download Speeds measured in Megabytes per second [Mbps]).

Internet Service

A **Serviceable** location refers to an address with access to Broadband Internet service from an Internet Service Provider. As of March 14, 2024, the FCC's new benchmark for high-speed fixed broadband is 100 Mbps download and 20 Mbps upload, a significant increase from the previous 25/3 Mbps benchmark set in 2015[30]. Under these new standards[31]:

- "**Served**" locations have broadband speeds of at least 100 Mbps download and 20 Mbps upload.
- "**Underserved**" locations have speeds above 25/3 Mbps but below 100/20 Mbps.
- "**Unserved**" locations lack broadband service or have speeds below 25/3 Mbps.

These terms and standards align with the standards of the NTIA BEAD program and other U.S. Universal Service Fund initiatives. For more details, refer to Section 2.3, "Broadband Internet Availability," on page 16 of the plan.

Internet Connectivity

Internet connectivity is a combined measure of people accessing and utilizing the internet (particularly broadband internet) and digital devices at home. Some factors that can be assessed to "measure" digital connectivity are: Average Household Size, Percentage of the Population Working from Home, Percentage of Households with Digital Computing Devices, Percentage of Households with Internet, Percentage of Households with Broadband Internet (defined as download/upload speeds above 100/20 Mbps), and Broadband Internet Usage vs. Availability (percentage of households which have a Broadband Internet connection to their home that actually subscribe to a Broadband Internet Service).

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[30] FCC News, Office of Media Relations, Press Release dated March 14, 2024: https://docs.fcc.gov/public/attachments/DOC-401205A1.pdf
[31] NTIA BEAD Program, Program Documentation:
https://www.ntia.gov/funding-programs/internet-all/broadband-equity-access-and-deployment-bead-program

According to the Massachusetts Broadband Map the City of Leominster has 11,532 Serviceable Locations, of which 11,514 (99.84%) are classified as "Served", one (1; .009%) are classified as "Underserved", and 17 (0.15%) are classified as "Unserved". **Figure 4-9** below shows the total distribution of serviceable locations, relative to their status as Served, Underserved, or Unserved.[32]

Figure 4-9 – Distribution of serviceable locations in Leominster
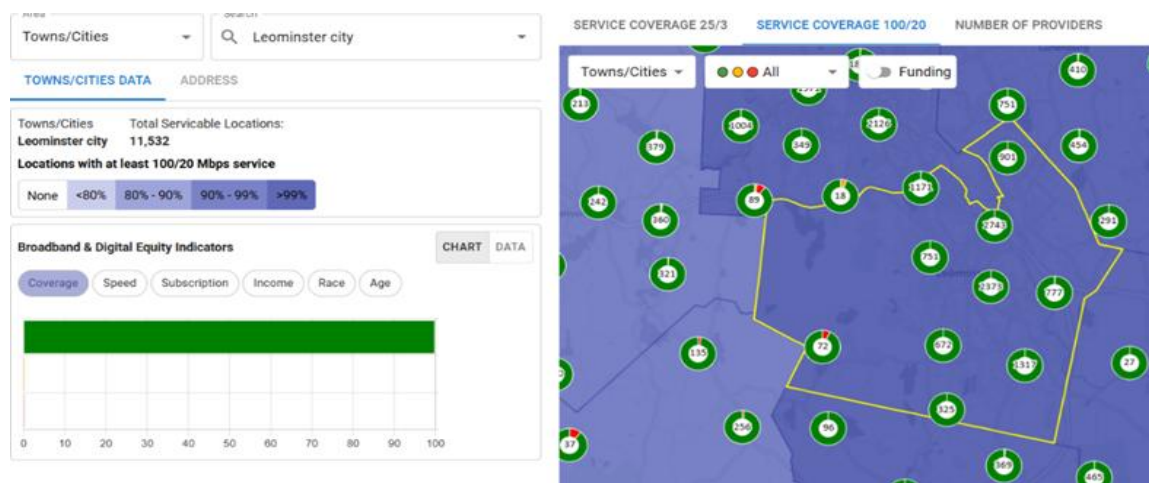
4.4.2 Internet Service Providers in Leominster

Leominster has four (4) primary Internet Service Providers (ISP), as shown by **Table 4-3**. Cable, Fiber, and Fixed Wireless internet are available, and satellite internet may also be available from various providers such as Dish, DirectTV, HughesNet, ViaSat, and Starlink.

Table 4-3 - Leominster Internet Service Providers				
Provider	**Connection**	**Availability**	**Avg. Download Speed**	**Max Download Speed**
Xfinity	Cable	99.9%	1,619 Mbps	2,000 Mbps
Earthlink	Fiber	97.9%	940 Mbps	940 Mbps
Verizon	Fiber	97.8%	940 Mbps	940 Mbps
	Fixed Wireless	19.7%	228 Mbps	300 Mbps
T Mobile 5G	Fixed Wireless	88.%	47Mbps	100Mbps
Source: ISP Reports (https://ispreports.org/) accessed October 29, 2024.				

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[32] Massachusetts Broadband Map

4.4.3. Digital Connectivity Index

Leominster is comparable to statewide and national averages with slightly more households with internet and broadband, as well as using devices, as shown within **Table 4-4**, on the following page. One major variation from statewide and national averages is the availability of Fiber-optic infrastructure in Leominster. Fiber-optic, which can handle greater bandwidth and provide higher speeds, has 97.8% availability in Leominster, which is substantially higher than both the state and the national level.

Table 4-4 - Leominster Digital Connectivity Index			
Metric or Measure of Connectivity	**Leominster**	**Massachusetts**	**USA**
Average Household Size	2.4	2.5	2.7
Work from Home Percent	11%	15%	12%
Households with Devices	96%	95%	94%
Households with Internet	93%	91%	89%
Households with Broadband Internet	82%	81%	73%
Broadband Internet Usage vs. Availability	83%	82%	74%
Fiber-optic Availability	97.8%	55.92%	58.49%
Source: ISP Reports (https://ispreports.org/) accessed October 29, 2024.			

The shift to remote work brought about by Covid-19 has significantly increased the demand for higher internet speeds and greater bandwidth. The widespread adoption of supplementary "work-from-home" applications such as online messaging and video chatting services resulted in a need for more devices and robust broadband. The popularity of these resources is not limited to the remote work setting, as traditional office workplaces have become reliant on the heightened communication capabilities they provide. This change underscores the importance of reliable internet connectivity in today's work environment, wherever it may be.

In addition, since late 2022, national demand for Artificial Intelligence (AI) programs has increased exponentially, along with the subsequent demand and need for faster, more widely available broadband internet connectivity. The upward trend of these bandwidth-intensive internet uses will continue and require that communities increase their digital infrastructure to accommodate current and future needs. Leominster's fiber-optic availability has gotten a jump to accommodate those requirements. With population growth, higher demand for broadband internet, and an increase in high bandwidth internet uses, improvement to Leominster's digital literacy programs and device access programs could better provide for the existing and future populations.

4.4 Public Broadband System

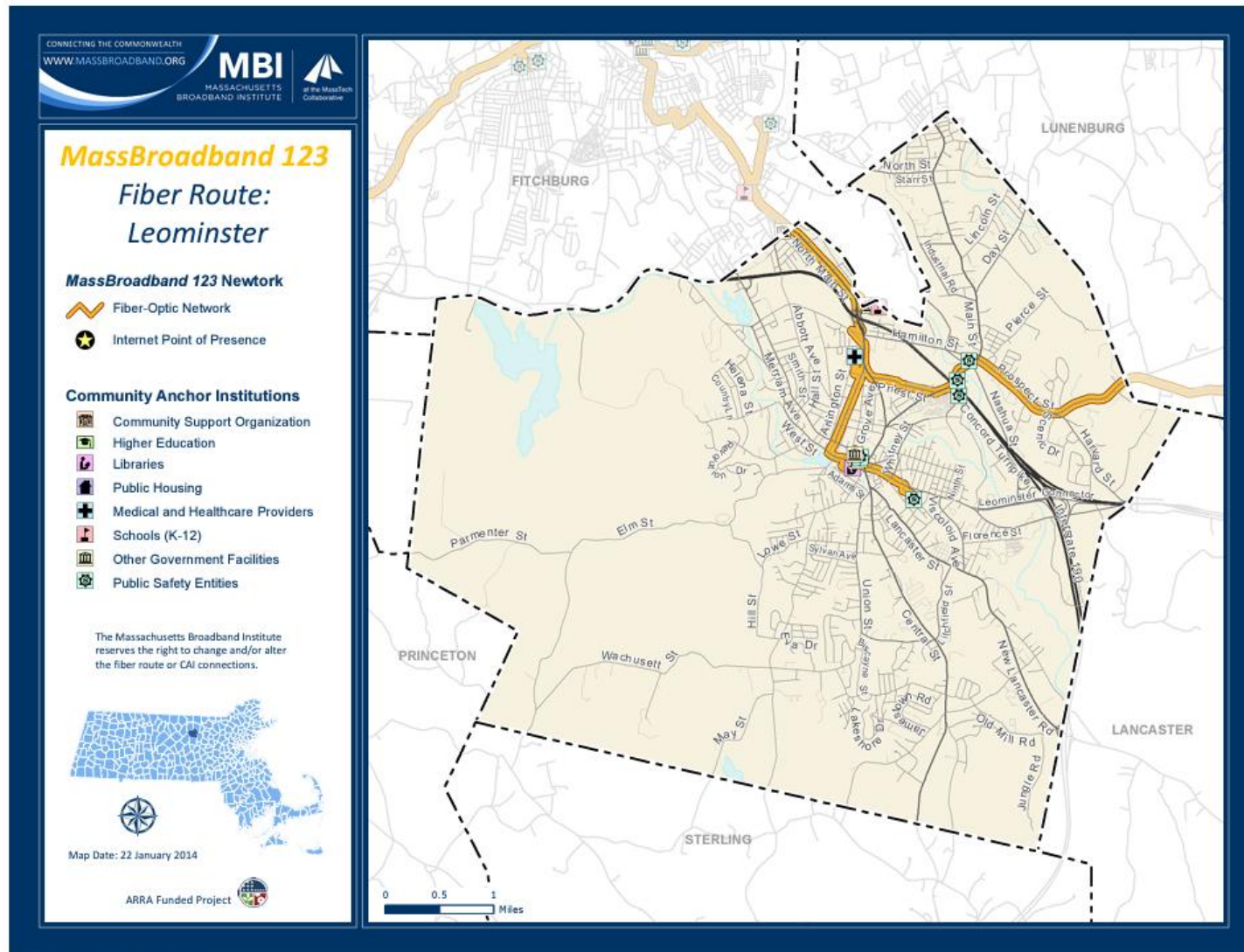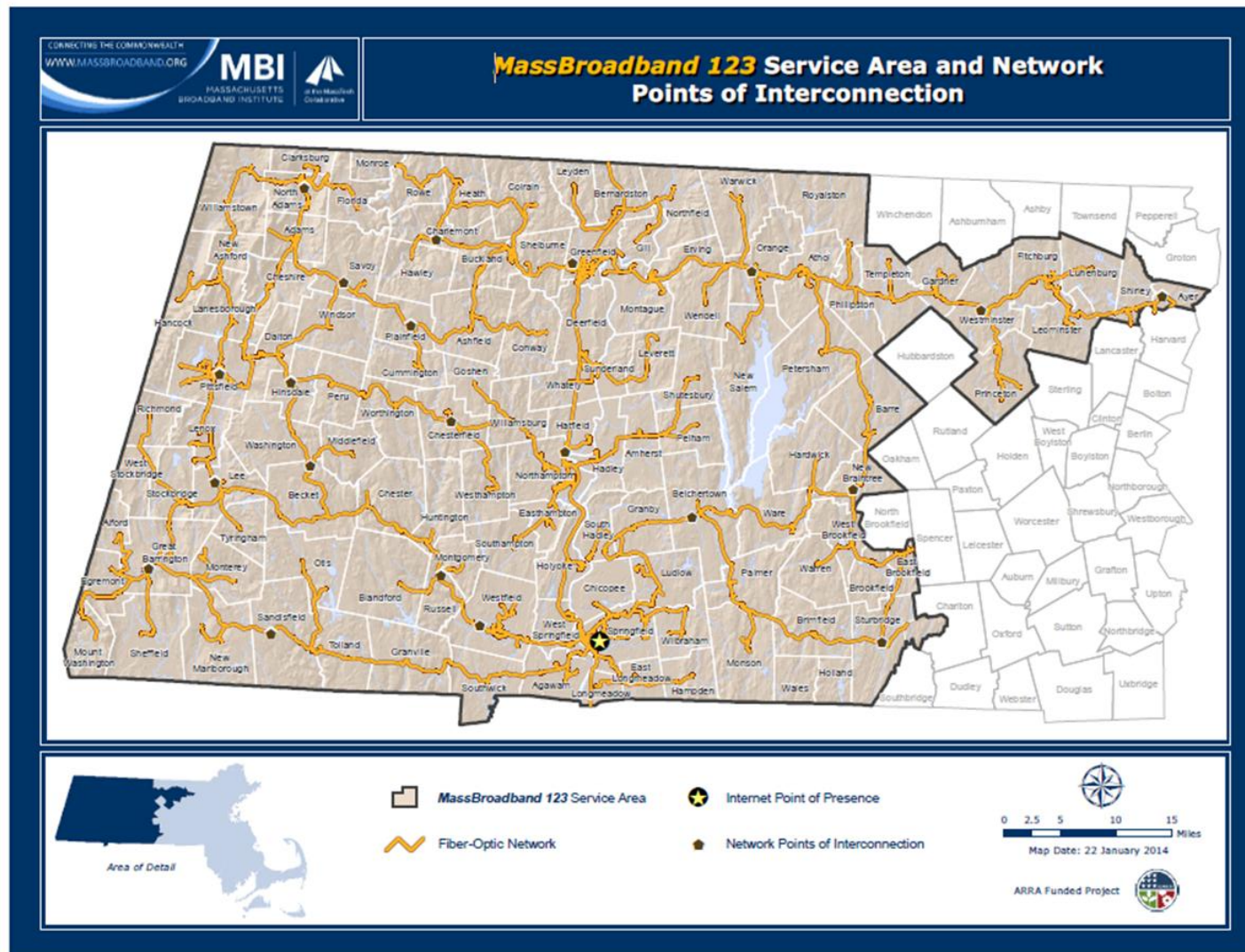Figure 4-10: MassBroadband 123 Fiber Route: Leominster, MA.

Figure 4-11: MassBroadband 123 Service Area and Network Points of Interconnection

4.6 Critical Digital Assets & Anchor Institutions

Critical Digital Assets and Community Anchor Institutions are critical public resources for emergency personnel, residents, students, workers, and visitors to access internet services and devices outside their homes and for the effective and efficient administration of government and civic life. The following outlines the communities' digital assets and institutions and their current role in the availability of digital equity resources and the provision of public internet and digital literacy programs and services.

4.6.1. Leominster Critical Digital Assets

The term "Critical Digital Asset" means a digital computer, communication system, or network that is a component of a critical Information System, including assets that perform Safety-Sensitive and/or Emergency Planning (SSEP) functions. Such assets (facilities- and systems-based infrastructure) are often critical to emergency response and public safety and provide support to protect, serve, or administer important government and public safety functions. Critical Digital Assets sometimes provide a pathway to other critical systems or a support system asset whose failure or compromise could result in a threat to public safety. Critical Digital Assets are often at risk of cyber-attacks and proper digital network security and access is crucial to their protection and function. A summary of the primary Critical Digital Assets for Leominster is shown in **Table 4-5**.

Table 4-5- Critical Digital Assets - Leominster		
Facility Type	**Organization**	**Location**
Public Safety	Emergency Management	37 Carter St.
Public Safety	Leominster Fire Department	534 Main St
Public Safety	Leominster Fire Department (2)	19 Church St.
Public Safety	Leominster Fire E911 LS	19 Church St.
Public Safety	Leominster Police Department	29 Church St
Public Safety	State Police - Station C-4	30 Haws St
Medical & Healthcare	UMass Memorial-Health Alliance Hospital	60 Hospital Rd
Public Service	Leominster Department of Public Works	109 Graham St

| Other Government Buildings	Army National Guard	260 Mill St
Other Government Buildings	Leominster Wastewater Plant	24 Lanides Lane
Other Government Buildings	Notown Water Treatment Plant	108 Gram St
Other Government Buildings	Leominster Post Office	68 Main St
Education	Leominster Public Schools	24 Church St

4.6.2. Leominster Community Anchor Institutions

The term "Community Anchor Institution" as defined within the Digital Equity Act of 2021 means a public school, a library, a medical or healthcare provider, a community college or other institution of higher education, a state library agency, and any other nonprofit or governmental community support organization. Below in **Table 6** is a summary of the primary Community Anchor Institutions located within Leominster:

Table 4-6 - Community Anchor Institutions - Leominster		
Facility Type	**Organization**	**Location**
City Facility	City of Leominster	25West St
City Facility	Leominster Public Library	30 West St
Government Organization	Human Rights Commission	700 Main St, Fitchburg
Government Organization	Massachusetts Department of Transitional Assistance (Fitchburg Office)	49 Nursery Lane, Fitchburg
Governmental Authority	Leominster Housing Authority	100 Main St #1
Governmental Authority	Leominster Development Corporation	100 Main St #1
Non-Profit Broadcast	Leominster Access Television (LTV)	20 Litchfield St
Non-Profit Broadcast	WLPZ-LP 95.1FM	24 Church St
Non-Profit	Leominster Veterans Council Inc.	100 West St
Government Agency	MassHire North Central Career Center	100 Erdman Way
Non-profit	Spanish American Center	112 Spruce St
Non-profit	Ginny's Helping Hand	52 Mechanic St
Non-profit	North Central Massachusetts Chamber of Commerce	860 South St, Fitchburg
Non-profit	The Arc of Opportunity	564 Main Street, Fitchburg
Non-profit	Boys & Girls Club of Fitchburg & Leominster	365 Lindell Avenue
Non-profit	LUK, Inc.	554 Westminster St, Fitchburg

Non-profit	NewVue Communities	470 Main St, Fitchburg
Non-profit	Making Opportunity Count (MOC)	601 River St, Fitchburg
Non-profit	Montachusett Homecare Corporation	680 Mechanic St., Fitchburg
Non-profit	Seven Hills North Central Family Support Center	1460 John Fitch Highway, Fitchburg
Non-Profit	Literacy Volunteers of Montachusett Region	718 Main St, Fitchburg
Faith-based Organization	Catholic Charities	196 Mechanic St
Senior Center	Leominster Senior Center	5 Pond St
Nursing Home	Life Care Center of Leominster	370 West St
Nursing Home	Leominster Rehabilitation & Nursing Home	44 Keystone Dr
Nursing Home	Benchmark Senior Living	1160 Main St
Nursing Home	Sunrise of Leominster	6 Beth Ave
Nursing Home	Manor on the Hill	450 N Main St
School	Priest Street Elementary	115 Priest St
School	Fall Brook Elementary	25 Decicco Dr
School	Francis Drake Elementary	95 Viscoloid Ave
School	Johnny Appleseed Elementary	845 Main St
School	Northwest Elementary School	45 Stearns Ave
School	Samoset Middle School	100 Decicco Dr
School	Sky View Middle School	500 Kennedy Way
School	Leominster High School	122 Granite St
School	Center for Technical Education & Innovation	122 Granite St
School	Leominster Center for Excellence	236 Lancaster St
School	Leominster Academy	122 Granite St
School	Allencrest Academic Learning Center	100 Main St #1
School	Lipton Academy School	100 Erdman Way
School (Private)	St. Leo School	120 Main St
Medical Clinic	Community Health Link/UMass Memorial Health	100 Erdman Way
Medical Clinic	Urgent Care	510 North Main St
Medical Clinic	Leominster Community Health & Urgent Care Canter	165 Mill St
Medical Clinic	Ready MED	241 North Main St
Medical Clinic	Convenient MD Urgent Care	20 Commercial St

Figure 4-12 on the following page shows the locations of all Critical Digital Assets and Community Anchor Institutions located within Leominster, as listed above.
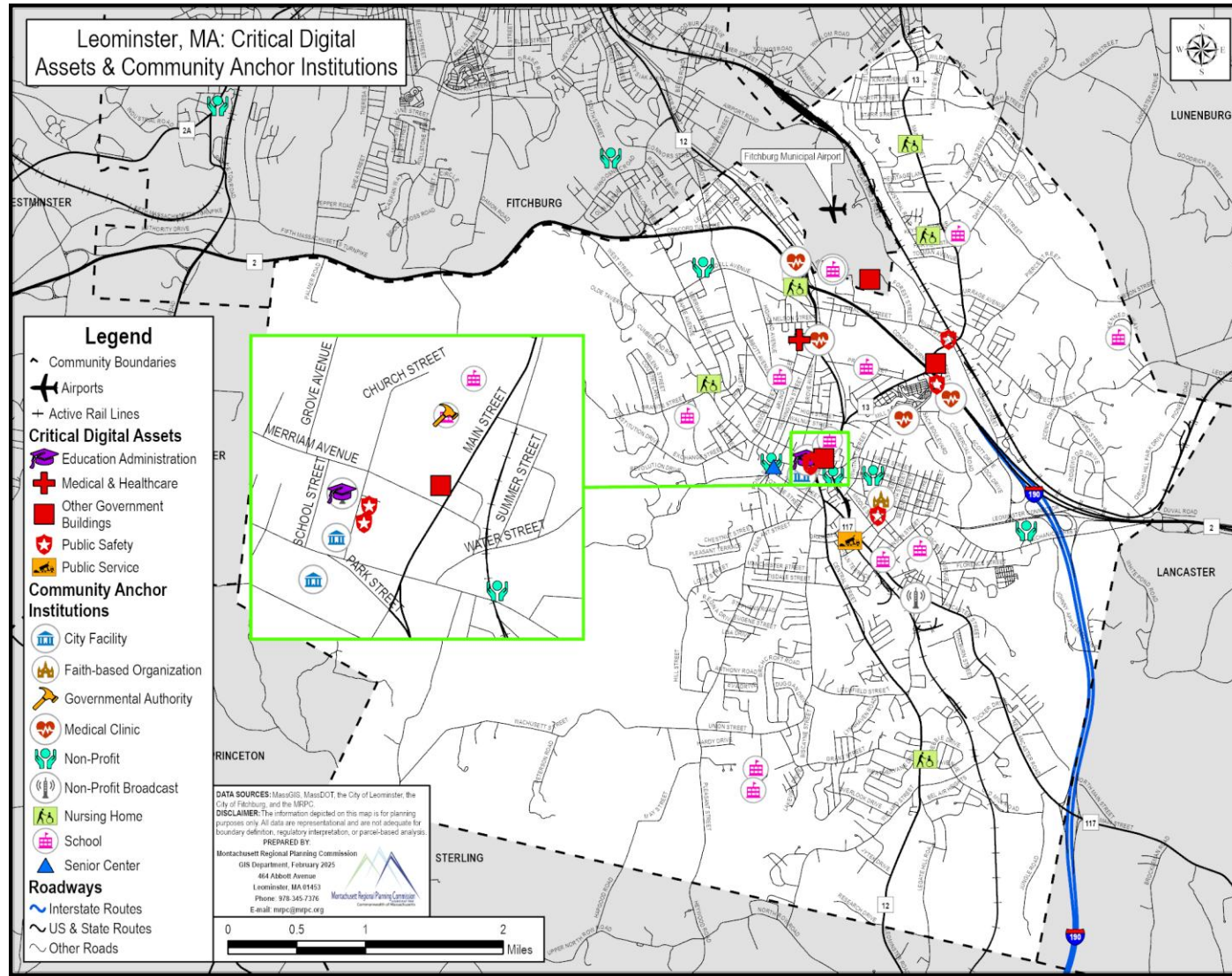
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5. Community Digital Equity Needs

In addition to the Existing Conditions Evaluation presented within **Section 4** of this Plan, the Digital Equity Planning Process also includes an assessment of "Community Needs" presented here as **Section 5**. Location-specific Community Needs are established as part of the public outreach and engagement portion of the planning process through information gathered during targeted outreach to interested stakeholders, covered populations, and local digital equity champions, including core team meetings, focus group meetings, stakeholder questionnaires, interviews, and local and regional responses to the Statewide and Leominster Digital Equity Surveys.

5.1 Summary of Needs

The assessment of community needs was not limited only to internet accessibility but also included an evaluation of the City of Leominster and surrounding region's digital literacy opportunities, and the community's level of digital literacy skills, abilities, comfort levels, and willingness to adopt broadband internet and digital technologies. Community needs were assessed generally, but specific needs of Covered Populations of the Digital Equity Act, as described within **Section 4.3** above, were considered throughout and are provided within **Section 5.2**, below.

5.1.1 City Barriers and Needs Overview

A. Digital Availability

- **Lack of personal digital devices and home internet** – In Leominster, greater than 10% of households in 4 out of 9 Census Tracts (neighborhoods) do not have a computer or broadband internet subscription and in 1 of those Census Tracts the proportion is above 20%.

- **Limited Wi-Fi internet outside of public buildings** – An important outcome of this planning process and assessment of community needs was the identification of the need and desire for free charging stations, public workspaces and public wi-fi in additional outdoor public spaces such as outside of the Public Library or City Hall.

- **Limited access to Digital literacy resources** – Approximately 66% of Leominster's population qualifies as a member of a Covered Population of the Digital Equity Act. Given the understanding that covered populations face greater challenges and barriers to digital inclusion and equity, strong, coordinated partnerships that promote and provide digital literacy training and leadership are needed. Partnerships with existing digital literacy training organizations should be established. Additional resources and funding should also be sought to provide ala-carte or at-home, learn-as-you-go services through existing free programs like www.DigitalLearn.org or programs funded by the City of Leominster or partner organizations.

- **Access to Assistive Technology and Devices** – It was noted that many governments public computers and workstations are not fully "accessible" to individuals with disabilities. Even government webpages are not always fully ADA accessible or compliant with the established standards for Information and Communication Technology (ICT) under Section 508 of the Rehabilitation Act and Section 255 of the Communications Act. Additional digital and internet ADA accessibility measures through enhanced web content, devices and workspaces meeting the ICT standards and improved public access to assistive digital technology and devices are needed.

B. Digital Affordability

- **Affordability of Broadband Internet** – In many parts of the Montachusett Region there are few choices in internet service providers (ISP) which prevents market competition and leads to expensive services. In general, the internet is expensive in Leominster and there are few affordable internet options for low-income households except for those that are based on a lower level of service,

resulting in lower speed and reliability. The Internet is now considered an essential service, or utility, like heat, electricity, and water, and therefore, programs to supplement the cost must be considered for those needing financial assistance.

- **Affordability of Digital Devices** – As stated in section A, over 10% of people living in 4 of the 9 census tracts do not have internet or devices. In one tract, that number surpasses 20%. Whether devices and workstations are made available for use in public buildings and spaces, or for personal ownership use through free or reduced-cost device distribution programs, it is essential to increase access not only to affordable, reliable broadband internet, but also to affordable, up-to-date, high-tech digital devices and technologies. Following the model established by NDIA and other digital literacy and device distribution advocates and training professionals, it is recommended that public device distribution programs are inclusive of or offered in conjunction with Digital Literacy training.

C. Digital Adoptability

- **Concerns about Cyber-Security & Internet Safety** – Cyber-security and internet safety were common topics of concern raised during stakeholder interviews, public engagement, and focus group meetings.

- **Limited Basic Computer Skills** – It was noted that many residents, particularly aging adults and Veterans need basic computer skills. Often, digital literacy and computer classes assume that people already know what may seem like common knowledge to others. Many people now need to use the internet for everyday living activities not associated with work or school. Understanding this need and accommodating the digital literacy and skills needs of people other than students and working professionals is necessary.

- **Limited Basic Internet Skills** – Navigating the internet is not always intuitive between websites or applications and among different people and population groups. It was noted that many of the region's residents could use basic instruction or assistance navigating the internet. Individuals with a language barrier or lower levels of literacy, and aging adults, may face increased challenges and barriers to accessing and acquiring basic internet skills and other digital literacy needs.

- **Difficulty Navigating Government Websites and Online Applications and Forms** – It was noted that residents, particularly Aging Adults and Veterans need assistance navigating federal, state, and local government websites and need assistance completing and submitting online applications, permits, and forms and uploading supporting documentation to related online application systems. Of interest, it was noted that assistance was needed with the following:

a. DMV Forms (license and registration renewals)
b. Immigration Services Forms
c. Online bill or tax payments
d. Online Medical Records/Telehealth
e. Veteran's Administration Website

- **Difficulty Setting up digital devices and accessing and changing device settings** – Many people noted that the hardest part of using a digital device can be setting it up or finding and changing settings within the device. While some are comfortable operating and using a digital device like a cellphone, laptop, computer, or tablet, they are not comfortable enough to set one up if they need to purchase a new device. This can be intimidating or stressful for some and often prohibits them from making necessary changes or updating old, out-of-date technology.

- **Difficulty Managing online subscriptions and accounts** –The need for more and more online accounts to accomplish everyday tasks (Veteran's Administration, Tele-Health platforms, Amazon, Netflix, etc.) creates a challenge managing numerous account usernames and passwords. This can be a challenge for anyone, but especially for people who do not have a high level of confidence using the internet and digital devices. And, if setting up and managing these accounts is challenging, it can be almost impossible to cancel or make changes to an account, especially one that is connected to a bank account, credit or debit card. These types of issues were noted as a challenge for people of all ages and with varying degrees of digital literacy and confidence.

5.2 Summary of Needs by Covered Population Group

Covered Population: Individuals in Covered Households (<150% of area median income)		
Digital Equity Factor	**Challenges & Barriers**	**NEEDS**
Availability	• Limited locations where free, public Wi-Fi is available • *Limitations to internet in public housing communal spaces* • *Limited available internet in individual public housing units* • Lack of public charging stations • Limited resources in public facilities (Library hotspots)	• Additional locations where free, Public Wi-Fi is available • Public charging stations • *Wi-Fi in all Public Housing* • Wi-Fi options for homebound • Additional Hot Spot availability
Affordability	• Cost of internet service • Cost of devices • Housing insecurity • Limited/fixed income • Transitional employment • ISP programs that offer low cost but inadequate internet service	• Low-cost/free internet programs • Device distribution programs (must include a digital literacy component) • Equitable ISP programs
Adoptability	• Lack of digital literacy • Lack of affordability • Lack of trust for the internet • Lack of technical knowledge to use devices effectively • Limited formats where public internet resources and information is disseminated	• Digital literacy classes • Device distribution (once digital literacy program complete) • Internet Safety Classes • One on one tech help • Live tech help line • Hard copy (and on-line) information pertaining to available digital resources

Covered Population : Aging Individuals Over 60 Years of Age		
Digital Equity Factor	**Challenges & Barriers**	**NEEDS**
Availability	• Limited locations where free, public Wi-Fi is available • Limited resources in public facilities (Library hotspots)	• Additional locations where free, Public Wi-Fi is available • Additional Hot Spot availability • Wi-Fi options for homebound • Additional transportation options to digital resources
Affordability	• Cost of internet service • Cost of devices • Fixed/limited income • *Housing insecurity* • ISP programs that offer low cost but inadequate internet service	• Low-cost/free internet programs • Device distribution programs (must include a digital literacy component) • Equitable ISP programs
Adoptability	• Lack of digital literacy • Lack of consistent digital literacy classes • Lack of trust/comfort with using the internet • No device • Outdated device • Lack of one-on-one tech help • Limited formats where public internet resources and information is disseminated	• One on one tech help • Consistent/additional digital literacy classes • Internet safety training • Basic computer use classes geared toward the aging population • Device distribution (once digital literacy program complete) • Hard copy (and on-line) information pertaining to available digital resources

	Covered Population: Veterans	
Digital Equity Factor	**Challenges & Barriers**	**NEEDS**
Availability	• Limited locations where free, public Wi-Fi is available • Limited resources in public facilities (Library hotspots) • Lack of room for workspaces in the Veteran's Center • Lack of public charging stations	• Additional locations where free, public Wi-Fi is available • Additional Hot Spot availability • Wi-Fi options for homebound Veterans • Additional transportation options to digital resources • Additional workspaces (include spaces with privacy) • Public charging stations
Affordability	• Cost of internet service • Cost of devices • Fixed/limited income • Housing insecurity • Transitional employment • ISP assistance programs that offer low cost but inadequate internet service	• Low-cost/free internet programs • Device distribution programs (must include a digital literacy component) • Equitable ISP internet assistance programs
Adoptability	• Lack of digital literacy • Lack of trust/comfort using the internet • Limited access to public devices • No device • Limited options for privacy while using devices • Limited of one on one tech help • Limited of accessible formats where public internet resources and information is disseminated	• One on one tech help • Digital literacy classes • Internet safety training • Basic computer use classes • Additional private workspaces • Device distribution (once digital literacy program complete) • Hard copy (and on-line) information pertaining to available digital resources • Live tech help line

Covered Population: Individuals with Disabilities		
Digital Equity Factor	**Challenges & Barriers**	**NEEDS**
Availability	• Limited locations where accessible, free public Wi-Fi is available • Limited accessibility to resources in public facilities where free Wi-Fi is available • Limited resources available (Library hotspots)	• Additional accessible locations where free, Public Wi-Fi is available • Additional Hot Spot availability • Wi-Fi options for homebound individuals • Transportation to digital resources
Affordability	• Cost of internet service • Cost of devices • Fixed/limited income • ISP programs that offer low cost but inadequate internet service	• Low-cost/free internet programs • Device distribution programs (must include an accessible digital literacy component) • Equitable ISP programs
Adoptability	• Lack of digital literacy • Lack of accessible devices • Lack of accessible formats where public internet resources and information is disseminated • Lack of trust when using the internet • Internet safety	• One on one tech help – in home and on-site options • Accessible Digital literacy classes – in home and on-site options • Device distribution (once digital literacy program complete) • Accessible methods to distribute digital resource information • Hard copy (and on-line) information pertaining to available digital resources • Live tech help line

Covered Population: Individuals with a Language Barrier		
Digital Equity Factor	**Challenges & Barriers**	**NEEDS**
Availability	• Limited locations where free, public Wi-Fi is available • Limited resources in public facilities where free Wi-Fi is available • Limited resources available (Library hotspots) • Lack of public charging stations	• Additional locations where free, Public Wi-Fi is available • Additional Hot Spot availability • Public charging stations
Affordability	• Cost of internet service • Cost of devices • Fixed/limited income • ISP programs that offer low cost but inadequate internet service	• Low-cost/free internet programs • Device distribution programs (must include a digital literacy component with translation if needed) • Equitable ISP programs
Adoptability	• Lack of digital literacy • Lack of devices • Lack of ESL digital literacy classes • Lack of accessible formats where public internet resources and information is disseminated	• One on one tech help – in home and on-site options with translation services • Digital literacy classes with translation services • Internet safety training with translation services • Device distribution (once digital literacy program complete) • Hard copy (and on-line) information pertaining to available digital resources -with translated editions and/or translation capabilities • Live tech help line

Covered Population: Members of a Racial or Ethnic Minority Group

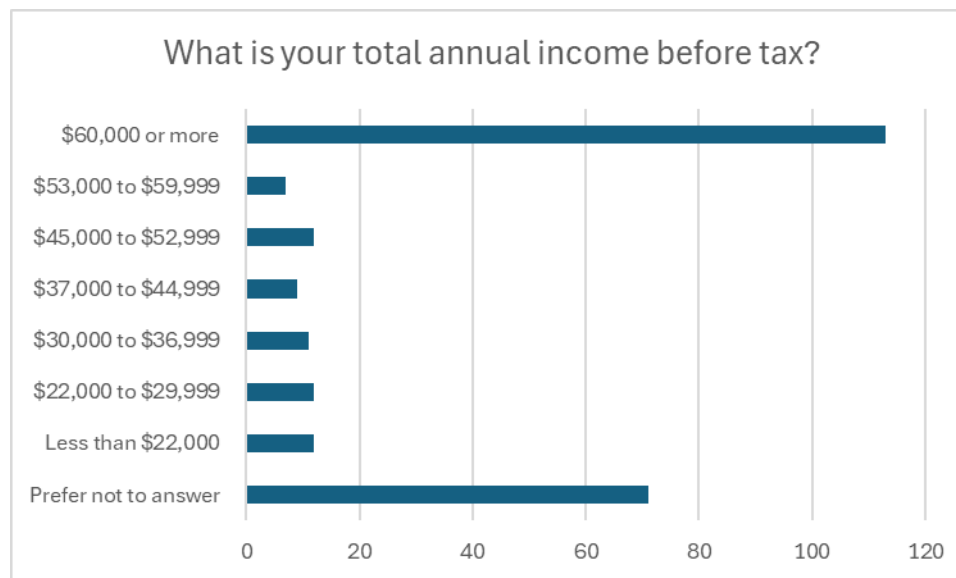| Digital Equity Factor	Challenges & Barriers	NEEDS
Availability	- Limited locations where free, public Wi-Fi is available - Limited resources in public facilities where free Wi-Fi is available - Limited resources available (Library hotspots) - Lack of public charging stations	- Additional locations where free, Public Wi-Fi is available - Additional Hot Spot availability - Public charging stations
Affordability	- Cost of internet service - Cost of devices - ISP programs that offer low cost but inadequate internet service	- Low-cost/free internet programs - Device distribution programs (must include a digital literacy component) - Equitable ISP programs
Adoptability	- Lack of digital literacy - Lack of affordability - Internet safety concerns - Lack of accessible formats where public internet resources and information is disseminated	- Digital literacy classes - Device distribution (once digital literacy program complete) - Hard copy (and on-line) information pertaining to available digital resources - Live tech help line

5.3 Summary of Municipal & Organizational Needs

- **Technology & Infrastructure Gaps** – *Aging digital networking equipment, computers, and workstations in public spaces like the Senior Center and Veterans Center need to be updated with modern, up-to-date equipment and technology.*
- **Partnerships**– Consider developing partnerships with MOC, Mount Wachusett Community College, and MassHire Career Center to coordinate with and build upon their existing Digital Literacy programs.
- **Understanding Digital Equity & Inclusion in Urban Areas** – Better define the city's role and importance in identifying ways to bridge the digital equity gap to bring digital technology and services to disadvantaged populations and neighborhoods.

5.4 Survey Results Summary

5.4.1 Statewide Digital Equity Survey

The state's first digital equity survey launched in 2023 to help the Massachusetts Broadband Institute identify individuals' needs for accessibility and affordability of digital devices and the internet as well as digital skills needed to safely access online resources. **319** people from Leominster took the statewide survey. Many of the responses illustrated that those taking the survey were satisfied with their service and have little trouble paying for internet and devices and are comfortable with their digital skills. When asking the respondents about income, it was clear that perhaps the survey is not reaching the covered populations adequately. Therefore, the Core Group developed a local survey. A complete list of state survey responses is available upon request to the city.

What is your total annual income before tax?

Income Bracket	Responses
$60,000 or more	~113
$53,000 to $59,999	~6
$45,000 to $52,999	~11
$37,000 to $44,999	~8
$30,000 to $36,999	~11
$22,000 to $29,999	~11
Less than $22,000	~11
Prefer not to answer	~71

5.4.2 Local Digital Equity Survey

Results from **265** surveys were assessed with key points below. Complete local survey results and an in-depth analysis have been compiled as an **Appendix** of this Plan and are available upon request. The following offers a small sampling of results.

The top challenges faced accessing or using the internet are the "cost," slow and unreliable speeds, and concerns for online safety or privacy. Affordability remains a prominent barrier to fully taking ownership of and utilizing the internet.

When asked, if the cost of the internet was personally affordable, **59.25%** responded with "Yes," however, **40.75%** responded "No" which suggests an inherent struggle with steeply fluctuating unaffordable costs of the internet. Residents are also concerned with the internet service upload and download speeds being too slow or unreliable. One respondent stated, "Service providers are expensive for terrible service and quality." Likewise, online safety and privacy remains the top challenge of **47.17%** of respondents when accessing the internet.

The following is a sampling of comments when respondents were asked **"What do you think the city can do to improve digital inclusion & equity and/or enhanced internet access for everyone."**

Improve Wi-fi and internet connectivity in areas on edge of town.

Municipal broadband at a low cost

Ensure that all families have access to internet, especially those who are low income who need. Especially households with children in school and the elderly.

Make the cost affordable for all

The survey results in Leominster highlight significant opportunities for improving digital access in the community. While most residents are satisfied with their internet services, connectivity issues and the need for broader access outside the home, particularly for marginalized groups, are evident. Given the internet's critical role in accessing resources like entertainment, social media, finance, telehealth, and education: addressing challenges such as affordability, slow speeds, and privacy concerns is crucial. Prioritizing the development of equitable urban solutions by enhancing digital infrastructure—such as implementing city-owned mesh networks and hotspots—along with providing devices & digital literacy programs, can bridge the digital divide and ensure equitable access to essential services for all residents.

6

6. Digital Equity Goals, Actions & Implementation

Broadband internet accessibility and connectivity issues in the city of Leominster are related to various factors, including gaps in reliable internet service, diverse socioeconomic demographics affecting income and opportunity, higher-than-average services costs limiting access and affordability, limited access to public internet and digital workspaces, affordable devices and technology, and digital literacy training and tech help. Through the information provided in this Plan and upon its eventual implementation, the city will have the tools necessary to enhance digital equity and inclusion to achieve the overall goal of bridging the digital gap.

6.1 Digital Equity Goals

1. Improve the effectiveness, efficiency and quality of local initiatives that promote digital equity.

2. Increase access to affordable, fast, reliable internet.

3. Expand internet service, device distribution and digital literacy through community engagement and partnerships.

4. Increase the capabilities of Leominster's technological resources and public digital workspaces.

5. Seek and secure funding opportunities for investments and long-term support of digital equity programs and services.

6.2 Digital Equity Project Focus Areas

Actions outlined in this plan and displayed within the Digital Equity Action Plan (**Section 6.3**), were devised using the following seven (7) project focus areas specified within the Municipal Digital Equity Implementation Program.

Source: Extreist.com

Source: HOK.com

MBI - Digital Equity Project Focus Areas	
👤	**1. Staff Capacity for Digital Equity** A full- or part-time staff person to oversee, project manage, and execute municipal digital equity activities in coordination with municipal leadership, various municipal departments, stakeholders, and residents.
📶	**2. Wi-Fi Access and Innovative Connectivity Technology** Assessment, design, and establishment of an appropriate technology solution to provide in-unit access to the internet for residents living in affordable housing and/or low-income neighborhoods.
🏠	**3. Public Space Modernization** Improvements to inadequate broadband infrastructure and digital use in public spaces, such as libraries, community centers, senior centers, educational facilities, workforce training locations, and commercial corridors.
🏠	**4. Connectivity for Economic Hardship** Provision of Wi-Fi cellular hot spots to individuals lacking stable housing where they are unable to have a fixed broadband internet subscription.
📖	**5. Digital Literacy** Provision of training programs to improve digital literacy and skills to use devices, online resources, and other digital tools. Literacy program curricula and models may vary based on learner needs and familiarity with devices and the internet, such as in-person group instruction, a-synchronous online instruction, or one-on-one training.
💻	**6. Device Distribution and Refurbishment** Provision of new or used internet-connected devices, such as laptops, tablets, and smart phones, to distribute to target populations.
💬	**7. Education, Outreach, and Adoption** Enrollment of eligible residents in discounted options for broadband, devices, and digital skills. Outreach may include workshops, call center phone banking, door-to-door outreach, online/printed communications, and public service announcements.

6.3 Digital Equity Action Plan

Goal	Action	Project Focus Area	Potential Lead(s)	Funding/Program
1. Improve the effectiveness, efficiency, and quality of local initiatives that promote digital equity, literacy, and inclusion.	Promote and Support continuation of existing Digital Literacy Training Programs that include device distribution programs, education, funding, and coordination.	5,7	Planning Dept./Community Development	Municipality
	Continue to evaluate and update the Leominster Digital Equity Plan and pursue opportunities, services, programs, and partnerships that enhance digital equity and inclusion initiatives City-wide.	5,6,7	Planning Dept.	Municipality
	Encourage peer-mentorship and "train-the-trainer" models where individuals are empowered to become qualified digital literacy and certified Digital Navigators such as senior-to-senior tech help sessions, peer-to-peer youth-led and youth driven initiatives.	5	COA/Schools	Municipality
	Identify and train a Digital Navigator (Qualified Trainer) at each City-owned Anchor Institution (e.g., City Hall, Library, Senior Center, Veterans Center) and encourage staff members at partner Social Services Organizations to pursue training as Digital Navigators/Trainers.	1	City Administration	Municipality/MBI Implementation Grant
	Join/establish a Regional Digital Equity Coalition and play a leadership role in future implementation and evolution of regional broadband internet access and digital literacy initiatives.	2,4,5,7	Planning Dept/Community Development	Municipality

2. Increase access to affordable, fast, reliable internet.	Create additional public Wi-Fi mesh networks and install outdoor, public workstations and charging stations to support residents, businesses, consumers, and city functions.	3,4	Library/City IT	Community Compact Cabinet Municipal Fiber Grant Program
	Install kiosks, digital signs, large monitors, or map-boards showing locations of public Wi-Fi, workspaces, charging stations and digital literacy resources and Community Anchor Institutions.	3,4	City IT	Community Compact Cabinet Municipal Fiber Grant Program
	Create public Wi-Fi mesh networks at City Parks and Playgrounds such as Doyle Field and recreational facilities such as the Leominster City Pool/Fournier Water Park.	3,4	City IT	Community Compact Cabinet Municipal Fiber Grant Program
	Coordinate with the Housing Authority to provide free internet access and computer workstations in each Housing Authority communal space and investigate providing affordable internet options to all residents.	2,5,6,7	City IT, Housing Authority	Metropolitan Area Planning Council Apartment Wi-Fi, MBI Residential Retrofit Program
3. Expand internet service, device distribution and digital literacy through community engagement and partnerships to overcome existing barriers and challenges.	Expand capabilities on the city webpage for improved accessibility, ease of use, and enhanced function, with a goal toward meeting the established standards for information and communication technology (ICT).	5,7	City IT	Municipality, Municipal ADA Improvement Grant Program
	Create a Digital Equity and Inclusion webpage within the City website to host the Leominster Digital Equity Plan and a related interactive Local Digital Resources Map displaying locations of digital equity/literacy resources.	5,7	City IT	Municipality

	Create print copies and a digital downloadable/printable version of the Local Digital Resources Map for distribution and display, including the installation of kiosks at Community Anchor Institutions and/or public outdoor digital spaces (workstations, charging stations, and outdoor public Wi-Fi areas).	5,7	City IT	Municipality
	Partner with social service agencies to create device distribution programs and digital literacy programs.	5,6,7	Planning Dept./Community Development	MBI Implementation Grant Program
4. Increase the capabilities of Leominster's technological resources and public digital workspaces.	Purchase additional Wi-Fi hotspots (with internet service subscription) for the Public Library to loan.	1,2,4	Library/City IT	MBI Implementation Grant Program
	Provide additional workspaces & laptops at the library.	2,3,4	Library	
	Improve Wi-Fi service at the library by installing boosters, additional access points or by similar means.	2,3,4	Library/City IT	
	Provide private workspaces at the Veteran's center that are equipped with internet connection, a desktop computer, printers and scanners.	2,3,4	Veteran's Center	
	Establish a distribution program that uses refurbished devices that are no longer used by other city departments.	6	School Dept.	
	Provide private workspaces at the Senior Center that are equipped with internet connection, a desktop computer, printer and scanner.	2,3,4	Senior Center	

5. Seek and secure funding opportunities for investment and long-term support of digital equity programs and services.	Leverage existing and potential funding sources and programs to enhance digital equity and inclusion in Leominster.	7	Planning Dept.	Enhancing Digital Literacy for Oder Adults Grant, Hybrid Programming for Councils on Aging Grant, Municipal Americans with Disabilities Act Grant, Community Compact Cabinet Municipal Fiber Grant Program, Gap Networks Grant Program
	Identify meaningful partnerships and seek coordinated joint-funding applications for developing, expanding, or sharing resources to support the mission of existing Digital Equity & Literacy partners and Community Achor Institutions.	1,7	Planning Dept.	Municipality
	Coordinate closely with MassHire Central Mass Career Center and Make Opportunity Count (MOC) to understand existing Digital Literacy funding mechanisms and sources to best plan for future funding needs over the course of the next 5 years and beyo*nd*.	1,7	Planning Dept.	Municipality
	Develop framework and partnerships and seek funding to establish mobile, site-site and in-home digital literacy trainers and training services and/or corresponding Rideshare Transit and Transportation Programs that provide "rides for digital literacy and inclusion".	5,7	Planning Dept./COA/Veteran's Center	Enhancing Digital Literacy for Oder Adults Grant, Hybrid Programming for Councils on Aging Grant, Municipal Americans with Disabilities Act Grant

6.4 Digital Equity Implementation

Leominster can and should leverage numerous state and federal funding opportunities to support digital equity initiatives to bridge the City's' digital divide, increase digital inclusion, and enhance digital equity. These funding programs target critical implementation areas of digital equity planning, including workforce development, digital literacy education, device distribution, broadband adoption, infrastructure, and community outreach & engagement.

6.4.1. Municipal Digital Equity Implementation Program

Municipalities participating in the Municipal Digital Equity Planning program (the program associated with the development of this Plan) are directly eligible for another funding program administered by the Massachusetts Broadband Institute (MBI), the Municipal Digital Equity Implementation Grant program. Municipalities that have completed a Digital Equity Plan may select and apply for funding to implement one or more activities or "actions" identified as priorities within the Plan. The funding program allows for projects related to several project focus areas relevant to achieving or enhancing digital equity and providing services or programs supporting digital inclusion.

As with some related planning activities in the economic development field, it may be beneficial to adopt a regional approach to digital equity implementation. Such an approach would enable resource sharing that could reduce staff time and costs through coordinated efforts and support thereby increasing efficiency and likely offering mutual, joint benefits, and increased success. At present, MBI has set aside a total of $56,603.77 in implementation funds for the City of Leominster. Through an application to MBI, the town is eligible to receive those funds for the implementation of actions identified within this Plan. It should be noted that the Municipal Digital Equity Implementation Grant Program allows municipalities to apply for up to $100,000.

The intent of the Municipal Digital Equity Implementation Program is to enable municipalities who need funding to mobilize, start-up, and implement digital equity activities locally to access a one-time grant to execute a project (or projects) defined in their Digital Equity Plan or related document that MBI deems of sufficient standard. Project implementation will increase access and usage of the internet for the populations most impacted by the COVID-19 pandemic.

Municipalities are strongly encouraged to utilize their planning consultants from the Municipal Digital Equity Planning Program to define a project (or set of projects) scope and budget for implementation. Upon approval from MBI, municipalities may start project implementation and will be accountable to MBI's reporting requirements, which vary by proposed focus area(s).

Specifically, the Municipal Digital Equity Implementation Program will accomplish three goals:

1. Enable municipalities to make local digital equity investments that will increase access, adoption, and usage of the internet for the populations most impacted by the COVID-19 pandemic.

2. Transition municipalities from the planning to implementation phase by providing funds to execute a project (or projects) indicated in their Digital Equity Plan, Digital Equity Planning

3. Encourage collaboration and synergy with the Digital Equity Partnerships Program, which includes statewide and regional grantees with high capacity for digital equity work. Charette, or pre-existing plan deemed sufficient by MBI

MBI will administer the Implementation Grant round in the process outlined below:
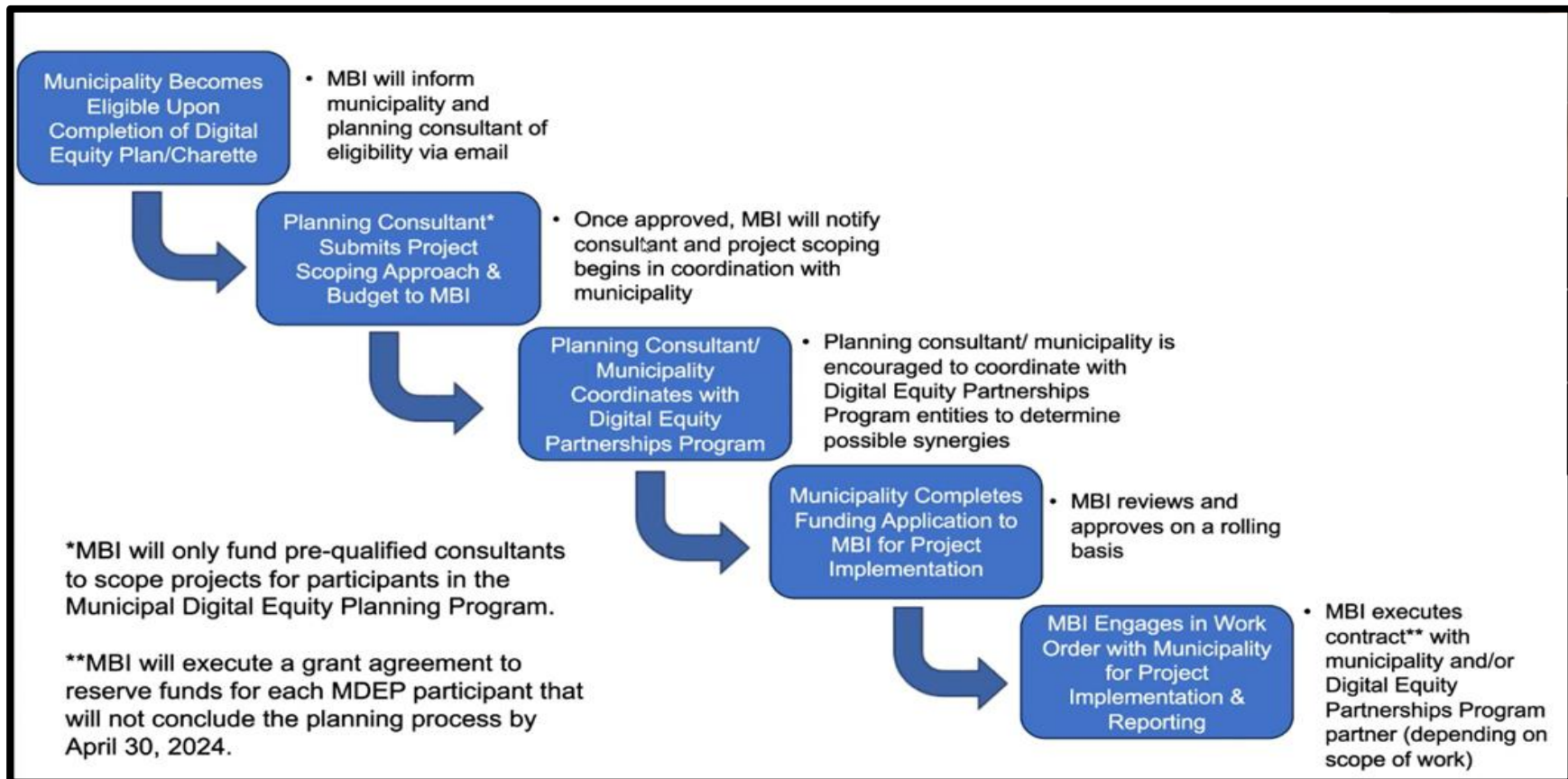
6.4.2. Additional Digital Equity Funding

Lead for America American Connection Corps

https://broadband.masstech.org/massachusetts-digital-equity-opportunity

The Lead for America American Connection Corp (ACC) is a service membership focused on advancing economic prosperity and bridging the digital divide. The ACC supports broadband development, digital inclusion, and civic leadership in communities through a network of ACC Members. Organizations currently engaging in digital equity and inclusion work that want to expand their initiatives and impact can apply to host a digital equity practitioner directly through the Lead for America American Connection Corps (ACC) program. MBI and Lead for America have committed to placing a cohort of practitioners to ensure a broad range of organizations can take advantage of this program. Individuals will be recruited in partnership with selected host sites from the communities that they will serve.

Digital Equity Partnerships Program

https://broadband.masstech.org/partnerships

The Digital Equity Partnerships Program launched in September 2022 to support organizations across the state in implementing projects that meet the digital equity goals outlined in the Commonwealth's 2021 ARPA COVID recovery legislation. The Program is comprised of six initiatives that applicants can focus on within proposals:

1. Wi-Fi Access: Implementing Wi-Fi in affordable housing and/or low-income neighborhoods.

2. Public Space Internet Modernization: Improving infrastructure and resources in public.

3. Connectivity for Economic Hardship: Providing "hot spots" to low-income/housing insecure individuals.

4. Digital Literacy: Establishing digital literacy programs to train populations on devices, resources, and digital tools.

5. Device Distribution and Refurbishment: Securing new and/or refurbished devices for distribution.

6. Education, Outreach, and Adoption Support Initiative: Conducting outreach to increase the success of digital equity programs like the Federal Communications Commission's Affordable Connectivity Program (ACP).

In December 2023, the Healey-Driscoll Administration and the Massachusetts Broadband Institute (MBI) at MassTech announced $20 million in new grants through the state's Digital Equity Partnerships Program, which supports high-impact and scalable initiatives that reach residents most affected by the digital divide.

As part of this funding announcement, the University of Massachusetts Lowell was awarded $4 Million to spearhead a Digital Equity Partnership project covering the Gateway Cities of Leominster, Fitchburg, Lowell, Haverhill, and Lawrence, and more broadly across the many communities of the Merrimack Valley, Northern Worcester County and the North Shore. Through the funded partnership the UMass Lowell team will offer technical skills, a student digital navigators' model, project management resources, and procurement expertise. Specific outcomes will include deploying three neighborhood-scale mesh Wi-Fi networks, improving six public facilities with broadband service, creating a multi-tiered digital literacy and navigation initiative that establishes a regional help desk at UMass Lowell and advances new digital literacy programs, distributing 1,200 new or refurbished devices; and finally, providing outreach at six community-based organizations to promote individual of adoption the Federal Communication Commission's, Affordable Connectivity Program.

Several aspects of the UMass Lowell Digital Equity Partnership Program including, Wi-Fi Access Initiative, Public Space Modernization Initiative, Digital Literacy Initiative, Device Distribution and Refurbishment Program, and Education, Outreach & Adoption Program are aimed to serve several Gateway Cities including Fitchburg and Leominster, as well as other parts Northern Worcester County within the Montachusett Region.

Gap Networks Grant Program
https://broadband.masstech.org/gap-networks-grant-program

The $145 million Gap Networks Grant Program, administered by the Massachusetts Broadband Institute (MBI) will fund the deployment of broadband infrastructure in areas that currently lack broadband service. The Program aims to expand access and connectivity in unserved and underserved locations throughout the Commonwealth to bridge the digital divide. Specifically, the Program will fund the deployment of broadband infrastructure in those areas that currently lack access to sufficient broadband internet service, defined as service offering download speeds of at least 100 Mbps and upload speeds of at least 20 Mbps.

While prior investment of public funds has substantially reduced the number of unserved and underserved locations remaining in the state, there are still pockets of locations throughout the state that lack access to reliable and affordable broadband service. This Program is intended to address those remaining gaps in broadband availability.

This Program will score more favorably proposed projects in economically challenged areas, specifically Gateway Municipalities and those areas identified by HUD's Qualified Census Tract program. Furthermore, awardees will be required in the Federal Communications Commission's Affordable Connectivity Program, that provide low-income consumers with subsidies on internet services.

[Metropolitan Area Planning Council Apartment Wi-Fi](#) and [MBI Residential Retrofit Program](#)
https://www.mapc.org/our-work/expertise/digital-equity/apartment-wi-fi/
https://broadband.masstech.org/retrofit

The Metropolitan Area Planning Council's (MAPC) [Apartment Wi-Fi Program](#) works with municipalities, public housing authorities, and affordable housing developers to build Wi-Fi networks for residents. The Apartment Wi-Fi Program provides funding, project management, and procurement support to fund the construction of Wi-Fi networks, providing residents with equal or superior service to what is available from commercial ISPs at no cost to residents. Program funding covers all capital costs associated with network design, construction, equipment, and the first year of ongoing operating expenses.

MBI's [Residential Retrofit Program](#) (funded through the federal Capital Projects Fund) works in tandem with MAPC's apartment Wi-Fi Program, utilizing the same expression of interest form for housing operators.

Housing Authorities and Redevelopment Authorities involved in affordable public housing projects should connect with representatives from MBI and/or MAPC to learn about the Apartment Wi-Fi Program and Residential Retrofit Program to find out if there are any opportunities to leverage these resources for existing and planned affordable housing buildings and properties.

[Community Compact Cabinet Municipal Fiber Grant Program](#)
https://www.mass.gov/municipal-fiber-grant-program

The Massachusetts Division of Local Services Municipal Fiber Grant Program assists municipalities with the construction and completion of municipal fiber networks. A cohesive municipal network "allows for centralized management of IT infrastructure, including an enterprise approach to network monitoring, cyber security, records management, and backup and recovery." All municipalities that are not previous grantees of the program are eligible.

Eligible communities can leverage Municipal Fiber Grant Program funds toward developing a municipal wireless mesh network to provide free public internet outdoors. These funds can also support the promotion of job opportunities within the local broadband economy and workforce training opportunities.

Community Compact Cabinet IT Grant Program
https://www.mass.gov/community-compact-it-grant-program

The Massachusetts Community Compact IT Grant Program, administered by the Division of Local Services, provides grants of up to $200,000 to support the implementation of local innovative IT projects, including one-time capital needs related to planning, design, installation, implementation, and initial training. Eligible communities can leverage the IT Grant Program funds toward developing a municipal wireless mesh network to provide free public internet outdoors.

Community Compact Cabinet Efficiency and Regionalization Grant Program
https://www.mass.gov/efficiency-regionalization-grant-program

The Community Compact Efficiency and Regionalization (E&R) Grant Program, administered by the Division of Local Services, is a competitive grant program that provides financial support for government bodies interested in regionalization and other efficiency strategies. Funds may be administered by government entities, regional school districts, regional planning agencies, and councils of governments. Example eligible expenses include equipment or software, technical assistance, or transition or project management costs for one year.

Eligible communities can use E&R funding to secure software packages needed by municipal offices, including but not limited to permitting software for the Public Health Department. Communities can also partner with adjacent communities to secure a shared resource, like a Resident Engagement Coordinator.

Enhancing Digital Literacy for Oder Adults Grant
https://www.mass.gov/info-details/enhancing-digital-literacy-for-older-adults-grant

The Enhancing Digital Literacy for Older Adults Grant is a $1.5 million program funded by American Rescue Plan Act Home and Community-Based Services (HCBS) that is designed to help councils on Aging (COAs) improve the digital literacy of older adults. Grants of up to $100,000 per COA are available for COAs in Massachusetts to:

- Purchase devices, software, or broadband for older adults; technology purchases for the COA are also allowed if they facilitate the goal of increasing the digital literacy of older adults

- Provide training, education, or support to enhance digital literacy for older adults in a COA's service area or older adults who access the COA

Overall, the goal of the grant is to help older adults use technology in a way that strengthens, enhances and expands HCBS. This may include helping older adults engage in telehealth, access medical information, connect with family or caregivers, participate in preventive health courses, participate in healthy aging programming, or find and access supports to age in the community.

Hybrid Programming for Councils on Aging Grant
https://www.mass.gov/info-details/hybrid-programming-for-councils-on-aging-grant

The Hybrid Programming for Councils on Aging Grant is a new $1.45 million program from the Executive Office of Elder Affairs (EOEA). Funds are available to help Massachusetts Councils on Aging (COAs) expand access to high-quality hybrid (i.e., both in-person and virtual) programs for Massachusetts residents who are 60 years of age and older. That way, the same programming is available, accessible, and enjoyable for Older Adults who attend in person or virtually. Other potential funding sources for aging adults include Massachusetts Community Health & Healthy Aging Funds. A successful digital literacy program has been established by the Town of Bernardston Council on Aging/Senior Center.

Each COA may be awarded up to $100,000. Two COAs applying together can request up to $200,000. Three or more COAs applying together can request up to $300,000.

Applicants should use funds to achieve one or more of the following objectives:
- Deliver high-quality virtual and in-person programming in which Older Adults attending in-person and virtually both have their needs met.
- Enhance programming to reach previously unserved or underserved Older Adults in their service area.
- Ensure the sustainability of the program after the grant period ends (March 2025).

The grant round for 2024 is closed but more funds are expected to be available in 2025.

Municipal Americans with Disabilities Act Grant
https://www.mass.gov/info-details/municipal-ada-improvement-grant-program

The Municipal Americans with Disabilities Act Grant program is aimed to support capital improvements specifically dedicated to improving programmatic access and/or removing barriers

encountered by persons with disabilities in applicant facilities throughout the Commonwealth. Grants will be awarded to successful applicants to remove barriers and create and improve accessible features and programmatic access including, but not limited to, Limited Use/Limited Application (LULAs) signage, and communication access devices.

Determination of Need (DoN)
https://www.mass.gov/determination-of-need-don

The Massachusetts Department of Public Health (DPH) Determination of Need (DoN) program was established to "encourage competition with a public health focus; to promote population health; to support the development of innovative health delivery methods and population health strategies within the healthcare delivery system; and to ensure that resources will be made reasonably and equitably available to every person within the Commonwealth at the lowest reasonable aggregate cost."

The Massachusetts Executive Office of Elder Affairs (EOEA) created the Massachusetts Community Health and Healthy Aging Funds initiative in partnership with the Massachusetts DPH in 2017 as a revision to the DoN program. This program aims "to enhance the capacity of multi-sector collaboratives to authentically engage residents and work together" to remove barriers to health."

Communities can leverage funding through the DoN program to establish training opportunities for local consumers regarding tracking medical records.

Commonwealth Corporation (CommCorp) YouthWorks Funding
https://commcorp.org/program/youthworks/

Commonwealth Corporation's YouthWorks is a state-funded youth employment program that supports skills training for youth up to age 25 from households earning less than 200% of the federal poverty rate.

YouthWorks funding could be leveraged to support workforce training in North Central Massachusetts and throughout the Montachusett Region to enhance digital literacy & inclusion and support the local broadband economy. YouthWorks participants can also benefit from a statewide network of digital navigators through past program participants, and established MassHire Workforce Development programs, Job Boards, and Career Centers.

Massachusetts Department of Elementary and Secondary Education: Digital Literacy Now Grant
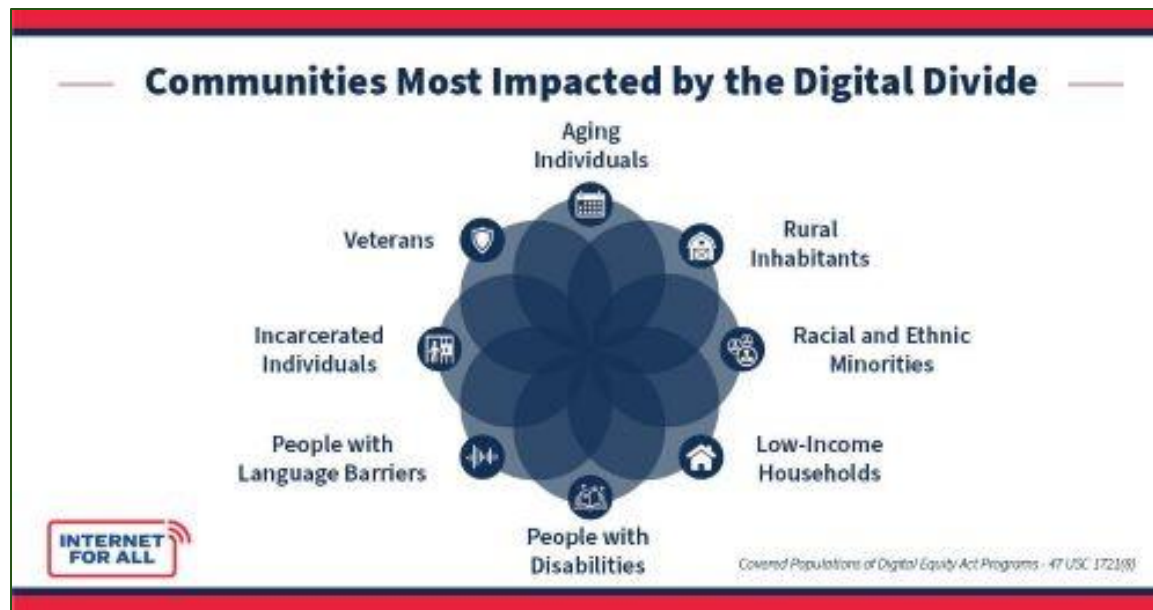**https://www.doe.mass.edu/grants/2022/147-2/**

The purpose of this trust continuation grant is to establish and promote rigorous, engaging, and standards-aligned digital literacy and computer science (DLCS) education in public schools from kindergarten through grade 12. School districts are the unit of change toward creating rigorous, inclusive, and sustainable K–12 digital literacy and computer science education.

Additional Resources can be found within the Appendix of this Plan and made available upon request.

6.5 Conclusion

Plan implementation will be accomplished by adhering to the principles of this plan and by utilizing its strategies and recommended actions as a guidance to achieving its overall vision. In some cases, the completion of an action may be contingent on the Town obtaining outside funding or other resources, separate from the Municipal Digital Equity Implementation grant funding program, and where possible, potential funding sources have been provided.

Monitoring, evaluating, and enhancing the Town's Digital Equity Plan are important steps in maintaining an effective document and enhancing Digital Equity over time. Periodic revisions and updates of the plan will be required to ensure that the goals of the plan are kept current, consider potential changes in digital equity and inclusion priorities and accomplishments over time. It is recommended that this plan be revised every 3 years and that accomplishments, new priorities, or evolving needs, are evaluated and tracked over time to aid in the Plan's implementation and eventual update.