

# Massachusetts BEAD Final Initial Proposal Volume I

**April 22, 2024**

**Massachusetts Broadband Institute**

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# Executive Summary

## Digital Equity in Massachusetts: A Transformational Opportunity

**Massachusetts is at a pivotal moment with a unique opportunity to drive transformative change in digital equity.**

The Massachusetts Broadband Institute (MBI) is the central broadband office for the Commonwealth of Massachusetts. MBI is one of five primary divisions of the Massachusetts Technology Collaborative (MassTech), a quasi-public economic development agency that works closely with the state Executive Office of Economic Development.

MBI has made significant investments to expand internet access across the State. MBI has funded last mile projects, established a middle mile network, and facilitated public-private partnerships to extend high-speed internet access to underserved and remote areas. These efforts have included grants, technical assistance, and collaborations between public entities and private service providers, all aimed at bridging the digital divide and ensuring better connectivity. With these investments, Massachusetts has achieved an availability rate that exceeds 98%, measured by the number of locations with high-speed internet infrastructure. This leaves a limited number of locations lacking high speed connections. Through a once-in-a generation federal funding investment, Massachusetts has an unprecedented opportunity to achieve its strategic goals and unlock meaningful economic potential for all residents.

## Vision for Digital Equity

**The vision for broadband and digital equity in the Commonwealth is 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.

Availability	Adoption	Quality of Service
Every location has high-speed internet <b>available</b> .	Every resident can <b>utilize</b> and <b>afford</b> the internet.	Every location has <b>reliable</b> service.

## Shaping the BEAD and DEA Planning Processes

**MBI's planning process for Broadband Equity Access and Deployment (BEAD) and Digital Equity Act (DEA) prioritized alignment.** While the BEAD and DEA plans seek unique goals - with BEAD investing in statewide infrastructure, and DEA focusing on digital equity investments - MBI aligned the efforts to ensure coordinated stakeholder engagement and visioning activities. This allowed MBI to develop a shared strategy to bridge the digital divide across the Commonwealth.

**MBI's historic investments in middle mile and last mile infrastructure has set the stage for the Commonwealth to achieve universal broadband availability in the coming years.** The sequencing of MBI's infrastructure grant funds will begin with the Broadband Infrastructure Gap Networks Grant Program<sup>1</sup> which aims to fill the remaining gaps in Massachusetts broadband coverage. Any remaining coverage gaps that remain

after the Gap Networks Program or that are identified through the BEAD Challenge Process will be addressed with BEAD Deployment funds.

**Following the guidance provided by the National Telecommunications and Information Administration (NTIA), we conducted a large-scale engagement process to understand the state of digital equity in Massachusetts and where gaps exist.** MBI established a Broadband & Digital Equity Working Group to bring together practitioners across the Commonwealth to inform every step of this work; conducted stakeholder interviews; hosted statewide listening sessions and focus groups; distributed a statewide Digital Equity survey in nine languages; and conducted data analysis involving publicly available data.

**This Plan is made possible by our robust network of partners, including existing MBI grantees advancing local, regional, and municipal digital equity planning efforts across the Commonwealth.** Throughout the planning process, we deliberately created opportunities to invite these partners to inform both the BEAD and DEA Plans and ensure these Plans reflected their expertise and understanding of digital equity. This exercise helped to strengthen the community of digital equity practitioners across the Commonwealth and positions Massachusetts well to effectively allocate and execute on the Plan with BEAD funds and Digital Equity Capacity grants when available.

## Our Approach for BEAD

The BEAD program in Massachusetts aims to provide universal broadband access and support digital equity initiatives. The Commonwealth is in a unique situation for BEAD broadband deployment projects as the Broadband Infrastructure Gap Networks Grant Program (Gap Networks Program), funded through the ARPA Capital Projects Fund, may have the capacity to serve most of the unserved and underserved locations in the Commonwealth prior to BEAD funding becoming available. MBI expects that, due to the CPF-funded Gap Networks Program, few or no mass market Broadband Serviceable Locations (BSLs) may remain by the time the BEAD subgrantee selection process begins. However, there is a possibility that higher-than-expected costs, lower-than-expected participation, and/or coverage gaps identified through the BEAD challenge process, will result in a situation where the BEAD program in Massachusetts has remaining coverage gaps to address. The BEAD deployment program will have up to three possible rounds of funding based on the number of locations remaining to be served. All three rounds may not be required if there are not a significant number of locations to be served following the Gap Network Program. The rounds of competitive grant applications will be followed by negotiations to ensure that no gaps remain. The goal is that by the end of these rounds, the BEAD deployment program will achieve its 100% availability goal.

Given MBI's rich history of supporting broadband access and digital equity initiatives for every Massachusetts resident, MBI intends to use non-deployment BEAD funds to support deeper investment into already existing digital equity programs while also developing new, complementary programs that support the Commonwealth's vision for adoption and quality of service. This approach will make the most efficient use of federal funds while advancing progress toward the Commonwealth realizing MBI's unified vision.

## Main Findings

Based upon learnings from this process, MBI established digital equity gaps, sourced from the State's major digital equity needs. From these gaps, MBI generated correlating actions, linked to future programs to implement throughout Massachusetts. Gaps were categorized by the NTIA's Measurable Objectives and are connected to forward-looking strategies established in the Statewide Digital Equity Plan. High-level findings from each Measurable Objective area include:

### Broadband Affordability & Availability

- High internet subscription costs are the largest identified barrier that prevent Massachusetts residents from having broadband at home.
- Many residents with internet subscriptions experience poor internet quality.

## Accessibility of Devices and Device Support

- Residents identify a need for low-cost devices.
- Residents need devices that are easy to use.
- Residents need sustainable devices.

## Digital Literacy

- Residents need greater digital literacy support, especially support that is linguistically and culturally accessible across different demographic groups.
- Residents need support using the internet to conduct essential day-to-day activities, including accessing job opportunities and healthcare.
- Institutions offering digital literacy programs, including libraries, need operating support.

## Privacy & Cybersecurity

- Residents are concerned about internet safety, especially with regard to protecting themselves from having their data stolen, from online scams, and from digital surveillance.
- Individuals with disabilities are particularly concerned about medical data breaches.
- Residents are concerned about youth safety online.

## Accessibility & Inclusivity of Public Resources

- Residents, particularly those with language and accessibility barriers, identify difficulty accessing public resources online.
- Residents need more information about how to access online public resources and desire support programs tailored to their needs.

**MBI's assessment of needs found that greater affordability, higher quality of service, and increased internet safety are top priorities for residents across Covered and Underrepresented Populations and regions of the state.** These consistent themes underlie the diverse needs across different regions and demographic groups. As a result, MBI is committed to being responsive to the diversity of resident needs, recognizing the unique differences in needs across regions and demographic groups and avoiding a one-size-fits-all approach. MBI used this understanding of needs to recommend programs to improve digital equity in the Commonwealth.

## Implementation Plan

**MBI developed an implementation strategy to organize our efforts to achieve digital equity in Massachusetts.** We designed the framework to rely on extensive collaboration with our local and statewide partners and to make the Plan effective and sustainable over the long term. MBI's implementation strategy is structured to achieve the vision through 3 sets of activities: build on existing programs, develop new programs, and create foundations for success. The list of recommended programs below provides examples that MBI may want to prioritize from the full list of programs.

### Build on Existing Programs

**Digital Equity Partnerships Program.** MBI will scale its existing Partnerships program with a focus on 3 objectives: expand geographical coverage to regions with gaps in support, expand coverage by target populations

regardless of geographic location, and expand initiatives supported through past grants where these have proven to be successful.

**Municipal Digital Equity Planning Program:** Building on the 70 municipalities that have participated in this program to date, MBI's future investments will focus on two initiatives: provide participating municipalities with easily accessible funding to implement priority initiatives based on their plans and create meaningful funding options to implement larger, longer-term projects.

## Develop New Programs

**State-Supported Technical Assistance.** MBI will develop a Front Door program to support quality of service through a consumer-facing web portal dedicated to addressing quality-of-service concerns for the residents through education, troubleshooting tools, and escalation options.

**Statewide Digital Navigator Corps.** MBI will support organizations throughout Massachusetts to hire, train, and staff digital navigators who can provide local support with technology troubleshooting, education, program access, and more. We will prioritize increasing the number of navigators in regions and among populations where this resource is currently unavailable.

## Create Foundations for Success

**Foster Regional and Topic-Specific Digital Equity Coalitions:** MBI will facilitate the creation of coalitions that promote digital equity across Massachusetts. MBI envisions that coalitions could be structured by region, Covered Population or other socioeconomic or demographic characteristics, priority outcome areas (economic and workforce development, education, healthcare, housing, and infrastructure), or other dimensions.

**Establish Best Practices Catalogue:** MBI will strengthen the ability of all organizations to support digital equity objectives by educating practitioners and developing a catalogue of best practices. This support will be available both to organizations that focus on digital equity and to those that do not.

**MBI will track the outputs and outcomes of its programs in multiple ways.** Existing MBI programs already have in place methods to track KPIs and overall progress. Building on these structures and KPIs, MBI will set program evaluation measures with its partners for all programs—based on the Measurable Objectives and key performance indicators—that allow it to assess whether programs are producing results and, if not, where they should improve. MBI will also establish mechanisms for lessons learned to be shared statewide so that successful programs can be expanded more broadly.

## The Way Forward

**Completing the Massachusetts Internet for All Broadband and Digital Equity Plans is the first step.** As we move towards putting the Plans into action, we understand the need to ensure Plans remain as “living documents” that will continue to reflect the realities of diverse communities in the Commonwealth and can guide investments and partnerships where it meets the need and the moment. To do so, MBI will continue ongoing connections with stakeholders and communities across the Commonwealth to have an up-to-date understanding of needs and barriers.

**This will be an all-hands-on-deck effort over the coming years,** and we look forward to joining hands with major stakeholders in and outside of government—including Commonwealth and local government agencies, nonprofit leaders, and private industry partners—to meet this pivotal moment and ensure universal connectivity and its benefits for all.

# 1. Introduction for Volume I

The Massachusetts Broadband Institute is pleased to present our submission in response to the National Telecommunications and Information Administration (NTIA) BEAD Initial Proposal Volume I. As part of our submission, we have addressed and met the following four requirements, as outlined in the BEAD NOFO (Footnote: See BEAD NOFO at 31, Section IV.B.5.b):

- 1 **Existing Broadband Funding (Requirement 3):** Identified existing efforts funded by the federal government to deploy broadband and close the digital divide, including in Tribal Lands.
- 2 **Unserved and Underserved Locations (Requirement 5):** Identified each unserved and underserved locations within our jurisdiction, including Tribal Lands, using the latest National Broadband Map submission.
- 3 **Community Anchor Institutions ("CAIs") (Requirement 6):** Described how the statutory definition of the term "community anchor institution" was applied, identified all eligible CAIs in our jurisdiction and Tribal Lands, and determined the types of CAIs MBI intends to serve.
- 4 **Challenge Process (Requirement 7):** Outlines how MBI will conduct a challenge process.

MBI has chosen to adopt the BEAD Model Challenge Process and also intends to utilize the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

Upon posting a draft of Volumes I, a public comment period followed. A summary of the public comments and related updates made to the plan is included in this document.

## 1.1 Existing Broadband Funding (Requirement 3)

MBI has compiled the existing efforts funded by both the federal and state government within Massachusetts to deploy broadband and close the digital divide, including on Tribal Lands, as documented in the Five-Year Action Plan.

### 1.1.1 Existing Broadband Funding Attachment

As a required attachment, submit the file identifying sources of funding, a brief description of the broadband deployment and other broadband-related activities, the total funding, the funding amount expended, and the remaining funding amount available. Eligible Entities may copy directly from their Five-Year Action Plans.

MBI has provided a comprehensive list of the current broadband funding sources in the table below, and in the required attachment, "[BEAD Initial Proposal Volume I Existing Broadband Funding Sources Template.xlsx](#)". The table below and the attachment provide a brief description of the broadband deployment and other broadband-related activities, the total funding, the funding amount expended, and the remaining funding amount available. Note that the expended column includes both obligated and expended amounts through June 30, 2023. For programs that are not administered by MBI, the amounts listed as "Expended" are derived from publicly available reports.

Table 1: Existing broadband funding

Source	Purpose	Total	Expended*	Available
<a href="#"><u>U.S. Economic Development Administration ("EDA") (Federal)</u></a>	The purpose of this federal grant is to conduct a statewide broadband coverage and service quality gaps project.	\$1 million	\$1 million	\$0
<a href="#"><u>American Rescue Plan Act ("ARPA") Capital Projects Fund (Federal)</u></a>	1) The Gap Networks Grant Program focuses on "connecting the unconnected" and households that do not have access to wireline internet service offering at least 100 Mbps download speed/20 Mbps upload speeds, prioritizing the lowest reported speeds.	\$152.8 million	\$0.5 million	\$152.3 million
	2) The Residential Retrofit Program will focus on identification and remediation of issues negatively impacting the quality of residential internet service for eligible residents	\$22.5 million	\$0	\$22.5 million
<a href="#"><u>Broadband Equity, Access, and Deployment Program ("BEAD") (Federal)</u></a>	Build networks that connect unserved and underserved locations, provide high speed internet to community anchor institutions, and help MA achieve digital equity	\$147.4 million	\$5 million	\$142.4 million
<a href="#"><u>Broadband Innovation Fund (State)</u></a>	1) The Digital Equity Partnerships Program is focused on the implementation of digital equity projects and to address statewide digital equity gaps. 2) The Municipal Digital Equity Planning Program enables municipalities, or other local bodies of government, to engage in planning activities related to digital equity and bridging the digital divide.	\$75.0 million	\$4.1 million	\$70.9 million
<a href="#"><u>NTIA Tribal Broadband Connectivity Program (Federal)</u></a>	Provide grants to support broadband deployment and adoption in tribal communities.	\$9.1 million	N/A**	N/A**



Source	Purpose	Total	Expended*	Available
<a href="#"><u>FCC Rural Digital Opportunity Fund ("RDOF")</u></a> <b>(Federal)</b>	RDOF supports broadband networks in rural communities across the country.  RDOF Phase I began in 2020 and targeted over six million homes and businesses in census blocks that are entirely unserved by voice and broadband with speeds of at least 25/3 Mbps. Phase II will cover locations in census blocks that are partially served, as well as locations not funded in Phase I.	\$3.4 million	\$0.3 million	\$3.1 million
<a href="#"><u>FCC Connect America Fund – Phase II Auction (CAF II)</u></a> <b>(Federal)</b>	The federal universal service high-cost program (also known as the Connect America Fund) is designed to ensure that consumers in rural, insular, and high-cost areas have access to modern communications networks capable of providing voice and broadband service, both fixed and mobile, at rates that are reasonably comparable to those in urban areas.  The program fulfills this universal service goal by allowing eligible carriers who serve these areas to recover some of their costs from the federal Universal Service Fund.	\$11.1 million	\$3.7 million	\$7.4 million
<a href="#"><u>Connecting Minority Communities Pilot Program</u></a> <b>(Federal)</b>	The Connecting Minority Communities Pilot Program supports Historically Black Colleges and Universities (HBCUs), Tribal Colleges and Universities (TCUs), and Minority-Serving Institutions (MSIs). Its goal is to help these organizations buy Internet service and equipment. It also provides funding to hire and train information technology personnel.	\$2.9 million	N/A**	N/A**
<a href="#"><u>Alternative Connect America Cost Model (ACAM)</u></a> <b>(Federal)</b>	The Alternative Connect America Cost Model was created in 2016 via the Rate-of-Return Reform Order. It offers funding to carriers who choose to adopt a new cost model for calculating High-Cost support and meet specific broadband build-out obligations. Since 2017, Massachusetts ISPs have filed claims totaling \$739.3k.	\$137.9 million	\$0.7 million	\$137.2 million

\*includes obligated and expended amounts through June 30, 2023. For programs that are not administered by MBI, the amounts listed as “Expended” are derived from publicly available reports.

\*\*N/A Indicates that MBI is neither the recipient nor the administrator of federal funds and has been unable to gather information from publicly available sources. MBI is not privy to information regarding the expenditure of these funds.

## 1.2 Unserved and Underserved Locations (Requirement 5)

To identify all the unserved and underserved locations in the Commonwealth, MBI is submitting two CSV files which contain the location IDs of these locations. This includes all unserved and underserved locations in applicable Tribal Lands. These files can be accessed using the attachments named below:

### 1.2.1 Unserved Locations Attachment

As a required attachment, submit one CSV file with the location IDs of each unserved location including unserved locations in applicable Tribal Lands.

Unserved Locations: [MA Unserved Locations](#)

### 1.2.2 Underserved Locations Attachment

As a required attachment, submit one CSV file with the location IDs of each underserved location including underserved locations in applicable Tribal Lands.

Underserved Locations: [MA Underserved Locations](#)

### 1.2.3 Date Selection

Identify the publication date of the National Broadband Map that was used to identify the unserved and underserved locations.

The unserved and underserved location data were identified from v2 of the BSL Fabric released on December 31, 2022, and Broadband Data Collection (BDC) filings, updated on January 9, 2024. While current BSLs and status are provided as part of this version, MBI encourages the use of the challenge process to provide feedback on the status of locations as served, underserved, or unserved.

## 1.3 Community Anchor Institutions (CAIs) (Requirement 6)

### 1.3.1 CAI Definition and Sources

Describe how the statutory definition of “community anchor institution” (e.g., schools, libraries, health clinics) was applied, how eligible CAIs were identified, and how network connectivity needs were assessed, including the types of CAIs that the Eligible Entity intends to serve.

Based on the statutory definition of “community anchor institution” as defined in 47 USC 1702 (a)(2)(E), MBI has applied the definition of “community anchor institution” to mean a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization (including any public housing agency, HUD-assisted housing organization, or Tribal housing organization), or community support organization that facilitates greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.

In addition to the definition above, MBI defines seniors centers, community centers, veterans centers, job training centers, and homeless shelters located in all locations, including Tribal Lands, as community anchor institutions. These locations tend to serve as hubs that provide digital skills training, online education, or technical support for vulnerable populations in their communities and often have specialized technology needs and require affordable, high-speed, reliable broadband connections to provide their services effectively.

For example, seniors centers play an important role in promoting digital inclusion among elderly individuals by offering a comfortable space for them to access the internet and learn digital skills. These centers usually have training programs, workshops, and support services aimed at teaching seniors how to use digital devices, educating them on cybersecurity, and enhancing their overall digital proficiency. High speed internet at seniors centers will also help this population group access telehealth services.

Community centers can help vulnerable groups access broadband services in several ways. They often provide public access to computers and the internet, which can benefit those who do not have these resources at home. Apart from this, community centers also hold digital literacy workshops and provide assistance with online job searches, provide access to telehealth services, and accessing government services, providing much-needed support to vulnerable populations.

Veterans centers are a critical resource hub for individuals and their families who have served our country and may be disabled, low-income, experiencing housing insecurity, or simply seeking resources. Veterans centers provide support in obtaining benefits related to housing, education, and healthcare, such as counseling services and referrals to mental and physical health services. These benefits often require online applications to be submitted. Moreover, many veteran centers provide telehealth services to its veterans, a service that requires access to reliable and high-speed internet.

Job training centers are essential in connecting workers and employers. Many job centers in Massachusetts provide free training and resources to the public—resources that are critical to underrepresented and vulnerable populations. An essential component of these centers are the resources it provides for individuals to effectively conduct a job search which includes computers, software, and access to internet. Many job listings are posted online, and job interviews are often conducted virtually, creating significant barriers for populations who do not have access or reliable access to internet.

Homeless shelters can help this at-risk population access broadband services by providing access to computers and the internet for job and housing searches, and to access other social services. Additionally, they can offer digital literacy training to help unhoused individuals improve their online skills and connect with resources that can lead to finding stable housing, employment, or accessing telehealth services.

Based on the statutory definition above, the following criteria were used to determine the inclusion or exclusion of community support organizations not specifically listed in 47 USC 1702(a)(2)(E):

- 1 Whether the community support organization facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.
- 2 Whether the community support organization conducts a substantial portion of its activities to support digital inclusion that serves vulnerable populations. Digital inclusion activities help ensure that all individuals and communities, including the most disadvantaged, have access to affordable, robust broadband internet service, internet-enabled devices that meet the needs of the user; digital literacy training; quality technical support; and applications and online content designed to enable and encourage self-sufficiency, participation and collaboration. (National Digital Inclusion Alliance, “Definitions”).
- 3 Whether the community support organization requires at least one gigabyte symmetrical speed service to carry out its services of facilitating broadband use.
- 4 Whether the community support organization is willing to subscribe to at least one gigabyte symmetrical speed service.

MBI reserves the right to designate an organization as a CAI based on the extent and magnitude of MBI's eventual investments in CAI connectivity as well as MBI's unified BEAD and Digital Equity Act strategy goals and objectives in relation to vulnerable population. The listing of specific categories of CAIs, including the statutorily defined categories of CAIs, as well as the attachments listing specific CAI locations, does not commit MBI to make infrastructure investments in those CAIs.

MBI used the MassGIS (Bureau of Geographic Information) site to both identify CAIs and gather their location information. Additional research was performed to gather CAI location information from other state agencies and websites for health clinics, public safety entities, higher education facilities, and others. MBI took special interest in mapping the identified CAIs on tribal lands to ensure tribal CAIs were included.

The following definitions and sources were used to identify the types of community anchor institutions:

Table 2: Definitions and sources used to identify the types of community anchor institutions

Source	Definition
<b>Schools</b>	<p>Schools appearing in this data set are those attended by students in pre-kindergarten through high school, based on the Massachusetts Department of Elementary and Secondary Education (DESE) school profiles database. This includes public elementary, public secondary, public vocational/technical/ agricultural regional, private, charter, and special education schools.</p> <p>Data was acquired from MassGIS (Bureau of Geographic Information).</p>
<b>Libraries</b>	<p>This dataset contains points which represent locations of all public and some special libraries currently registered with the Massachusetts Board of Library Commissioners (MBLC).</p> <p>Data was acquired from MassGIS (Bureau of Geographic Information).</p>
<b>Health clinic, health center, hospital, or other medical providers</b>	<p>Data for hospitals, community health centers, and nursing facilities was acquired from MassGIS (Bureau of Geographic Information). Data for community behavioral health centers and clubhouses, categorized under community health center was gathered from Mass.gov and Massachusetts Clubhouse Coalition. Data for clinics was acquired from Massachusetts eHealth Institute (MeHi's) tracking of ambulatory medical practices for the Executive Office of Health and Human Services (EOHHS). Clinics included small to large ambulatory practices, those from 1-9 Medical Doctors (MDs), Doctor of Osteopathic Medicine (Dos), Nurse Practitioners (NPs), and Physicians Assistants (Pas) to at least 20 MDs, Dos, NPs, and Pas.</p> <p>Acute and Non-Acute care hospitals are those licensed under <a href="#">Massachusetts General Law Chapter 111, Section 51</a> and defined using the Massachusetts Department of Public Health (DPH) and Department of Mental Health (DMH) license criteria as well as a listing on the state's Bureau of Hospitals website.</p> <p><i>Note: Community behavioral health centers and club houses were considered as CAIs for the following reasons. Community behavioral health centers provide mental health and substance abuse services and treatment through three service offerings: mobile crisis intervention, community crisis stabilization, and routine outpatient services. Routine outpatient services are offered in-person and in a telehealth setting, requiring access to reliable and high-speed internet. A key function of successful outpatient services includes obtaining all the necessary</i></p>

Source	Definition
	<i>supportive services, such as housing and food assistance or care coordination, resources that typically rely on online applications. Similarly, clubhouses assist adults with major mental illnesses live full, productive, and meaningful lives in the community at varied levels of independence by providing resources such as employment opportunities, technology, and housing. Clubhouses serve vulnerable populations and having access to reliable, high-speed internet could expand the capability to provide technical assistance, coordinate services, and provide virtual resources.</i>
<b>Public safety entity</b>	<p>Fire houses were sourced through the Department of Fire Services and acquired via MassGIS (Bureau of Geographic Information).</p> <p>Police Stations were provided by the Massachusetts Emergency Management Agency (MEMA) GIS Program in cooperation with the Regional Planning Agencies and participating communities. Data was acquired via MassGIS (Bureau of Geographic Information).</p> <p>Prison/Correctional Facilities were acquired via MassGIS (Bureau of Geographic Information) who verified locations from the websites of the Massachusetts Department of Correction (MADOC), Massachusetts Sheriffs' Association (MSA), Federal Bureau of Prisons (BOP) and individual facilities, and verbal communication with many of the facilities. This data was acquired from MassGIS (Bureau of Geographic Information).</p>
<b>Institutions of higher education</b>	<p>Institutions of higher education include private and public universities and community colleges. Additionally, MBI has chosen to include minority serving institutions, trade schools, and adult education programs.</p> <p>This data is primarily based on all Massachusetts colleges listed in the National Center for Education Statistics with additional schools added from lists of professional occupational/vocational institutions compiled by the Massachusetts Office of Consumer Affairs and Business Regulation Division of Professional Licensure. Data was acquired from NASA and MassGIS.</p>
<b>Public housing organizations</b>	Public housing organizations were identified from the National Housing Preservation Database (NHPD) and include State-assisted Housing Organization and HUD-assisted Housing Organization.
<b>Community support organizations</b>	<p>As explained above, community support organizations include seniors centers, community centers, veterans centers, job training centers, and homeless shelters, as they facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals.</p> <p>Data for senior centers was acquired from the Massachusetts Office of Elder Affairs.</p> <p>Data for community centers was available only for Boston and acquired from Boston's Open Data Portal.</p> <p>Data for veterans centers was sourced from Veterans Affairs.</p> <p>Job training centers data was sourced from MassHire.</p>

Source	Definition
	Homeless shelters data was sourced from the Mass Dept of Health & Social Services.

Organizations that are not separately listed above may submit a Code C challenge justifying that their location should be classified as a CAI based on the criteria listed above. MBI will evaluate the challenges and will make a final determination on the eligibility of each location.

### Determining Connectivity of CAIs

MBI conducted a detailed textual and spatial analysis to determine high-speed fiber availability to CAIs. The FCC National Broadband Map (Fabric) data was matched to the CAI address list using a variety of spatio-textual processes to obtain Location IDs. This then allowed for joining of the CAI data to the BDC data to obtain service level information. Additionally, fiber availability was determined using field-collected fiber facility location data and third-party fiber location data. CAIs that are within 500 feet of a fiber facility or a fiber to the premises network were considered to have 1 gigabit symmetrical fiber service available to that location. This analysis allowed MBI to update the CAI list with the broadband availability information.

### 1.3.2 List of CAIs in Massachusetts

As a required attachment, submit the CSV file (named "cai.csv") that lists eligible community anchor institutions that require qualifying broadband service and do not currently have access to such service, to the best of the Eligible Entity's knowledge.

Based on the MBI definition of CAI, a .csv file has been provided which lists locations using the template provided by NTIA. The following attachment lists all the CAI identified by MBI: [MA CAI List.csv](#).

## 1.4 Challenge Process (Requirement 7)

### 1.4.1 NTIA BEAD Model Challenge Process Adoption

Select if the Eligible Entity plans to adopt the NTIA BEAD Model Challenge Process for Requirement 7

MBI intends to adopt the NTIA BEAD Model Challenge Process:

- ☒ Yes  
☐ No

### 1.4.2 Modifications to Reflect Data Not Present in the National Broadband Map

If applicable, describe any modifications to classification of broadband serviceable locations in the Eligible Entity's jurisdiction as "served," "underserved," or "unserved," and provide justification for each modification.

MBI will include the following modifications to reflect data not present in the National Broadband Map:

#### Pre-Challenge Modifications

**Modification 1: DSL Modification:** MBI will treat locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is "served") delivered via DSL as "underserved." This modification will better reflect the locations eligible for BEAD funding because it will facilitate the phase-out of legacy copper facilities and ensure the delivery of "future-proof" broadband service. This designation cannot be challenged or rebutted by the provider.

**Modification 2: Cellular Fixed Wireless:** MBI recognizes that the BEAD NOFO classifies licensed fixed wireless as a qualifying reliable broadband technology. At the time of preparation of this Initial Proposal, analysis suggests

that over 3,800 locations in Massachusetts may qualify as “served” from cellular fixed wireless service only. This type of coverage is prone to network capacity constraints that may result in some incoming service requests being denied because the network in that area is at full capacity. While this will likely improve over time as ISPs continue to invest in their networks, the variable nature of service availability has resulted in locations that are designated as served on the FCC map being unable to subscribe to broadband service based on the timing of the request. It is MBI’s belief that broadband service that is prone to network capacity constraints, does not satisfy the BEAD program’s universal coverage standard.

The FCC National Broadband Map is compiled on the basis of provider-reported data, where providers are asked to report their coverage at a specific moment in time based on “maximum advertised speed.” This modification does not suggest that provider reporting to the FCC is inaccurate. But accuracy is relative to the question asked. Fixed wireless carriers regularly advertise internet service “up to” specified speeds but may not reflect speeds consistently available to all customers irrespective of network capacity. It is therefore possible, and MBI believes, that an ISP using fixed wireless technology will advertise service at 100/20 or faster service, however, in a given area some incoming service requests will be denied because the network lacks capacity.

More specifically, MBI has found that a provider website may indicate that service is available at a specific address while another search on a different day indicates that the service is not available to a new customer at the same address. Some examples of the impact of this variability in service availability, include:

- Service is available to residents of an apartment building until such time as maximum network capacity is reached, thereby prohibiting other residents in the building from subscribing to the service.
- A homeowner closes their account when they sell their house and the new homeowner is unable to subscribe to the service because other houses in the area have signed up in the interim.

Rather than leave households vulnerable to intermittent availability of service, MBI seeks to identify capacity-constrained locations and make these eligible for BEAD funding. Those identified locations currently showing as “served” by cellular fixed wireless technology only on the latest version of FCC National Broadband Map will be reclassified as “underserved”. MBI may consult with cellular fixed wireless providers as part of this pre-challenge process and seek input and information prior to making any reclassification determinations. To implement this modification as noted above, MBI may contact cellular wireless ISPs serving locations that have fixed wireless as the only identified broadband option, and ask them to confirm, not only that they advertise 100/20 service, but that they have sufficient capacity to meet all incoming service requests for all BSLs and CAIs in the service area for the foreseeable future.

Any locations reclassified as underserved by MBI that were subject to mutual agreement with the provider will not be open to a subsequent rebuttal by the provider during the challenge process. A provider will, however, have the opportunity to rebut during the challenge process any reclassification of a location by MBI that was made (1) without consulting the provider during the pre-challenge period; or (2) without reaching mutual agreement with the provider. To successfully rebut this modification, the cellular fixed wireless provider must demonstrate that it: (a) is providing 100/20 Mbps or better service at the relevant locations (e.g., by using the rebuttal approach for the speed test area challenge); and (b) has sufficient network capacity to simultaneously serve (i.e., as concurrently active subscribers) at least 80% of locations in the claimed coverage area, including both those reported as served only by cellular fixed wireless and those reported as served by all other technologies. This will account for transient demand and those using cellular broadband as a secondary source of connectivity. As one option for making such a showing, a provider may describe how many fixed locations could be served from each cell tower and the amount of per-user averaged bandwidth to serve 80% of those locations. A capacity of 5 Mbps for each location is considered sufficient.

MBI will inform NTIA of any changes to the classifications and update the number of unserved locations prior to launching the Challenge Process.



### 1.4.3 BEAD Eligible Entity Planning Toolkit

Select if the Eligible Entity plans to use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

MBI intends to use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

☒ Yes

☐ No

### 1.4.4 Deduplication of Funding

Describe the process that will be used to identify and remove locations subject to enforceable commitments.

MBI will enumerate locations subject to enforceable commitments by using the BEAD Eligible Entity Planning Toolkit, and consult at least the following data sets:

- 1 The Broadband Funding Map published by the FCC pursuant to IIJA § 60105 (Footnote: The broadband funding map published by FCC pursuant to IIJA § 60105 is referred to as the “FCC Broadband Funding Map.”)
- 2 Data sets from state broadband deployment programs that rely on funds from the Capital Projects Fund and the State and Local Fiscal Recovery Funds administered by the U.S. Treasury.
- 3 State and local data collections of existing enforceable commitments, including commitments that have been fulfilled but are not accurately designated by the FCC.
- 4 Locations funded through MBI’s Gap Networks Program. Any locations that are awarded under the Gap Networks Program but go under contract after MBI publishes the list of eligible locations will not be eligible for BEAD funding and challenges to any of these locations will not be evaluated by MBI.

MBI will make a best effort to create a list of BSLs subject to enforceable commitments based on state/territory or local grants or loans. If necessary, MBI will translate polygons or other geographic designations (e.g., a county or utility district) describing the area to a list of Fabric locations. MBI will submit this list, in the format specified by the FCC Broadband Funding Map, to NTIA (Footnote: Guidance on the required format for the locations funded by state or territorial and local programs will be specified at a later date, in coordination with FCC.)

MBI will review its repository of existing state and local broadband grant programs to validate the upload and download speeds of existing binding agreements to deploy broadband infrastructure. In situations in which the state or local program did not specify broadband speeds, or when there was reason to believe a provider deployed higher broadband speeds than required, MBI will reach out to the provider to verify the deployment speeds of the binding commitment. MBI will document this process by requiring providers to sign a binding agreement certifying the actual broadband deployment speeds deployed.

MBI drew on these provider agreements, along with its existing database on state and local broadband funding programs’ binding agreements, to determine the set of state and local enforceable commitments.

### 1.4.5 List the federal, state, or territorial, and local programs that will be analyzed to remove enforceable commitments from the set of locations eligible for BEAD funding

As a required attachment, submit the list of the federal, state/territorial, and local programs that will be analyzed to remove enforceable commitments from the set of locations eligible for BEAD funding.

MBI has listed state or territorial and local programs that will be used to identify existing enforceable commitments in the following attachment: [BEAD Initial Proposal Volume I Deduplication of Funding Programs.xlsx](#).



## 1.4.6 Challenge Process Design

Describe the plan to conduct an evidence-based, fair, transparent, and expeditious challenge process.

Based on the NTIA BEAD Challenge Process Policy Notice, as well as MBI's understanding of the goals of the BEAD program, the proposal represents a transparent, fair, expeditious and evidence-based challenge process.

### Permissible Challenges

MBI will only allow challenges on the following grounds:

- The identification of eligible community anchor institutions, as defined by MBI,
- Community anchor institution BEAD eligibility determinations,
- BEAD eligibility determinations for existing broadband serviceable locations (BSLs),
- Enforceable commitments, or
- Planned service.
- Eligibility status refers to the locations service status and if it is eligible to receive BEAD funding i.e. if the location is unserved, underserved, or in the case of a CAI if the location currently has access to a gigabit symmetrical service.

### Permissible Challengers

During the BEAD Challenge Process, MBI will only allow challenges from nonprofit organizations, units of local and tribal governments, and internet service providers.

### Challenge Process Overview

The challenge process conducted by MBI will include four phases, spanning over 120 calendar days (Footnote: The NTIA BEAD Challenge Process Policy Notice allows up to 120 calendar days. Broadband offices may modify the model challenge process to span up to 120 days, as long as the timeframes for each phase meet the requirements outlined in the NTIA BEAD Challenge Process Policy Notice):

**Publication of Eligible Locations:** Prior to beginning the Challenge Phase, MBI will publish the set of locations eligible for BEAD funding, which consists of the locations resulting from the activities outlined in Sections 5 and 6 of the NTIA BEAD Challenge Process Policy Notice (e.g., administering the deduplication of funding process). MBI will also publish locations considered served, as they may be challenged. [\[Estimated to be 06/15/2024\]](#).

**Challenge Phase:** During the Challenge Phase, the challenger will submit the challenge through the MBI challenge portal. This challenge will be visible to the service provider whose service availability and performance is being contested. The portal will notify the provider of the challenge through an automated email, which will include related information about timing for the provider's response. After this stage, the location will enter the "challenged" state.

- a. **Minimum Level of Evidence Sufficient to Establish a Challenge:** The challenge portal will verify that the address provided can be found in the Fabric and is a BSL. The challenge portal will confirm that the challenged service is listed in the National Broadband Map and meets the definition of reliable broadband service. The challenge will confirm that the email address is reachable by sending a confirmation message to the listed contact email. For scanned images, the challenge portal will determine whether the quality is sufficient to enable optical character recognition (OCR). For availability challenges, MBI will manually verify that the evidence submitted falls within the categories stated in the NTIA BEAD Challenge Process Policy Notice and the document is unredacted and dated.
- b. **Timeline:** Challengers will have 30 calendar days to submit a challenge from the time the initial list of unserved and underserved locations, community anchor institutions, and existing enforceable commitments are posted. [\[Estimated to be 06/15/2024 to 07/15/2024\]](#)

**Rebuttal Phase:** For challenges related to location eligibility, only the challenged service provider may rebut the reclassification of a location or area with evidence. If a provider claims gigabit service availability for a CAI or a unit of local government disputes the CAI status of a location, the CAI may rebut. All types of challengers may rebut planned service (P) and enforceable commitment (E) challenges. If a challenge that meets the minimum level of evidence is not rebutted, the challenge is sustained. A provider may also agree with the challenge and thus transition the location to the “sustained” state. Providers must regularly check the challenge portal notification method (e.g., email) for notifications of submitted challenges.

- a. **Timeline:** Providers will have 30 calendar days from the close of the challenge phase to provide rebuttal information to MBI. The rebuttal period begins once the challenge phase is completed, with all challenges being provided to providers at the same time at the opening of the rebuttal period . [\[Estimated to be 07/15/2024 to 08/14/2024\]](#)

**Final Determination Phase:** During the Final Determination phase, MBI will make the final determination of the classification of the location, either declaring the challenge “sustained” or “rejected.”

- a. **Timeline:** Following intake of challenge rebuttals, MBI will make a final challenge determination within 60 calendar days of the challenge rebuttal period close. Reviews will occur once all challenges and rebuttals are submitted to ensure that Area and MDU challenges are accurately evaluated. [\[Estimated to be 08/14/2024 to 10/13/2024\]](#)

### Evidence & Review Approach

To ensure that each challenge is reviewed and adjudicated based on fairness for all participants and relevant stakeholders, MBI will review all applicable challenge and rebuttal information in detail without bias, before deciding to sustain or reject a challenge. MBI will document the standards of review to be applied in a Standard Operating Procedure and will require reviewers to document their justification for each determination. MBI plans to ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted. MBI will also require that all reviewers submit affidavits to ensure that there is no conflict of interest in making challenge determinations. Unless otherwise noted, “days” refers to calendar days.

Table 3: Types of permissible challenges

Code	Challenge Type	Description	Specific Examples	Permissible Rebuttals
A	Availability	The broadband service identified is not offered at the location, including a unit of a multiple dwelling unit (MDU).	<ul style="list-style-type: none"> <li>• Screenshot of provider webpage.</li> <li>• A service request was refused within the last 180 days (e.g., an email or letter from provider).</li> <li>• Lack of suitable infrastructure (e.g., no fiber on pole).</li> <li>• A letter or email dated within the last 365 days that a provider failed to schedule a service installation or offer an installation date within</li> </ul>	<ul style="list-style-type: none"> <li>• Provider shows that the location subscribes or has subscribed within the last 12 months, e.g., with a copy of a customer bill.</li> <li>• If the evidence was a screenshot and believed to be in error, a screenshot that shows service availability.</li> <li>• The provider submits evidence that service is now available as a standard installation,</li> </ul>

Code	Challenge Type	Description	Specific Examples	Permissible Rebuttals
			<p>10 business days of a request (Footnote 1).</p> <ul style="list-style-type: none"> <li>A letter or email dated within the last 365 days indicating that a provider requested more than the standard installation fee to connect this location or that a Provider quoted an amount in excess of the provider's standard installation charge in order to connect service at the location.</li> </ul>	e.g., via a copy of an offer sent to the location.
S	Speed	The actual speed of the service tier falls below the unserved or underserved thresholds (Footnote 2).	Speed test by subscriber, showing the insufficient speed and meeting the requirements for speed tests.	Provider has countervailing speed test evidence showing sufficient speed, e.g., from their own network management system (Footnote 3).
L	Latency	The round-trip latency of the broadband service exceeds 100 ms (Footnote 4).	Speed test by subscriber, showing the excessive latency.	Provider has countervailing speed test evidence showing latency at or below 100 ms, e.g., from their own network management system or the CAF performance measurements (Footnote 5).
D	Data cap	The only service plans marketed to consumers impose an unreasonable capacity allowance ("data cap") on the consumer (Footnote 6).	<p>Screenshot of provider webpage.</p> <p>Service description provided to consumer.</p>	Provider has terms of service showing that it does not impose an unreasonable data cap or offers another plan at the location without an unreasonable cap.
T	Technology	The technology indicated for this location is incorrect.	Manufacturer and model number of residential gateway (CPE) that demonstrates the service is delivered via a specific technology.	Provider has countervailing evidence from their network management system showing an appropriate residential gateway that

Code	Challenge Type	Description	Specific Examples	Permissible Rebuttals
				matches the provided service.
B	Business service only	The location is residential, but the service offered is marketed or available only to businesses.	Screenshot of provider webpage.	Provider documentation that the service listed in the BDC is available at the location and is marketed to consumers.
E	Enforceable Commitment	The challenger has knowledge that broadband will be deployed at this location by the date established in the deployment obligation.	Enforceable commitment by service provider (e.g., authorization letter). In the case of Tribal Lands, the challenger must submit the requisite legally binding agreement between the relevant Tribal Government and the service provider for the location(s) at issue (see Section 6.2 above).	Documentation that the provider has defaulted on the commitment or is otherwise unable to meet the commitment (e.g., is no longer a going concern).
P	Planned service	The challenger has knowledge that broadband will be deployed at this location by December 31, 2024, without an enforceable commitment or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment. (Footnote 7)	<ul style="list-style-type: none"> <li>Construction contracts or similar evidence of on-going deployment, along with evidence that all necessary permits have been applied for or obtained.</li> <li>Contracts or a similar binding agreement between the Eligible Entity and the provider committing that planned service will meet the BEAD definition and requirements of reliable and qualifying broadband even if not required by its funding source (<i>i.e.</i>, a separate federal grant program), including the expected date deployment will be completed, which must be on or before December 31, 2024.</li> </ul>	Documentation showing that the provider is no longer able to meet the commitment (e.g., is no longer a going concern) or that the planned deployment does not meet the required technology or performance requirements.

Code	Challenge Type	Description	Specific Examples	Permissible Rebuttals
N	Not part of enforceable commitment.	This location is in an area that is subject to an enforceable commitment to less than 100% of locations and the location is not covered by that commitment. (See BEAD NOFO at 36, n. 52.)	Declaration by service provider subject to the enforceable commitment.	
C	Location is a CAI	The location should be classified as a CAI.	Evidence that the location falls within the definitions of CAIs set by the Eligible Entity (Footnote 8).	Evidence that the location does not fall within the definitions of CAIs set by the Eligible Entity or is no longer in operation.
R	Location is not a CAI	The location is currently labeled as a CAI but is a residence, a non-CAI business, or is no longer in operation.	Evidence that the location does not fall within the definitions of CAIs set by the Eligible Entity or is no longer in operation.	Evidence that the location falls within the definitions of CAIs set by the Eligible Entity or is still operational.
F	Fixed wireless	Pre-challenge modification for fixed wireless technology.	No location-specific evidence required.	<p>To successfully rebut this modification, the cellular fixed wireless provider must demonstrate that it:</p> <ol style="list-style-type: none"> <li>1 is providing 100/20 Mbps or better service at the relevant locations (using the rebuttal approach for the speed test area challenge); and</li> <li>2 has sufficient network capacity to simultaneously serve (i.e., as concurrently active subscribers) at least 80% of locations in the claimed coverage area, including both those reported as served only by cellular fixed wireless and those</li> </ol>

Code	Challenge Type	Description	Specific Examples	Permissible Rebuttals
				reported as served by all other technologies. This will account for transient demand and those using cellular broadband as a secondary source of connectivity. As one option for making such a showing, a provider may describe how many fixed locations could be served from each cell tower and the amount of per-user averaged bandwidth to serve 80% of those locations. A capacity of 5 Mbps for each location is considered sufficient."

Footnote 1: A standard broadband installation is defined in the Broadband DATA Act (47 U.S.C. § 641(14)) as "[t]he initiation by a provider of fixed broadband internet access service [within 10 business days of a request] in an area in which the provider has not previously offered that service, with no charges or delays attributable to the extension of the network of the provider."

Footnote 2: The challenge portal has to gather information on the subscription tier of the household submitting the challenge. Only locations with a subscribed-to service of 100/20 Mbps or above can challenge locations as underserved, while only locations with a service of 25/3 Mbps or above can challenge locations as unserved. Speed challenges that do not change the status of a location do not need to be considered. For example, a challenge that shows that a location only receives 250 Mbps download speed even though the household has subscribed to gigabit service can be disregarded since it will not change the status of the location to unserved or underserved.

Footnote 3: As described in the NOFO, a provider's countervailing speed test should show that 80 percent of a provider's download and upload measurements are at or above 80 percent of the required speed. See Performance Measures Order, 33 FCC Rcd at 6528, para. 51. See BEAD NOFO at 65, n. 80, Section IV.C.2.a.

Footnote 4: Performance Measures Order, including provisions for providers in non-contiguous areas (§21).

Footnote 5: Ibid.

Footnote 6: An unreasonable capacity allowance is defined as a data cap that falls below the monthly capacity allowance of 600 GB listed in the FCC 2023 Urban Rate Survey (FCC Public Notice DA 22-1338, December 16, 2022). Alternative plans without unreasonable data caps cannot be business-oriented plans not commonly sold to residential locations. A successful challenge may not change the status of the location to unserved or underserved if the same provider offers a service plan without an unreasonable capacity allowance or if another provider offers reliable broadband service at that location.

Footnote 7: The scheduled service dates have been revised from June 30, 2024, to December 31, 2024, to account for the updated Challenge Process timeline which is set to begin in June 2024 to capture seasonality in broadband usage that occurs in certain regions of the state. During the period between Memorial Day and Labor Day, certain regions of the state, including

Cape Cod, Martha's Vineyard and Nantucket, experience a significant increase in the population due to tourism. These populations spikes place greater demands on broadband infrastructure, which could impact internet access for permanent residents as well as businesses. Due to the timing of MBI's planned challenge process commencing in June 2024, MBI has extended the "Planned Service" deadline to be approximately six months after commencing the challenge process, as the NTIA template originally contemplated.

Footnote 8: For example, eligibility for FCC e-Rate or Rural Health Care program funding or registration with an appropriate regulatory agency may constitute such evidence, but the Eligible Entity may rely on other reliable evidence that is verifiable by a third party.

### **Area and MDU Challenge**

MBI will administer area and MDU challenges for challenge types A, S, L, D, and T. An area challenge reverses the burden of proof for availability, speed, latency, data caps and technology if a defined number of challenges for a particular category, across all challengers, have been submitted for a provider. Thus, the provider receiving an area challenge or MDU must demonstrate that they are indeed meeting the availability, speed, latency, data cap and technology requirement, respectively, for all (served) locations within the area or all units within an MDU. The provider can use any of the permissible rebuttals listed above.

An area challenge is triggered if six (6) or more broadband serviceable locations using a particular technology and a single provider within a census block group are challenged.

An MDU challenge requires challenges for one unit for MDUs having fewer than 15 units, for two units for MDUs of between 16 and 24 units, and at least three units for larger MDUs. Here, the MDU is defined as one broadband serviceable location listed in the Fabric (Footnote: For example, a complex of apartment buildings may be represented by multiple BSLs in the Fabric). An MDU challenge counts towards an area challenge (i.e., six successful MDU challenges in a census block group may trigger an area challenge).

Each type of challenge and each technology and provider is considered separately, i.e., an availability challenge (A) does not count towards reaching the area threshold for a speed (S) challenge. If a provider offers multiple technologies, such as DSL and fiber, each is treated separately since they are likely to have different availability and performance.

Area challenges for availability need to be rebutted with evidence that service is available for all BSLs within the census block group, e.g., by network diagrams that show fiber or Hybrid fiber-coaxial (HFC) infrastructure or customer subscribers. For fixed wireless service, the challenge system will offer representative random, sample of the area in contention, but no fewer than 10, where the provider has to demonstrate service availability and speed (e.g., with a mobile test unit). For MDU challenges, the rebuttal must show that the inside wiring is reaching all units and is of sufficient quality to support the claimed level of service.

### **Speed Test Requirements**

MBI will accept speed tests as evidence for substantiating challenges and rebuttals. Each speed test consists of three measurements, taken on different days. Speed tests cannot predate the beginning of the challenge period by more than 60 calendar days.

Speed tests can take the following forms:

- 1 A reading of the physical line speed provided by the residential gateway, (i.e., DSL modem, cable modem (for HFC),
- 2 Optic Network Terminal (for fiber to the home), or fixed wireless subscriber module.
- 3 A reading of the speed test available from within the residential gateway web interface.
- 4 A reading of the speed test found on the service provider's web page.
- 5 A speed test performed on a laptop or desktop computer within immediate proximity of the residential gateway, using Ookla, M-Lab, Cloudflare, Netflix, or speed test sites operated or sponsored by MBI (including commercial test aggregators).

Each speed test measurement must include:

- The time and date the speed test was conducted.
- The provider-assigned internet protocol (IP) address, either version 4 or version 6, identifying the residential gateway conducting the test.
- Each group of three speed tests must include:
  - The name and street address of the customer conducting the speed test.
  - A certification of the speed tier the customer subscribes to (e.g., a copy of the customer's last invoice).
  - An agreement, using an online form provided by the Eligible Entity, that grants access to these information elements to the Eligible Entity, any contractors supporting the challenge process, and the service provider.

The IP address and the subscriber's name and street address are considered personally identifiable information (PII) and thus are not disclosed to the public (e.g., as part of a challenge dashboard or open data portal).

Each location must conduct three speed tests on three different days; the days do not have to be adjacent. The median of the three tests (i.e., the second highest (or lowest) speed) is used to trigger a speed-based (S) challenge, for either upload or download. For example, if a location claims a broadband speed of 100 Mbps/25 Mbps and the three speed tests result in download speed measurements of 105, 102 and 98 Mbps, and three upload speed measurements of 18, 26 and 17 Mbps, the speed tests qualify the location for a challenge, since the measured upload speed marks the location as underserved.

Speed tests may be conducted by subscribers, but speed test challenges must be gathered and submitted by units of local government, nonprofit organizations, or an internet service provider.

Subscribers submitting a speed test must indicate the speed tier they are subscribing to. Since speed tests can only be used to change the status of locations from "served" to "underserved", only speed tests of subscribers that subscribe to tiers at 100/20 Mbps and above are considered. If the household subscribes to a speed tier of 100/20 Mbps or higher and the speed test yields a speed below 100/20 Mbps, this service offering will not count towards the location being considered served. However, even if a particular service offering is not meeting the speed threshold, the eligibility status of the location may not change. For example, if a location is served by 100 Mbps licensed fixed wireless and 500 Mbps fiber, conducting a speed test on the fixed wireless network that shows an effective speed of 70 Mbps does not change the status of the location from served to underserved.

A service provider may rebut an area speed test challenge by providing speed tests, in the manner described above, for at least 10% of the customers in the challenged area. The customers must be randomly selected. Providers must apply the 80/80 rule, i.e., 80% of these locations must experience a speed that equals or exceeds 80% of the speed threshold (Footnote: The 80/80 threshold is drawn from the requirements in the CAF-II and RDOF measurements. See BEAD NOFO at 65, n. 80, Section IV.C.2.a.). For example, 80% of these locations must have a download speed of at least 20 Mbps (that is, 80% of 25 Mbps) and an upload speed of at least 2.4 Mbps to meet the 25/3 Mbps threshold and must have a download speed of at least 80 Mbps and an upload speed of 16 Mbps to be meet the 100/20 Mbps speed tier. Only speed tests conducted by the provider between the hours of 7 pm and 11 pm local time will be considered as evidence for a challenge rebuttal.

MBI understand the challenges municipalities face in collecting speed test data and plans to provide technical assistance and additional guidance on the process.

### **Transparency Plan**

To ensure that the challenge process is transparent and open to public and stakeholder scrutiny, MBI will, upon approval from NTIA, publicly post an overview of the challenge process phases, challenge timelines, and instructions on how to submit and rebut a challenge. This documentation will be posted publicly for at least a week prior to opening the challenge submission window. MBI also plans to actively inform all units of local government of its challenge process and set up regular touchpoints to address any comments, questions, or concerns from local governments, nonprofit organizations, and Internet service providers ("ISPs"). Relevant



stakeholders can sign up on the MBI website, "<https://masstech.org/contact-masstech>", or challenge process updates and newsletters. They can engage with MBI by a designated email address ([broadband@masstech.org](mailto:broadband@masstech.org)). Providers will receive challenge notifications through email. All required documentation related to the challenge process will be made available on the MBI website here: [Massachusetts Broadband Institute | MBI \(masstech.org\)](https://www.mass.gov/info-details/massachusetts-broadband-institute-masstech). The specific sub-address for the challenge process is still in development.

MBI also plans to provide technical assistance to municipalities to support their submission of challenges.

Beyond actively engaging relevant stakeholders, MBI will also post all submitted challenges and rebuttals before final challenge determinations are made, including:

- the provider, nonprofit, or unit of local or tribal government that submitted the challenge,
- the census block group containing the challenged broadband serviceable location,
- the provider being challenged,
- the type of challenge (e.g., availability or speed), and
- a summary of the challenge, including whether a provider submitted a rebuttal.

MBI will not publicly post any personally identifiable information (PII) or proprietary information, including subscriber names, street addresses and customer IP addresses. To ensure all PII is protected, MBI will review the basis and summary of all challenges and rebuttals to ensure PII is removed prior to posting them on the website. Additionally, guidance will be provided to all challengers as to which information they submit may be posted publicly.

MBI will treat information submitted by an existing broadband service provider designated as proprietary and confidential consistent with applicable state law. If any of these responses do contain information or data that the submitter deems to be confidential commercial information that should be exempt from disclosure under state open records laws or is protected under applicable state privacy laws, that information should be identified as privileged or confidential. Otherwise, the responses will be made publicly available.

MBI will comply with all state and federal laws regarding the protection of PII including, but not limited to:

- Standards for the Protection of Personal Information of Residents of the Commonwealth: [201 CMR 17.00](#)
- Regulations to Safeguard Personal Information of Commonwealth Residents; Duty to Report Known Security Breach or Unauthorized Use of Personal Information and Breaches of Security Including Social Security Numbers: [MA Gen L ch 93h \(2022\)](#)
- Standards for disposal of records containing personal information: [MA Gen L ch 931 § 2 \(2016\)](#)

### 1.4.7 NTIA BEAD Model Challenge Process Answer

*As a required attachment only if the Eligible Entity is not using the NTIA BEAD Model Challenge Process, outline the proposed sources and requirements that will be considered acceptable evidence.*

*If the Eligible Entity is not using the NTIA BEAD Model Challenge Process, outline the proposed sources and requirements that will be considered acceptable evidence.*

**NTIA BEAD Model Challenge Process Answer:**

N/A

## 1.5 Volume 1 Public Comment

*Describe the public comment period and provide a high-level summary of the comments received during the Volume I public comment period and how they were addressed by the Eligible Entity. The response must demonstrate:*

- a. The public comment period was no less than 30 days; and
- b. Outreach and engagement activities were conducted to encourage feedback during the public comment period.

Under the Broadband Equity Access and Deployment (BEAD) program as outlined in Division F, Title I, Section 60102, Public Law 117-58, 135 Stat. 429 of the Infrastructure Investment and Jobs Act, MBI released the draft Initial Proposal for public comment on its website. Both Volumes I and II of the Initial Proposal were intentionally published at the same time alongside the Statewide Digital Equity Plan to gather comprehensive public feedback on MBI's plans to achieve universal broadband access and close the digital divide. MBI highlighted the public comment opportunity during its listening sessions and focus groups, and encouraged the public to participate in the process.

The public comment period spanned over 33 calendar days, from November 13 to December 15, 2023. MBI received feedback from 106 participants split between 56 individuals and 50 organizations on the BEAD Initial Proposal. The type of organizations included non-profits, local governments, and ISPs. The majority of comments revolved around the themes of Affordability and Competition. Affordability comments mainly highlighted challenges in ACP subscription processes and limited affordable service options. Meanwhile, competition-related comments emphasized the lack of competition in certain areas, the need for ISP accountability on price and service, and overall high pricing.

The following list summarizes the public comments received by main theme:

- Affordability
- Competition
- Access and accessibility
- Existing Conditions & Representation of Target Pops
- Challenge Process
- Digital Literacy
- Cost and Barrier Reduction
- Reliability
- Supply Chain Risk and Cybersecurity
- Other

MBI appreciates the effort of each commenter who reviewed the Initial Proposal and contributed a public comment. All feedback has been carefully considered in the finalization of this document, with revisions made where necessary. MBI remains dedicated to ensuring that the Commonwealth's BEAD program aligns with the collective goals of providing affordable, reliable high-speed internet to every home, business, individual, and community in the state, empowering residents to enhance their lives through technology.