Ohio Department of Development

BroadbandOhio

State of Ohio Initial Proposal, Volume I Broadband Equity, Access, and Deployment (BEAD) Program

October 2023

Contents

Introduction

BroadbandOhio has drafted the following document to meet the requirements for Volume I of the Broadband Equity, Access and Deployment (BEAD) Initial Proposal:

- Requirement 3 – Identification of existing broadband efforts
- Requirement 5 – Identification of existing unserved and underserved locations
- Requirement 6 – Identification and application of community anchor institutions
- Requirement 7 – Detailed challenge process plan, including Ohio's selection of the following optional modules:
  - DSL Modifications (to phase out older technology)
  - Speed Test Modifications (to better reflect actual broadband speeds)
  - Area and MDU Challenge (to reverse 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)
  - Speed Test Module (speed test data to be accepted as evidence for substantiating challenges and rebuttals, to better reflect actual broadband speeds)

Ohio has completed a 30-day public comment period for Volume I of the Initial Proposal. A high-level summary of the comments received during the Volume I public comment period and how they were addressed is provided in this document.

Ohio will incorporate any guidance received from the National Telecommunications and Information Association (NTIA) on this draft of Volume I of the BEAD Initial Proposal to ensure compliance with the BEAD requirements, as enabled by existing provisions.[1]

Volume II of the BEAD Initial Proposal will be released for public comment at a later date.

[1] Ohio House Bill 33 by the 135th General Assembly, Section 122.4017.

Existing Broadband Funding (Requirement 3)

In Ohio's Five-Year Action Plan, submitted on June 27, 2023, Ohio provided information pertaining to existing broadband funding, including:

- Sources of funding;
- A brief description of the broadband deployment and other broadband-related activities;
- The total funding of broadband activities;
- The funding amount expended; and
- The remaining funding amount available.

This information has been augmented with recent awards and appropriations and is provided in the attachment [BEAD Initial Proposal_Volume I_Existing Broadband Funding Sources Template.xlsx], as well as in Appendix A (Requirement 1.1.1).

Unserved and Underserved Locations (Requirement 5)

In the attached csv files (Requirement 1.2.1), Ohio has provided the location IDs for all unserved [unserved.csv] and underserved [underserved.csv] broadband serviceable locations in Ohio.

This information was determined through analysis of the FCC National Broadband Map data, which includes data as of Dec 31, 2022, that was last updated on August 16, 2023 (Requirement 1.2.2).

The definitions of unserved and underserved locations are taken from the BEAD Notice of Funding Opportunity (NOFO), published by NTIA on May 13, 2022.

Community Anchor Institutions (Requirement 6)

(Requirement 1.3.1) Based on the statutory definition of "community anchor institution" as defined in 47 USC 1702 (a)(2)(E), BroadbandOhio 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 or HUD-assisted housing organization), or community support organization that 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.

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):

- 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.

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

Schools: All public and private K-12 schools in the state of Ohio. Compiled with support from the Management Council - Ohio Education Computer Network and the Homeland Infrastructure Foundation-Level Data (HIFLD).

Libraries: All public libraries in Ohio, identified in partnership with the Ohio Public Library Information Network, which facilitates e-Rate for libraries in Ohio, and by leveraging data from Data Ohio and the Ohio Public Library Systems Directory.

Local government building / county seats: Local county office government buildings, identified via Ohio Secretary of State's Official Roster of Ohio Officers.[2]

Health clinic, health center, hospital, or other medical providers: The category also includes Public Health Departments, Urgent Care Facilities, and Federally Qualified Health Centers (FQHC). Hospital, Urgent Care Facilities, Public Health Departments, and Nursing Home data are from HIFLD; Rural Clinics and FQHC data have been provided by the Ohio Department of Health.

Public safety entity: The list includes entities such as fire houses, emergency medical service stations, police stations, and public safety answering points (PSAP), based on information from HIFLD.

Institutions of higher education: Institutions of higher education include all institutions that have an NCES ID in the category "college," including junior colleges, community colleges, minority serving institutions, historically black colleges and universities, other universities, or other educational institutions. Detailed information was obtained from HIFLD.

Public housing organizations: Public housing organizations are being identified through state contacts with the local U.S. Department of Housing and Urban Development (HUD) agencies within various Ohio counties, and via a survey that was distributed by the Ohio Housing Finance Agency.

Community support organizations: Ohio included the following organizations that facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals:

- Job training centers,[3] due to their role in advancing access to job opportunities often found online, which facilitates greater use of broadband services for low-income and unemployed individuals, which ultimately drives digital opportunity.

[2] https://ohioroster.ohiosos.gov/reports.aspx
[3] Source: Homeland Infrastructure Foundation-Level Data (HIFLD)

- Senior centers,[4] due to their role in providing access to and facilitating greater use of broadband service by aged individuals (a covered population).
- Childcare centers, identified via Ohio Department of Job and Family Services and Ohio Department of Education,[5] due to their role facilitating greater use of broadband services for low-income individuals.
- Ohio Community Action Agencies,[6] included for their "work to alleviate poverty and empower low-income families,"[7] which can be further enabled by facilitating greater use of broadband services for the communities they serve.
- Ohio United Way 211 call centers,[8] included for their role supporting low-income Ohioans with "free and confidential 24-hour access to a compassionate professional who will review options for help, develop a plan and act as your advocate if you are faced with barriers to service," which includes ACP enrollment information, housing and employment support.

To assess the network connectivity needs of the types of eligible community anchor institutions listed above, BroadbandOhio:

- Engaged government agencies. BroadbandOhio engaged Ohio Public Library Information Network (OPLIN), Ohio Department of Health officials, OARnet, and the Management Council – Ohio Education Computer Network to understand what information they have pertaining to the service availability for community anchor institutions. For libraries and K-12 public schools, service availability and need have been determined from e-Rate data. OARnet shared the organizations for which they provide middle mile access, and the corresponding service availability.

[4] Source: Ohio Care Planning Council (OhCPC)
[5] http://childcaresearch.ohio.gov/export
[6] https://oacaa.org/
[7] https://oacaa.org/community-action/
[8] https://www.211oh.org/

- **Engaged relevant umbrella organizations and nonprofits.** The broadband office engaged nonprofit organizations through the survey described below to understand service gaps and needs. The survey was distributed through multiple channels, including those provided by the Ohio digital equity manager.
- **Conducted a survey.** Between April 12th and June 30th, 2023, BroadbandOhio conducted an online survey aimed at identifying Community Anchor Institutions in Ohio, and understanding service availability. BroadbandOhio received approximately 130 responses to the survey, and the information on access to 1 Gbps symmetrical service are included in the csv file described below [cai.csv].
- **Conducted a geospatial proximity analysis.** A geospatial analysis was conducted to understand each CAI's proximity to BSLs served with mass market 1Gbps symmetrical service, with the assumption that those that are located within a certain distance likely have access to 1Gbps symmetrical broadband. In order to determine this, Ohio was divided into hexagons with side length of 0.33 miles, and BSLs served with 1Gbps symmetrical reliable broadband (per the FCC National Broadband Map) were plotted against these. The entire area of hexagons that contain a BSL(s) served by 1Gbps symmetrical service was considered as likely served with 1Gbps symmetrical technology. Then, identified CAIs were overlayed to the hexagons, and those CAIs that fell within hexagons with a BSL served with 1Gbps symmetrical broadband were flagged as likely served by 1Gbps symmetrical broadband.

Using the feedback from government agencies, survey responses, public comment feedback and the geospatial analysis described above, BroadbandOhio compiled the list of those CAIs that likely do not have 1Gbps symmetrical broadband service, in the attached csv file [cai.csv] **(Requirement 1.3.2).**

Challenge Process (Requirement 7)

NTIA BEAD Model Challenge Process Adoption (Requirement 1.4.1)

Yes, Ohio plans to adopt the NTIA BEAD Model Challenge process for Requirement 7 (NTIA BEAD Model Challenge Process Adoption (requirement 1.4.1); but plans to:

a. use 21-day durations for the challenge and rebuttal phases, as described in the BEAD Challenge Process Policy Notice; and

b. the challenge process will span approximately 70 days.

Modifications to Reflect Data Not Present in the National Broadband Map (Requirement 1.4.2)

DSL Modifications

The broadband office 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.

Speed Test Modifications

The broadband office will treat as "underserved" locations that the National Broadband Map shows to be "served" if rigorous speed test methodologies (i.e., methodologies aligned to the BEAD Model Challenge Process Speed Test Module) demonstrate that the "served" locations actually receive service that is materially below 100 Mbps downstream and 20 Mbps upstream. This modification will better reflect the locations eligible for BEAD funding because it will consider the actual speeds of locations.

BroadbandOhio plans to use Ookla speed testing data from 2020, 2021, 2022 and 2023. Data from each year will be aggregated at an appropriate Hex or census-unit level to compare to locations that are designated underserved or served in the FCC National Broadband Maps data. This analysis will be focused on areas and locations where the advertised service is provided only by fixed wireless technology or by fixed-wireless and DSL technologies. This analysis will look at the evolution of actual speeds over time, including late 2020 and 2021 during the pandemic, when most households would have purchased broadband service of more than 25/3 Mbps if it had been available.

Providers will be able to contest the pre-challenge speed test modifications by submitting a rebuttal during the Ohio challenge process and presenting evidence consistent with the evidentiary requirements described for the rebuttal phase.

Deduplication of Funding (Requirement 1.4.3)

Yes, Ohio plans to use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

NTIA BEAD Model Challenge Process (Requirement 1.4.4)

BroadbandOhio 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.[9]
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 of Ohio and local data collections of existing enforceable commitments.

[9] The broadband funding map published by FCC pursuant to IIJA § 60105 is referred to as the "FCC Broadband Funding Map."

BroadbandOhio 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, the broadband office will translate polygons or other geographic designations (e.g., a county or utility district) describing the area to a list of Fabric locations. The broadband office will submit this list, in the format specified by the FCC Broadband Funding Map, to NTIA.

BroadbandOhio 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 of Ohio or local program did not specify broadband speeds, or when there was reason to believe a provider deployed higher broadband speeds than required, the broadband office will reach out to the provider to verify the deployment speeds of the binding commitment. The broadband office will document this process by requiring providers to sign a binding agreement certifying the actual broadband deployment speeds deployed.

BroadbandOhio will draw on these provider agreements, along with its existing database on state and local broadband funding programs' binding agreements, to determine the set of State of Ohio and local enforceable commitments.

Deduplication of Funding (Requirement 1.4.5)

The list of federal, state, or territorial, and local programs that will be analyzed to remove enforceable commitments from the set of locations eligible for BEAD funding is provided in the attached file [BEAD Initial Proposal_Volume I_Deduplication of Funding Programs Template.xlsx] (Requirement 1.4.5).

Challenge Process Design

NTIA BEAD Model Challenge Process (Requirement 1.4.6)

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

Permissible Challenges

BroadbandOhio will only allow challenges on the following grounds:

- The identification of eligible community anchor institutions, as defined by the Eligible Entity,
- Community anchor institution BEAD eligibility determinations,
- BEAD eligibility determinations for existing broadband serviceable locations (BSLs),
- Enforceable commitments, or
- Planned service.

Permissible Challengers

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

Challenge Process Overview

The challenge process conducted by the broadband office will include four phases, spanning approximately 70 days starting from the challenge process,[10] the final determinations of which will be publicly posted on BroadbandOhio's webpage for at least 60 days prior to awarding grants:

[10] The NTIA BEAD Challenge Process Policy Notice allows *up to* 120 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.

1. Publication of Eligible Locations: Prior to beginning the Challenge Phase, the broadband office 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). The office will also publish locations considered served, as they may be challenged. BroadbandOhio aims to publish this information on Wednesday, November 13, 2023.

2. Challenge Phase: During the Challenge Phase, the challenger will submit the challenge through the broadband office 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, the broadband office 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 21 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. BroadbandOhio aims to run the challenge phase from Monday, November 27 to Monday, December 18, 2023.

3. Rebuttal Phase: Only the challenged service provider may rebut the reclassification of a location or area with evidence, causing the location or locations to enter the "disputed" state. 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 21 calendar days from notification of a challenge to provide rebuttal information to the broadband office. BroadbandOhio aims to run the rebuttal phase from Tuesday, December 26, 2023 to Monday, January 15, 2024.

4. Final Determination Phase: During the Final Determination phase, the broadband office 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, the broadband office will make a final challenge determination within 42 calendar days of the challenge rebuttal. Reviews will occur on a rolling basis, as challenges and rebuttals are received. BroadbandOhio aims to run the final determination phase from Tuesday, December 26, 2023 (with the commencement of the Rebuttal Phase on a rolling basis) to Monday, February 5, 2024.

5. Public posting of final determination: After the final determination phase, BroadbandOhio will submit the outcomes of the final determination to NTIA for review and approval. Once approved by NTIA, BroadbandOhio will publicly post the results of the challenge process in the form of a post-Challenge Process map on its webpage, which would include the final classification of each unserved location, underserved location, and eligible community anchor institution. This map will be available for at least 60 days prior to awarding grant funds.

    a. Timeline: While the specific timing is contingent upon receipt of NTIA's approval, BroadbandOhio aims to publish the final post-Challenge Process map as soon as

possible, following NTIA's approval. The map will be available for at least 60 days prior to awarding grant funds.

Evidence & Review Approach

To ensure that each challenge is reviewed and adjudicated based on fairness for all participants and relevant stakeholders, the broadband office will review all applicable challenge and rebuttal information in detail without bias, before deciding to sustain or reject a challenge. The broadband office 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. The broadband office plans to ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted. The broadband office will also require that all reviewers submit affidavits to ensure that there is no conflict of interest in making challenge determinations.

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).	Screenshot of provider webpage. A service request was refused within the last 180 days (e.g., an email or letter from provider). Lack of suitable infrastructure (e.g., no fiber on pole). A letter or email dated within the last 365 days that a provider failed to schedule a service installation or offer an	Provider shows that the location subscribes or has subscribed within the last 12 months, e.g., with a copy of a customer bill. If the evidence was a screenshot and believed to be in error, a screenshot that shows service availability. The provider submits evidence that service is now available as a standard installation, e.g., via a copy of an offer sent to the location.

Code	Challenge type	Description	Specific examples	Permissible rebuttals
			installation date within 10 business days of a request.[11] 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.	
S	Speed	The actual speed of the service tier falls below the unserved or underserved thresholds.[12]	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.[13]
L	Latency	The round-trip latency of the broadband service exceeds 100 ms[14].	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

[11] 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."

[12] 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.

[13] 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.

[14] *Performance Measures Order*, including provisions for providers in non-contiguous areas (§21).

Code	Challenge type	Description	Specific examples	Permissible rebuttals
				management system or the CAF performance measurements.[15]
D	Data cap	The only service plans marketed to consumers impose an unreasonable capacity allowance data cap") on the consumer.[16]	Screenshot of provider webpage. Service description provided to consumer.	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 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	Enforceable commitment by service provider (e.g.,	Documentation that the provider has defaulted on

[15] Ibid.

[16] 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.

Code	Challenge type	Description	Specific examples	Permissible rebuttals
		broadband will be deployed at this location by the date established in the deployment obligation.	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).	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 June 30, 2024, without an enforceable commitment or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment.	Construction contracts or similar evidence of on-going deployment, along with evidence that all necessary permits have been applied for or obtained. 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.e.*, a separate federal grant program), including the expected date deployment will be completed, which must be on or before June 30, 2024.	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.
N	Not part of enforceable commitment.	This location is in an area that is subject to an enforceable commitment to less	Declaration by service provider subject to the enforceable commitment.	

Code	Challenge type	Description	Specific examples	Permissible rebuttals
		than 100% of locations and the location is not covered by that commitment. (See BEAD NOFO at 36, n. 52.)		
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.[17]	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.

Area and MDU Challenge

The broadband office 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

[17] 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.

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 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 by at least 3 units or 10% of the unit count listed in the Fabric within the same broadband serviceable location, whichever is larger.

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 BSL within the census block group, e.g., by network diagrams that show fiber or 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% of the number of addresses in the Census Block Group, where the provider has to demonstrate service availability and speed (e.g., with a mobile test unit).[18]

Speed Test Requirements

BroadbandOhio 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 days.

Speed tests can take four forms:

1. A reading of the physical line speed provided by the residential gateway, (i.e., DSL modem, cable modem (for HFC),

[18] A mobile test unit is a testing apparatus that can be easily moved, which simulates the equipment and installation (antenna, antenna mast, subscriber equipment, etc.) that would be used in a typical deployment of fixed wireless access service by the provider.

2. ONT (for FTTH), 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 speed test applications from the list of applications approved by NTIA.

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 a broadband service provider.

Subscribers submitting a speed test must indicate the speed tier they are subscribing to. If the household subscribes to a speed tier of between 25/3 Mbps and 100/20 Mbps and the speed test results in a speed below 25/3 Mbps, this broadband service will not be considered to determine the status of the location. 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[19], i.e., 80% of these locations must experience a speed that equals or exceeds 80% of the speed threshold. 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.

Transparency Plan

[19] 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.

To ensure that the challenge process is transparent and open to public and stakeholder scrutiny, the broadband office 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. The broadband office 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. Relevant stakeholders can sign up on the broadband office website (https://broadband.ohio.gov/) for challenge process updates and newsletters. They can engage with the broadband office by a designated email address (broadbandohio@development.ohio.gov).

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

- The provider, nonprofit, or unit of local 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.

The broadband office 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, the broadband office 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.

The broadband office will treat information submitted by an existing broadband service provider designated as proprietary and confidential consistent with applicable federal 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.

Volume I Public Comment

(1.5.1) Description of the public comment period, including a high-level summary of the comments received during the Volume I public comment period, how they were addressed by BroadbandOhio, and:

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.

BroadbandOhio's public comment period for Volume I of the Initial Proposal commenced Monday, July 24, 2023 and was held through the end of Tuesday, August 22, 2023 (30 days).

Outreach and engagement activities conducted to encourage feedback during the public comment period included:

- Publication of Volume I on BroadbandOhio website: The Initial Proposal Volume I public comment period has been posted publicly on BroadbandOhio's website, with a link to the dedicated webpage prominently displayed on the landing page for BroadbandOhio.
- Outreach to RDIAs: As demonstrated in the Five-Year Action Plan, Regional Digital Inclusion Alliances (RDIAs) were formed in October 2022 by BroadbandOhio across five regions of the state (Northwest, Northeast, Central, Southeast, Southwest) to serve as collaborative partners with BroadbandOhio. These alliances bring together diverse stakeholders to coordinate regional planning, support digital inclusion, and collect local feedback to inform Ohio's Digital Opportunity Plan. BroadbandOhio announced the start of the Initial Proposal Volume I public comment period to all RDIA leads via email. The email included information regarding where to find the draft, how to submit a comment, and until when the public comment period lasted. The email requested the RDIA leads

to not only participate in the public comment period themselves but also to notify stakeholders in their respective regions to maximize public participation.

- Outreach to Ohio Broadband Alliance: The Ohio Broadband Alliance convenes stakeholders quarterly to discuss progress toward our collective goals, insights, best practices from recent work, and opportunities to collaborate. BroadbandOhio leads this coalition of over 500 members comprising ISPs, local governments, and non-profits. Internet service providers (ISPs), community and non-profit organizations, local government leaders, state and federal agencies, economic development organizations, and industry trade associations are especially encouraged to attend. BroadbandOhio announced the start of the Initial Proposal Volume I public comment period to all Broadband Alliance members via email to the listserv. The email included information regarding where to find the draft, how to submit a comment, and until when the public comment period lasted. The email requested Broadband Alliance members to provide any questions, comments, or suggestions.
- Outreach to Broadband Working Group: This group convenes key Ohio state agencies related to broadband so they can identify barriers to broadband deployment, align on priorities, collect information on assets they can leverage, and more. The Working Group consists of InnovateOhio; the Ohio Departments of Development (Governor's Office of Workforce Transformation, Governor's Office of Appalachia), Education, Administrative Services, and Higher Education; OARnet; and the Ohio Education Computer Network Management Council. BroadbandOhio announced the start of the Initial Proposal Volume I public comment period to all Broadband Working Group members via email. The email included information regarding where to find the draft, how to submit a comment, and until when the public comment period lasted. The email requested Broadband Alliance members to provide any questions, comments, or suggestions.

- **Ongoing stakeholder engagement efforts.** BroadbandOhio has continued to conduct stakeholder engagement efforts. Following the Initial Proposal Volume I public comment period launch, BroadbandOhio encouraged stakeholders engaged to participate in the public comment period. Meetings occurred during this period include the following:
  - **BroadbandOhio Alliance Quarterly Meeting (July 26, 2023)**: The Quarterly Alliance meeting engaged stakeholders from across the state to discuss upcoming funding opportunities, program status updates, and discussion of BEAD program. Approximately 60 people participated.
  - **Meeting with Ohio Telecom Association (OTA) (August 11, 2023)**: BroadbandOhio engaged ISP representatives to discuss upcoming funding opportunities and BEAD. Approximately 100 people participated.
  - **Meeting with multiple county commissioners (August 14, 2023)**: BroadbandOhio engaged county commissioners from Preble, Miami, Montgomery, and Darke to discuss a potential group broadband study / project, and spoke about upcoming funding and BEAD program. 12 people participated.
  - **Meeting with County Commissioners Association of Ohio (CCAO) (August 17, 2023)**: BroadbandOhio engaged county commissioners regarding upcoming funding opportunities and the challenge process for BEAD. Approximately 100 people participated.

The Ohio Broadband Alliance and RDIAs bring together diverse stakeholders including local community organizations, unions and worker organizations, and other underrepresented groups. These have been particularly effective for engaging these groups during the focused BEAD-SDOP outreach in Q1-Q2 2023.

A total of 21 comments from the public were received during the public comment period. A high-level summary of the comments received is described below.

Community Anchor Institution (Requirement 6)

- Identification and request for inclusion of additional organizations as CAIs
- Consideration for including houses of worship in some rural areas where this would be effective
- Additional explanation for geospatial proximity analysis

Challenge process and modifications (Requirement 7)

- DSL modification:
    - Support for DSL modifications, especially in Appalachian region
    - Suggestion to reclassify MDU locations on DSL as "unserved"
    - Suggestion to not simply look at technology but also speeds available, or make modification subject to challenge process to allow rebuttals
- Speed Test Modification:
    - Suggestion to accept speed tests by subscriber only if using platforms and equipment recommended by provider and indicating equipment used
    - Suggestion to use speed test physically linked to either outdoor radio (if FWA) or at fiber demarc
    - Suggestion to designate areas as either unserved and underserved per speed test analysis
    - Suggestion to place of burden of proof on the ISP instead of residents to substantiate claims
    - Suggestion to prioritize providers' proof of internal speed test and not require additional testing
    - Request for removal of speed test modification from challenge process
- FWA Modification:
    - Comments for and against the proposed FWA modification:

- Support modification due to service overstatements, FWA's lower capacity to provide mass market services, and foliage / terrain issues
- Request to remove modification considering FWA is not legacy service, lower deployment cost, minimal BEAD outlay, and high count of Appalachian counties

- Area / MDU challenge:
  - Comments for and against – and extension of – the area challenge:
    - Bulk pre-challenge modification for MDUs in high poverty and highly unconnected census tracts as unserved
    - Implementation of bulk challenge process similar to FCC Broadband Data Collection
    - Area challenge defined at census block (CB) level, with 6 challenges to be within 1 mile of each other for urban CBs and 3 miles for rural CBs
    - Removal of area and MDU challenges to reduce complexity of challenge process, and increase count of individual challenges needed in an area challenge
- Challenge Process design:
  - Suggestion to use most current version of FCC National Broadband Map
  - Suggestion that for ISP challenger eligibility, only consider established providers with track record of 5 years or longer providing broadband service to a substantial number of customers
  - Suggestion to increase length of challenge and rebuttal phase windows (30 – 45 days)
  - Suggestion to maximize transparency / accountability through public notice of challenge process, technical assistance, and direct notification to providers
  - Suggestion to collect enforceable commitments prior to challenge process
  - Suggestion to change select evidentiary requirements, e.g., for availability, planned service, and enforceable commitment challenges
  - Suggestion to, separate from challenge process, adopt post-application verification process as part of subgrantee process to gather new planned service and/or enforceable commitments

NTIA provided curing feedback on the following topics:

- Community-driven CAIs: NTIA provided multiple comments requesting upfront definition, identification, and determination of eligibility of Community-driven CAIs prior to commencing the challenge process. Ohio's proposed approach was to partner with communities, in which households do not have a CAI within 5 miles, to identify a suitable CAI to subsidize high-speed internet deployment for 1 Gigabit symmetrical service via an RFP process.
- FWA modifications: NTIA provided comments noting that the proposed fixed wireless modification would be inconsistent with BEAD's definition of reliable broadband service.
- Public posting of final determination: NTIA provided comments requesting additional information on BroadbandOhio's plan to publicly post the results of the challenge process, including the final classification of each unserved location, underserved location, or eligible community anchor institution at least 60 days prior to awarding grant funds.

To address this feedback in volume I of the Initial Proposal, BroadbandOhio has:

- Incorporated proposed CAIs, which are consistent with existing CAI categories within the CAI definition.
- Confirmed the plan to use the evidentiary requirements of the model challenge process, and the selected modifications as described in the draft for public comment.
- Confirmed the plan to abide by the NTIA curing feedback, which declined to approve the proposed fixed wireless modification.
- After considering NTIA curing feedback, removed the community-driven CAI category from the Initial Proposal Volume I.

APPENDIX A: Existing Broadband Funding

Source	Purpose	Total	Expended	Available
House Bill 2 of the 134th General Assembly	Provision of ORBEG grants to internet service providers to fund the infrastructure cost of broadband projects in unserved and underserved areas of the state.[20]	$232,849,488.15	$232,849,488.15 (disbursement pending)	$0
	Deployment of various state pilot projects by BroadbandOhio for broadband deployment, adoption, and digital opportunity. Pending and ongoing projects include: • ACCESS/United LSD • Cuyahoga County Connectivity Project • Dayton Recreation Centers Project • Creative Housing Pilot	$34,650,511.85	$13,314,000.00	$21,336,511.85

[20] https://broadband.ohio.gov/grant-opportunities/grant-opportunities-1/grant-opportunities-1

Source	Purpose	Total	Expended	Available
	• (Complete) Regional Council of Eastgate, Lake-to-River Broadband Corridor • (In progress) State Telehealth Administrator with OCHIN • (In progress) OSU Molly Caren Pilot • (In progress) BASCOM / Seneca County Project • (Complete) Mt Healthy Project • (Pending finalization) MARCS Towers, Jackson • (Pending finalization) Ohio Department of Natural Resources (ODNR) Lodges pilots			
FCC Rural Development Opportunity Fund (RDOF) Phase I Auction	Provision of high speed fixed broadband service to rural homes and small businesses in census blocks that are entirely unserved.	$123,585,126 [21] (note, excludes defaults as of April 2022)	n/a – Federally administered program directly to providers	n/a

[21] https://www.fcc.gov/document/auction-904-winning-bidders/attachment-b; https://www.fcc.gov/document/auction-904-winning-bidders/attachment-a. Excludes defaults.

Source	Purpose	Total	Expended	Available
CARES Act[22]	Provision of hotspots and internet-enabled devices to students for purchases made between July 1, 2020 and December 30, 2020 through the BroadbandOhio Connectivity Grant. Federal legislation has extended the grant opportunity through November 22, 2021.	$50,000,000.00	$50,000,000.00	$0.00
State Digital Opportunity Capacity Grant Program[23]	Development of a statewide plan for achieving digital opportunity goals and closing the digital divide.	$1,470,550.76	$726,801.60	$743,749.16
Connect America Fund Phase II[24]	Provision of fixed broadband and voice services across the United States	$13,186,434.40	n/a – Federally administered	n/a
National Telecommunications and Information Administration	Expansion of high-speed Internet access and connectivity to eligible Historically Black Colleges and	$2,066,822.86 (Awarded to	n/a – not administered by the state	n/a

[22] https://broadband.ohio.gov/explore-broadband/broadbandohios-projects/riverside-connectivity-pilot; https://ohio-k12.help/broadbandohio-connectivity-grant/
[23] https://broadband.ohio.gov/grant-opportunities/state-digital-equity-grant/state-digital-equity-planning-grant
[24] From Connect America Fund Phase II Auction (Auction 903) results page (https://www.fcc.gov/auction/903), award amount by state found here (https://docs.fcc.gov/public/attachments/DA-18-887A3.pdf).

Source	Purpose	Total	Expended	Available
(NTIA) Connecting Minority Communities Pilot Program (CMC)[25]	Universities (HBCUs), Tribal Colleges or Universities (TCUs), and other Minority-serving institutions (MSIs).	Wilberforce University)		
National Telecommunications and Information Administration (NTIA) Connecting Minority Communities Pilot Program (CMC)[26]	Expansion of high-speed Internet access and connectivity to eligible Historically Black Colleges and Universities (HBCUs), Tribal Colleges or Universities (TCUs), and other Minority-serving institutions (MSIs).	3,000,000.00 (Awarded to Central State University)	n/a – not administered by the state	n/a
(Application in process) Appalachian Regional Initiative for	Cross-state development of a large-scale middle-mile network across Ohio, Pennsylvania, Kentucky, and West Virginia designed to create a multistate ecosystem.	Concept paper accepted and finalizing grant application	n/a	n/a

[25] https://www.internetforall.gov/news-media/biden-harris-administration-announces-more-175-million-internet-all-grants-61-minority
[26] https://broadbandusa.ntia.doc.gov/funding-programs/connecting-minority-communities/award-recipients

Source	Purpose	Total	Expended	Available
Stronger Economies (ARISE) Grant[27]				
(Application in process) Coronavirus Capital Projects Fund (CPF)	Enhancement of broadband deployment by funding broadband infrastructure projects aimed at affordability, fiber construction, infrastructure upgrade, and more. Projects include: • Ohio's Affordability and Digital Equity Grant ($20 million); • Multi-County Last Mile Fiber Build Pilot ($60 million); • Shovel Ready School District Project ($7 million); • Western Ohio Infrastructure Upgrade Pilot Project ($3 million); • Ohio Broadband Expansion Grant Program ($77.5M)[28];	$268,578,200.00	$0.00	$162.5M, as of 8/14/2023

[27] https://www.arc.gov/arise/
[28] Planned timeline for ORBEG Round 2 provided in the appendix.

Source	Purpose	Total	Expended	Available
	• Line Extension Program ($10M); and • Creation of Appalachian Community Innovation Centers ($85M)			
House Bill 33 of the 135th General Assembly[29]	Establishment of the Ohio Broadband Pole Replacement and Undergrounding Program to subsidize the cost to provision of qualifying broadband service access to residences and businesses in an unserved area by reimbursing certain costs of pole replacements, mid-span pole installations, and undergrounding	$50,000,000	$0.00	$50,000,000
U.S. Department of Agriculture (USDA) ReConnect Program	Provision of loans and grants to provide funds for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband service in eligible rural areas	$21,341,792.00	n/a – not administered by the state	n/a

[29] https://search-prod.lis.state.oh.us/solarapi/v1/general_assembly_135/bills/hb33/EN/06/hb33_06_EN?format=pdf

Source	Purpose	Total	Expended	Available
American Rescue Plan (ARPA) Coronavirus State and Local Fiscal Recovery Funds (SLFRF)[30]	Federal funds to local governments in 2022. Addresses the unique needs of local communities and creates a stronger national economy by using these essential funds to: Fight the pandemic and support families and businesses struggling with its public health and economic impacts; Maintain vital public services, even amid declines in revenue resulting from the crisis; Build a strong, resilient, and equitable recovery by making investments that support long-term growth and opportunity.	n/a – not administered by the state	n/a – not administered by the state	n/a
Appalachian Regional Commission (ARC) Partnerships for Opportunity and Workforce and Economic	Federal funds to local governments in 2022. Targets federal resources to help communities and regions that have been affected by job losses in coal mining, coal power plant operations, and coal-related supply chain industries due to the changing economics of America's energy production	n/a – not administered by the state	n/a – not administered by the state	n/a

[30] https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds

Source	Purpose	Total	Expended	Available
Revitalization Initiative (POWER) Grant[31]				
County General Fund	Various local-level broadband projects supported via County General Funds.	n/a – not administered by the state	n/a – not administered by the state	n/a

[31] https://www.arc.gov/power/

APPENDIX B. ORBEG Round 2 Timeline

Planned timeline, as of October 10, 2023:

- Broadband Expansion Authority Meeting: Wednesday, October 4th, 2023
- ORBEG RD 2 Application Published: Friday, October 6th, 2023
- Application and Guidebook Posted (30 days): Friday, October 6th – Sunday, November 5th, 2023
- Application Submission Period (60 days): Monday, November 6th, 2023 – Friday, January 5th, 2024
- Application Extension Period (14 days): Monday, January 8th, 2024 – Monday, January 22nd, 2024
- Challenge Period (65 days): Wednesday, February 7th - Friday, April 12th, 2024
- Applicant Addresses BBOH Decision (14 days): Monday, April 15th – Monday, April 29th, 2024
- Application Review/ Award Announcements (up to 30 days): Tuesday, April 30th - Thursday, May 30th, 2024