



State of Delaware
Department of Technology and Information
Initial Proposal Volume I
(Requirements 3, 5 – 7)
BEAD Program

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This document is a draft of Volume I of the Broadband Equity, Access, and Deployment (BEAD) Initial Proposal and is being released for public comment by Delawareans in advance of its submission by the Delaware Department of Technology and Information (DTI) to the National Telecommunications and Information Administration (NTIA).

All are welcome to submit comments regarding the draft document.

Comments regarding the draft should be submitted via email to broadband.comments@delaware.gov by 11:59 PM ET on Friday, September 1, 2023.

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1. Introduction

The State of Delaware Department of Technology and Information (DTI) hereby submits to the National Telecommunication and Information Administration (NTIA) this first volume of the BEAD Initial Proposal in alignment with NTIA’s BEAD challenge guidance to propose how DTI will meet all requirements of Volume I of the Initial Proposal.

This document includes the following requirements outlined in the [BEAD Notice of Funding Opportunity \(NOFO\)](#)¹:

1. The document identifies existing efforts funded by the federal government or the State of Delaware within the jurisdiction of the State of Delaware to deploy broadband and close the digital divide (Initial Proposal Requirement 3).
2. The document identifies each unserved location and underserved location within Delaware, using the most recently published National Broadband Map as of the date of submission of the Initial Proposal, and identifies the date of publication of the National Broadband Map used for such identification (Initial Proposal Requirement 5).
3. The document describes how DTI has applied the statutory definition of the term “community anchor institution” (CAI), worked to identify all eligible CAIs in Delaware, and assessed the needs of eligible CAIs, including what types of CAIs it intends to serve; which institutions, if any, it considered but declined to classify as CAIs; and, if DTI proposes service to one or more CAIs in a category not explicitly cited as a type of CAI in Section 60102(a)(2)(E) of the Infrastructure Act, the basis on which DTI determined that such category of CAI facilitates greater use of broadband service by vulnerable populations (Initial Proposal Requirement 6).
4. The document proposes a detailed plan as to how DTI will conduct a challenge process as required by NTIA and consistent with the draft challenge process guidance released by NTIA on June 28, 2023 (Initial Proposal Requirement 7).

DTI intends to run its challenge process after (1) NTIA approves this first volume of the Initial Proposal, and (2) DTI submits the second volume of its Initial Proposal, addressing all remaining requirements of the Initial Proposal as described in NTIA’s BEAD Notice of Funding Opportunity. This will enable DTI to maintain the timeline required by NTIA for the BEAD program.

¹ <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>.

2. Existing broadband funding and resources (Requirement 3)

This first volume of the State of Delaware BEAD Initial Proposal includes, consistent with NTIA requirements, descriptions of existing funding for broadband in Delaware.

Attached as Appendix 1 is a file that identifies:

1. Sources of funding
2. A brief description of the broadband deployment and other broadband-related activities
3. Total funding
4. Funding amount expended
5. Remaining funding amount available

3. Unserved and underserved locations (Requirement 5)

This first volume of the State of Delaware BEAD Initial Proposal includes, consistent with NTIA requirements, a list of all unserved and underserved locations in Delaware. Consistent with the BEAD NOFO, “unserved” means a location that lacks reliable broadband service at a speed of at least 25 Mbps downstream and 3 Mbps upstream and latency levels low enough to support real-time, interactive applications. “Underserved” means locations that lack similar broadband connections, but at speeds of at least 100 Mbps downstream and 20 Mbps upstream.

The data is sourced from the FCC’s Broadband DATA Map as of July 12, 2023. The publication date of the National Broadband Map does not predate the submission of the Initial Proposal by more than 59 days.

3.1 Locations IDs of all unserved and underserved locations

Attached as Appendices 2 and 3 are two CSV files with the location IDs of all unserved and underserved locations, respectively.

3.2 Publication date of the National Broadband Map used to identify unserved and underserved locations

The unserved and underserved locations identified in this document and its attachments are based on the June 2023 publication date of the National Broadband Map. Consistent with NTIA guidance, that publication date of the National Broadband Map does not predate the submission of the Initial Proposal by more than 59 days.²

Note: Appendices 2 and 3, listing all unserved and underserved locations, will be publicly available when the final version of this document is published after consideration of public comments. Any Delawarean can see if their address is part of the BEAD plan by [searching this map by address](#).³

² Delaware’s actual challenge process will use the November 2023 publication of the National Broadband Map (or whichever version is most current as of the time of initiation of the challenge process).

³ <https://gis.broadband.delaware.gov/apps/0ce8c35f97f047d8b7a6e94bc429791d/explore>.

4. Community anchor institutions (Requirement 6)

This first volume of the State of Delaware BEAD Initial Proposal includes, consistent with NTIA requirements, a definition of “community anchor institution,” a list of community anchor institutions, and an analysis of the connectivity needs of the institution.

4.1 Definition of “community anchor institution”

Adopting the statutory definition of “community anchor institution”⁴, DTI defines “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 and HUD-assisted housing organization), or community support organization that facilitates greater public 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 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 public 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 community anchor institutions:

1. **Schools:** This category includes all K-12 schools participating in the FCC E-Rate program or that have a National Center for Education Statistics (NCES) ID in the categories “public schools” or “private schools.”
2. **Libraries:** The list of libraries includes all those participating in the FCC E-Rate program as well as all member libraries, and their branches, of the American Library Association (ALA).
3. **Health clinic, health center, hospital, or other medical providers:** The list of health clinics, health centers, hospitals, and other medical providers includes all institutions that have a Centers for Medicare and Medicaid Services (CMS) identifier.
4. **Public safety entity:** The list of public safety entities includes fire houses, emergency medical service stations, and police stations, based on records maintained by the State of Delaware and units of local government. Included in the list of public safety entities is also the list of public safety answering points (PSAP) in the FCC PSAP registry.
5. **Institutions of higher education:** Institutions of higher education include all institutions that have an NCES ID in the category “college”, including junior colleges, community

⁴ 47 USC 1702 (a)(2)(E).

colleges, minority serving institutions, the State’s historically black university (Delaware State University), other universities, and other educational institutions.

6. **Public housing organizations:** Public housing organizations include those listed by the Delaware State Housing Authority and Delaware’s counties, to leverage their databases of public housing organizations.
7. **Community support organizations:** The list includes organizations identified by the University of Delaware in partnership with DTI (see 4.2.2.a below) that facilitate greater public use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals.

4.2 Connectivity needs of defined CAIs

To assess the network connectivity needs of the types of eligible community anchor institutions listed above, DTI undertook the following activities:

1. **Engaged government agencies.** DTI communicated with relevant State agencies to understand what records are available regarding relevant community anchor institutions 1 Gbps broadband service availability. Specifically, DTI contacted the following agencies:
 - a. **Education:** DTI is the service provider for all K-12 public and charter schools in Delaware, operating through contracts with carriers. DTI has determined that these CAIs have the requisite symmetrical broadband speeds as identified by the BEAD NOFO.
 - b. **Healthcare:** DTI communicated with the Delaware Department of Health and Social Services to determine which public health facilities lack 1 Gbps symmetrical broadband service. DTI has determined that these CAIs have the requisite symmetrical broadband speeds as identified by the BEAD NOFO.
 - c. **Libraries:** DTI coordinated with the Delaware Division of Libraries to determine which libraries lack 1 Gbps symmetrical broadband service. DTI has determined that these CAIs have the requisite symmetrical broadband speeds as identified by the BEAD NOFO.
 - d. **Public safety:** DTI communicated with the Delaware Department of Safety and Homeland Security and the Delaware State Police to obtain 1 Gbps broadband service availability data. DTI has determined that these CAIs have the requisite symmetrical broadband speeds as identified by the BEAD NOFO.
 - e. **Housing:** Working with the Delaware State Housing Authority, DTI circulated a survey of affordable housing units in the state to determine connectivity. No building containing affordable housing units reported having below 1 Gbps service available. Though, as noted below, certain units within a building may fall into the “unserved” or “underserved” classifications.

2. **Engaged relevant umbrella organizations and nonprofits.** DTI engaged with umbrella and nonprofit organizations that work with community anchor institutions to coordinate and obtain 1 Gbps broadband service availability data. Specific activities include:
 - a. **University of Delaware CAI Census:** DTI contracted with the Biden School of Public Policy and Administration at the University of Delaware (“Biden School”) to complete a census of certain Community Anchor Institutions in the state. The Biden School identified, mapped, and surveyed select CAIs relative to the availability of broadband service and the delivery of digital programming. The Biden School targeted CAIs that facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals. In its report, the Biden School identified 7 CAIs that fall under this category and do not have 1 Gbps symmetrical service available at their location, detailed in Appendix 4.
3. **List of CAIs that do not have adequate broadband service.** Using the responses received, DTI compiled the list of those CAIs that do not have adequate broadband service available. Attached as Appendix 4 is a CSV file with the relevant list of eligible CAIs that require qualifying broadband service and do not currently have such service available to the best of DTI’s knowledge.

Note: Appendix 4, listing the CAIs that we have identified as not having 1 Gbps service, will be publicly available when the final version of this document is published after consideration of public comments. If you represent a CAI that you believe does not have access to 1 Gbps symmetrical service, email broadband.comments@delaware.gov.

5. Challenge process (Requirement 7)

This first volume of the State of Delaware BEAD Initial Proposal includes, consistent with NTIA requirements, a detailed and rigorous proposed challenge process for development of the map under which BEAD grants will be evaluated and awarded by DTI. The proposed challenge process, including all required elements, is described in detail below.

Adoption of NTIA Challenge Model

No

Yes

DTI plans to adopt the NTIA BEAD Model Challenge Process with the following modifications to satisfy Requirement 7 and to ensure that the State has a fair process following federal guidelines. Delaware will also adopt the BEAD Eligible Entity Planning Toolkit.⁵

Modification 1 - DSL served locations reclassified as unserved

As noted in the Optional Module 2 example in the Model Challenge Process, Delaware will treat locations showing available qualifying broadband service (i.e., a location that is “served”) delivered via DSL as “unserved” if DSL is the only technology at the location satisfying the “served” requirements. According to the FCC, DSL has median download speeds under 30 Mbps and median upload speeds under 3 Mbps, which do not meet the definition of served.

Marking these locations as unserved will facilitate the phase-out of legacy copper facilities and ensure the delivery of “future-proof” broadband service. Providers try to overcome this limitation of DSL by pair-bonding copper wiring. In doing so, they effectively take 2 copper lines and turn them into one connection. As a result, only one of two households would have access to service; consequently, a substantial share of households would now be unserved.

Modification 2 - Licensed Fixed Wireless served locations reclassified as underserved

DTI will treat as “underserved” locations that the National Broadband Map shows to be “served” where Licensed Fixed Wireless using cellular technologies (e.g., 4G/5G home internet) is the only technology at the location satisfying the “served” requirements. According to speedtest.net, as of March 2023, the median cellular internet speeds in the United States are approximately 80 Mbps download and 10 Mbps upload, which do not meet the definition of served.⁶

⁵ See https://www.internetforall.gov/sits/default/files/2023-04/BEAD_Model_Challenge_Process_-_Public_Comment_Draft_04.24.2023.pdf.

⁶ See, Speed Test Global Index ranking mobile and fixed broadband speeds from around the world on a monthly basis. Available at <https://www.speedtest.net/global-index/united-states>.

Additionally, cellular networks, by design, have a significant drop-off of data rates the farther a user is from the source (e.g., tower). While cellular providers may not impose unreasonable data caps, they do impose throughput limits and deprioritization of traffic on data plans. A heavy data user could be defined as a customer using as little as 50Gbps of data in a single billing cycle. These customers can experience extreme data throttling (i.e., reducing bandwidth allocation) during periods of high demand when a network is congested; consequently, users will often experience inconsistent broadband service, including the inability to access speeds of 25/3Mbps or 100/20Mbps to meet the underserved or served requirements of the BEAD Program respectively.

5.1 Deduplication of funding: Use of BEAD Planning Toolkit for identifying enforceable commitments

Yes

No

DTI will use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

5.2 Process description

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

- The Broadband Funding Map published by the FCC pursuant to the Infrastructure Investment and Jobs Act of 2021, Division F, Title I, § 60105.
- Data sets from the State of Delaware broadband deployment programs that rely on funds from the State and Local Fiscal Recovery Funds administered by the U.S. Treasury
- Data sets from the State of Delaware broadband deployment programs that rely on State of Delaware funds, as well as other local data collections of existing enforceable commitments

DTI will make its best effort to develop a list of broadband serviceable locations (BSLs) subject to enforceable commitments based on State or local grants or loans. If necessary, DTI will translate polygons or other geographic designations (e.g., a county or utility district) describing the area to a list of Fabric locations. DTI will submit this list, in the format specified by the FCC Broadband Funding Map, to NTIA.

DTI will review its repository of existing State grant programs to validate the upload and download speeds of existing binding commitments to deploy broadband infrastructure. In situations in which the program did not specify broadband speeds, or when there was reason to believe a provider deployed higher broadband speeds than required, DTI will reach out to the provider to verify the deployment speeds of the binding commitment. DTI will document

this process by requiring providers to sign a binding agreement certifying the actual broadband deployment speeds deployed.

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

5.3 List of programs analyzed

Attached as Appendix 5 is a CSV file with the relevant list of the federal programs that will be analyzed to remove enforceable commitments from the set of locations eligible for BEAD funding.

5.4 Challenge process design: Process description

This DTI plan is largely based on the NTIA BEAD Challenge Process Policy Notice and DTI's understanding of the goals of the BEAD program. The full process is designed to ensure a transparent, fair, expeditious, and evidence-based challenge process.

Permissible challenges

DTI will allow challenges on the following grounds:

- The identification of eligible community anchor institutions, as defined by DTI in the Initial Proposal Volume I
- Community anchor institution BEAD eligibility determinations
- BEAD eligibility determinations for existing BSLs included in the FCC's National Broadband Map
- Enforceable commitments
- Planned service

Permissible challengers

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

Challenge process overview

The challenge process conducted by DTI will include four phases, potentially spanning up to 14 weeks, per the schedule of the NTIA model challenge process:

1. **Publication of Eligible Locations:** Prior to beginning the Challenge Phase, DTI 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). DTI will also publish locations considered served, as they can be challenged. DTI tentatively plans to

publish the locations on November 15, 2023, tracking to start the challenge process on December 2, 2023.

2. **Challenge Phase:** During the Challenge Phase, challengers may submit the challenge through DTI's challenge portal. All challenges will be made 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. At this time, the location will enter the "challenged" state.
 - a. **Minimum Level of Evidence Sufficient to Establish a Challenge:** The challenge portal will verify the following:
 - i. That the address provided in the challenge can be found in the Fabric and is a BSL
 - ii. That the challenged service is listed in the National Broadband Map and meets the definition of reliable broadband service
 - iii. That the email address from which the challenge was sent is verifiable and reachable by sending a confirmation message to the listed contact email
 - iv. For scanned images, the challenge portal will determine whether the quality is sufficient to enable optical character recognition (OCR)
 - b. DTI will 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.
 - c. **Timeline:** Challengers will have 30 calendar days to submit a challenge from the time the initial lists of unserved and underserved locations, community anchor institutions, and existing enforceable commitments are posted. The 30-day challenge submission period will run from December 1, 2023, to December 30, 2023
3. **Rebuttal Phase:** Only the challenged service provider may rebut the reclassification of a location or area. Providers must regularly check the challenge portal notification method for notifications of submitted challenges.
 - a. **Provider Options:** Challenged service providers will have the following options for action at this time.

- i. **Rebut:** Rebuttals must be provided with evidence, at which time the challenged location or locations will enter the “disputed” state.
 - ii. **Leave Unrebutted:** If a challenge that meets the minimum level of evidence is not rebutted, the challenge will be considered conceded and sustained. This will result in transition of the challenged location(s) to the “sustained” state.
 - iii. **Concede the Challenge:** In the event the challenged service provider signals agreement with the challenge, the challenge will be considered conceded and sustained. This will result in transition of the challenged location(s) to the “sustained” state.
 - b. **Timeline:** Providers will have 30 business days from notification of a challenge to provide rebuttal information to DTI. The 30-day challenge rebuttal period will run from January 2, 2024, to February 1, 2024.
4. **Final Determination Phase:** During the Final Determination phase, DTI will make the final determination of the classification of the location(s) that remain in the disputed state, either declaring the challenge “sustained” or “rejected.”
 - a. **Timeline:** DTI will make a final challenge determination within 30 calendar days of the challenge rebuttal. Reviews will occur on a rolling basis, as challenges and rebuttals are received. The 30-day final determination period will run from February 2, 2024, to March 4, 2024.

Evidence and review approach

To ensure that each challenge is reviewed and adjudicated in a way that is fair to all participants and relevant stakeholders, DTI will review all applicable challenge and rebuttal information in detail without bias, before deciding to sustain or reject a challenge. DTI will:

- Document the standards of review to be applied in a Standard Operating Procedure
- Require reviewers to document their justification for each determination
- Ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted
- Require that all reviewers submit affidavits to ensure that there is no conflict of interest in making challenge determinations

Table of challenge types, evidence examples, and permissible rebuttals

| Code | Challenge type | Description | Specific examples of required evidence | 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"> • 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 installation date within 10 business days of a request.⁷ • A letter or email dated within the last 365 days indicating that a provider requested more than the standard installation fee to | <ul style="list-style-type: none"> • Provider shows that the location subscribes or has subscribed within the past 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. |

⁷ 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.”

| Code | Challenge type | Description | Specific examples of required evidence | Permissible rebuttals |
|------|----------------|---|---|--|
| | | | 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. ⁸ | 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. ⁹ |
| L | Latency | The round-trip latency of the broadband service exceeds 100 ms. ¹⁰ | 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 |

⁸ 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.

⁹ 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.

¹⁰ Performance Measures Order, including provisions for providers in non-contiguous areas (§21).

| Code | Challenge type | Description | Specific examples of required evidence | Permissible rebuttals |
|------|----------------|--|--|--|
| | | | | management system or the CAF performance measurements. ¹¹ |
| D | Data cap | The only service plans marketed to consumers impose an unreasonable capacity allowance (“data cap”) on the consumer. ¹² | <ul style="list-style-type: none"> • 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 that demonstrates the service is delivered via a specific technology. | Provider has countervailing evidence from its network management system showing an appropriate residential gateway that matches the provided service. |

¹¹ *Ibid.*

¹² An unreasonable capacity allowance is defined as a data cap that falls below the 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 of required evidence | Permissible rebuttals |
|-------------|------------------------|---|--|---|
| B | Business service only | The location is residential, but the service offered is marketed or available only to businesses. | Screenshot of provider webpage. | Provider has 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). | 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). |

| Code | Challenge type | Description | Specific examples of required evidence | Permissible rebuttals |
|------|-----------------|--|--|---|
| P | Planned service | The challenger has knowledge that broadband will be deployed at this location by July 16, 2024, without an enforceable commitment or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment. | <ul style="list-style-type: none"> • 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 State or SBO 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 July 16, 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. |

| Code | Challenge type | Description | Specific examples of required evidence | 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 out in section 1.3. ¹³ | Evidence that the location does not fall within the definitions of CAIs set out in section 1.3 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 out in section 1.3 or is no longer in operation. | Evidence that the location falls within the definitions of CAIs set by set out in section 1.3 or is still operational. |

¹³ 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 challenges

Based on the criteria outlined in the BEAD NOFO,¹⁴ DTI has compiled a list of MDUs that are unserved and underserved and therefore eligible for BEAD funding. Our list of unserved and underserved MDUs goes beyond the locations marked as unserved and underserved in the FCC National Broadband Map fabric.¹⁵ DTI has identified 1,191 unserved and underserved MDUs, representing an estimated 43,864 households, 13,134 unconnected households (or 67,318 residents – 19,854 of whom are unconnected). These 1,191 locations should be reclassified as unserved. A summary of the data is in the table below, and the list of locations are attached to this submission.¹⁶

| | FCC National Broadband Map Fabric | | | Actual BEAD Criteria |
|---------------------------------|-----------------------------------|-------------|--------|----------------------|
| | Unserved | Underserved | Served | Unserved |
| Buildings with 50+ units | 14 | 30 | 135 | 180 |
| Buildings with 10+ units | 913 | 98 | 179 | 1,191 |

Evidence for bulk modification of specified MDUs to unserved locations

As the table suggests, the FCC National Broadband Map provides only a starting point for our list of BEAD-eligible locations including MDUs. Since the National Broadband Map identifies multi-family housing developments as one Broadband Serviceable Location (BSL), it does not represent broadband availability of the individual units or households. Without accurate unit-by-unit data, the National Broadband Map significantly undercounts the number of unserved and underserved MDUs and households living in multi-family housing. For example, if an apartment building contains 100 households (i.e., units), the National Broadband Map only identifies this building as a single BSL. There are several scenarios where availability of broadband service at an MDU BSL does not equate to the same availability of broadband to all units within that location. This results in an overstatement of the availability of broadband service at multi-family housing locations and thus undercounts the true total of Delaware

¹⁴ BEAD NOFO p. 33, “4. Installing internet and Wi-Fi infrastructure or providing reduced-cost broadband within a multi-family residential building, with priority given to a residential building that has a **substantial share of unserved households** or is **in a location in which the percentage of individuals with a household income that is at or below 150 percent of the poverty line applicable to a family of the size involved is higher than the national percentage of such individuals**” (emphasis added)

¹⁵ National Broadband Map version November 2022.

¹⁶ The list of BEAD-eligible MDUs is in the attached spreadsheet using the format NTIA provided in the BEAD Model Challenge process.

residents who are unserved or underserved. Examples of these scenarios are summarized below:

- Internet service provider (ISP) offers a much more substantial service to the building manager's office or commercial space (e.g.: Fiber) than their inside wiring is capable of delivering to the residential units (ex: DSL).
- ISP has fiber-to-the-curb or building, but has no inside wiring infrastructure to the unit.
- ISP is able to deliver fiber to the building (FTTB) within 10 days, but only offers business-class internet services and does not actually provide residential service.
- Technology at the MDU is not capable of delivering 25/3 or 100/20 across all households simultaneously. Example: provider offers 100/20 DSL service, but needs to use pair-bonding to achieve that speed. In a 100-unit MDU, 100 DSL lines would be bonded into 50 connections, leaving 50 households served and 50 unserved.
- Inside wiring infrastructure is in a state of disrepair and cannot support speeds of 100/20 Mbps. Many public housing and affordable housing MDUs are 30-40+ years old and wiring has not been adequately maintained.
- ISP's equipment is located in a Main Distribution Frame (MDF), Intermediate Distribution Frame (IDF), cabinet, pedestal, node or potentially the central office, and is not capable of delivering 25/3 or 100/20 across all households simultaneously without overbuilding the entire MDU.¹⁷
- Non-cellular, licensed Fixed Wireless Access (FWA) providers without existing equipment/service in the MDU could not meet the 10-day installation window. The individual household of an MDU does not have the ability to authorize a Licensed FWA provider to access rooftops, telco rooms, and run new wiring all the way to their unit. This would require an agreement with the building owner and possibly a permit.

The additional MDUs on our list of unserved locations are based on the *property's location in census tracts with very high levels of poverty and/or very low levels of connectivity*. The source data used to identify the MDUs on the list come from the American Community Survey, coupled with data from the Department of Housing and Urban Development (HUD) and commercially-available real estate databases.¹⁸ These additional data sources give ample evidence that the

¹⁷ MDF and IDF are industry standard designations for racks of networking equipment, or switches, that help distribute the network throughout the property. If outdated they will not handle a high enough capacity to distribute the required bandwidth to each unit regardless of how large the backhaul signal coming into the property.

¹⁸ This data was analyzed and compiled by research and engineering teams at EducationSuperHighway (ESH) and provided to the state at no cost. ESH sourced proprietary third-party real estate data and combined them with HUD location datasets.

universe of unserved locations as defined in the NOFO span far beyond simply those defined as unserved and underserved in the FCC's National Broadband Map.

By expanding the universe of unserved locations to include all MDUs in census tracts with both high poverty rates and high numbers of unconnected households, DTI will be able to prioritize MDUs that have a high probability of meeting the BEAD prioritization requirement of having "a substantial share of unserved households" judging by the sheer numbers of those that are estimated not to be served. To determine whether there is a "substantial share of unserved households" in an MDU, unit level availability data is needed. As the current National Broadband Map does not classify households at the unit level, their true classification is unknown; therefore, DTI considers these specified MDUs as unserved until they are successfully challenged as served.

DTI will administer area and MDU 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 will be triggered if there are challenges to six or more broadband serviceable locations using a particular technology and a single provider within a census block group.

An MDU challenge will require challenges by at least three units or 10 percent 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 will be 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 will be treated separately because they are likely to have different availability and performance.

Area challenges can 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 HFC infrastructure or customer subscribers. For fixed wireless service, the challenge must be rebutted with representative, random, samples of the area in contention, but no fewer than 10 data points in which the provider demonstrates service availability and speed (e.g., with a mobile test unit).¹⁹

¹⁹ 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.

Speed test requirements

DTI will accept speed tests as evidence for substantiating challenges and rebuttals. Each speed test must consist of three measurements, taken on different days. The State may utilize the template of the Connect America Fund, WC Docket No. 10-90, Order, 33 FCC Rcd 6509 (WCB/WTB/OET 2018) – Performance Measures Order. 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), ONT (for FTTH), or fixed wireless subscriber module
- 2 A reading of the speed test available from within the residential gateway web interface
- 3 A reading of the speed test found on the service provider’s web page
- 4 A speed test performed on a laptop or desktop computer within immediate proximity of the residential gateway, using speedtest.net or other Ookla-powered front ends or M-Lab’s speed test services

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 to which the customer subscribes (e.g., a copy of the customer’s last invoice)
- An agreement, using an online form provided by DTI, that grants access to these information elements to DTI, 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 or underserved. 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 rule²⁰, 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 p.m. and 11 p.m. local time will be considered as evidence for a challenge rebuttal.

Transparency plan

To ensure that the challenge process is transparent and open to public and stakeholder scrutiny, DTI 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.

DTI 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

²⁰ 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.

governments, nonprofit organizations, and internet service providers. Relevant stakeholders can [sign up on DTI's website](#)²¹ for the Broadband Office's newsletter, which will disseminate information about the challenge process. They can engage with DTI through a designated email address: broadband@delaware.gov. Providers will be notified of challenges through email notification.

Beyond actively engaging relevant stakeholders, DTI 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)
- A summary of the challenge, including whether a provider submitted a rebuttal

DTI 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, DTI 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.

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

²¹ <https://broadband.delaware.gov/pages/index.shtml?dc=community>.

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Appendix 3: Location IDs of all underserved locations*

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Appendix 5: List of federal and State programs analyzed to remove enforceable commitments from the locations eligible for BEAD funding

**Will be publicly available when the final version of this document is published after consideration of public comments.*

Appendix 1: Descriptions of existing funding for broadband in Delaware

| Source | Purpose | Total | Expended | Available |
|---|--|-----------------|-----------------|-----------|
| American Rescue Plan Act | Delaware Broadband Infrastructure Grant Program | \$43,000,000.00 | 43,000,000.00 | \$0 |
| Coronavirus Aid, Relief, and Economic Security Act | Connect Delaware Program – construct broadband infrastructure (437 installations) and acquire broadband equipment and services for low-income students | \$20,000,000.00 | \$20,000,000.00 | \$0 |

Appendix 5: Federal Programs for Review

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|--|
| Rural Digital Opportunity Fund (RDOF) |
| Coronavirus Aid, Relief, and Economic Security (CARES) |
| American Rescue Plan (ARPA): State and Local Fiscal Recovery Funds |