INTERNET FOR ALL

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BROADBAND EQUITY ACCESS AND DEVELOPMENT

INITIAL PROPOSAL VOL. 1 APPROVED 4.17.24

INTERNET FOR ALL

GUAM

Office of Infrastructure Policy and Development
October, 2023

U.S. Department of Commerce

National Telecommunications and Information Administration

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Internet For All

Introduction

Buenas yan Håfa Adai! Welcome to the initial proposal presented by Guam's Office of Infrastructure Policy and Development (OIPD). This proposal serves as the first volume in a two-part strategic plan aimed at mapping out Guam's digital future for the next five years. Our ambition is clear-cut: to ensure that every resident of Guam, irrespective of their geographic location or economic standing, has the ability to connect to free high-speed public internet or an affordable private broadband service.

Our vision is Connectivity for All, and this proposal is designed to articulate the roadmap to that vision. It outlines comprehensive strategies, objectives, and tactics to bridge digital divides, strengthen infrastructure, and align with the standards set by the Broadband Equity, Access, and Deployment (BEAD) program. This proposal aims to encapsulate every facet required to transform our ambition into reality.

We invite you to review this initial proposal, which will soon be followed by a second volume containing further details and technical specifications. We value your input and encourage public comment as we collaboratively shape a digital future for Guam that is both inclusive and forward-looking.

Let's come together to build a connected Guam for everyone. We appreciate your involvement in this crucial endeavor.

1.1 Existing Broadband Funding

Table 1: Broadband Funding

Source	Description	Total	Expended	Available
USDA	Reconnect 3	$29,767,35.20	Unknown	$29,767,35.20
NTIA	Broadband Equity Access and Deployment Planning Grant	$1,250,000.00	$192,582.72	$1,057,417.88
NTIA	Digital Equity Planning Grant	$150,000.00	$34,561.12	115,438.88
NTIA	Broadband Infrastructure program	$12,770,692.18	$1,355,648.64	$11,415,043.54
NTIA	BEAD (not inclusive of planning funds)	$155,581,733.59	$192,588.72	$155,389,144.87
FCC	Affordable Connectivity Program Outreach Round 2	$383,586.00	$10,387.33	$373,198.67
USDT	Captol Projects Fund (None Allocated to Broadband)	$ 7,100,000.00	0	$7,100,000.00
USDT	SLFRF (None allocated to broadband)	$528,985,904.00	$309,429,444.00	$219,556,460.00
USDA	Reconnect 3	$29,767,35.20	Unknown	$29,767,35.20

1.2 Unserved/Underserved

Unserved and Underserved Locations:
Unserved means service under 25 Mbps down, 3 Mbps up, and sub-100 ms latency. Another definition of unserved is not getting the broadband service you pay for or if you cannot afford it at all. Recommendations for improving broadband to unserved and underserved locations and addressing Community Anchor Institutions (CAIs) needs are welcome. We intend to take a community-centered approach, prioritizing technical requirements and existing infrastructure. Post-allocation, we will determine our challenge process and our mapped priorities. There is a need to focus on community needs, education, access, and affordability, considering the actual situation in Guam, not merely what is shown in potentially faulty maps.

01.02.03 National Broadband Map Publication Date : 2023-12-13

unserved:https://docs.google.com/spreadsheets/d/1hqJMBbbbHxuI27BpIpeHQdraoTYraiPYO53pI4vPn0E/edit?usp=sharing

underserved:https://docs.google.com/spreadsheets/d/17trjkaqBSqJbPtUT5oJz5pAY0Zhb2HucfRI6v8TG7E4/edit?usp=sharing

1.3 Community Anchor Institutions

1.3.1 CAI Statutory Definition

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

In Guam, the definition and categorization of Community Anchor Institutions (CAIs) are meticulously aligned with the statutory guidelines provided by the National Telecommunications and Information Agency (NTIA), while also being tailored to address the unique needs of the island's community. This alignment and customization are key in ensuring that Guam's CAIs not only comply with federal standards but also effectively serve the local population.

1. **Statutory Alignment**: The NTIA defines CAIs as entities that facilitate greater use of broadband service by vulnerable populations, including schools, libraries, health clinics, public safety entities, and other organizations serving low-income individuals, children, and the aged. Guam's definition of CAIs adheres to this framework by including traditional entities like schools and libraries, which are fundamental in providing educational resources and internet access to students, including those from low-income backgrounds. Medical facilities in Guam align with health clinics and hospitals in the NTIA definition, serving critical healthcare and telemedicine needs, especially for aged and vulnerable populations.

2. **Public Safety and First Responders**: Recognizing the importance of public safety, Guam includes first responder locations such as fire stations, police stations, and emergency medical service facilities as CAIs. This inclusion aligns with the NTIA's emphasis on public safety entities as CAIs, acknowledging their crucial role in ensuring community safety and well-being.

3. **Cultural and Community Focus**: Expanding beyond the NTIA's traditional scope, Guam includes cultural heritage centers and community resource centers. These institutions, while not explicitly mentioned in the NTIA guidelines, serve the public in significant ways. They align with the statute's spirit by promoting cultural preservation and providing community services, often to vulnerable populations.

4. **Tourism-Related Institutions**: In a unique adaptation, Guam designates key travel and economic hubs like airports and seaports as CAIs. This adaptation is justifiable under the NTIA guidelines as these locations serve public safety functions, are essential for medical transport, food supply and support customs and immigration law enforcement. They are vital in a remote island context like Guam, where connectivity and access are crucial for both residents and visitors.

5. **Technology and Connectivity Needs**: All these institutions, whether traditional or uniquely defined by Guam, require reliable broadband connectivity to effectively provide their services. This necessity aligns with the NTIA's focus on enhancing broadband usage among vulnerable groups. By ensuring these institutions have adequate digital infrastructure, Guam adheres to the overarching goal of the NTIA to promote digital inclusion and connectivity, especially in underserved areas.

In summary, Guam's approach to defining CAIs aligns with NTIA's statutory guidelines by including traditional institutions while also expanding the definition to encompass entities unique to the island's needs and context. This approach ensures comprehensive digital inclusion and connectivity across the community, in line with federal objectives and local priorities.

1. **Schools (GDOE Facilities and Private Schools)**: These institutions are foundational in Guam's remote setting, providing vital educational resources and internet access. They play a crucial role in bridging the digital divide, particularly for minority and low-income students, ensuring equitable access to education.

2. **Libraries**: More than just repositories of books, libraries in Guam are lifelines for information and digital literacy. In a remote island context, they become critical access points for the community, especially for those who lack home internet.

3. **Health Clinics, Health Centers, Hospitals, and Other Medical Providers (Medical Facilities)**: These facilities are essential in providing healthcare services in Guam, where remoteness can impact access to healthcare. They are particularly vital for telemedicine services, crucial for aged and minority populations.

4. **Public Safety Entities (Public Safety Facilities)**: In Guam's unique geographic context, public safety facilities are the backbone of community safety. They are essential for emergency response and law enforcement, providing a sense of security in remote and minority communities.

5. **Institutions of Higher Education (Colleges/Universities)**: These institutions are key to higher learning and research in Guam, offering essential resources and internet access. They play a pivotal role in empowering minority students and enhancing educational opportunities in a remote island setting.

6. **Public Housing Organizations (Senior/Community Centers)**: These centers are vital in providing social support and health services, particularly for aged and low-income individuals in minority communities. In Guam, they are crucial in fostering community engagement and inclusivity.

7. **Community Support Organizations**:

- **Daycare Centers and After-School Service Organizations**: Essential for supporting children in Guam, providing educational and recreational activities, crucial in a remote island community.
- **Food Banks and Homeless Kitchens**: Critical in addressing food insecurity, these organizations are a lifeline for low-income and minority populations in Guam.
- **Military Family Services**: Provide indispensable support to military families, including minority and low-income groups, in a region where military presence is significant.
- **Community Resource Centers**: Serve as vital hubs for community services and resources, aiding vulnerable and minority populations in remote areas of Guam.
- **Child Support & Advocacy/Shelters**: Protect and support vulnerable children, focusing on the needs of minority communities in the unique context of Guam.
- **Shelters (including Foster Child & Family Support Centers)**: Provide essential services to vulnerable populations, including shelter, education, and internet access for job searches and social services.

- **Public Parks**: These spaces offer more than recreation; they provide free public Wi-Fi, a crucial service for low-income and minority individuals in remote areas of Guam, ensuring connectivity and access to digital resources.

- **Churches**: Act as community centers in Guam, offering various services, including internet access. They play an integral role in supporting minority communities, often acting as gathering points for social support.

- **Cultural Heritage and Learning Centers**: These centers are key in preserving Guam's rich cultural heritage. They provide educational programs and resources, often requiring internet for research and digital exhibitions, and are vital for educating both locals and visitors about the island's unique culture.

- **Airports and Port Authority**: In a remote island community like Guam, these facilities are not just transit points but critical for public safety and connectivity. They are used extensively for medical transport, support customs and immigration law enforcement, and play a pivotal role in sustaining the local economy.

About the CAI Database and Process

The Guam Office of Infrastructure Policy and Development (OIPD) is currently developing a database with data dimensions for each Organization and each Location relevant to the agreed upon definition.

One Organization is presumed to have one or more Locations in the CAIs Database model. Aspects of each Community Anchor Institution currently being collected by the Office include:

Organization Dimension:

- Name of entity
- Categorization according to perceived mission

Location Dimension:

- Local "Branch" Name
- Physical address where available
- Geopositioning data
- Service data, where available, from the FCC National Broadband Map

During the Verification process, the Office will coordinate with other government agencies and the Governor's Office as required, in order to settle on specific guidelines for what will and will not be considered a Community Anchor Institution. The minimal effect of these guidelines will be to confirm which entities will be eligible for funding consideration for Broadband (and possibly Digital Equity) programs.

Survey

As the list of Community Anchor institutions is established, the Office of Infrastructure Policy and Development continues to determine which Community Anchor Institutions are served with Gigabit Access. Along with basic institutional information, the form will include survey questions such as:

- How much internet bandwidth does your organization have at this location, total?
- What type of service (if any) does your organization have at this location?
- How much does your organization pay for internet service each month? Annually?
- Which internet service provider does your institution utilize?
- Does your organization offer free wireless internet to the public or visitors/users from the public?

The list will be adjusted as time goes on as we receive feedback from the surveyed population. The survey for single-location CAIs will be delivered as a Google form to all listed institutions and is pictured below.

Value of Community Anchor Institution Data beyond Broadband

Funding Opportunities: Having a full and well-maintained database of Community Anchor Institutions will make Guam agencies and institutions like the Office of Infrastructure Policy and Development more capable of planning for and responding to new funding opportunities as they come available. The database can be especially critical in identifying and developing partnership opportunities based upon constituency and geographic alignments.

Information Technology/Cybersecurity: Information Technology organizations like Guam's OTECH frequently need to engage with CAIs in order to deliver notices and advice, communicate the availability of new service classes or Information Technology resources, and advise on current cybersecurity conditions. While in some states the office of Information Technology manages its own database of CAIs, it will make sense in Guam for the list to be made public through an organization that regularly issues data communications for the public.

Public Safety: Since many CAIs have some role to play in sheltering the community and keeping residents safe, public safety officers and organizations will benefit from having a list of CAIs available to improve their work. For example, a Guam Police or Attorney General's office team seeking to engage the public in outreach about a problematic trend in public safety might turn to the CAIs database in order to get a good feel for where they might best be able to engage the public. Or, during an emergency, local and national crisis response teams might use the available database to publish public safety evacuation and shelter maps. Making these processes more efficient and thorough could have a tangible impact on real public safety.

Public Transparency: Having a clean, thoughtfully developed, and well-communicated database will serve the public through increased transparency of which organizations are or are formally considered as Community Anchor Institutions. Such a database may provoke public comment and response, which itself will be valuable in maintaining and refining data, and increasing public confidence in government processes. To date, we have identified 200+ anchor institutions throughout the island.

1.3.2 Eligible CAI List[1]

https://docs.google.com/spreadsheets/d/1QXktlsZ0_nWs5HQVamI7mJnQkRMG_erumdFY0q_2FGc/edit?usp=sharing

1.4 Challenge Process (Requirement 7)

1.4.1 NTIA BEAD Model Challenge Process Adoption

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

NTIA BEAD Model Challenge Process Answer:

Eligible Entities must indicate their plan to adopt the NTIA BEAD Model Challenge Process answer in question 1.4.1 by selecting "Yes."

☒ Yes
☐ No

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

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

We have adopted a Challenge Process Model with specific modifications, ensuring that the Broadband Equity, Access, and Deployment (BEAD) program effectively targets the actual broadband needs in Guam.
This model is designed to reflect data that may not be currently represented in existing broadband service maps.
1. Adoption of Challenge Process Model:
The model allows for direct community input, feedback from service providers, and detailed data analysis. This participatory approach ensures that all stakeholders have a voice in identifying areas inaccurately depicted in current broadband maps, fostering a sense of community ownership and trust in the process.

Modifications to Reflect Unrepresented Data:

[1] The Eligible Entity must submit a CSV file with a list of eligible CAI locations identified within the jurisdiction of the Eligible Entity, using the data format provided by NTIA. The Eligible Entity must complete all mandatory fields in the file named "cai.csv" as outlined in Appendix A of the NTIA BEAD Challenge Process Policy Notice. Address information must identify the physical location of the community anchor institutions, not the administrative location. For example, the address should describe the location of the school building, not that of the board of education administrative building.

Pre-Challenge Speed Test 01.04.02.a: Optional Module 3 (Speed Test Modification) addressed on page 11, section 1.1.3 and 1.1.4: 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. As described below, such speed tests can be rebutted by the provider during the rebuttal period.

Treating DSL and Copper Service Areas as 'Underserved': Recognizing that DSL and copper infrastructure, despite being labeled as 'served' on broadband maps, often fail to provide adequate and reliable broadband services, we classify these areas as 'underserved'. This proactive stance acknowledges the need for modern, high-quality internet services, reflecting our commitment to phasing out outdated technologies and championing future-proof broadband solutions.

Reclassification Based on Speed Test Data: For locations reported as 'served' but actually experiencing substandard broadband speeds, we rely on rigorous speed test methodologies. These tests offer concrete, empirical evidence of the actual service quality, allowing us to make informed decisions about reclassification. By grounding our approach in data-driven insights, we ensure that resources are allocated effectively to enhance broadband services where they are most needed.

Community and Stakeholder Speed Tests as Valuable Inputs:
Speed tests conducted by community members and stakeholders are invaluable in providing real-time data about broadband service quality. This grassroots-level involvement is crucial for a holistic understanding of broadband service across Guam. It empowers communities by giving them a direct role in shaping the broadband landscape and ensuring that their needs are adequately met.

Community and Stakeholder Engagement:
Engaging with the community and stakeholders is a cornerstone of our model. This engagement is not only about gathering data but also about building relationships and trust within the community. It ensures that the broadband map modifications are reflective of the actual experiences and needs of Guam’s residents, fostering a transparent and collaborative environment.

Pre-Challenge Modification for Latency:
Guam faces a unique challenge concerning latency in its broadband infrastructure. The substantial distance between Guam and the contiguous United States can result in increased latency for internet traffic over this route, which may have adverse effects on

latency-sensitive applications and user experiences. Latency, in this context, refers to the time it takes for a broadband packet to travel between two points, often measured as the round-trip time for data transmission and acknowledgment receipt, considering the interactive nature of internet traffic.
The Federal Communications Commission (FCC) does not specify a methodology for measuring latency in data submitted to the National Broadband Map, which subsequently feeds into the NTIA BEAD Eligible Entity Planning Toolkit (EEPT). Some internet service providers may report all their broadband services in Guam as "high latency," primarily due to the considerable distance between Guam and the contiguous United States, rather than congestion on local access networks or other factors. However, the BEAD Notice of Funding Opportunity (NOFO) does prescribe a methodology for measuring latency in BEAD-funded broadband deployment projects, as outlined in the BEAD NOFO at 64, Section IV.C.2.a.i. Under these performance metrics, providers serving non-contiguous areas greater than 500 air miles from an FCC-designated Internet Exchange Point (IXP) may conduct latency testing between customer premises and the point where traffic is aggregated for transport to the continental U.S. Applying this methodology to internet traffic in Guam is likely to result in "latency less than or equal to 100 milliseconds" for all unserved and underserved locations where high latency conditions primarily arise from the distance from the continental United States. This latency measurement standard is adopted by the Office of Infrastructure Policy and Development (OIPD) for BEAD Program implementation in Guam. Our objective is to initiate the challenge process with an accurate list of locations classified as served, unserved, and underserved, utilizing the measurement methodologies applicable to the BEAD Program. To achieve this, we propose a pre-challenge process modification designating all broadband services in Guam as low latency, aligning with the BEAD NOFO's latency determination methodology described above. Failing to apply this latency methodology could lead to mischaracterization, inadequate prioritization of BEAD deployment funding for unserved and underserved areas, and hinder potential challenge process participants from focusing their efforts based on an accurate list of served, unserved, and underserved locations. This would be contrary to the policy goals of our office and NTIA.

It is essential to note that this pre-challenge process modification for latency may be subject to challenge, and any such challenge can be rebutted by the provider. If testing reveals that data transmitted round trip between customer premises and the point where traffic is aggregated for transport to the continental U.S. exceeds 100 ms, it would provide a valid basis for a latency challenge during the Challenge Process. The outcome of such a challenge would depend on meeting the evidence requirements, the information presented in any rebuttal, and other relevant factors in accordance with the rules established for our Challenge Process.

By adopting these modifications and justifications, we ensure that our broadband coverage map is a true reflection of the community's needs, leading to more effective and equitable broadband service improvements across Guam. This approach not only aligns with the objectives of the BEAD program but also demonstrates our commitment to a community-centric and data-driven strategy for enhancing digital infrastructure.

01.04.03 Eligible Entity Planning Toolkit

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

01.04.04 Enforceable Commitments Identification

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

The broadband office will enumerate 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 IIJA § 60105. 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. Territory and local data collections of existing enforceable commitments. The broadband office will make a best effort to create a list of broadband serviceable locations (BSLs) subject to enforceable commitments based on 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.

The broadband office will review its repository of existing local broadband grant programs to validate the upload and download speeds of existing binding agreements to deploy broadband infrastructure. In situations in which the territory 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 speeds deployed. The broadband office drew on these provider agreements, along with its existing database on state and local broadband funding programs' binding agreements, to determine the set of territorial and local enforceable commitments. * The broadband funding map published by FCC pursuant to IIJA § 60105 is referred to as the "FCC Broadband Funding Map." * Guidance on the required format for the locations funded by state or territorial and local programs will be specified at a later date, in coordination with FCC.

01.04.05 Enforceable Commitments List

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

Enforceable Commitments List												
program_id	project_id	project	tranche	fund_ob	project_cost	proj_start	proj_end	cadence	fund_awarded	fund_expended	fund_loan	fund_grant
6	2927	Teleguam Holdings, LLC-GU1701-A73	Round 3 (RUS-REC-2022)	29767352	29767352	9/13/22	12/31/28	4	29767352	0	0	29767352
11	2603	Government of Guam Department of Administration	2 projects; 2 providers	12770692	12911687	3/1/22	2/28/25	3	12770692	17976		

Deduplication of Funding

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

NTIA BEAD Model Challenge Process Answer:

The BEAD Eligible Entity Planning Toolkit is a collection of NTIA-developed technology tools that, among other things, overlay multiple data sources to capture federal, state, and local enforceable commitments. Eligible Entities adopting the Model must indicate their plan to use the BEAD Eligible Entity Planning Toolkit by selecting "Yes."

☒ Yes
☐ No

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

NTIA BEAD Model Challenge Process Answer:

The broadband office 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.[2]

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

2. Data sets from state broadband deployment programs that rely on funds from the Capital Projects Fund and the State and Local Fiscal Recovery Funds administered by the U.S. Treasury.
3. Territory and local data collections of existing enforceable commitments.

The broadband office 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.[3]

The broadband office 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 Territory 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.

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

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

Example Response:

If adopting the NTIA BEAD Model Challenge Process, Eligible Entities must list any state or territorial and local programs that will be used to identify existing enforceable commitments. Eligible Entities should use the example attachment to guide the format of the file submitted for 1.4.5.

Deduplication of Funding Programs:
https://docs.google.com/spreadsheets/d/1biCXmOPWJT1RW5u6GDU7uEZWB7Wp-ofuXjegstBO6Gc/edit?usp=sharing

Challenge Process Design

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

NTIA BEAD Model Challenge Process Answer: Yes

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.

[3] Guidance on the required format for the locations funded by state or territorial and local programs will be specified at a later date, in coordination with FCC.

Permissible Challenges

The broadband office 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 90 calendar days[4]:

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.
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.

    i) **Minimum Level of Evidence Sufficient to Establish a Challenge:** 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

[4] 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.

NTIA BEAD Challenge Process Policy Notice and the document is unredacted and dated.

b) **Timeline**: Challengers will have 30 calendar days to submit a challenge from the time the initial list of unserved and underserved locations, community anchor institutions, and existing enforceable commitments are posted.

c) **Rebuttal Phase**: Only the challenged service provider may rebut the reclassification of a location or area
d) with evidence, causing the location or locations to enter the "disputed" state. If a challenge that meets the
e) minimum level of evidence is not rebutted, the challenge is sustained. A provider may also agree with the
f) challenge and thus transition the location to the "sustained" state. Providers must regularly check the
g) challenge portal notification method (e.g., email) for notifications of submitted challenges.
h) Timeline: Providers will have 30 calendar days from notification of a challenge to provide rebuttal information
i) to the broadband office.
j) **Timeline**: Providers will have 30 calendar days from notification of a challenge to provide rebuttal information to the broadband office.

3) **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 30 calendar days of the challenge rebuttal. Reviews will occur on a rolling basis, as challenges and rebuttals are received. TENTATIVE MAY 1.

NOTE: Dates may change based on a number of factors, including but not limited to approval date of IPV1, and Procurement of Challenge Process Contractors.

[Optional Speed Test Module] Speed Test Requirements

The broadband office will accept speed tests as evidence for substantiating challenges and rebuttals. Each speed test consists of three measurements, taken on different days. Speed tests cannot predate the beginning of the challenge period by more than 60 calendar days. Speed tests can take the following forms: 3. A reading of the physical line speed provided by the residential gateway, (i.e., DSL modem, cable modem (for HFC), 4. ONT (for FTTH), or fixed wireless subscriber module. 5. A reading of the speed test available from within the residential gateway web interface. 6. A reading of the speed test found on the service provider's web page. 7. A speed test performed on a laptop or desktop computer within immediate proximity of the residential gateway, using a [NTIA-approved speed test application listed in Appendix B.] 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. Since speed tests can only be used to change the status of locations from "served" to "underserved", only speed tests of subscribers that subscribe to tiers at 100/20 Mbps and above are considered. If the household subscribes to a speed tier of 100/20 Mbps or higher and the speed test yields a speed below 100/20 Mbps, this service offering will not count towards the location being considered served. However, even if a particular service offering is not meeting the speed threshold, the eligibility status of the location may not change. For example, if a location is served by 100 Mbps licensed fixed wireless and 500 Mbps fiber, conducting a speed test on the fixed wireless network that shows an effective speed of 70 Mbps does not change the status of the location from served to underserved. A service provider may rebut an area speed test challenge by providing speed tests, in the manner described above, for at least 10% of the customers in the challenged area. The customers must be randomly selected. Providers must apply the 80/80 rule[1], 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.[5]

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 installation date within 10 business days of a request.[6] • A letter or email dated within the	• 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

[5] 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.

[6] 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."

			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.	location.
S	Speed	The actual speed of the service tier falls below the unserved or underserved thresholds.[7]	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.[8]
L	Latency	The round-trip latency of the broadband service exceeds 100 ms[9].	Speed test by subscriber, showing the excessive latency.	Provider has countervailing speed test evidence showing latency at or below 100 ms, e.g., from their own network management system or the CAF performance measurements.[10]

[7] 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.

[8] 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.

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

[10] *Ibid*.

D	Data cap	The only service plans marketed to consumers impose an unreasonable capacity allowance ("data cap") on the consumer.[11]	• 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.

[11]. 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.

E	Enforceable Commitment	The challenger has knowledge that broadband will be deployed at this location by the date established in the deployment obligation.	Enforceable commitment by service provider (e.g., authorization letter). In the case of Tribal Lands, the challenger must submit the requisite legally binding agreement between the relevant Tribal Government and the service provider for the location(s) at issue (see Section 6.2 above).	Documentation that the provider has defaulted on the commitment or is otherwise unable to meet the commitment (e.g., is no longer a going concern).
P	Planned service	The challenger has knowledge that broadband will be deployed at this location by 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	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.

			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.	
N	Not part of enforceable commitment.	This location is in an area that is subject to an enforceable commitment to less than 100% of locations and the location is not covered by that commitment. (See BEAD NOFO at 36, n. 52.)	Declaration by service provider subject to the enforceable commitment.	
C	Location is a CAI	The location should be classified as a CAI.	Evidence that the location falls within the definitions of CAIs set by the Eligible Entity.[12]	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.

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

Area and MDU Challenge

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 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], where the provider has to demonstrate service availability and speed (e.g., with a mobile test unit).[13]

Speed Test Requirements

The TBO 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),
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 a speed test application approved by the Eligible Entity or speed test application from the list of applications approved by NTIA, or a peer-reviewed speed test developed by a research group.

Each speed test measurement must include:

- The time and date the speed test was conducted.

[13] 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.

- 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, which 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 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 rule[14], 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.

[14] 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.

1.5 Volume I Public Comment

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

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

Public comments were submitted through a diverse set of channels to ensure maximum inclusivity: Submission Portal: A user-friendly portal on the official website was utilized.

Email: A dedicated email address was available for those who preferred this medium.

Social Media: Engagement through specific hashtags and direct messaging options was encouraged.

In-person Meetings and Town Halls: These were held for direct community engagement. Through these multifaceted outreach activities, we were committed to making the Initial Proposal not just an idea, but a community endeavor that helped shape a connected and inclusive future for all of Guam.

The public comment period has now concluded. The public comment period commenced November 1, 2023 and ended Nov. 30.

During the Volume I public comment period, feedback was received from key stakeholders including IBEW, GTA, and IT&E, focusing on labor standards, broadband data accuracy, unserved/underserved definitions, and the challenge process. The Eligible Entity responded by considering enhancements to labor practice priorities, incorporating accurate broadband funding data, revising definitions based on stakeholder insights, and refining the challenge process for greater transparency and efficiency. These adjustments demonstrate a commitment to stakeholder collaboration and a thorough approach to developing a comprehensive and effective broadband expansion strategy for Guam, ensuring the proposal reflects the needs and expertise of the community and industry.