Initial Proposal

North Carolina

Volume I

SUBMITTED TO NTIA

Dec. 22, 2023

This Draft Initial Proposal will go through a number of revisions in the coming months. Prior to submitting the Initial Proposal to the National Telecommunications and Information Administration (NTIA) in December, the N.C. Department of Information Technology (NCDIT) revised the draft, in its discretion, pursuant to feedback received during the public comment period. The Initial Proposal will undergo a "curing" process with NTIA in 2024, where NTIA may require NCDIT to make changes. Federal guidelines relevant to this Initial Proposal are still under development, which may result in additional modifications, and any changes to North Carolina law, such as changes necessary to align the state's programs with BEAD requirements, will need to be reflected as well.

Existing Broadband Funding (Requirement 3)

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

Source *Name of federal agency/ other source of funding.*	**Purpose** *Indicate whether the broadband funding program was federal, state/territory, or locally funded.*	**Total** *Total amount of funds awarded by the listed source.*	**Obligated** *Total amount of funds obligated to date.*	**Available** *Total amount of remaining funds available to date.*
U.S. Treasury - ARPA SLFRF	GREAT Grant federally funded program	$350,000,000	$350,000,000	0
State Capital Infrastructure Fund	GREAT Grant program state funded program	$50,623,710	0	$50,623,710
U.S. Treasury - ARPA SLFRF	Completing Access to Broadband program	$212,939,144	$22,000,000	$190,939,144
U.S. Treasury - Capital Projects Fund	Completing Access to Broadband program	$187,060,856	0	$187,060,856
U.S. Treasury - ARPA SLFRF	Broadband Pole Replacement program	$100,000,000	0	$100,000,000
U.S. Treasury - ARPA SLFRF	Digital Literacy Grant program	$50,000,000	$14,000,000	$36,000,000
U.S. Treasury - ARPA SLFRF	Mapping- comprehensive fabric and cost-modeling	$1,000,000	$202,775	$797,225
U.S. Treasury - Capital Projects Fund	Stop-Gap Solutions program	$86,522,303	0	$86,522,303
NTIA IIJA BEAD	BEAD Planning federal grant	$5,000,000	$385,898	$4,614,102
NTIA IIJA Digital Equity	Digital Equity Planning federal grant	$1,415,614	0	$1,415,614
U.S. Dept. of Agriculture	ReConnect	$48,015,482		
Federal Communications Commission	Rural Digital Opportunity Fund	$166,580,442		
NTIA	Broadband Infrastructure Program	$29,985,800		
NTIA	Tribal Broadband Connectivity Program	$500,000		
NTIA	Middle Mile	$11,186,162		
N.C. School Connectivity Fund	Provides match to K-12 schools participating in the federal E-rate program	$32,000,000 per year		

**As of Sept. 30, 2023*

Community Anchor Institutions (Requirement 6)

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

Based on the statutory definition of "community anchor institution" as defined in 47 USC 1702 (a)(2)(E), the N.C. Department of Information Technology (NCDIT) Division of Broadband and Digital Equity (the division) interpreted the definition of "community anchor institution" to mean a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization (including any public housing agency, HUD-assisted housing organization, or tribal housing organization), or community support organization that facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.

Based on the statutory definition above, the following criteria were used to determine the inclusion or exclusion of community support organizations not specifically listed in 47 USC 1702(a)(2)(E): Whether the community support organization facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals. This division also considers persons with disabilities, persons in rural communities with related barriers to infrastructure, and persons in communities with indicators of economic stress to be part of the vulnerable populations described above. Over decades of broadband development work, the division has observed that greater use of broadband is facilitated by CAIs (both directly and indirectly) in an increasing number of ways, particularly since the pandemic. Many CAIs directly provide resources that are easily recognized as components of digital inclusion like public Wi-Fi access, digital skills training, computer access or device lending, hotspot lending, outreach about the nationwide Affordable Connectivity Program and custom technical assistance. The greater use of broadband is also indirectly facilitated by CAIs achieving their diverse core missions - engaging and serving vulnerable populations, equipping them with basic resources like skills, health, education, enrichment, civic involvement, and offering entry points into a supportive community landscape. For example, by helping an unhoused person find housing, a CAI has given that person a secure, dry place to store and use a device and an address at which to receive an affordable tier of broadband. CAIs serve unique roles that impact their surrounding communities by actively elevating vulnerable populations into a better position to leverage and reap the benefits of broadband.

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

- **Schools**: K-12 schools include all K-12 schools participating in the Federal Communications Commission (FCC) E-Rate program or have a National Center for Education Statistics (NCES) ID in the categories "public schools" or "private schools", identified in partnership with the N.C. Department of Public Instruction, and the N.C. Department of Administration Division of Non-Public Education. This category also includes central county public school district offices, identified by MCNC, the operator of North Carolina's Research and Education Network (NCREN). These district offices serve

as the physical nodes from which infrastructure and bandwidth are served to the individual school sites of each county.

- **Libraries**: Includes all libraries participating in the FCC E-Rate program and all central and branch libraries as identified in partnership with the State Library of North Carolina.
- **Health clinic, health center, hospital, or other medical providers**: This list includes hospitals, public health departments, federally qualified health centers, free and charitable clinics, rural health centers, all institutions that have a Centers for Medicare and Medicaid Services certification number, and other healthcare facilities as identified in partnership with the N.C. Department of Health and Human Services (NCDHHS), and the N.C. Telehealth Network Association.
- **Public safety entity**: The list includes entities such as fire houses, emergency medical service stations, police stations, and public safety answering points (PSAP), based on records maintained by the Eligible Entity and statewide divisions of the N.C. Department of Public Safety, including Law Enforcement and Emergency Management Services. Fire station locations are identified with the help of an online mapped inventory maintained by the N.C. Office of the State Fire Marshall and hosted by the N.C. Center for Geographic Information Analysis.[1] The list of public safety answering points (PSAPs) includes all PSAPs in the FCC PSAP registry [911 Master PSAP Registry | Federal Communications Commission (fcc.gov)].
- **Institutions of higher education:** Institutions of higher education include all institutions that have an NCES ID in the category "college", including junior colleges, community colleges, minority serving institutions, historically black colleges and universities, other universities, or other educational institutions. This category also includes identified nonprofit or university-affiliated research institutes. Data on the main campuses and remote/satellite campuses of higher education are identified with assistance from the N.C. Community College System, the University of North Carolina System, and N.C. Independent Colleges and Universities.
- **Public housing organizations**: Public housing organizations were identified using publicly available data published online by the U.S. Department of Housing and Urban Development.[2] The nonprofit organizations Public and Affordable Housing Research Corporation and National Low-Income Housing Coalition maintain a database of nationwide public housing units at the National Housing Preservation Database. Public housing community centers or community rooms that can be identified and confirmed to provide public Wi-Fi access or other means of furthering the use of broadband by residents will also be eligible for inclusion as a CAI. Individual housing authorities and other sources may be engaged to identify these.
- **Community support organizations:** The Eligible Entity includes any organizations that facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals. The Eligible Entity includes the following subcategories of community anchor institutions in this category:
    a. **Senior centers and job training centers.** The Department of Labor maintains a database of "American Job Training" training centers, established as part of the Workforce Investment Act, and reauthorized in the Workforce Innovation and Opportunities Act of 2014. The database can be accessed at the American Job

[1] https://www.nconemap.gov/datasets/6f4fe0c55b0d4cbb92877e461d698c29_0/about
[2] https://hudgis-hud.opendata.arcgis.com/datasets/HUD::public-housing-authorities/about

Center Finder.[3] The National Council on Aging is a potential resource for identifying senior centers.[4] Senior center locations are being identified with assistance from the Office of Aging and Adult Services within the NCDHHS.

b. **Government Facilities**. Federal, state, local, or tribal government sites that serve the interests of vulnerable populations and directly or indirectly further their use of broadband will be included, as identified by respective government agencies and the division's partnering advocacy organizations that have knowledge about the services available to vulnerable populations from these sites. This may include government owned community centers that serve vulnerable populations.
c. **Welcome centers and visitor centers.** Identified in partnership with the N.C. Department of Transportation (NCDOT) and the N.C. Department of Commerce, and with help from local chambers of commerce, local convention and visitor bureaus, and N.C. Department of Commerce. These sites often provide public Wi-Fi access for traveling individuals including covered populations, benefitting any vulnerable individuals who seek a safe, noncommercial environment in which to stop over for hours or longer, make use of free facilities, and become oriented with the area.
d. **Cultural sites.** Museums, official historical sites open to the public, zoos, and aquariums, etc., identified in partnership with help from the N.C. Department of Cultural and Natural Resources. These sites often provide public Wi-Fi access and educational engagement through digital resources like virtual tours and narrations, online maps, and in-person guides directing visitors to online resources, in multiple languages where available. Individuals representing covered populations who participated in listening sessions identified the need for more public Wi-Fi at locations such as cultural sites. Additional locally funded sites in this category can be submitted by units of local government and nonprofit partners in response to the public comment period and ongoing outreach.
e. **Agricultural institutions.** This list includes cooperative extension agencies, research farms, and field labs identified in partnership with NC State University. These locations are actively involved in the development of county-wide digital inclusion plans, and the provision of digital equity resources for farmers and farmworkers. Any United States Department of Agriculture or North Carolina Department of Agriculture sites that are found to be furthering the use of broadband by one or more vulnerable populations will also be included. Also, to be included are 112 farmers markets inventoried by the N.C. Department of Agriculture and Consumer Services. These locations support a vital part of North Carolina's rural economy, cultural heritage, and efforts to make healthy foods more accessible by expanding the digital skills and online reach of local growers and artisans, and by offering the public online access to these local growers and artisans onsite via Wi-Fi and offsite via websites and social media engagement.
f. **Correctional facilities.** This includes federal and state prisons, local jails, and juvenile detention facilities. Work camps, including camps operated seasonally, are included if they otherwise meet the definition. A federal prison is a facility operated by the Federal Bureau of Prisons for the incarceration of individuals. A state prison is a facility operated by a state, commonwealth, or territory of the

[3] https://www.careeronestop.org/localhelp/americanjobcenters/find-american-job-centers.aspx
[4] National Institute of Senior Centers

United States for the incarceration of individuals for a term usually longer than one year. A juvenile detention facility is a facility for the incarceration of those who have not yet reached the age of majority (usually 18 years old). A local jail is a locally administered facility that holds inmates beyond arraignment (usually 72 hours) and is staffed by municipal or county employees. This data was originally collected by a third-party commercial contractor that engaged approximately a dozen state and federal agencies. The division is now reaching out to these agencies, such as the N.C. Department of Adult Corrections, to update the information and establish a workflow for recurring updates. These facilities have a need for online educational and skills training tools, including, but not limited to, digital skills, digital therapeutic resources, as well as bandwidth for operational functions such as security and communications.

g. **Nonprofit agencies, service centers, and shelters.** This includes nonprofit locations that provide covered populations with critical services and resources, working directly with one or more covered populations, and providing support activities or resources that further the use of broadband in ways beneficial to populations central to the nonprofit mission of these locations. This category may include nonprofit-owned community centers that serve vulnerable populations. Information about these locations will be gathered from multiple sources, including the N.C. Department of Health and Human Services, the United Way and North Carolina 211 directory of nonprofit resources, and the division's network of collaborators and community stakeholders.
h. **Faith-based organizations.** This includes churches and other faith-based sites that engage in activities and services for their surrounding community that facilitate further and beneficial uses of broadband by one or more covered populations by providing public Wi-Fi, computer labs, and/or digital skills trainings. Residents who represented covered populations identified faith-based organizations as community anchor institutions in the listening sessions conducted to inform the BEAD and Digital Equity planning efforts. This category may include community centers that are owned by faith-based organizations and that serve vulnerable populations. These locations will be identified with assistance from NCDOT, the NCDIT Center for Geographic Information Analysis, as well as the NC State University Institute for Emerging Issues, and the N.C. Rural Economic Development Center, the latter two of which have initiatives involving the function of houses of worship as CAIs.

In each case, the Eligible Entity also draws on state, territorial, tribal, county, and municipal resources to identify additional eligible community anchor institutions that were not contained in the data sources listed above. In addition, the Eligible Entity is using the Initial Proposal and Final Proposal public comment processes to collect input on the proposed CAI processes to help ensure that all relevant institutions meeting the CAI criteria are ultimately included. The division is meeting with county leaders across the state and inviting input and the submission of data on relevant CAI locations that are unique to the area or in county-owned facilities, but not already identified in the division's data. Internet service providers and county officials are also being provided with a secure means of uploading data to the state broadband office identifying CAI locations and the maximum broadband speeds at which they are currently served. In cases where a site falls within an approved category of CAI, but due to unique circumstances has a broadband need of less than 1 Gbps symmetrical for both the present and foreseeable future. leadership for the CAI may request an exemption from the 1 Gbps symmetrical requirement for

infrastructure funding for that individual site. The Eligible Entity will review the request and upon approval, will document the explanation and remove the site from the list of CAI locations submitted in North Carolina's BEAD final proposal, but will work to ensure that the location is included in the BSL fabric and that broadband availability of at least 100 Mbps download and 20 Mbps upload is made available.

Upon careful consideration, the division has determined that the following types of locations do not align with the functional criteria defining community anchor institutions for the purposes of this work: public housing residential units and farms. These locations are a priority for ensuring high-quality connectivity, but due to some unique characteristics and needs, the division proposes that these locations could be better served by custom approaches not sufficiently afforded by CAI categorization.

Public housing residential units will more appropriately be handled as priority residences (many of which are multi-dwelling units), with the aim of establishing the availability of high-quality, mass-market service to every unit. Tracking progress for a multi-dwelling unit situation as a CAI would provide insufficient information for the division to determine what level of broadband service is available to each household. A single connection of 1Gbps to the building would be considered served under BEAD guidelines, but no information is required as to how or whether that 1Gbps is distributed among the individual households. A multi-dwelling unit (MDU) challenge, described further in this document, could provide a means of ensuring service to individual units of buildings classified as residences, but not to buildings classified as CAIs. Also, some public housing residences are single family homes or duplexes, which operate like any other residence and do not have the same bandwidth needs as a CAI.

Affordability is likely an issue for any tier of service offered to households in public housing. Affordability can be addressed in partnership with willing public housing authorities in a supplementary fashion once sufficient infrastructure is present throughout a building to ensure that residents have the option to obtain their own connection and can manage the service quality directly with their internet service provider. The alternative is to either 1) focus on the bandwidth of a single connection into the building, which may not end at a single unit (like an office), and which is considered middle-mile up to the point at which the connection is split into the separate connections representing some fraction of that original 1 Gbps into individual units or 2) provide a separate 1 Gbps symmetrical circuit to every unit of a building to satisfy the requirements to consider the building served as a CAI. The latter alternative requires a central connection into the building of many Gbps and creates a significantly greater affordability issue for individual residences. The division finds that ensuring the required 100 Mbps download and 20 Mbps upload per unit for residential units, combined with MDU challenge participation, will provide a better outcome for public housing residents.

Individual farms often operate as private residences, which can create a privacy issue for publicly mapping and tracking broadband as CAIs. Farms also may need connectivity that is wireless or mobile across large areas such as fields and pastures or connectivity that is shared with multiple key structures on the land beyond the primary residence. Given such circumstances, decentralized connectivity from multiple wireline sources and/or investing in wireless extensions of bandwidth across a farm may prove to be a more effective use of resources than a focus on a bandwidth of 1 Gbps or higher at a single primary structure on a farm. As with public housing residences, the division believes that the unique needs and challenges are best prioritized - and should be prioritized - in ways other than classifying them

as a community anchor institution. The division has collected broadband data from farms across the state and currently is working to ensure these locations are included in the national map of broadband serviceable locations (which does not track broadband information for CAIs), as well as in broadband availability challenges to the national map, broadband access plans, and digital equity outreach. The division participates in the N.C. Agricultural Digital Alliance and will continue to coordinate with leaders and stakeholders in the agricultural community to navigate toward solutions that best serve individual farms.

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

- **Engaged government agencies.** The division has reached out to multiple state agencies to understand what records are available regarding the availability of 1 Gbps broadband service for relevant community anchor institutions.
    - The division is coordinating with the Friday Institute for Educational Innovation at N.C. State University and the N.C. Department of Public Instruction to capture the actual capacity of broadband circuits to individual K-12 public schools, but it has determined that none of those locations lack access to 1 Gbps symmetrical broadband service or the minimum recommended by the State Educational Technology Directors Association in their Broadband Imperative III document[5]:
        - For districts with 1,000 or fewer students, 2.8 Mbps per user (student, teachers, and educational staff);
        - for districts with between 1,000 and 10,000 students, 2 Mbps per user; for larger districts, 1.4 Mbps per user.
    - Additionally, the division is working with the NCDHHS to determine which community anchor institutions (*e.g.*, state-run health clinics) lack 1 Gbps symmetrical broadband service. Further, the division reached out to all primary and secondary PSAPs based on the FCC 911 Master PSAP Registry to obtain 1 Gbps broadband service availability data.
    - Lastly, the division also is coordinating internally as it resides within the department leading goods and services procurement efforts to obtain availability and network connectivity needs based on existing records of procured broadband service for state-affiliated community anchor institutions.
- **Engaged relevant umbrella organizations and nonprofits.** The division engaged umbrella and nonprofit organizations that work with CAIs to coordinate and obtain 1 Gbps broadband service availability data. Specifically, the division requested information related to availability needs from the member organizations across all geographic regions. NCDIT is the carrier on record for broadband service to several major categories of CAIs on state-owned and operated facilities, so the division is coordinating internally to obtain and update broadband speed information for those CAI locations. The division has a strong working relationship with MCNC, the nonprofit operator of North Carolina's Research and Education Network which serves a significant number of CAIs. MCNC is contributing broadband connectivity information for each of the institutions it serves. The division also is requesting that other internet service providers serving one or more CAI in North Carolina share data directly with the division using a provided template and a secure means of file upload and identify the best contacts the division should reach for future data updates. Additional information about the

[5] https://www.setda.org/wp-content/uploads/2019/11/SETDA_Broadband-Imperative-III_110519.pdf

connectivity thought to be available at libraries across the state is being captured and provided by the State Library of North Carolina. Information technology support staff for NC State University are compiling and providing connectivity data for research farms, agricultural field labs, and agricultural cooperative extension agencies. The broadband office has developed a CAI broadband survey, which includes an optional speed test, and may be leveraged to supplement connectivity data for CAIs at which contracted bandwidth information is not readily available.

Using the input received, the division compiled a list of those CAIs that do not have adequate broadband service. The division will continue to collect and update CAI data until the launch of the challenge process and beyond.

Challenge Process (Requirement 7)

NTIA BEAD Model Challenge Process Adoption

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

☒ Yes

☐ No

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.

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

The division 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 receive service that is materially below 100 Mbps download and 20 Mbps upload. 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.

The division will treat locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is "served") delivered via licensed fixed wireless over mobile access networks as "underserved." This modification will better reflect the locations eligible for BEAD funding because it will avoid assumptions about service availability that is "dynamic" per telecom representatives and potentially available at one point in time but not shortly thereafter at the same address. The modification also will factor in the prioritization of light mobile traffic that takes place on these networks over uses consistent with sustained, location-based connectivity. The presence of data caps and throttling beyond a set quantity of data usage are also applicable business practices over cellular networks that limit the availability of broadband for sustained home use, compared to other technologies. The choice to designate locations with only licensed fixed wireless over a cellular network as unserved, and therefore eligible for funding, is supported by the 99.5% success rate of availability challenges for this technology category in North Carolina following the first release of FCC National Broadband Map data. This designation can be challenged or rebutted by the provider.

The division will treat locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is "served") delivered via the recently added "Licensed by Rule" technology code 72 as "underserved." This new technology code includes "operators providing last-mile connections through General Authorized Access (GAA) in the 3.5 GHz CBRS band", while the FCC's original licensed fixed wireless technology code 71 states "Licensed spectrum includes Priority Access Licenses (PALs), but not General Authorized Access (GAA), in the 3.5 GHz Citizens Broadband Radio Service (CBRS) band" and that

"Licensed-by-Rule spectrum for last-mile connections to end users should file their data as Unlicensed Terrestrial Fixed Wireless (Tech Code 70) or Licensed-by-Rule Terrestrial Fixed Wireless (Tech Code 72), as appropriate."[6] The division agrees with the original FCC logic distinguishing between PAL and GAA CBRS, because PAL CBRS is more formally licensed for exclusive use and free of interference, while GAA CBRS is not. Unlicensed fixed wireless already is considered by the FCC and NTIA to have limitations that deter marking locations as "served" based on its availability and given that similar limitations exist with GAA CBRS in Tech code 72, the division finds that licensed by rule fixed wireless service should be handled in a matter consistent with unlicensed fixed wireless. This designation can be challenged or rebutted by the provider.

Deduplication of Funding

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

☒ Yes

☐ No

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

The division 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.[7]
2. Data sets from state broadband deployment programs that rely on funds from the Capital Projects Fund and the State and Local Fiscal Recovery Funds administered by the U.S. Treasury.
3. State and local data collections of existing enforceable commitments.

The division will make its best effort to create a list of broadband serviceable locations (BSLs) subject to enforceable commitments based on state or local grants. If necessary, the division will translate polygons or other geographic designations (e.g., a county or utility district) describing the area to a list of BSLs. The division will seek to obtain information from internet service providers about any specific BSLs within a protected area that are known to be outside the scope of work that protects the area, and for any such locations brought forward, to preserve the eligibility of those specific BSL's for BEAD-funded projects The division will submit this list in the format specified by the FCC Broadband Funding Map to NTIA.[8]

The division will review its repository of existing state and local broadband grant programs to validate the upload and download speeds of existing binding agreements to deploy broadband infrastructure. In situations in which the state or local program did not specify broadband speeds, or when there was reason to believe a provider deployed higher broadband speeds than required, the division will contact the provider to verify the deployment speeds of the

[6] https://help.bdc.fcc.gov/hc/en-us/articles/12271133620763-Technology-Codes-for-Terrestrial-Fixed-Wireless-
[7] The broadband funding map published by FCC pursuant to IIJA § 60105 is referred to as the "FCC Broadband Funding Map."
[8] 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.

binding commitment. The division will document this process by requiring providers to sign a binding agreement certifying the actual broadband deployment speeds deployed.

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

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.

- All relevant federal funding programs reflected in the FCC Broadband Funding Map, including but not limited to RDOF, Connect America Fund, etc.
- GREAT Grants federally funded (ARPA)
- Completing Access to Broadband projects federally funded (ARPA)
- Orange County project separate from division programs

Challenge Process Design

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

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

Permissible Challenges

The division will only allow challenges on the following grounds:

- Identification of eligible community anchor institutions, as defined by the Eligible Entity
- Community anchor institution BEAD eligibility determinations
- BEAD eligibility determinations for existing BSLs
- Enforceable commitments
- Planned service

Permissible Challengers

During the BEAD Challenge Process, the division will only allow challenges from nonprofit organizations, units of local and tribal governments, and broadband service providers. Individual citizens may contribute speed test results and other supporting evidence for challenges, but the challenges must be gathered with all specified requirements and submitted by the qualifying challenger entity as described above.

Challenge Process Overview

The challenge process conducted by the division will include four phases, spanning 90 calendar days[9]:

1. **Publication of Eligible Locations**: Prior to beginning the Challenge Phase, the division 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 division will also publish locations considered "served," as they may be challenged. Tentative Date: Sept. 15, 2024.

2. **Challenge Phase**: During the Challenge Phase, the challenger will submit the challenge through the division challenge portal. This challenge will be visible to the service provider whose service availability and performance is being contested. The portal will notify the provider of the challenge through an automated email, which will include related information about timing for the provider's response. After this stage, the location will enter the "challenged" state.
    a. **Minimum Level of Evidence Sufficient to Establish a Challenge:** The challenge process will verify that the address provided can be found in the Fabric and is a BSL. The challenge process will confirm that the challenged service is listed in the National Broadband Map and meets the definition of reliable broadband service. The challenge process will confirm that the email address is reachable by sending a confirmation message to the listed contact email. For scanned images, the challenge process will determine whether the quality is sufficient to enable optical character recognition (OCR). For availability challenges, the division will manually verify that the evidence submitted falls within the categories stated in the NTIA BEAD Challenge Process Policy Notice and the document is unredacted and dated.
    b. **Timeline**: Challengers will have 30 calendar days to submit a challenge from the time the initial list of unserved and underserved locations, community anchor institutions, and existing enforceable commitments are posted. Tentative Dates: Oct. 1-30, 2024

3. **Rebuttal Phase**: Only the challenged service provider may rebut the reclassification of a location or area with evidence, causing the location or locations to enter the "disputed" state. If a challenge that meets the minimum level of evidence is not rebutted, the challenge is sustained. A provider may also agree with the challenge and thus transition the location to the "sustained" state. Providers must regularly check the challenge portal notification method (e.g., email) for notifications of submitted challenges.
    a. **Timeline**: Providers will have 30 calendar days from notification of a challenge to provide rebuttal information to the division. The rebuttal period begins once the provider is notified of the challenge, and thus may occur concurrently with the challenge phase. Tentative Dates: Nov. 1-30, 2024

[9] The NTIA BEAD Challenge Process Policy Notice allows *up to* 120 calendar days. Broadband offices may modify the model challenge process to span up to 120 days, as long as the timeframes for each phase meet the requirements outlined in the NTIA BEAD Challenge Process Policy Notice.

4. **Final Determination Phase**: During the Final Determination phase, the division 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 division 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 Dates: Dec. 1-30, 2024

Note: North Carolina currently has multiple broadband deployment programs under BEAD, as outlined in state session law. The state may run an additional duplicate challenge process subsequent to 2024 to ensure that data remains refreshed for all the grant rounds.

Evidence & Review Approach
To ensure that each challenge is reviewed and adjudicated based on fairness for all participants and relevant stakeholders, the division will review all applicable challenge and rebuttal information in detail without bias before deciding to sustain or reject a challenge. The division 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 division plans to ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted. The division will also require that all reviewers submit affidavits to ensure that there is no conflict of interest in making challenge determinations. Unless otherwise noted, "days" refers to calendar days. The division finds it necessary to initiate and complete the state challenge process after finalizing the commitment of broadband infrastructure funds, that the division is also responsible for under the American Rescue Plan Act (ARPA), including both SFRF and CPF funds administered by US Treasury. This is necessary to prevent the risk of duplicative award locations, and conflicts between federal program guidelines that would be created by distributing these funds simultaneously. This impacts the relevant dates for submitting challenges, rebuttals, and supporting evidence as outlined below.

Code: A
Challenge Type: Availability
Description: The broadband service identified is not offered at the location, including a unit of a multiple dwelling unit (MDU).
Specific Examples:
- Screenshot of provider webpage, where date is clearly visible, from within the last 180 days.
- A service request was refused within the last 180 days (e.g., an email or letter from a provider).
- Lack of suitable infrastructure (e.g., no fiber on pole).
- A letter or email dated within the last 180 days that a provider failed to schedule a service installation or offer an installation date within 10 business days of a request.
- A letter or email dated within the last 180 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.

Permissible Rebuttals:
- 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 location).

Code: S

Challenge Type: Speed

Description: The actual speed of the service tier falls below the unserved or underserved thresholds.

Specific Examples:

- Speed test by subscriber, showing the insufficient speed and meeting the requirements for speed tests.

Permissible Rebuttals:

- Provider has countervailing speed test evidence showing sufficient speed, (e.g., from their own network management system.[10]

Code: L

Challenge Type: Latency

Description: The round-trip latency of the broadband service exceeds 100 ms.[11]

Specific Examples:

- Speed test by subscriber, showing the excessive latency.

Permissible Rebuttals:

- Provider has countervailing speed test evidence showing latency at or below 100 ms (e.g., from their own network management system or the Connect America Fund performance measurements.[12]

Code: D

Challenge Type: Data Cap

Description: The only service plans marketed to consumers impose an unreasonable capacity allowance ("data cap") on the consumer.[13]

Specific Examples:

- Screenshot of provider webpage.
- Service description provided to consumer.

Permissible Rebuttals:

- 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.

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[10] 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.

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

[12] *Ibid*.

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

Code: T

Challenge Type: Technology

Description: The technology indicated for this location is incorrect.

Specific Examples:

- Manufacturer and model number of residential gateway (CPE) that demonstrates the service is delivered via a specific technology.
- Printed screen showing "denial of service" for that technology type or list of available technologies as evidence from provider website address search tool, where date is clearly visible and within the 180 days.

Permissible Rebuttals:

- Provider has countervailing evidence from their network management system showing an appropriate residential gateway that matches the provided service.

Code: B

Challenge Type: Business Service Only

Description: The location is residential, but the service offered is marketed or available only to businesses.

Specific Examples:

- Screenshot of provider webpage, where date is clearly visible.

Permissible Rebuttals:

- Provider documentation that the service listed in the BDC is available at the location and is marketed to consumers.

Code: E

Challenge Type: Enforceable Commitment

Description: The challenger has knowledge that broadband will be deployed at this location by the date established in the deployment obligation.

Specific Examples:

- 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).

Permissible Rebuttals:

- 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: P

Challenge Type: Planned Service

Description: The challenger has knowledge that broadband will be deployed at this location by Dec. 31, 2024, without an enforceable commitment or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment.

Specific Examples:

- Construction contracts or similar evidence of on-going deployment, along with evidence that all necessary permits have been applied for or obtained.
- Contracts or a similar binding agreement between the Eligible Entity and the provider committing that planned service will meet the BEAD definition and requirements of reliable and qualifying broadband even if not required by its funding source (i.e., a separate federal grant program), including the expected date deployment will be completed, which must be on or before Dec. 31, 2024.

Permissible Rebuttals:

- 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: N

Challenge Type: Not part of enforceable commitment.
Description: 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.)
Specific Examples:

- Declaration by service provider subject to the enforceable commitment.

Permissible Rebuttals:

- 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: C

Challenge Type: Location is a CAI.
Description: The location should be classified as a CAI.
Specific Examples:

- Evidence that the location falls within the definitions of CAIs set by the Eligible Entity.[14]

Permissible Rebuttals:

- Evidence that the location does not fall within the definitions of CAIs set by the Eligible Entity or is no longer in operation.

Code: R

Challenge Type: Location is not a CAI.
Description: The location is currently labeled as a CAI but is a residence, a non-CAI business, or is no longer in operation.
Specific Examples:

- The location is currently labeled as a CAI but is a residence, a non-CAI business, or is no longer in operation.

Permissible Rebuttals:

- Evidence that the location falls within the definitions of CAIs set by the Eligible Entity or is still operational.

[14] 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 division 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 or MDU challenge must demonstrate that they are indeed meeting the availability, speed, latency, data cap and technology requirement, respectively, for all locations they reported as served within the area or all units within an MDU. The provider can use any of the permissible rebuttals listed above.

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

An MDU challenge requires challenges for one unit for MDUs having fewer than 15 units, for two units for MDUs of between 16 and 24 units, and at least three units for larger MDUs. Here, the MDU is defined as one broadband serviceable location listed in the Fabric.[15] An MDU challenge counts towards an area challenge (*i.e.*, six successful MDU challenges in a census block group may trigger an area challenge).

Each type of challenge and each technology and provider will be considered separately, except an availability challenge (A) does count toward reaching the area threshold for speed (S) or technology (T) challenges of a specific reported technology within the MDU or area. No other challenge categories can count toward the threshold of another category. 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 multiple BSL reported as such within the area like a census block or group (e.g., by network diagrams that show fiber or hybrid fiber-coaxial cable (HFC) infrastructure or customer subscribers). For fixed wireless service, the challenge system will allow a representative, random sample of the area in contention, but no fewer than 10, where the provider must demonstrate service availability and speed (e.g., with a mobile test unit).[16]

Speed Test Requirements

The division 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 five forms:

1. A reading of the physical line speed provided by the residential gateway, (i.e., cable modem (for HFC))
2. ONT (for Fiber to the Home - FTTH), or fixed wireless subscriber module

[15] For example, a complex of apartment buildings may be represented by multiple BSLs in the Fabric.

[16] 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.

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 the speed test developed for the division in partnership with the Friday Institute for Educational Innovation at NC State University. See www.ncbroadband.gov for more information about North Carolina's broadband survey with speed test methodology.

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 second 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 to which they are subscribing. 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 might not change, because eligibility is based on the highest available service and some locations have multiple services. For example, if a location is served by 100 Mbps licensed fixed wireless and 500 Mbps fiber, conducting a speed test on the fixed wireless network that shows an effective speed of 70 Mbps does not change the status of the location from served to underserved.

A service provider may rebut an area speed test challenge by providing speed tests, in the manner described above, for at least 10% of the customers in the challenged area. The customers must be randomly selected. Providers must apply the 80/80 rule (i.e., 80% of these locations must experience a speed that equals or exceeds 80% of the speed threshold.[17] 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 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, the division will, upon approval from NTIA, publicly post an overview of the challenge process phases, challenge timelines, and instructions on how to submit and rebut a challenge. This documentation will be posted publicly for at least a week prior to opening the challenge submission window. The division also plans to actively inform all units of local government of its challenge process and set up regular touchpoints to address any comments, questions, or concerns from local governments, nonprofit organizations, and Internet service providers.

The division compiled a contact list for all broadband providers from previous years of coordination and administration of state and federal broadband funding programs. These contacts can be engaged to ensure that the appropriate individuals will receive notifications of relevant challenges submitted. The division also has compiled contacts for leaders in all 100 North Carolina counties, and has convened key stakeholders from state agencies, nonprofits, universities, and some local governments. This network of contacts will be invited to submit challenges and leveraged to contact additional eligible challengers. The division will share information about the upcoming challenge process on its website and social media channels. Relevant stakeholders can sign up on the division website at ncbroadband.gov/BEAD for challenge process updates and announcements. They can engage with the division by a designated email address (broadband@nc.gov). Internet service providers will receive an email notification of challenges submitted pertaining to their reported service.

Beyond actively engaging relevant stakeholders, the division 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

The division will not publicly post any personally identifiable information (PII) or proprietary information, including subscriber names, street addresses and customer IP addresses. To ensure all PII is protected, the division will review the basis and summary of all challenges and

[17] 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.

rebuttals to ensure PII is removed prior to posting them on the website. Additionally, guidance will be provided to all challengers as to which information they submit may be posted publicly.

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

In addition to applicable federal law, the division will comply with all North Carolina laws regarding privacy and confidentiality, including but not limited to relevant provisions in the following North Carolina General Statutes: Chapter 132 (the North Carolina Public Records Act); Chapter 75, Article 2A (the North Carolina Identity Theft Protection Act); Chapter 14, Article 19C (criminal Identity Theft); and Chapter 14, Article 19D (the Telephone Records Privacy Protection Act).

Volume I Public Comment

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

a. The public comment period was no less than 30 days; and

b. Outreach and engagement activities were conducted to encourage feedback during the public comment period.

The division prepared a draft initial proposal, divided into two volumes, and posted it online for public input on Monday, Nov. 6. The division accepted public comments via email to NCDITpartnerfeedback@nc.gov for 30 days until Tuesday, Dec. 5. The division reviewed all comments received and refined its draft before submitting the initial proposal to the National Telecommunications and Information Administration (NTIA) for approval.

The division issued a press release on Nov. 6 to notify the public and various stakeholders that the draft initial proposal was available for public comments. The division emailed hundreds of stakeholders who participated in the BEAD and Digital Equity planning processes to ensure they became aware of the draft posted online and the opportunity to provide public comments and input. Numerous partner organizations, such as the N.C. Association of County Commissioners, N.C. League of Municipalities, and N.C. Rural Center, graciously shared the announcement and invitation to provide public input in their email newsletters and various communication platforms over the course of the public comments period.

In addition, the division presented information about the draft initial proposal at several meetings and convenings during the public comments period to encourage public participation. For example, the division convened railroad organizations and internet service providers in the state for a webinar about permitting processes on Nov. 8, presented at the Connect Triangle Summit in Raleigh about deployment, digital equity, and workforce planning on Nov. 9, and hosted meetings with the Digital Equity Working Group, NC 811 utility locator service providers, and organizations representing local governments and rural residents during that period. Division staff met with individuals and organizations who requested an opportunity to discuss the draft initial proposal as well. Finally, the division offered a webinar on Dec. 4 to share information about the initial proposal, answer questions, and solicit public input. More than 150 individuals registered to participate in the webinar and the division posted a recording online afterward for on demand viewing by the public.

Public comments received related to Volume I raised these issues most:

- Fixed wireless categorization – some argued for treating locations with fixed wireless service as unserved and others argued for characterizing it as reliable service. In response the division decided to treat them as underserved.
- Community anchor institutions – some posed questions about which organizations should qualify as community anchor institutions, some advocated for inclusion of particular types of organizations, and others argued for narrowing the definition to include less organizations. In response the division clarified and modified its definitions in several instances, revised its sources of information, and elaborated on how some community anchor institutions serve covered populations and facilitate their broadband use.
- Challenge process – some advocated for modifying who qualifies as permissible challengers, some wanted to expand the period of time and others wanted to limit it as

much as possible, and some argued for changing the types of evidence accepted. In response, the division clarified the timeline, modified the evidence accepted to support challenges, and updated its MDU challenge content to reflect the most recent NTIA guidance on the subject.