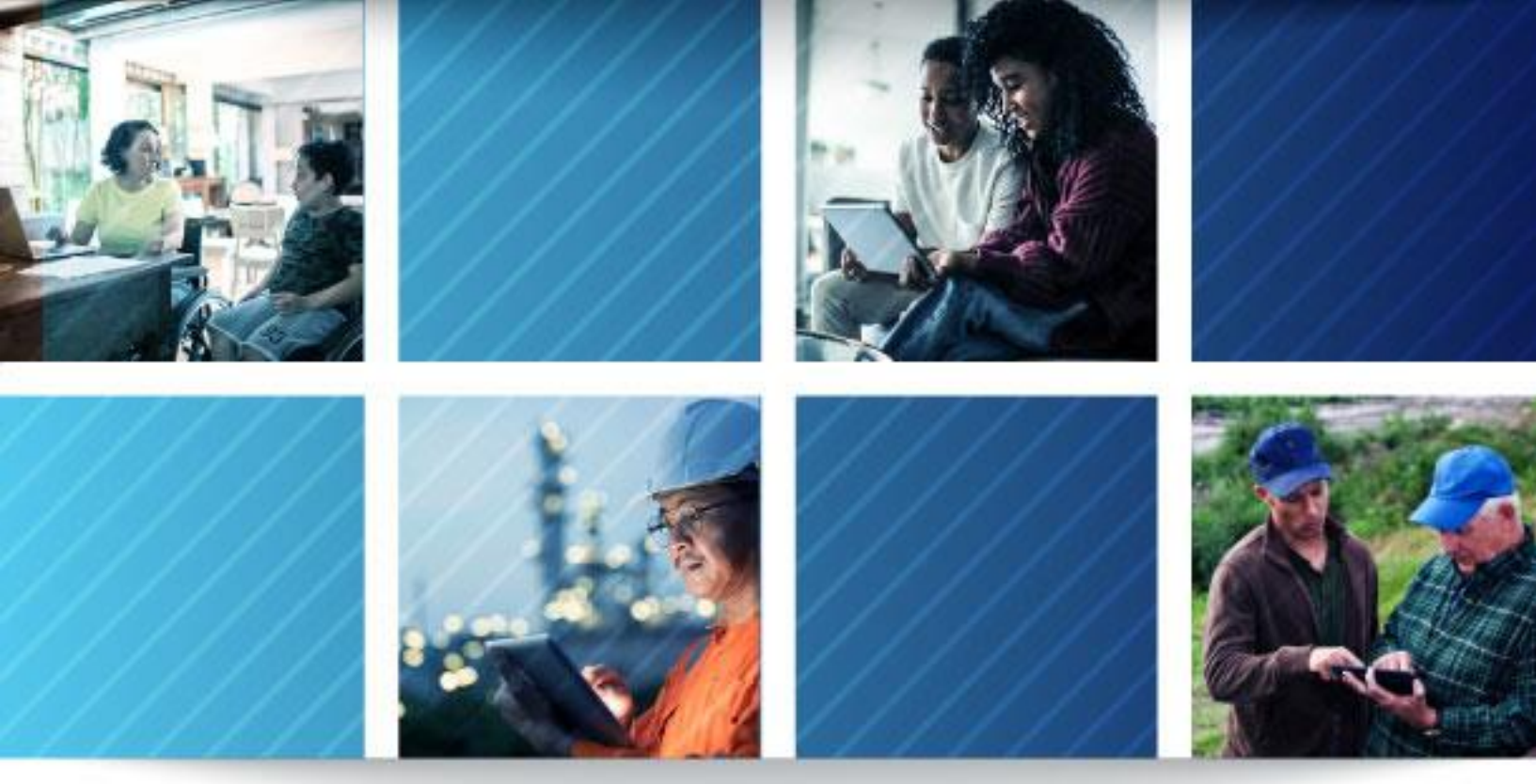

CONNECT ILLINOIS

Public Comment Draft: Initial Proposal Vol 1

Broadband Equity, Access, and Deployment (BEAD)

September 2023

ILLINOIS BROADBAND LAB

Illinois Department of Commerce & Economic Opportunity
OFFICE OF BROADBAND
JB Pritzker, Governor

UNIVERSITY OF ILLINOIS SYSTEM

OVERVIEW

The Illinois Office of Broadband has drafted the following to meet the requirements for the Volume 1 of the BEAD Initial Proposal:

Requirement 3 – Identification of existing broadband efforts

Requirement 5 – Identification of existing unserved and underserved locations

Requirement 6 – Identification and application of community anchor institutions

Requirement 7 – Detailed challenge process plan

Upon receipt and consideration of comments to this document, the Illinois Office of Broadband plans to submit this document for consideration to the National Telecommunications and Information Association (NTIA), the administrators of BEAD, including the Assistant Secretary of the U.S. Department of Commerce.

Volume 2 of the Initial Proposal will be released for public comment at the same time of this document. Upon approval of this proposal, as well as submission of the remaining requirements for the Initial Proposal as outlined in the BEAD Notice of Funding Opportunity, the IOB plans to commence the challenge process as outlined in this document.

EXISTING BROADBAND EFFORTS (REQUIREMENT 3)

Table 1 summarizes federal and state funding programs and funds for broadband deployment and other broadband-related activities in Illinois (Req. 1.1.1). The IOB will also submit Table 1 as an attachment, per NTIA guidance. Expended and available breakdown is only available for Broadband access and deployment programs, as required by the BEAD NOFO.

Table 1: Broadband Funding

Source	Purpose	Total	Expended (allocated to projects)[1]	Available
American Rescue Plan's Capital Projects Fund (CPF)[2]	The CPF was launched to allow investment in capital assets that meet communities' critical needs in the short and long term, with an emphasis on making funding available for broadband infrastructure. CPF funding accounts for a portion of the $350 million Round 3 of the Connect Illinois Broadband Grant Program.	$253,682,328	In progress	
American Rescue Plan's Coronavirus State Fiscal Recovery Fund (CSLFRF)[3]	One of the uses of the CSLFRF funds is to invest in water, sewer, and broadband infrastructure. The CSLFRF's allocated funds to the Rebuild Illinois Projects Fund account for about $46 million of the $350 million Round 3 of the Connect Illinois Broadband Grant Program.	$46,317,672	In progress	

1 Expended and available breakdown only applies to Broadband access and deployment programs.
2 Capital Projects Fund, U.S. Department of Treasury
3 State of Illinois Recovery Plan, Governor's Office of Management and Budget Report, 2022

Source	Purpose	Total	Expended (allocated to projects)[1]	Available
FCC Rural Digital Opportunity Fund (RDOF) Phase I Auction[4]	The RDOF Phase I auction was held to bring broadband to homes and businesses in census blocks that were entirely unserved by voice and broadband. The broadband services were set to offer download speeds of at least 25 Mbps through bidders who were internet service providers. The total assigned support for Illinois was $378 million for 19 winning bidders across the state, with about 160,000 locations assigned over 10 years. Of the winning bidders in the original support assigned, CTI Fiber, Connect Everyone LLC, Hawaii Dialogix Telecom LLC, LTD Broadband LLC, MCC Network Services LLC, and Space Exploration Technologies Corp—corresponding to about 66,000 locations—had defaulted as of January 13, 2023. AMG Technology Investment Group LLC, Mercury Wireless, Inc., Rural Elective Cooperative Consortium, and Wisper-CABO 904 Consortium—corresponding to 1,300 locations—partially defaulted as of January 13, 2023. As of that same date, approximately 93,000 locations remained earmarked to be served by the providers that were awarded funding.	$241,378,544	Not state managed	n/a

[4] Auction 904: Rural Digital Opportunity Fund; FCC: Rural Digital Opportunity Fund Phase I Auction Closes, as of Jan 2021; Rural Digital Opportunity Fund: Assignments Total Assigned by State; Auction 904: Rural Digital Opportunity Fund; Note: Applicant's name and winning bidder's name may not directly correspond.

Source	Purpose	Total	Expended (allocated to projects)[1]	Available
	See the appendix for additional details on RDOF-funded projects.			
FCC Connect America Fund Phase II (CAF II)[5]	In CAF Phase II, the FCC provides funding to service providers to subsidize the cost of building a new network infrastructure or upgrading networks to provide voice and broadband service in areas where it is lacking. The total assigned support for Illinois was $99 million for nine winning bidders across about 32,000 locations assigned over 10 years. See the appendix for additional details on the projects that have been funded.	$99,602,495	Not state managed	n/a
Rural Utility Service (RUS), United States Department of Agriculture's (USDA) Rural eConnectivity Program (the ReConnect Grant and Loan Program)[6]	The Broadband ReConnect Program's grant and loan funding for high-speed broadband infrastructure was invested in Illinois in FY2019, FY2020, and FY2022 among 10 recipients in different funding categories. Eight recipients were awarded investments to deploy fiber-to-the-premises across about 1,300 square miles; one recipient was awarded to deploy fiber-to-the-home across approximately 102 square miles; and one recipient was awarded to extend existing broadband service network across about 38 square miles. See the	$164,353,545	Not state managed	n/a

5 Connect America Fund Phase II FAQ; Authorized Auction 903 Long-Form Applicants (updated 11/17/2022)

6 ReConnect Loan and Grant Program, USDA U.S. Department of Agriculture; Based on FY19, FY 20, FY 22 funding; one project funded across Illinois and Kentucky

Source	Purpose	Total	Expended (allocated to projects)[1]	Available
	appendix for additional details on the projects that have been funded.			
Emergency Connectivity Fund (ECF), Federal Communications Commission[7]	The FCC's ECF program provides funding to schools and libraries to help close the "homework gap" for students who currently lack necessary Internet access or the devices they need to connect to classrooms. As of March 1, 2023, 144,574 broadband connections and 582,975 connected devices have been funded in Illinois.	$237,852,487	Not state managed	n/a
Connecting Minority Communities Pilot Program (CMC), National Telecommunications and Information Administration (NTIA)[8]	Three four-year institutions in Illinois were awarded CMC Pilot Program grants: (1) Chicago State University for its Community Navigator program, (2) Dominican University for its "Cross-Campus Digital Literacy" initiative, and (3) St. Augustine College for its initiative to address digital inequities through infrastructure, affordable connections and devices, and training. The IBL plans to support the three recipients in their digital equity initiatives to build collective resources and to share knowledge among stakeholders. The goal is to build a collaborative digital navigator program that is expected to be the foundation for efforts scaled across Illinois.	$8,497,531	Not state managed	n/a

7 Emergency Connectivity Fund, FCC
8 Connecting Minority Communities Pilot Program, NTIA

Source	Purpose	Total	Expended (allocated to projects)[1]	Available
"Internet for All" planning grants, Bipartisan Infrastructure Law[9]	Illinois received $1,515,352.64 to fund activities related to digital equity planning. Illinois received $5 million to fund activities related to the BEAD Equity, Access, and Deployment Program.	$6,515,352		
ACP Outreach Grant[10]	The Affordable Connectivity Outreach Grant Program is meant to foster awareness and enrollment in the ACP. Awardees are meant to serve as trusted community messengers about the ACP and to be equipped with funding to pursue innovative outreach strategies for reaching historically underserved and unserved communities. ACP Outreach Calls hosted by the IBL are a forum for grantees across the state to collaborate and share best practices for deploying their grant funding.	$700,000 (directed to the DCEO); $1,863,719 (total across 7 awardees in Illinois)		
Governor's Emergency Education Relief (GEER) Funds[11]	Illinois's governor dedicated GEER funds to pre-K-12 and higher education to bridge the digital divide. School districts received $32.5 million to purchase devices, such as laptops and tablets, and $7.5 million to purchase Wi-Fi hotspots and increase internet connectivity among students and families. Some $46 million was directed to public universities and community colleges to	$86,000,000		

9 Biden-Harris Administration Awards More Than $6.5 Million to Illinois in 'Internet for All' Planning Grants, December 2022
10 FCC Announces $66 million in Affordable Broadband Outreach Grants, FCC
11 Gov. Pritzker Announces $108.5 Million COVID Funding for PreK-12, Higher Education with Equity Focus

Source	Purpose	Total	Expended (allocated to projects)[1]	Available
	help institutions' efforts to overcome barriers facing students and caused by the COVID-19 pandemic, including limited access to laptops and wireless hotspots.			
Elementary and Secondary School Emergency Relief (ESSER) Fund[12]	ISBE directed ESSER funds in the following three categories: $33.3 million for laptops and tablets, $7.1 million for internet connectivity, and $6.5 million for virtual coaching to support an estimated 4,000 new teachers, who are expected to enter the teaching profession this fall.	$46,900,000		
Lifeline Program for Low-Income Consumers	Lifeline is an FCC program that helps make communications services more affordable for low-income consumers. Eligible telecommunications carriers (ETCs, or service providers) can offer a discount to eligible low-income consumers on their mobile or fixed (i.e., landline) voice service or broadband (i.e., internet) service and receive a reimbursement from the federal universal service fund. Lifeline Program funding is disbursed in Illinois to a combination of incumbent local exchange carriers (ILECs) and	$120,038,623 (total as of March 15, 2023)[14]		

12 Gov. Pritzker Announces $108.5 Million COVID Funding for PreK-12, Higher Education with Equity Focus

14 Amount listed represents total for duration of the program.

Source	Purpose	Total	Expended (allocated to projects)[1]	Available
	competitive eligible telecommunications carriers (CETCs) monthly.[13]			
E-Rate - Schools & Libraries USF Program[15]	The FCC's E-Rate program makes telecommunications and information services more affordable for schools and libraries. With funding from the Universal Service Fund, E-Rate provides discounts for telecommunications, internet access, and internal connections to eligible schools and libraries. The total requested invoice line amount as of April 5, 2023, is $763 million.	$592,815,633 (total authorized disbursements as of April 5, 2023)[16]		
Rural Health Care Program[17]	The Rural Health Care Program provides funding to eligible health care providers for the telecommunications and broadband services necessary to provide health care. The program's goal is to improve the quality of health care available to patients in rural communities by ensuring that eligible health care providers have access to telecommunications and broadband services. Illinois has received Rural Health Care Program disbursement since 2012 with an original committed amount of $79,952,118.78 and a total committed amount of $68,699,205.45.	$54,007,789 (total disbursed as of April 5, 2023)[18]		

13 Lifeline, Universal Service Administrative Co.; Lifeline Disbursements Tool

15 E-Rate: Universal Service Program for Schools and Libraries, FCC;E-Rate Invoices and Authorized Disbursements (FCC Forms 472 and 474)

16 Amount listed represents total for duration of the program.

17 Rural Health Care Program, FCC; RHC Commitments and Disbursements Tool

18 Amount listed represents total for duration of the program. Total listed is for health care providers located in Illinois and receiving the service, whether individual or consortium.

UNSERVED AND UNDERSERVED LOCATIONS (REQUIREMENT 5)

Two .csv files are provided as attachments (titled “unserved.csv” and “underserved.csv”) and provide unserved and underserved location IDs in Illinois (Req. 1.2.1). The data was downloaded from NTIA’s Eligible Entity Planning Toolkit on 08/29/2023 (Req. 1.2.2).

For the purposes of the BEAD Program, in accordance with the BEAD Notice of Funding Opportunity, locations are categorized as follows:

Served: locations with speed greater than or equal to 100 Mbps download and 20 Mbps upload (100/20 Mbps)

Underserved: locations less than 100/20 Mbps and greater than or equal to 25/3 Mbps

Unserved: locations with speed less than 25/3 Mbps

Note: locations served exclusively by satellite, services using entirely unlicensed spectrum, or a technology not specified by the Commission for purposes of the Broadband DATA Maps, do not meet the criteria for Reliable Broadband Service[19] and so will be considered “unserved.” Locations served by fiber-optic technology, Cable Modem/ Hybrid fiber-coaxial technology, digital subscriber line (DSL) technology, or terrestrial fixed wireless technology utilizing entirely licensed spectrum or using a hybrid of licensed and unlicensed spectrum meet the criterial for Reliable Broadband Service[20], and are considered “served”, “underserved”, or “unserved” as specified above.

[19] As specified in Section I.C. (u) of the BEAD NOFO
[20] As specified in Section I.C. (u) of the BEAD NOFO

COMMUNITY ANCHOR INSTITUTIONS (REQUIREMENT 6)

Based on the statutory definition of “community anchor institutions” as defined in 47 USC 1702, (a)(2)(E), the Illinois Office of Broadband understood the definition of “community anchor institutions” to mean:

- School or institute of higher education
- Library
- Government building
- Health clinic, health center, hospital, or another medical provider
- Public safety entity (e.g., fire house, emergency medical service station, police station, or public safety answering point)
- Public housing organization (“including any public housing agency, HUD-assisted housing organization, or Tribal housing organization”)
- Community support organization that facilitates greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aging 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):

1. Whether the community support organization facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aging individuals.

The definitions and sources were used to identify the types of community anchor institutions are provided in Table 2 below.

Table 2: Community anchor institution definitions and sources

CAI Type	Category and definition (if necessary)	Source
School or institute of higher education	**Colleges and Universities**: all Post-Secondary Education facilities as defined by the Integrated Post-Secondary Education System (IPEDS), National Center for Education Statistics (NCES), and US Department of Education (ED) for the 2019-2020 school year.	HIFLD, IPEDS, NCES, and US Department of Education
School or institute of higher education	**Supplemental Colleges:** additional postsecondary education features from websites of all colleges in Illinois that are not included in the National Center for Education (NCES) Integrated Post-Secondary Education System (IPEDS)	HIFLD, IPDES, NCES, websites of colleges in Illinois
School or institute of higher education	**Private schools:** all K-12 schools participating in the FCC E-Rate program or that have an NCES (National Center for Education Statistics) ID in the categories “private schools”, combined with private elementary and secondary education facilities in the United States as defined by the Private School Survey (PSS), National Center for Education Statistics (NCES), and US Department of Education for the 2017-2018 school year.	USAC Open Data, HIFLD, PSS, NCES, US Dept of Education
School or institute of higher education	**Public schools:** all K-12 schools participating in the FCC E-Rate program or that have an NCES (National Center for Education Statistics) ID in the categories “public schools”, combined with all Public elementary and secondary education facilities in the United States as defined by the Common Core of Data (CCD), National Center for Education Statistics (NCES), and US Department of Education for the 2019-2020 school year.	HIFLD, CCD, NCES, US dept of Education

CAI Type	Category and definition (if necessary)	Source
Libraries	**Libraries**: all public libraries, including those participating in the FCC E-Rate program as well as all member libraries, and their branches, of the American Library Association (ALA).	USAC Open Data, Illinois Secretary of State
Government building	**State government buildings:** buildings or properties that are owned or leased by state level governments. It includes buildings occupied by the headquarters of cabinet level state government executive departments, legislative office buildings outside of the capitol building, offices and court rooms associated with the highest level of the judicial branch of the state government, and large multi-agency state office buildings.	Homeland Infrastructure Foundation-Level Data
Government building	**County government buildings:** government center of each county government.	Website of each county government
Health clinic, health center, hospital, or another medical provider	**Hospitals:** all hospitals identified in data by the following entities: the Defense Health Agency, State of Illinois, the US Department of Veteran Affairs. The data set includes children, chronic disease, critical access, general acute care, long term care, military, psychiatric, rehabilitation, special, and women's hospitals. The data set does not include nursing homes or health centers.	HIFLD, Defense Health Agency, State of Illinois, US Department of Veteran Affairs
Health clinic, health center, hospital, or another medical provider	**Urgent care facilities:** any location that can provide emergency medical care and must provide emergency medical treatment beyond what can normally be provided by an EMS unit, must be able to perform surgery, or must be able to provide recuperative care beyond what is normally provided by a doctor's office.	HIFLD
Health clinic, health center, hospital, or another medical provider	**Public health departments:** locations of public health departments that may be locally governed, part of a region or district, be an office or an administrative unit of the state health department, or a hybrid of these.	HIFLD

CAI Type	Category and definition (if necessary)	Source
Public safety entity	**Local Law Enforcement:** agencies that are "publicly funded and employ at least one full-time or part-time sworn officer with general arrest powers", defined by the US Department of Justice. Federal level law enforcement agencies are excluded from this effort.	HIFLD, DOJ-BJS CSLLEA
Public safety entity	**Fire Stations:** manned fire stations and buildings from which a fire response occurs, such as a volunteer fire department building to which fire fighters report for duty, but which is not continuously manned. The data includes both private and governmental entities.	HIFLD, US Geological Survey
Public safety entity	**FBI Field Offices:** represents the FBI Field Office locations in the United States and its territories	HIFLD
Public safety entity	**US Court of Appeals.**	HIFLD, Department of Justice
Public safety entity	**Courthouses**: all court buildings that handles county-level court functions, usually located in the city designated as a county seat	HIFLD
Public safety entity	**EMS Stations.**	HIFLD
Public safety entity	**State & Local Prisons and Jails:** secure detention facilities with jurisdiction at the local government level, combined with list of correctional facilities provided Illinois Department of Corrections	HIFLD, Illinois Department of corrections
Public safety entity	**Federal Prisons:** secure detention facilities with jurisdiction at the federal government level.	HIFLD, Federal Bureau of Prisons
Public Housing Organization	**Public Housing Agencies:** county level data on available public housing in Illinois	Department of Housing and Urban Development

CAI Type	Category and definition (if necessary)	Source
Community Support Organization	**Childcare centers:** center-based child day care locations (including those located at schools and religious institutes) and does not include group, home, and family-based child day cares.	HIFLD
Community Support Organization	**IDES locations and unemployment centers:** IDES administrative offices, call centers, processing centers, American Job Centers, and IDES local and regional offices.	Illinois Department of Employment Security
Community Support Organization	**Reentry support organizations:** Non-profit organizations and community centers supporting transition to life after prison, as identified by the Illinois Reentry Guide.	Illinois Re-Entry Resources
Community Support Organization	**Parks**: state parks, state wildlife areas, state recreational areas, state forests, historic sites, and regional offices of department of natural resources.	List provided by Department of Natural Resources
Community Support Organization	**Area Agency on Aging.**	Illinois Department on Aging
Community Support Organization	**Nursing homes:** nursing and assisted care facilities.	HIFLD, Illinois Department of Public Health
Community Support Organization	**Community-Based Organizations (CBOs):** Community-based non-profit organizations responsible for connecting low-income individuals to essential resources and social services.	IRS

Illinois plans to use the Initial Proposal public comment process to ensure that all relevant institutions meeting the CAI criteria are included.

As of July 26, the IOB has not declined to classify any category of institutions proposed as CAIs, including categories proposed during the comment period. The IOB has proposed additional CAI

categories under Community Support Organizations because they facilitate greater broadband use among the population it serves. Specifically:

- Area Agency on Aging and Nursing homes could facilitate greater broadband use among aging individuals.
- Childcare centers facilitate greater broadband use among families.
- IDES locations and unemployment centers facilitate greater broadband use among unemployed and/or low-income individuals.
- Community-based organizations serve as a critical touchpoint connecting low-income individuals to resources and social services such as food stamps, rental assistance, and other benefits. They also facilitate digital skill building and enrollment in affordable broadband services.
- Parks facilitate broadband use among all community members, especially those living in area with poor existing broadband infrastructure. During the local coordination tour, the IOB heard from multiple residents that parks are where they go when they cannot connect to reliable internet at home.

To assess the availability of 1Gbps symmetrical service at each CAI listed above, the broadband office has:

1. Cross-referenced relevant data sets. For libraries and K-12 public schools, the IOB used e-Rate data to determine service availability.
2. Engaged relevant agencies. The IOB engaged Illinois Century Network to assess the availability of 1Gbps symmetrical service at all schools, libraries, and government agencies.
3. Conducted geospatial proximity analysis: For CAIs other than schools, libraries, and government agencies, a geospatial analysis was conducted to understand each CAI's

proximity to BSLs served with mass market 1Gbps symmetrical service, with the assumption that those that are located within a certain distance likely have access to 1Gbps symmetrical broadband. The analysis divided the state of Illinois into hexagonal areas with side length of 0.3 miles, identified which hexagon had within it a BSL served by mass market 1Gbps symmetrical technology (as indicated in the FCC Broadband Data Map), and marked the area as likely served with 1Gbps broadband. Then, the analysis reviewed whether each CAI fell within hexagons marked as likely served with 1Gbps symmetrical broadband, and those CAIs that did not were flagged as likely not served by 1Gbps symmetrical broadband.

The broadband office compiled the list of all CAIs that do not have 1 Gigabit symmetrical broadband service based on steps outlined above. An attachment (titled “cai.csv”) has been provided, which includes the list of eligible community anchor institutions that do not have access to 1 Gigabit symmetrical service, to the best of the IOB’s knowledge.

CHALLENGE PROCESS (REQUIREMENT 7)

The State of Illinois will adopt the model challenge process as provided by NTIA (Req. 1.4.1) with the following modifications:

1. The state will adopt the DSL, speed test, and MDU pre-challenge modifications. Providers will be notified if their locations are subject to the speed test and MDU pre-challenge modifications and will have the option to contest the pre-modification through the rebuttal process.

2. The state will administer area and MDU challenge.

3. The state will conduct the challenge and rebuttal phases for 14 days each and the total process may span up to 120 days.

DSL Modification

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

Speed test Modification

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.

MDU modification

The Illinois Office of Broadband has identified 2,563 MDUs (buildings with 50+ units[21]) in high poverty[22] and highly unconnected[23] census tracts, representing an estimated 205k[24] to 335k total units[25]. Out of the 2,563 locations, the broadband office will treat as "underserved" the 2,546 locations that are currently categorized as "served" in the FCC National Broadband map[26] (see details in next table).

Table 3: Service availability of MDUs in high poverty and highly unconnected census tracks

	MDUs in high poverty and highly unconnected census tracks	FCC National Broadband Map[27]		
		Unserved	Underserved	Served
Buildings with 50+ units	2,563	2	15	2,546

The rationale for the MDU modification is as follows: since the National Broadband Map identifies multi-family housing developments as a single broadband serviceable location (BSL), it does not represent broadband availability of the individual units or households. Without accurate unit-by-unit data, the National Broadband Map may undercount the number of

[21] Based on estimates from EducationSuperHighway (ESH), which sourced proprietary third-party real estate data and combined this with HUD location datasets. When an address location in the FCC Broadband Maps matched with the ESH's proprietary third-party real estate datasets and/or HUD dataset, the larger unit count of either data source is used as the property unit counts.

[22] Census tracks with 19.4% or more of its population under 150% of the poverty level, based on Census American Community Survey (ACS) 5-year 2016-2020 and Census Public Use Microdata Sample (PUMS) 2016-2020.

[23] Census tracks with over 25% or more unconnected households, based on Census American Community Survey (ACS) 5-year 2016-2020 and Census Public Use Microdata Sample (PUMS) 2016-2020.

[24] Based on FCC Fabric that underlies the FCC Broadband Maps published in Nov 2022.

[25] The list of properties originates from the FCC Fabric dataset that underlies the FCC Broadband Maps published in November 2022. In addition, EducationSuperHighway (ESH) sourced proprietary third-party real estate data and combined this with HUD location datasets. When an address location in the FCC Broadband Maps matched with the ESH's proprietary third-party real estate datasets and/or HUD dataset, the larger unit count of either data source is used as the property unit counts.

[26] Downloaded from the FCC National Broadband map, accessed on July 15, 2023, which includes data as of Dec 31, 2022, that was last updated on July 12, 2023.

[27] Downloaded from the FCC National Broadband map, accessed on July 15, 2023, which includes data as of Dec 31, 2022, that was last updated on July 12, 2023.

unserved and underserved households living in multi-family housing. For example, if an apartment building contains 100 households (i.e., units), the National Broadband Map only identifies this building as a single BSL. There are scenarios where availability of broadband service at an MDU BSL does not equate to the same availability of broadband to all units within that location. This could result in an overstatement of the availability of broadband service at multi-family housing locations and could undercounts the true total of Illinois residents who are unserved or underserved. Examples of these scenarios are summarized below:

- ISP has fiber-to-the-curb or building but has no inside wiring infrastructure to the unit.
- ISP is able to deliver fiber to the building (FTTB) within 10 days, but only offers business-class internet services and does not actually provide residential service.
- Technology at the MDU is not capable of delivering 25/3 or 100/20 across all households simultaneously. Example: provider offers 100/20 DSL service but needs to use pair-bonding to achieve that speed. In a 100-unit MDU, 100 DSL lines would be bonded into 50 connections, potentially leaving 50 households served and 50 unserved.
- Inside wiring infrastructure is in a state of disrepair and cannot support speeds of 100/20 Mbps. Many public housing and affordable housing MDUs are 30-40+ years old and wiring has not been adequately maintained.
- ISP's equipment is located in a Main Distribution Frame (MDF), Intermediate Distribution Frame (IDF), cabinet, pedestal, node or potentially the central office, and is not capable of delivering 25/3 or 100/20 across all households simultaneously without overbuilding the entire MDU.[28]

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

- Non-cellular, licensed Fixed Wireless Access (FWA) providers without existing equipment/service in the MDU could not meet the 10-day installation window. The individual household of an MDU does not have the ability to authorize a Licensed FWA provider to access rooftops, telco rooms, and run new wiring all the way to their unit. This would require an agreement with the building owner and possibly a permit.

The 2,563 MDUs identified above are based on the property's location in census tracts with very high levels of poverty and/or very low levels of connectivity. The source data used to identify the MDUs on the list come from the American Community Survey, coupled with data from the Department of Housing and Urban Development (HUD) and commercially available real estate databases.[29]

By including all MDUs in census tracts with both high poverty rates and high numbers of unconnected households within the underserved count, Illinois can prioritize MDUs that have a high probability of meeting the BEAD prioritization requirement of having "a substantial share of unserved households" judging by the numbers of those that are estimated not to be served. To determine whether there is a substantial share of underserved and unserved households in an MDU, unit level availability data is needed. As the current National Broadband Map does not classify households at the unit level, their actual level of service availability has not been documented; therefore, The Illinois Office of Broadband considers the served MDUs in census tracts with both high poverty rates and high numbers of unconnected households as underserved until they are successfully proven to be served.

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

Eligible Entity will use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments (Req. 1.4.3).

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. 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 broadband office has requested data from recipients of Connect Illinois Round 1 & Round 2 grants, and applicants of Connect Illinois Round 3 grants to identify locations served (or to be served) by Connect Illinois grants. 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.

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 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 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 state and local enforceable commitments (Req 1.4.4.).

Federal, state, or territorial, and local programs that will be analyzed to remove enforceable commitments from the set of locations eligible for BEAD funding are listed in the attachment "BEAD Initial Proposal Volume I Deduplication of Funding Programs.xlsx" (Req. 1.4.5).

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

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 120 days (note that all dates included are tentative and subject to timing of NTIA approval's Initial Proposal Vol 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. The broadband office intends to publish the set of locations by November 1st , 2023.

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

a. Minimum Level of Evidence Sufficient to Establish a Challenge: The challenge portal will verify that the address provided can be found in the Fabric and is a BSL. The challenge portal will confirm that the challenged service is listed in the National Broadband Map and meets the definition of reliable broadband service. The challenge will confirm that the email address is reachable by sending a confirmation message to the listed contact email. For scanned images, the challenge portal will determine whether the quality is sufficient to enable optical character recognition (OCR). For availability challenges, the broadband office will manually verify that the evidence submitted falls within the categories stated in the NTIA BEAD Challenge Process Policy Notice and the document is unredacted and dated.

b. Timeline: Challengers will have 2 weeks to submit a challenge from the time the initial list of unserved and underserved locations, community anchor institutions, and existing enforceable commitments are posted. The broadband office intends to accept challenges from November 1st to November 15th, 2023.

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 15 days (excluding Federal and State holidays) from notification of a challenge to provide rebuttal information to the broadband office. Provider may receive notification of the challenge any time during challenge phase.

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 from January 8th to January 31st.

The IOB will conduct the required BEAD challenge process in the four phases outlined above.

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.

Table 4: Allowed challenge types

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.[30] A letter or email dated within the last 365 days indicating that a provider requested more than the standard installation fee to	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.

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

Code	Challenge type	Description	Specific examples	Permissible rebuttals
			connect this location or that a Provider quoted an amount in excess of the provider's standard installation charge in order to connect service at the location.	
S	Speed	The actual speed of the service tier falls below the unserved or underserved thresholds.[31]	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.[32]
L	Latency	The round-trip latency of the broadband service exceeds 100 ms[33].	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.[34]
D	Data cap	The only service plans marketed to consumers	Screenshot of provider webpage.	Provider has terms of service showing that it does not impose an unreasonable data cap or offers another

[31] 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.

[32] 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.

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

[34] Ibid.

Code	Challenge type	Description	Specific examples	Permissible rebuttals
		impose an unreasonable capacity allowance ("data cap") on the consumer.[35]	Service description provided to consumer.	plan at the location without an unreasonable cap.
T	Technology	The technology indicated for this location is incorrect.	Manufacturer and model number of residential gateway (CPE) that demonstrates the service is delivered via a specific technology.	Provider has countervailing evidence from their network management system showing an appropriate residential gateway that matches the provided service.
B	Business service only	The location is residential, but the service offered is marketed or available only to businesses.	Screenshot of provider webpage.	Provider documentation that the service listed in the BDC is available at the location and is marketed to consumers.
E	Enforceable Commitment	The challenger has knowledge that broadband will be deployed at this location by the date	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	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).

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

Code	Challenge type	Description	Specific examples	Permissible rebuttals
		established in the deployment obligation.	relevant Tribal Government and the service provider for the location(s) at issue (see Section 6.2 above).	
P	Planned service	The challenger has knowledge that broadband will be deployed at this location by June 30, 2024, without an enforceable commitment or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment.	Construction contracts or similar evidence of on-going deployment, along with evidence that all necessary permits have been applied for or obtained. Contracts or a similar binding agreement between the Eligible Entity and the provider committing that planned service will meet the BEAD definition and requirements of reliable and qualifying broadband even if not required by its funding source (*i.e.*, a separate federal grant program), including the expected date deployment will be completed, which must be on or before June 30, 2024.	Documentation showing that the provider is no longer able to meet the commitment (e.g., is no longer a going concern) or that the planned deployment does not meet the required technology or performance requirements.
N	Not part of enforceable commitment.	This location is in an area that is subject to an	Declaration by service provider subject to the enforceable commitment.	

Code	Challenge type	Description	Specific examples	Permissible rebuttals
		enforceable commitment to less than 100% of locations and the location is not covered by that commitment. (See BEAD NOFO at 36, n. 52.)		
C	Location is a CAI	The location should be classified as a CAI.	Evidence that the location falls within the definitions of CAIs set by the Eligible Entity.[36]	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.

[36] 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).[37]

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

Speed Test Requirements

IOB 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.

Each speed test measurement must include:

- The time and date the speed test was conducted.
- The provider-assigned internet protocol (IP) address, either version 4 or version 6, identifying the residential gateway conducting the test.

Each group of three speed tests must include:

- The name and street address of the customer conducting the speed test.
- A certification of the speed tier the customer subscribes to (e.g., a copy of the customer's last invoice).

- An agreement, using an online form provided by the Eligible Entity, that grants access to these information elements to the Eligible Entity, any contractors supporting the challenge process, and the service provider.

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

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

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

Subscribers submitting a speed test must indicate the speed tier they are subscribing to. If the household subscribes to a speed tier of between 25/3 Mbps and 100/20 Mbps and the speed test results in a speed below 25/3 Mbps, this broadband service will not be considered to determine the status of the location. If the household subscribes to a speed tier of 100/20 Mbps or higher and the speed test yields a speed below 100/20 Mbps, this service offering will not count towards the location being considered served 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[38], i.e., 80% of these locations must experience a speed that equals or exceeds 80% of the speed threshold. For example, 80% of these locations must have a download speed of at least 20 Mbps (that is, 80% of 25 Mbps) and an upload speed of at least 2.4 Mbps to meet the 25/3 Mbps threshold and must have a download speed of at least 80 Mbps and an upload speed of 16 Mbps to be meet the 100/20 Mbps speed tier. Only speed tests conducted by the provider between the hours of 7 pm and 11 pm local time will be considered as evidence for a challenge rebuttal.

Transparency Plan

To ensure that the challenge process is transparent and open to public and stakeholder scrutiny, the broadband office will, upon approval from NTIA, publicly post an overview of the challenge process phases, challenge timelines, and instructions on how to submit and rebut a challenge. This documentation will be posted publicly for at least a week prior to opening the challenge submission window. The broadband office also plans to actively inform all units of local government of its challenge process and set up regular touchpoints to address any comments, questions, or concerns from local governments, nonprofit organizations, and Internet service providers. Relevant stakeholders can sign up on the broadband office website for challenge process updates and newsletters (https://dceo.illinois.gov/connectillinois.html).They can engage with the broadband office by a designated email address (Broadband@illinois.gov). The providers will receive email notifications for submitted challenges.

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

- The provider, nonprofit, or unit of local government that submitted the challenge,
- The census block group containing the challenged broadband serviceable location,

[38] 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.

- The provider being challenged,
- The type of challenge (e.g., availability or speed), and
- A summary of the challenge, including whether a provider submitted a rebuttal.

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

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

Plan for ongoing efforts to improve the Illinois Broadband Map, beyond the BEAD challenge process

While the execution of the BEAD Challenge process to fulfill the requirements of the BEAD program will be swift, in order to enable Illinois to meet the broader timeline requirements for completing the final proposal, Illinois plans to periodically execute a similar challenge process, enabling Illinois to continue to refine and improve the maps. This may include continuing use of the challenge portal to periodically accept challenges, collect rebuttals, and make final determinations within the Illinois state map. While this process will not impact the list of unserved and underserved locations the state is obligated to connect via BEAD funds, it can impact how IOB will spend other federal and state broadband deployment funds, until the ultimate goal of closing the digital divide in Illinois is reached.

(End)