Finding Funding for Fiber:
Broadband Financing Options for Rural Texas Communities

Texas Rural Funders

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Thank you to the following:

Jordana Barton-Garcia, Connect Humanity
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Executive Summary

Access to broadband has transformed our economy and our society. Being connected makes a momentous difference in every area of our lives: health, education and workforce outcomes, economic development, precision agriculture, disaster response, and much more.

Securing sufficient internet access has been an economic development lever for twenty-five years. Over that time, the state of Texas and its communities have invested billions of dollars toward securing broadband for all its citizens. While many parts of Texas have achieved their broadband goals, rural Texans are still struggling to get connected and to have good service.

In some locations, anchor institutions and the central part of town are wired with fast, reliable access, while less dense parts of the community have expensive or unreliable options. In other communities, the entire county lacks the density for an effective network, and commercial and residential users have old, expensive, or finicky technology to enable broadband-level access.

What we do now depends on our definition of broadband fairness. The majority of Texans don’t think twice about their fast, reliable internet. But for those who don’t have that opportunity, the majority of whom live in rural areas, the options for financing, building, and managing a network are complex and confusing.

"It’s possible to build gold-standard internet service in rural and low-income communities. When willing partners come together to invest, we can build networks that meet the needs of families and businesses — and that are financially sustainable over the long term. This investment isn’t just for broadband infrastructure; it’s for improved health, more access to economic opportunities, and, ultimately, greater wealth creation for the community."

- Brian Vo, Connect Humanity

Privately-owned networks have very different benefits and risks from municipally-owned networks, and an infinite number of public-private partnership options fill the space between those two options. Foundations have an important role to play in making fairness and inclusion a requirement of network changes. Policymakers can learn from the blind spots of previous initiatives and investments as they steward the billions in federal money headed to Texas. Local leaders can prepare, organize, and activate their vision for connecting every address with the essential utility of broadband.

The purpose of this document is to demystify the financial vehicles and clarify the vocabulary of broadband development. It explains the pros and cons of various means of broadband development and deployment, illustrated by stories from across Texas as told by those who developed and run the systems.
Defining Broadband Costs: “Well, it depends”

Who is covered with existing broadband? Who should be covered by broadband? And how much will it cost to bring broadband to everyone? These three questions seem simple, but are far from it. Answering these questions enables communities and internet service providers to develop a business case for connecting the unserved and underserved parts of Texas that lack much-needed broadband infrastructure.

1. Who is covered by existing broadband services?

2. Who should be covered by broadband?

3. What will it cost to bring broadband to everyone?
Who is covered by existing broadband services?

It is a poorly-kept secret that broadband maps overstate available coverage. In other words, the maps that define coverage at the ground level indicate that nearly all addresses have access to high-speed, reliable internet communications. However, experience shows that many rural users can’t avoid the dreaded spiny circle on their computer. Broadband may not be available at every address, at sufficient speeds, at reasonable cost, with a basic level of customer service. That gap between what is expected and what is experienced can be significant, particularly when the maps of broadband availability guide the distribution of billions of dollars in federal funding.

Schools, hospitals, and large companies are often tied into existing internet networks, smaller businesses, residences, or remote areas still face significant challenges to securing sufficient supply and speed of internet service. Doing the primary research of contacting vendors to get service at specific addresses, and then doing speed checks of available service, are still the best ways to document the actual experiences of rural Texans.

Since 2015, the Federal Communications Commission has defined broadband internet access as 25 Mbps download and 3 Mbps upload. This is enough internet to stream a meeting or show on one device, but not fast enough for multiple concurrent connections, or the ongoing use of connected devices or smart home tools.

It takes at least 100 Mbps to connect multiple devices for work, security, and entertainment.
Who should be covered by broadband?

It is easy to say “everyone” should have broadband access. The COVID-19 pandemic revealed the gaps in access, particularly for families in rural communities, and the economy has accelerated toward broadband reliability to power remote work, precision agriculture, up-to-date public safety tools, and endless entertainment options.

When we look at the internet coverage maps, the Texas Tribune reports that three-quarters of Texans are covered with fast, reliable internet. Yet, the reality is quite different.

- Fixed wireless, often in the form of satellite access, may be available, but at significant cost or with variable reliability, dependent on the impacts of adverse weather or geographic limitations, such as trees that limit line-of-sight access.

- Phone-based internet, via hotspots or portable terminals, may be available, but are metered for the amount of internet available per day or month.

- Coverage is mapped at the census tract level. In federal maps, if even one location in a census tract has broadband access, that area is considered to be covered. The census tract is a grain size too big to show the actual available coverage.

The last point is crucial when it comes to eligibility for receiving forthcoming federal dollars. The latest programs to deliver broadband center on bringing internet to those who are not yet well-served, Texas Comptroller Glenn Hegar said he recognized that the data the state received to develop the maps does not match the reality in communities.
The Quest to Update Broadband Maps in East Texas

The T. L. L. Temple Foundation collaborated with the Deep East Texas Council of Governments (DETCOG) to catalyze a grass-roots effort to challenge documented coverage maps. Through a multimedia campaign in February 2023, utilizing local television, newspapers, social media, and person-to-person contact, individuals and business leaders in Lufkin and surrounding areas conducted speed tests on their available home internet. This 30-second task was completed 3,000 times, identifying 54 census tracts where broadband available is below the acceptable threshold. Over just one week, the FCC received these challenges, paired with calls, visits, and correspondence from area judges, mayors, superintendents, and other civic leaders to share the importance of the incoming data. The Lufkin Daily News editorialized like this:

“The maps for several East Texas counties indicate everyone — or a majority of residents have access to broadband... For example, the map shows 19,185 Angelina County residences are served, 9,423 are underserved and three are completely unserved — about .01% of the community.

Those of us living behind the Pine Curtain know those numbers are questionable at best. But the state’s data shows residents of San Augustine are primarily underserved with only two residents [unserved].

That’s so comically wrong it’s almost impossible to say it out loud with a straight face. But if we don’t try challenging the broadband office’s map, we’ll be stuck with their calculations.”

These challenges are the only way local citizens could advocate for fairness. East Texans’ responses were submitted to the Texas Broadband Development Office. As BEAD and other federal funding is allocated to Texas and to communities, the effectiveness of these challenges will be tested.

Designing, implementing, and submitting a challenge to the FCC broadband maps is an intense, time-sensitive effort. The money and know-how required to update available information can come from a number of sources - judges, superintendents, bankers or foundation leaders, mayors, and others - as effective challenges depend on quickly mobilizing thousands of people to submit precise technical information. Many organizations must coordinate to activate the network of folks who aspire to have faster internet. Many communities don’t realize that if they’re not listed on the federal map as underserved or underserved, they won’t be eligible for BEAD funding. So it’s really important to continue challenging the map to make sure that locations in your community are included.
What will it cost to bring broadband to everyone?

The quick answer is, it depends. The longer answer is that there are many variables for calculating development cost that differ by community. The state of the existing network, availability and cost of labor, materials, and equipment, type of construction required based on local terrain, and cost of financing options each factor into building a project cost.

Jennifer Prather, the CEO of Totelcom, a local broadband provider in DeLeon, Texas, compares costs and concerns of three types of broadband development.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Small Town</th>
<th>Rural Subdivision</th>
<th>Rural Farms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locations per</td>
<td>45</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>Local cost</td>
<td>Tree trimming around power lines</td>
<td>Fiber network construction costs</td>
<td>Saw blades and drill bits for rocky terrain</td>
</tr>
<tr>
<td>factors</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cost per</td>
<td>$887</td>
<td>$3,004</td>
<td>$14,951</td>
</tr>
<tr>
<td>Years to break</td>
<td>4</td>
<td>8</td>
<td>30+</td>
</tr>
</tbody>
</table>
The numbers tell a clear story: installations with low density will take decades to generate a return on investment. That explains why existing and large-scale broadband providers have not gotten to these last rural customers. A reasonable time horizon to break even is necessary to market, maintain, and upgrade the network and its service.

For financial lending purposes, five years is considered a reasonable horizon. For some smaller ISPs who are able to calculate Return on Investment (ROI) in a different way, 12-15 years to break-even is possible.

Prather’s straightforward economics show that public investment is necessary to reach the low density of unserved and underserved rural areas.

Rural broadband expert Dr. Christopher Ali frames it this way:

“This is about failure and successes: failures of policies and markets to deliver broadband, and successes of communities to come together and solve their broadband deficits.”
Get Connected, Y'all: A Guide for Communities to Secure Broadband

Key steps that enable community leaders to envision, engage, and enact fast access across their entire region. Access the entire document here.

1. Identify the decision-makers and influencers.
   Who is interested and can help? Start by engaging leaders who understand broadband as a necessary utility for all Texans.

2. Develop a vision of what you want for your community.
   Define success by what is fair, not what is available. What would it take to cover every single address with 1GB service?

3. Enlist help from experts.
   Contact the Texas Broadband Development Office or local Councils of Government to understand the complicated landscape of funding, technical partnerships, and collaborations across the state.

4. Verify current conditions of availability, reliability, speed, and cost.
   Understand the availability, reliability, cost, and service of existing broadband.

5. Develop a technology plan with engineers and industry pros.
   Starting with existing coverage, create a plan for validating existing maps and covering new addresses. Organize to challenge assumptions of overstated coverage.

6. Activate partnerships.
   Depending on the current state of your area and your goals, connect with funding partners or nonprofit organizations for guidance and expertise on financing, new players in the complex landscape, and opportunities to learn with other communities.

7. Develop a work plan and budget.
   With the partners, collaborate to pursue federal, state, and local funding to finance and manage network buildout.

8. Promote broadband benefits.
   Engage digital navigators to help make broadband accessible to newer users. Online banking, doctor visits, training opportunities, security applications, and social networking may each motivate new users.

   As you move toward full connectivity, acknowledge how far you've come. Have you built community connections? Have you helped older citizens or new Texans connect to available resources? Broadband enables us to build relationships around the globe, and with our neighbors.
Comparing Communities’ Broadband Development Strategies

The financial tools and processes to afford broadband development can be confusing and complex. Those who know the local landscape often have to learn the language of broadband along with the financial tools. Those who are fluent with the financial instruments need to understand the local context of existing networks, incumbent ISPs, the needs and influence of anchor institutions, and the reality of unserved and underserved customers.

As communities and the providers that service them grapple with the cost of building and maintaining broadband networks, as well as marketing to and serving customers, there are an infinite number of ways to address these needs. One end of the spectrum involves entrusting the entire network and operations to an outsourced investor, like the community of Monahans in western Ward County did. On the other end of the spectrum, the community and colonias of Pharr are served by a municipally owned and operated network. In between, privately-held local companies, co-ops, and utility companies work with local players to bring broadband to a community. In this section, we lay out the strengths and risks of various approaches, and share perspectives from those rural communities.

- **Private equity** - View Capital and Hosted America - Monahans
- **Privately-held company** - Totelcom - DeLeon
- **Co-op** - Etex - Gilmer
- **Municipal ownership** - TeamPharr.net - Pharr

"Rural America is incredibly diverse demographically, culturally, and economically. There is no one-size-fits-all investment strategy for rural America. Solving for the complex needs of rural communities—housing, workforce development, infrastructure (including broadband), health care, access to capital—often requires regionalism and a willingness to explore and adopt unique public-private partnerships. Communities that are able to leverage these partnerships are often the ones with the greatest ability to maximize future opportunity."

- Caitlin Cain, Vice President of Rural LISC

"
**Private Equity**

Communities partner with a private equity company to finance buildout and operations of the ISP.

*Average 40%-45% rate of return*

**Strengths**
- Private equity companies bring expertise in financing, developing, and administering broadband networks
- Speed of buildout faster than with braided funding
- ISP brings expertise to broadband marketing and operations

**Risks**
- Ownership, governance, and revenue belong to a private organization
- Support roles can be out of area or offshore

"As I was going out to talk to private equity folks, it’s just like going out to Shark Tank. They ask ‘How many passings are there? How many subscribers do you have?’ I went through discussions with private equity groups and family offices for a year and a half to find the right partner to fund the project.” - Carroll Faulkner, President, Digital Fields

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**Privately-Held Company**

DeLeon, TX

A locally owned company finances, builds, and provides middle mile and last mile service to commercial and residential customers, including operating the ISP.

*Average 9%-15% rate of return*

**Strengths**
- Local support and connection for repair and service
- Experience with and shared risk in securing funding
- Jobs and profits stay local or regional
- Organization may be strong community partner

**Risks**
- Ownership, governance of assets, and revenue belong to a private organization
- Not all communities may have available of suitable partners
Co-op

A collectively-held cooperative organization expands from telephone or electrical service to broadband and owns last mile service.

Average 6%-9% rate of return

Strengths
- Locally owned and governed, and provider is easily accessible for repairs and customer service
- Experience in serving last-mile customers with other utilities or services
- Likely to finance improvements over longer term than private companies, given organizational governance and mission

Risks
- Can be challenging to motivate and engage a board to accept risk required to expand service to a new utility
- Capital investment is a significant challenge, and co-ops may have limited access to capital markets

Municipal Ownership

Pharr, TX

Local government owns, maintains, and operates the middle mile and last mile network and runs the ISP.

Average 3%-7% rate of return

Strengths
- Locally owned and operated
- Public-private partnership can exist within a municipally-owned system; private partners can often build more quickly than cities
- Revenue comes back to the city or community in perpetuity

Risks
- Funding resources are complicated for a city or municipality to secure and manage
- Success with this model takes long-term community commitment to technical expertise and operational support
- Low-density networks or low subscription rates may not be attractive for future development
What Can I Do?

It is daunting to know what to do today to help with bringing broadband to rural communities. By stakeholder group, local experts share specific recommendations.

What can foundations do?

Foundations are often the first dollars in on new initiatives, helping provide capacity for developing vision, writing grants, and getting started. That remains a crucial support for communities pursuing broadband, but Texas broadband experts shared these additional perspectives.

- **Mobilize**: foundations can be extremely useful to mobilize individuals and works of people to challenge coverage maps. This prepares the area to improve their eligibility for federal funding.
- **Support Digital Literacy**: foundations can complement the state investment by supporting digital literacy. Providing training, support, and troubleshooting for those learning to use online banking or streaming media is something that government is not well positioned to do. Leverage local expertise to connect digital navigators with new users, in their native languages.
- **Don’t allow policymakers to say “Good enough.”** Those in agriculture need to be connected. Students in rural areas don’t have a McDonald’s parking lot to go to. Continue to bring along the perspectives of underrepresented folks who need someone to tell their story.

What can community leaders do?

- **Use Data to Create Accurate Maps**: invest the time to crosswalk FCC maps with local data sources like 911 maps or local utility maps, (Census, USPS, county appraisal district) to ensure every actual address is accurately represented on FCC maps.
- **Get Shovel Ready**: the physical environment often presents a significant impact on development costs. Cities and municipalities can manage trees and other aerial barriers, making sure physical infrastructure is prepared for shovel-ready projects.
- **Convene Partners**: connect community representatives, including IT leaders, anchor institutions, and residents, to update and challenge maps with accurate data from local ISPs.
- **Mandate Internet for All**: in policy and in practice, ensure that wireless internet is built out to every new address. Double-check coverage maps to ensure all existing business and residential addresses are represented.
What can policymakers do?

- **Ground Policy in Fairness:** even with competition, providers are going to make more money serving a dense area than sparse areas out there. Public policy can be grounded in equity and focused on the fairness of opportunity.

- **Support Community Map Challenge Efforts:** support and engage communities to submit map and program challenges. Collaborate with the Broadband Development Office to raise collective challenges.

- **Plan for Future Demand:** with or without the FCC, consider increasing the minimum speed defined as broadband. From the current definition of 25 Mbps download and 3 Mbps upload to the future standard of symmetrical 1G or more, plan ahead for the needs of tomorrow.

### Why is investing in broadband risky?

- **Policymakers see risk in funding providers with a shorter track record of broadband development.**

- **Communities have risk in assessing and selecting partners in a complicated technical field.**

- **Investors must wait years between investing in network development and earning customer revenue.**

- **Smaller providers and co-ops have less access to debt financing.**

- **Existing providers don’t want to overbuild when they are already capturing some revenue with existing infrastructure.**

- **Providers cannot afford to build low-density networks because it takes too long to achieve return on investment without government support.**

- **Without investing in building digital literacy skills of community members, there will not be enough new subscriptions to warrant investing in broadband.**

- **Even with expanded availability of faster, more reliable broadband, some subscribers will not leave their existing provider.**
Inventory of Financial Tools

Federal

Affordable Connectivity Program
An FCC benefit program that helps ensure that households can afford the broadband they need for work, school, healthcare and more. ACP provides a discount for purchasing internet service and devices.

Broadband Equity, Access, and Deployment
The Broadband Equity, Access, and Deployment Program (BEAD) is part of the 2021 Infrastructure Investment and Jobs Act. BEAD provides $42.45 billion nationally, and $3.3 billion to Texas to expand high-speed internet access by funding planning, infrastructure deployment and adoption programs in all 50 states.

E-Rate
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. Discounts range from 20% to 90% and are based on the poverty level of the schools. Rural schools and libraries may also receive a higher discount.

Healthcare Connect Fund
The Healthcare Connect Fund provides support for high-capacity broadband connectivity to eligible health care providers (HCPs) and encourages the formation of state and regional broadband HCP networks. Under the program, eligible rural HCPs, and those non-rural HCPs that are members of a consortium that has a majority rural HCP sites, can receive a 65% discount from the fund on all eligible expenses. HCPs can use the Healthcare Connect Fund to purchase services and equipment, as well as construct their own broadband infrastructure where it is shown to be the most cost effective option.

Rural Utility Service
This telecommunications program, part of USDA, provides funding for the deployment of rural telecommunications infrastructure.

ReConnect Loan and Grant Program
The ReConnect Loan and Grant Program of the USDA furnishes loans and grants to provide funds for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband service in eligible rural areas.
National

Private Equity Funds
Private equity refers to capital investment made into companies that are publicly traded. Private equity firms buy companies and overhaul them to earn a profit when the business is sold again. Private equity funds are used to finance middle- and last-mile efforts across the country.

Texas

Broadband Infrastructure Fund
During the 88th Texas Legislative session, House Bill 9 and House Joint Resolution 125 created a constitutionally-dedicated funding source for broadband of $1.5 billion. If Texas voters approve Proposition 8, a constitutional amendment in the November 2023 election, the state funds will be administered by the Comptroller for the purpose of expanding and supporting broadband and telecommunications infrastructure and services.

General Land Office Funds
The Texas General Land Office (GLO), through the Community Development and Revitalization division, works to rebuild Texas communities by putting Texans back in their homes, restoring critical infrastructure and mitigating future damage through resilient community planning. Communities can creatively use General Land Office funds, allocated for hurricane and wildfire restoration, to develop broadband networks and services.

Local

Community Development Financial Institutions (CDFIs)
Community Development Financial Institutions are designed to expand economic opportunity in low-income communities by providing access to credit, loans, and services for local residents and businesses. There are 48 CDFIs based in Texas, and many more serving Texas.

Foundation Support
Private foundations and family offices identify grant-making opportunities and support charitable causes with grants and program-related investments.

Just Transition Fund
The Just Transition Fund helps coal-impacted communities apply for federal funding to support economic diversification, workforce development, and broadband infrastructure projects. Through their Federal Access Center, they provide rolling, rapid-response grants up to $100,000 that can be used for match or application development costs (grant writing, staff time, project coordination, analysis, etc.). They also provide technical assistance support navigating the many available grant programs to identify which are a good fit for your program.
Players in the Industry

Agencies, organizations, and companies referenced throughout this document, mentioned and valued by Texas-based broadband experts.

Federal Agency

National Telecommunications and Information Administration
The NTIA is in the US Department of Commerce and advises the President on telecommunications and information policy issues. NTIA’s programs and policymaking focus largely on expanding broadband internet access and adoption in America, expanding the use of spectrum by all users, and ensuring that the internet remains an engine for continued innovation and economic growth. BEAD funding will be allocated from NTIA to state broadband offices.

State Organizations

Texas Association of Regional Councils
The statewide association of 24 Councils of Government (also known as regional councils), whose members are focused on enhancing quality of life through regional strategies, partnerships and solutions. They are comprised of city, county and special district members working together to implement cost-effective, results-oriented strategies that address statewide and local needs on a regional scale.

Texas Broadband Development Office
The Broadband Development Office (BDO), situated within the Texas Comptroller of Public Accounts, awards grants, low-interest loans and other financial incentives to internet service providers who expand access to broadband service in unserved and underserved areas.

Local Governments

Regional Councils, or Councils of Governments
Councils of Governments are voluntary associations of local governments formed under Texas law. These associations deal with the problems and planning needs that cross the boundaries of individual local governments or that require regional attention. Their advocacy and convening often aggregate local voices in creating regional perspectives in pursuing rural broadband.
Nonprofits

Connect Humanity
This national nonprofit works with communities to build the internet infrastructure and skills they need to participate fully in a digital society. By supporting community connectivity providers that are successfully connecting those who are hardest to reach, Connect Humanity helps communities build the internet infrastructure and skills they need to participate fully in a digital society.

Connected Nation Texas
Connected Nation Texas is a national organization operating in Texas that partners with Texas Rural Funders to coordinate technical expertise, policy perspective, and financial acumen to help Texas communities secure broadband.

Rural LISC
With residents and partners, Rural LISC supports resilient and inclusive rural communities as great places to live, work, and innovate. Rural LISC supports 146 local community-based partners through capacity building grants, loans and equity investments, training and technical assistance, public policy advocacy, and a support network that connects community-based rural groups to each other. Rural LISC is providing technical assistance and support for organizations in East Texas to implement digital navigator programs.

Texas Association of Telecommunications Officers and Advisors
TATOA is the local affiliate of a national professional association that exists to support and serve the communications needs of local governments. This professional association has conferences, professional development, technical assistance, and exemplars to support community leaders in successfully navigating broadband issues.

Texas Rural Funders
Texas Rural Funders is a coalition of funding organizations that believe the future of Texas depends on strong, successful rural communities. The diverse network of funders brings attention and resources to rural Texas, systemic challenges for impact no single organization could achieve alone. Texas Rural Funders is dedicated to working with rural communities to amplify opportunities and rural voices.
Glossary of Broadband Terms

- **Backbone.** The principal data routes among large interconnected computer networks and core routers of the internet. These data routes are hosted by commercial, government, academic and other high-capacity network centers. Providers connect middle-mile service to the backbone.

- **Bandwidth.** The measure of telecommunications and internet networks to transmit data and signals. It is generally expressed in gigabits per second (Gs) or megabits per second (Mbps).

- **Broadband.** Reliable high-speed internet access that is always on, defined by the Federal Communications Commission as having download speeds of at least 25 megabits per second (Mbps) and upload speeds of at least 3 Mbps. 100 Mbps upload and download speeds are common.

- **Community anchor institution.** Schools, libraries, medical and healthcare providers, public safety entities, institutions of higher education and community support organizations that are significant customers and provide access, outreach, equipment, and support services to facilitate greater use of broadband.

- **Digital divide.** The gap between individuals who have access to the internet and those who have limited or no access.

- **Digital equity.** Recognizes that digital access and skills are now required for full participation in many aspects of society and the economy. Digital equity highlights that a lack of access and/or skills can further isolate individuals and communities from a broad range of opportunities.

- **Digital inclusion.** Implies that individuals and communities have access to robust internet connections, internet-enabled devices that meet their needs, and the skills to explore, create, and collaborate in the digital world.

- **Digital literacy.** The ability to leverage current technologies, such as smartphones and laptops, and internet access to perform research, create content and interact with the world.

- **Fiber internet.** The technology utilizes fiber-optic cable, which can send data as fast as about 70% the speed of light. In addition, fiber-optic cables are not as susceptible to severe weather conditions as other types of traditional cables, which helps minimize outages. It also resists electrical interference.

- **Fixed wireless internet.** Fixed wireless internet is broadcast from towers through airwaves to receivers that the service provider will have installed on the user’s property. This is used instead of fiber internet.

- **Internet Service Provider (ISP).** A company that provides individuals, businesses, anchor institutions, etc., with a connection to the internet. They use different technologies to deliver internet service to their customers.

- **Last mile.** The physical part of a broadband network that serves as the final leg connecting the provider’s network to a home or building – the hookup between the carrier networks to the end point. To put it more simply, the last mile is where data bridges from infrastructure to device.

- **Middle mile.** The network infrastructure that connects “last mile” (i.e., local) networks to other network service providers, major telecommunications carriers, and the internet backbone.
• **Network infrastructure.** The hardware and software components of a network that provide network connectivity and allow the network to function.

• **Passing.** Any location which can be connected, including businesses and homes.

• **Right of Way.** Legal rights to pass through property owned by another. Right of ways are frequently used to secure access to land for digging trenches, deploying fiber, constructing towers and placing equipment on existing towers and utility poles.

• **Service area.** The entire area within which a service provider offers or intends to offer broadband service.

• **Take rate.** The percentage of customers within a broadband provider’s service area who subscribe to, or “take,” the service.

• **Tax increment financing.** Also known as TIF, a public financing method through which future property tax increases can be diverted to subsidize community development and improvement projects.

• **Technical assistance.** The process of providing targeted support to an organization with a development need or problem, typically delivered over an extended period of time.

• **Unserved area.** Areas that lack physical access to broadband service as defined by the state program.

• **Underserved area.** Areas that have internet service at speeds higher than those that are defined as unserved but lower than those that have broadband service.