

ANDERSON COUNTY, TEXAS

Technology Action Plan Summary



CONNECTED
NATIONSM
Texas

OVERVIEW

Today, technology plays a pivotal role in how businesses operate, how institutions provide services, and where consumers choose to live, work, and play. The success of a community has become dependent on how broadly and deeply the community adopts technology resources, which includes access to reliable, high-speed networks; the digital literacy of residents; and the use of online resources locally for business, government, and leisure.

The Connected Nation Texas (CN Texas) Connected Program partnered with the Anderson County Broadband Team to conduct a study designed to determine the availability of broadband infrastructure; how its residents are adopting and using broadband services; and what steps would have the greatest impact toward improving broadband access, adoption, and use across every sector locally.

Pursuant of this goal, between March 12 and September 19 of 2020, Anderson County conducted a comprehensive survey of broadband technology access and adoption across the community that collected responses from 1,760 households. CN Texas staff also met with community officials to determine community needs and to gather qualitative data for consideration in the study. Overall, the assessment was designed to identify issues and opportunities to close the local Digital Divide.

Anderson County is in a good position to improve broadband access, adoption and use throughout the community. With Rural Digital Opportunity Fund (RDOF) money (once approved) and Coronavirus State and Local Fiscal Recovery Funds flowing into the county, the future looks bright. Understanding how to partner with local providers and keeping up with grant expenditures is imperative to long-term success. Recommendations in this action plan are inexpensive or cost nothing at all but will contribute greatly to community development. Increasing broadband adoption and use throughout the County will contribute to greater quality of life.

The following provides a summary of the results of the technology assessment performed by CN Texas, as well as recommendations for improving broadband and technology access, adoption, and use. Many recommended actions are of low-cost to the County and should be engaged in immediately to help the community accelerate deployment opportunities.

Anderson County – Quick Facts

Population	57,922
Number of Households	16,677
Median Household Income	\$43,455
Poverty Rate	14.9%
Bachelor’s Degree or Higher	10.6%
Homeowner	69.6%
Hispanic or Latino Population	17.8%
Households Served with Broadband ¹	87.32%

Source: U.S. Census 2019
<https://data.census.gov/cedsci/profile?q=0500000US48001>

¹ The current FCC definition of broadband is a minimum of 25 Mbps download and 3 Mbps upload. This data is derived from Connected Nation Texas, Dec 2020.

KEY FINDINGS

- Nearly 60% of the residents use fixed internet connections² such as DSL, fiber, or fixed wireless, with an additional **fifth** of residents using non-fixed internet connections³ including dial-up, satellite, and mobile-only services.
- For households that said they do not subscribe to home internet service, **the top barrier reported was a lack of available service**, followed by the **cost of internet service**.
- The average internet speed reported by households in Anderson County (**13.11 Mbps**) is significantly lower than connections in other Connected communities (**36.7Mbps**) and is below the current FCC definition of broadband (minimum speed of 25 Mbps download and 3 Mbps upload).
- About **83% of businesses** participating in the survey reported that they subscribe to fixed or non-fixed broadband service. At the same time 72% reported that they were dissatisfied with their service with **unreliable connections** being the leading reason for their dissatisfaction.
- **67% of government entities** indicated they are not satisfied with their broadband service, with **slow speeds** and **unreliable connections** being the leading reasons for dissatisfaction.
- **93.3%** of households said they would like to have improved or additional options for home internet service.
- Just over one-third (**33.2%**) of households in Anderson County have access to internet service at speeds needed to run many modern applications (100 Mbps downstream and 10 Mbps upstream). Statewide, 88.5% of households have internet access at this speed.



87.3%

of households
in Anderson
County have
access to
broadband

² Fixed internet connections include DSL, fiber, or fixed wireless technology.

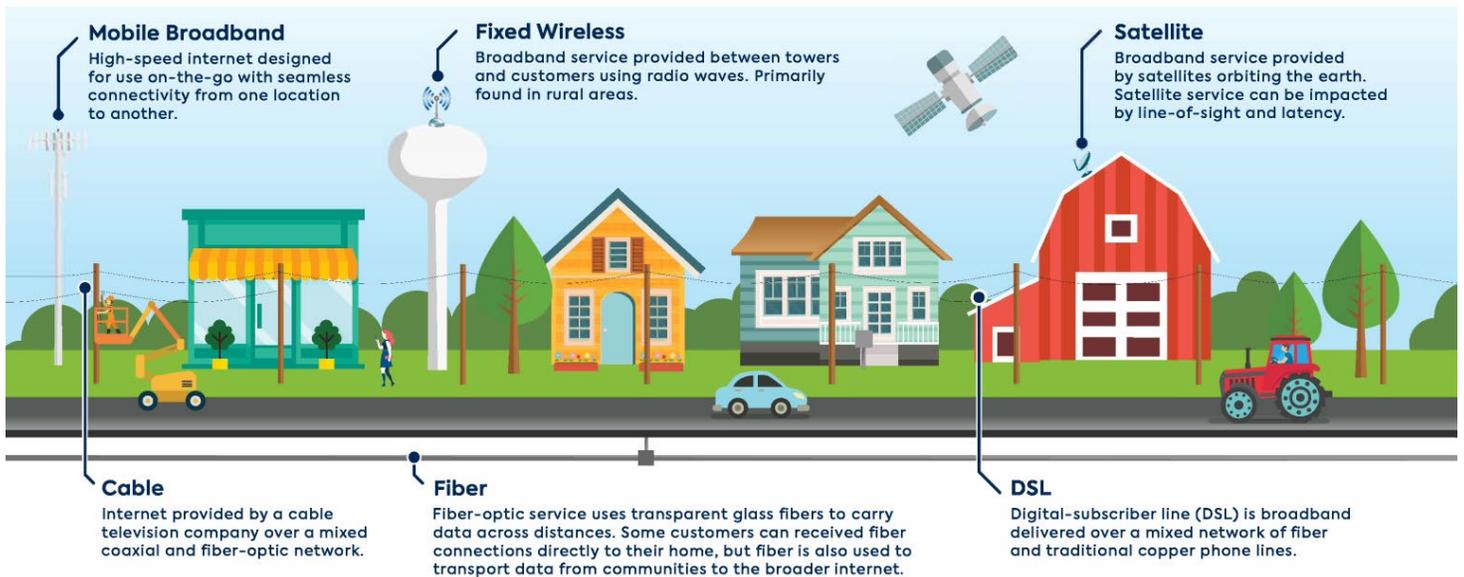
³ Non-fixed internet connections include dial-up, satellite, and mobile-only services. These non-fixed types of internet services, while providing basic access, are often plagued by connection latency, have costly monthly data plans, or can be impacted by weather, terrain, large expanses of open water, and other environmental factors.

INFRASTRUCTURE

The first step in understanding the state of broadband infrastructure in Anderson County and the rest of Texas is having accurate maps. Accordingly, CN Texas works with providers to develop a variety of broadband maps at a state and county level. Data shown on these maps is derived from a combination of direct provider outreach and data collection, FCC Form 477 broadband deployment filings, and independent research conducted by CN Texas. If a provider were unable or unwilling to supply granular data and a detailed service area could not be developed, the provider's service is represented by Form 477 data, a format that tends to overstate the service territory.

Broadband - Quick Facts	
Unserved Households (25/3 Mbps)	2,184
Households served (10/1 Mbps)	97.15%
Households served (25/3 Mbps)	87.32%
Households served (50/5 Mbps)	85.28%
Households served (100/10 Mbps)	33.22%

Broadband data collected by CN Texas in 2020



According to CN Texas broadband data collected in December 2020 - with public feedback, field validation, and provider input: many households in Anderson County do not have access to broadband of at least 25/3 Mbps, the current definition of broadband as set forth by the Federal Communications Commission (FCC). Broadband service in Anderson County serves a large majority of the population of the county. There were 6 providers identified via the data collection process that provide internet service in Anderson County as shown on the table below:

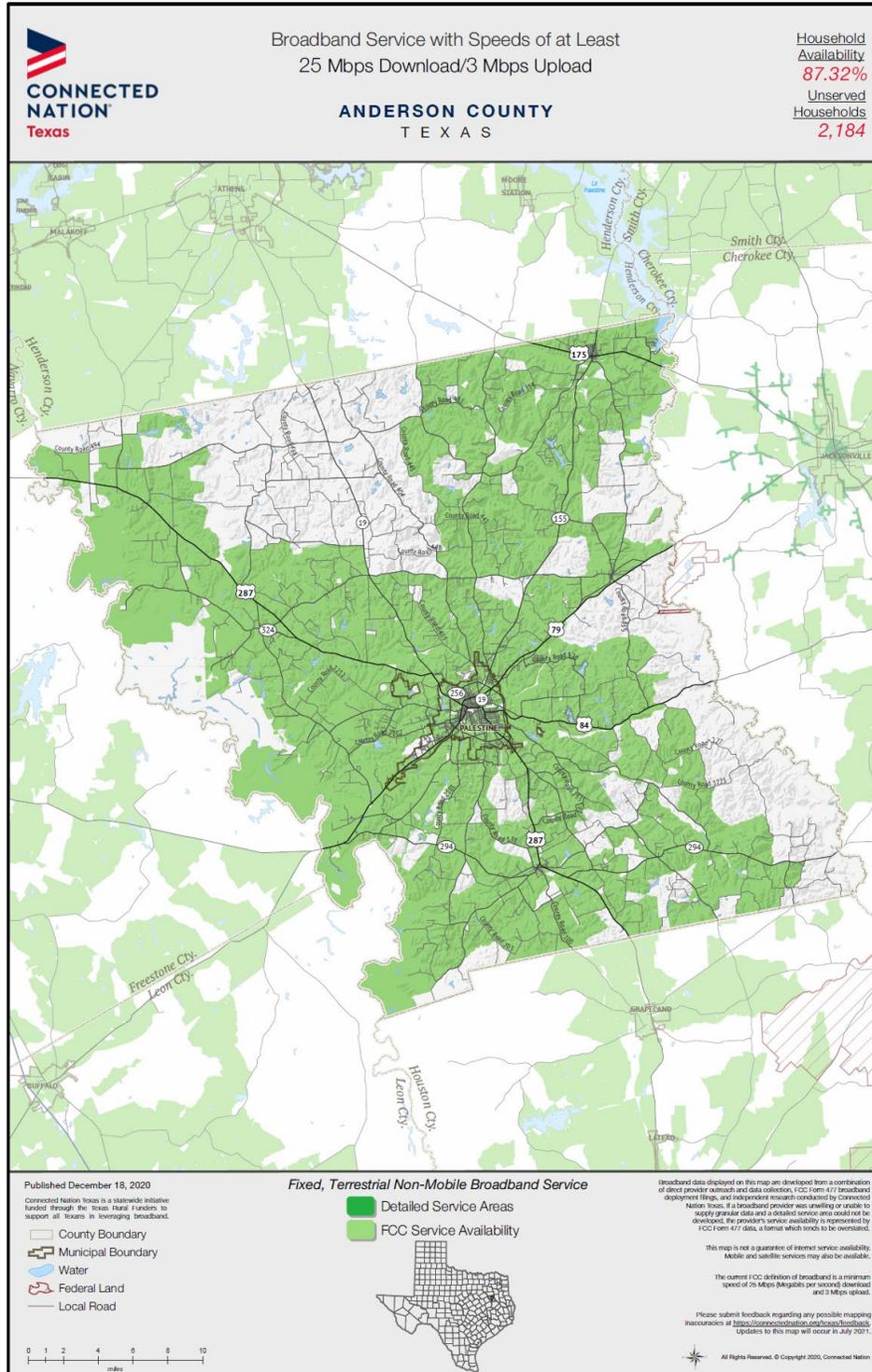
Internet Service Providers in Anderson County

PROVIDER	TECHNOLOGY	WEBSITE	MAXIMUM DOWNLOAD SPEED (Mbps)	MAXIMUM UPLOAD SPEED (Mbps)
CenturyLink	DSL	https://www.centurylink.com/	100	20
East Texas Broadband	Fixed Wireless	http://www.etbroadband.net	20	5
Eastex Net	Fiber	https://www.eastex.com/	100	100
	DSL	https://www.eastex.com/	25	20
Suddenlink Communications	Cable	https://www.suddenlink.com/	200	150
Valor Telecommunications of Texas LP	DSL	https://www.windstream.com/	100	100
	Fiber	https://www.windstream.com/	200	200
Zito Media LP	Cable	http://www.zitomedia.com/	200	15

ANDERSON COUNTY, TEXAS SUMMARY



Below is Anderson County's (25/3 Mbps) map. To access the full map in pdf, go to <https://connectednation.org/texas/county-maps/> and select Anderson County in the dropdown list. Other portions of the county are served by internet service providers (ISPs) offering slower advertised speeds.



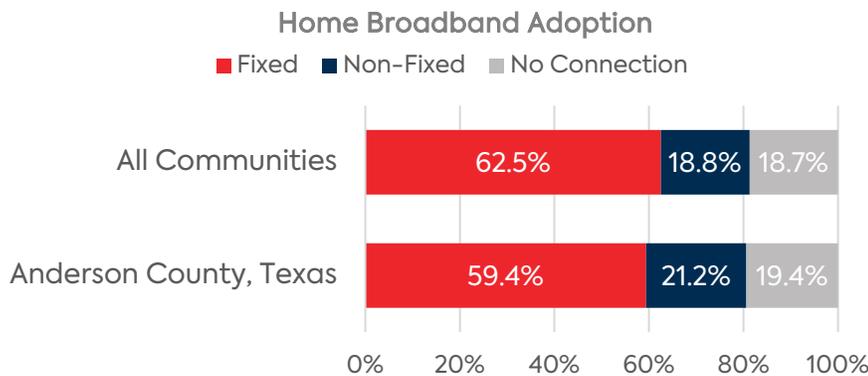
HOUSEHOLDS – DETAILED FINDINGS

The following provides an overview of results from a broadband survey conducted in Anderson County March 12 and September 19 of 2020. Altogether, CN Texas received 1,760 completed surveys from households across the county, and respondents provided insights into their internet connectivity, or lack thereof. Data from Anderson County are compared to data from dozens of other rural Connected participating communities across Michigan, Ohio, Texas, and Pennsylvania to benchmark and identify areas for improvement.

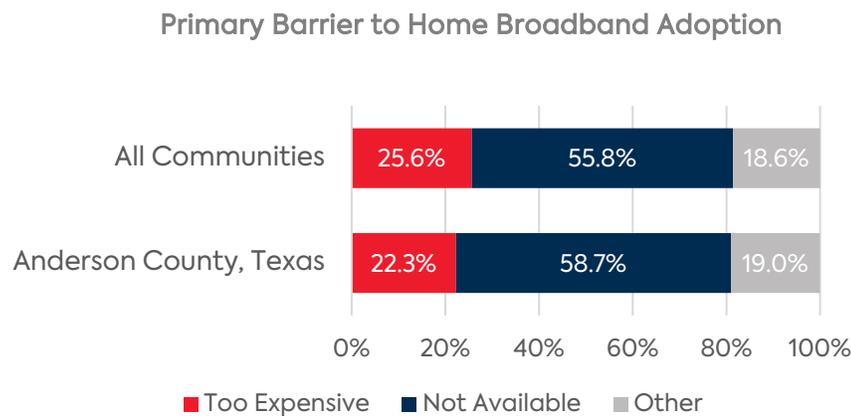
Households – Quick Facts	
Fixed Home Broadband Adoption ⁴	59.4%
Average Monthly Cost of Internet	\$75.68
Average Download Speed	13.11 Mbps
Households Satisfied with Service	24.0 %

Source: Anderson County Household Survey conducted by CN Texas

ADOPTION



In Anderson County, 59.4% of households that took the survey subscribe to fixed broadband service delivered via a cable, DSL, fiber, or fixed wireless technology. Also, 21.2% of respondents indicate they have internet service, but it is delivered via dial-up, satellite, or a mobile wireless service. This leaves just under one-fifth (19.4%) of survey respondents without internet access at home.

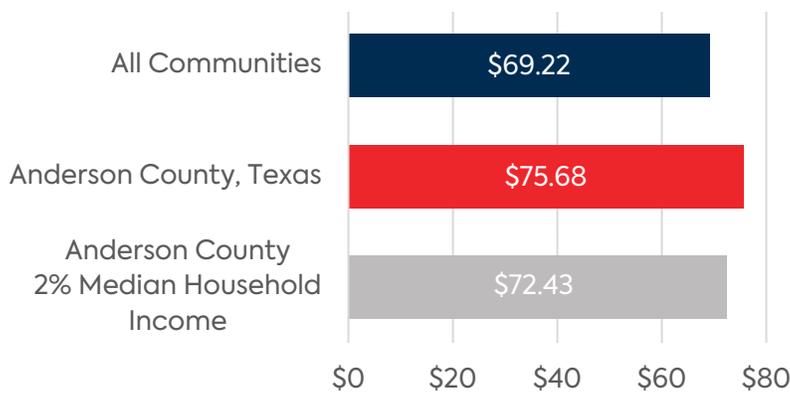


Among those without a home internet connection, 58.7% said they did not have broadband because it was not available to them, while almost one-quarter (22.3%) indicate that it was too expensive. Like in many communities, cost and availability are the two primary barriers to home broadband adoption.

⁴ Fixed home broadband connections are those provided by cable, DSL, fiber, or fixed wireless technology.

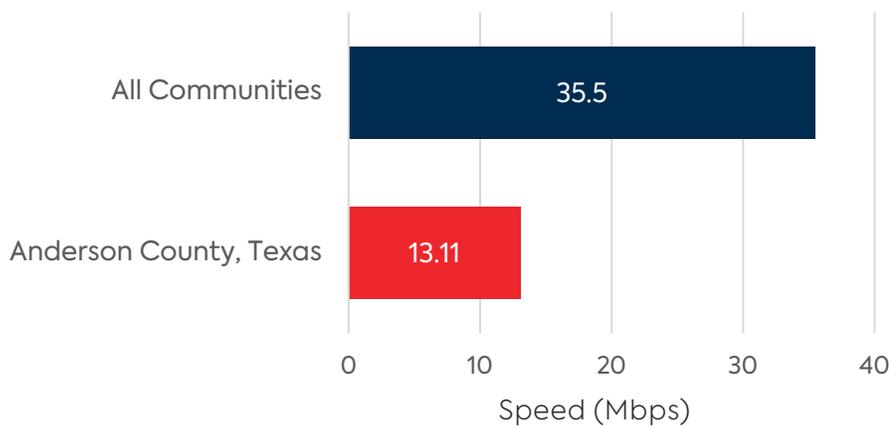
CONNECTION DETAILS

Average Monthly Cost for Home Internet Service



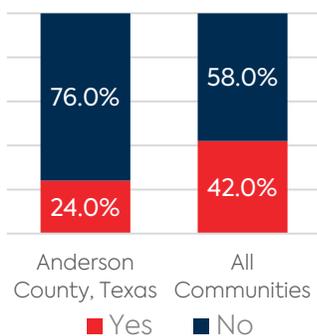
Two percent of monthly income is a recognized standard for measuring the affordability of a home internet connection. Respondents indicate that, on average, their internet connection costs about \$75.68 per month. This is higher than monthly costs in other communities (\$69.22). Two percent of the median household income in Anderson County is \$72.43 per month.

Average Download Speed (Mbps)

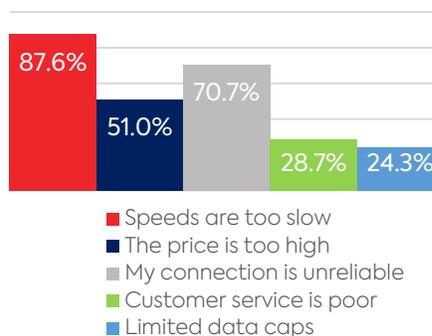


The FCC currently defines broadband as an internet connection with a download speed of at least 25 Mbps and upload speed of at least 3 Mbps. On average, respondents indicate that their connection's download speed is 13.11 Mbps, which is much lower than household connections in other communities and well below the defined speed of broadband which is 25 Mbps.

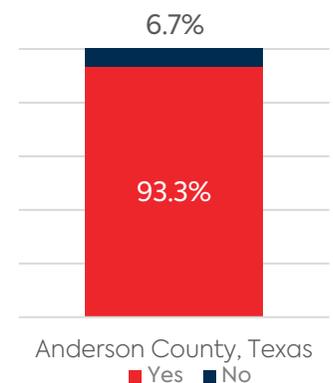
Does Your Internet Connection Meet Your Needs?



Why Does Your Connection Not Meet Your Needs?



Are You Interested in Additional Internet Choices at Home?



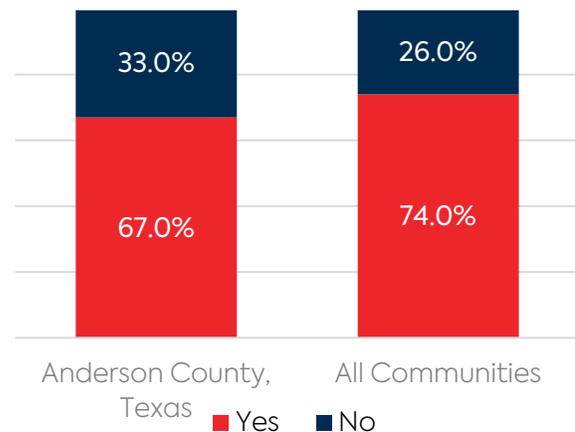
Competition provides residents with choices for service, allowing households the ability to switch providers if their current service does not meet their needs. Two-thirds of respondents indicate that their internet connection does not meet their needs. This is a higher rate of dissatisfaction compared to households in other communities (58%). When asked why their connection does not meet their needs, 87.6% of households indicate that the speed is too slow. About 51% say the price is too high, and nearly 70.7% indicate that the connection is unreliable; (respondents could choose more than one reason). Finally, nearly every respondent (93.3%) indicate that they are interested in additional internet choices for their home.

MOBILE CONNECTIVITY

A little more than Two-thirds of Anderson County households (67%) report that they subscribe to mobile internet service which they access via a smartphone or similar mobile device. This is a little lower than other Connected communities (74.0%).

Additionally, about 32.3% of mobile-connected households reported that they rely on their mobile connection at home as their primary source of internet connectivity or use mobile service to connect other household devices to the internet.

Households Subscribing to Mobile Internet Service



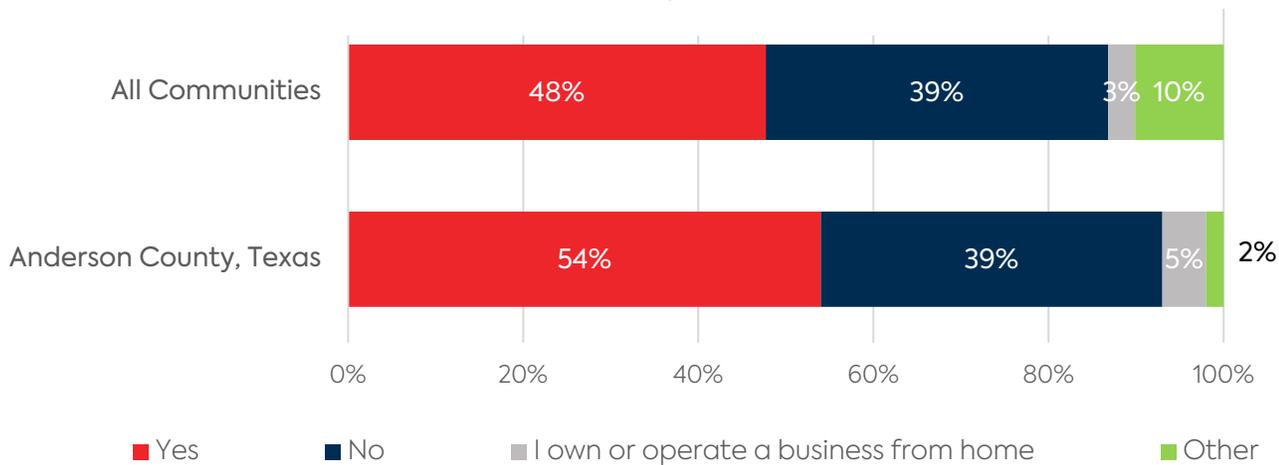
14.6%

of mobile-connected households
use that mobile service as their
primary home internet source

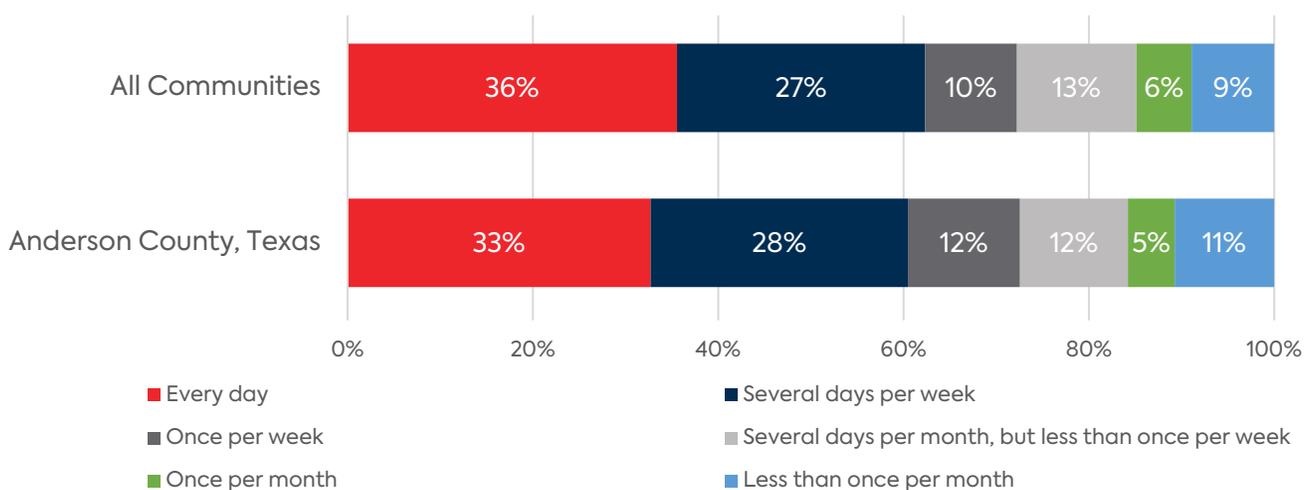
TELEWORK

Teleworking, or telecommuting, refers to working outside of the conventional workplace and communicating with it by way of telecommunications or computer-based technology. The COVID-19 pandemic forced many organizations to allow staff to telework. Teleworking is quickly becoming a critical part of growing a local economy because it represents an opportunity to attract or retain employees even though their employer may not be located within the community. However, this only works if those employees have access to advanced broadband infrastructure. Approximately 54% of residents in Anderson County indicate that they telework at least part of the time. This is more than residents in other communities. It is important to note that most of the data from other communities was collected prior to COVID-19, and Anderson County numbers may have been impacted by COVID-19.

Do You Currently Telework For Your Job?



How Frequently Do You Telework?



RECOMMENDATIONS

The following recommendations are presented to assist Anderson County in expanding broadband access and adoption throughout the community.

Develop Public-Private Partnerships to Deploy Broadband Service

Public-private partnerships take many forms, limited only by the imagination and legal framework in which a political subdivision operates. Some communities issue municipal bonds to fund construction of a network, others create non-profit organizations in collaboration with private carriers or provide seed investment to jumpstart network construction.

- Determine priorities for the partnership.
- Research partnership models.
- Understand key legal considerations for localities looking to build a broadband partnership

Enact strategies that promote fixed broadband access, such as a “dig once” policy.

Explore policy options that will make it easier to improve broadband infrastructure in the area. Where feasible and cost-effective, enact such policies. One example is a “Dig Once” policy whereby public or private excavators are required to coordinate with local authorities to install fiber or conduit whenever ground is broken on a public right-of-way.

- Explore legislative strategies enacted by states and municipalities and determine if such actions would be legal and cost-effective.
- Determine what steps would be necessary to enact a Dig Once provision that will be flexible and create as little disruption as possible, while still resulting in the desired goal.
- Continue to monitor the impact of such policies and revise as necessary.

Host Website and Social Media Classes for Local Businesses

Training should be provided to small businesses regarding the use of websites and social media within that small business. Website topics should range from starting a basic website to more advanced topics such as e-commerce. Social media topics should include a variety of social media outlets including Facebook, Twitter, Instagram, YouTube, Pinterest, and LinkedIn.

- Work with the local chamber of commerce and/or libraries to expand existing programs that promote e-commerce.
- Partner with providers to sponsor workshops.
- Identify regional and community partners with resources and expertise to assist with “free” website and social media workshops.
- Schedule workshops and advertise classes via local media.