



Applicant Name: Little River County

Applicant Address: Address: 351 N. Second St., Ste. 4, Ashdown, 71822

Applicant Phone Number: (870) 898-7202

Applicant Email Address: mcranford@lrcounty.com

Applicant Tax ID or EIN Number: 71-6000232

Key Contact Person: Mike Cranford

Total Amount Requested: \$75,000

Project Description: Rural Broadband FTTH

Little River County, AR., is applying for the University of Arkansas for Medical Sciences (UMAS) Rural Broadband Grant to aid in the development of a Fiber-to-the-Home (FTTH) broadband network. Little River County will partner with Extreme Broadband to provide high-speed broadband and CT&T Engineering to serve as engineering consultant. High speed broadband delivered by FTTH promotes commerce, enhances education, and increases economic success by supporting workforce continuity. Funds provided by this grant would allow for business and feasibility studies that identify underserved areas and propose new service areas that will offer high speed broadband access to rural communities. This application follows guidelines specified by UMAS to provide demographic statistics, technical specifications, financial costs and scheduling considerations. The design, descriptions, and activities for this grant application are consistent with similar and large-scale FTTH projects that have been successfully completed on time and within budget.

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Project Narrative

Introduction

Proposed Service Area

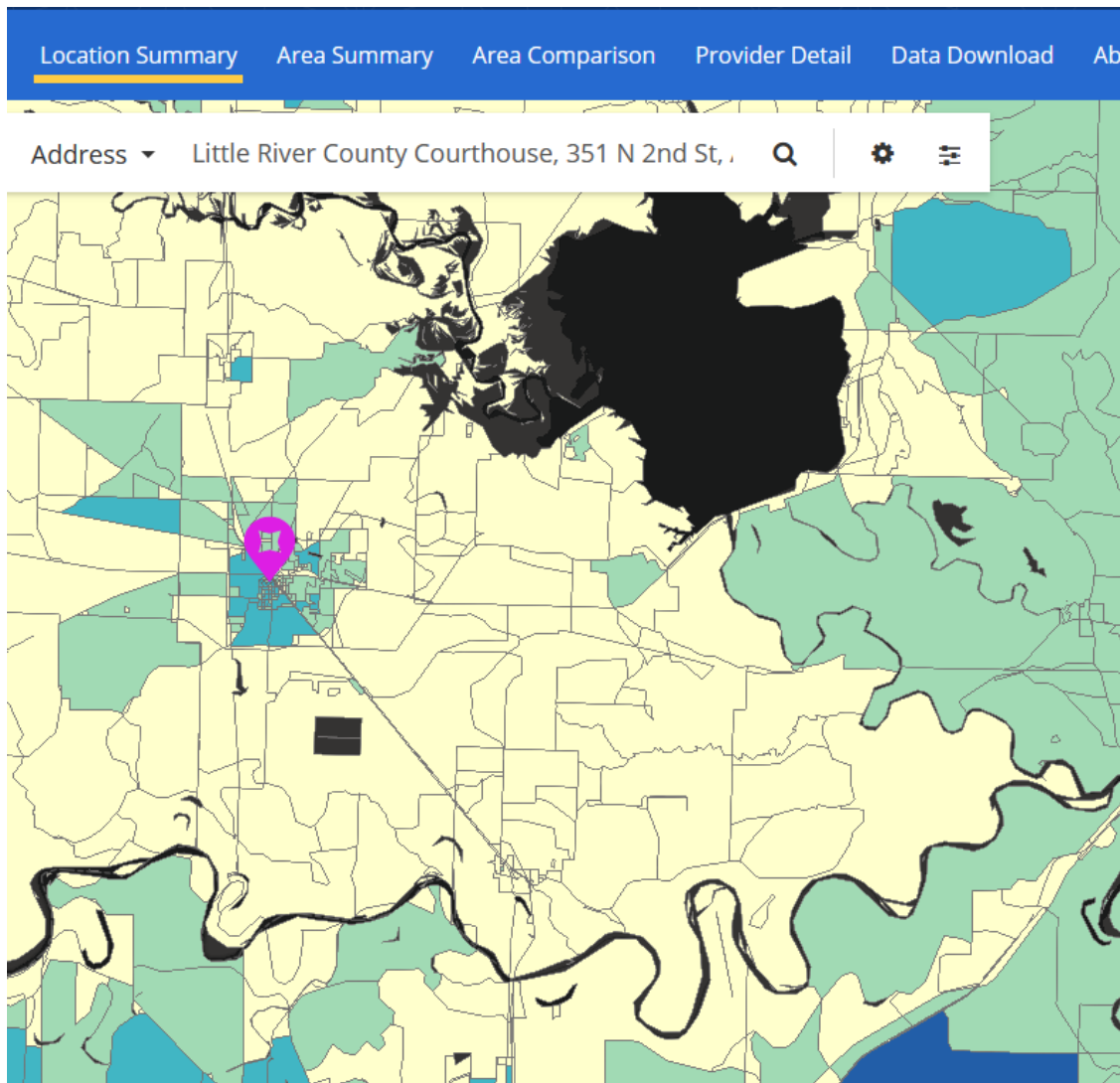
Proposed Service Areas that contain underserved residents ($\leq 25/3$) are found within the boundaries of Little River County, AR. This county is located on the southwest part of Arkansas bordering both Oklahoma and Texas. Per Federal Communication Commission (FCC), the proposed service area is located withing Census block ID: 050810301011042. To be eligible for the Rural Broadband Grant, local entities within Arkansas must be an unincorporated community within a county, a city of the first class, a city of the second class, and an incorporated town. The county seat, Ashdown, AR is classified as a First-Class City. Other cities include Foreman, Ogden, Wilton, and Winthrop. Alleene, Comet, Richmond, and Rocky Comfort are unincorporated communities in Little River County, AR.

The United States Census Bureau defines “Rural” as all population, housing, and territory not included within an urban area. The Census Bureau identifies urban areas as the following: Urbanized Areas (UAs) of 50,000 or more people; Urban Clusters (UCs) of at least 2,500 and less than 50,000 people. According to the 2018 American Community Survey, the total population of Ashdown, AR was 4,447 classifying it as and making it the only Urban Cluster in Little River County.

Location Summary next page

Location Summary

The map and graph included in this section queried locations within the proposed service area with bandwidth of $\geq 25/3$ Mbps and application settings excluded satellite.



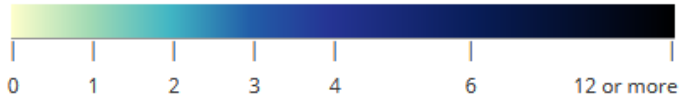
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All Providers Reporting Service



Census block ID: 050810301011042

Number of Fixed Residential Broadband Providers



Broadband



Technology ADSL, Cable, Fiber, Fixed Wireless

Speed ≥ 25/3 Mbps

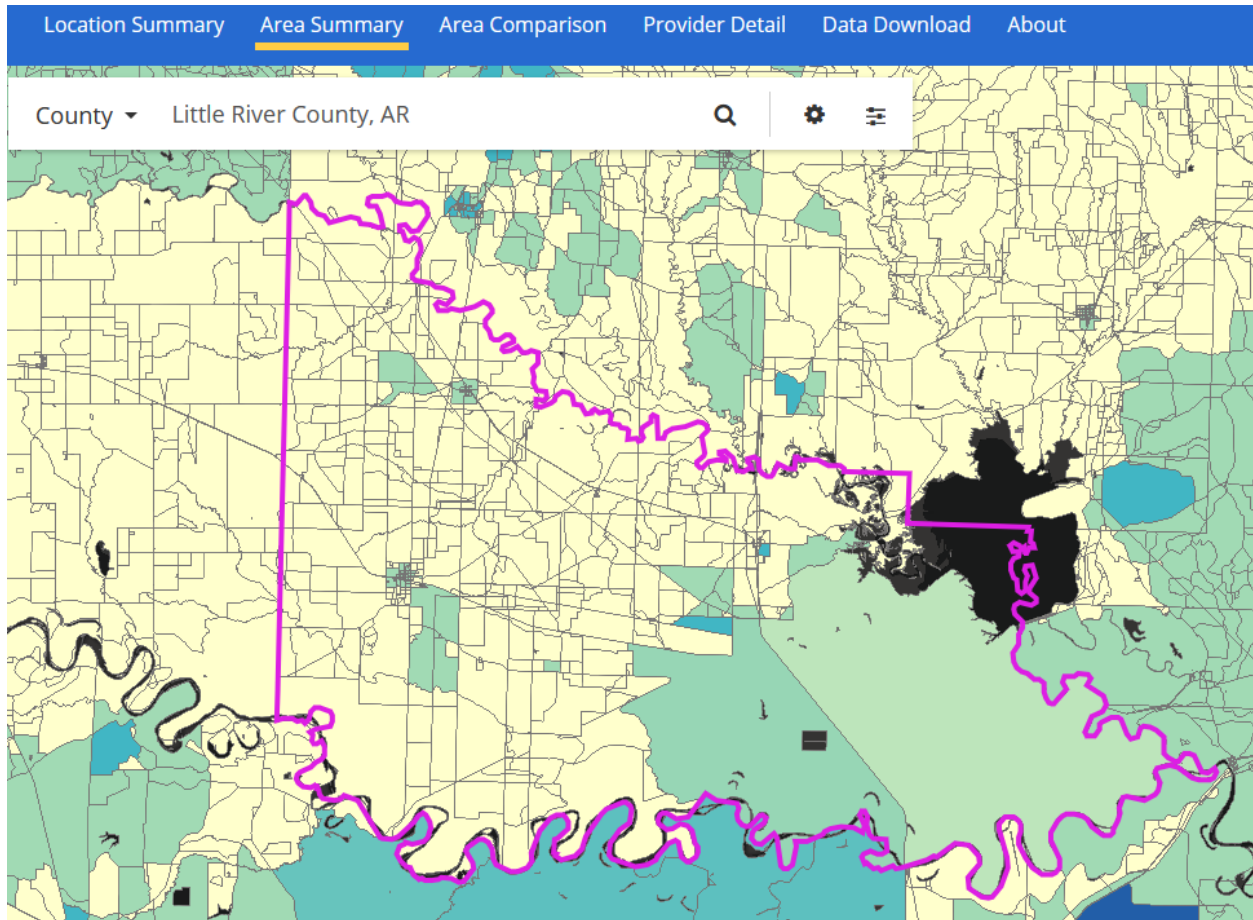
Date June 2019 (*latest public release*)

Provider	Tech	Down ▼ (Mbps)	Up (Mbps)
Cable One, Inc.	Cable	200	10
ViaSat, Inc.	Satellite	35	3
AT&T Inc.	ADSL	25	5
Hughes Network Systems, LLC	Satellite	25	3
AT&T Inc.	Fixed Wireless	10	1
AT&T Inc.	ADSL	6	0.512
VSAT Systems, LLC	Satellite	2	1.3

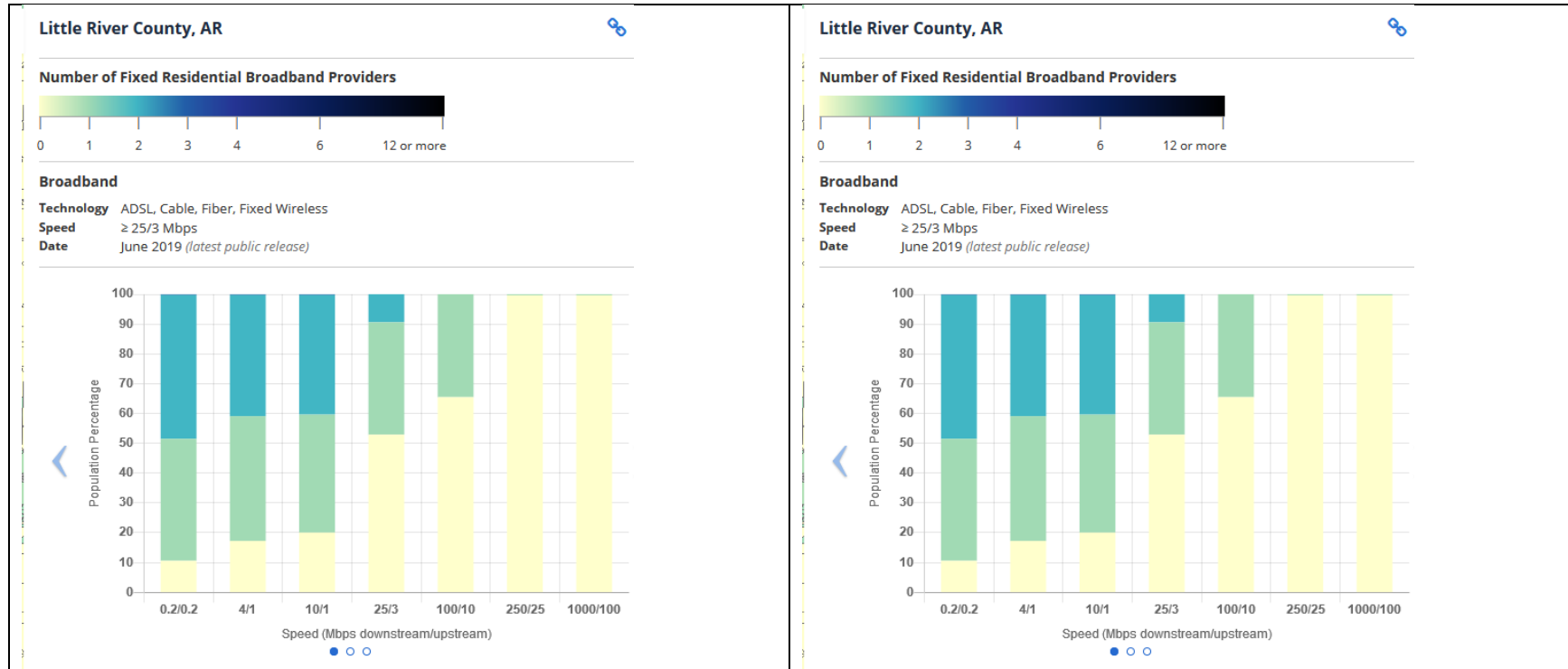
Area Summary Next Page

Area Summary

This section includes area summary coverage map for Little River County, AR along with graphs indicating Broad Speeds, Settlement Types, and Tribal areas.



These graphs and tables list the number of providers within Little River County's boundary that offer $\geq 25/3$ Mbps and present statistics for urban vs rural providers.



Speed	0 Providers	1 Providers	2 Providers	3 Providers		Number of Providers	Urban	Rural
25/3	52.8%	37.71%	9.41%	0%		No Providers	10.48	70.81
						1 or more providers	68.58	24.66
						2 or more providers	20.94	4.54
						3 or more providers	0	0

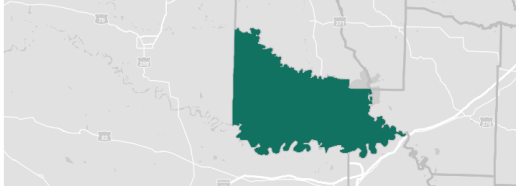
For Settlement type Tribal vs Non-Tribal, the FCC counted 12,326 Non-Tribal and 0 Tribal users in Number of Fixed Broadband Providers table.

Total Population

The US Census Bureau states that Little River County, AR has a total area of 532.1 square miles, and with a total population of 12,417. (see supporting documentation for population profile)

Little River County, Arkansas

County, or equivalent in Arkansas



Covering 532.1 square miles, Little River County, Arkansas is the 73rd-largest county in Arkansas by area. Little River County, Arkansas is bordered by Miller County, Hempstead County, Sevier County, Howard County, McCurtain County, and Bowie County.



POPULATION
12,417



MEDIAN HOUSEHOLD INCOME
\$45,388



POVERTY RATE
15.8%



BACHELOR'S DEGREE OR HIGHER
11.4%

Living in Poverty

The United States Census Bureau reports that poverty rate for Little River County, AR 15.8% which is above the national average of 10%. The median household income is \$45,388 which is \$14,905 below the national average of \$60,293.

Medically Underserved

This table generated from data.HRSA.gov shows that Little River County, AR has an Index of Medical Underservice (IMU) score of 61.0. This score is significant given that the lowest score (highest need) is 0; the highest score (lowest need) is 100; and an IMU qualifying designation must be a score of 62.0 or less.

Discipline	MUA/P ID	Service Area Name	Designation Type	Primary State Name	County	Index of Medical Underservice Score	Status	Rural Status	Designation Date	Update Date
Primary Care	1054170157	Little River County	Medically Underserved Area	Arkansas	Little River County, AR	61.0	Designated	Partially Rural	11/01/1978	09/05/2019
		Component State Name	Component County Name	Component Name	Component Type	Component GEOID	Component Rural Status			
		Arkansas	Little River	Little River	Single County	05081	Partially Rural			

Description of Need

Staffing Needs

CT&T Engineering consists of consultants and licensed engineers that provide the following services:

- GIS
- Drafting
- Utility
- Industrial Electrical
- Telecom Engineering
- Right of Way
- Data Engineering
- Information Technology
- Integration Services
- Project Management
- Inside Plant Engineering
- Outside Plant Engineering

These services allow CT&T Engineering to deliver a turnkey project that begins with grant writing services and ends with Fiber-to-the-Home turnup and testing.

Population Needs

Little River County residents between the ages 18-65 makeup 77.9% of the population. Three age groups within this range include Millennials and Generation X and account for the highest Internet usage with 18-29 consuming the most bandwidth followed by 30-49 and 50-64.

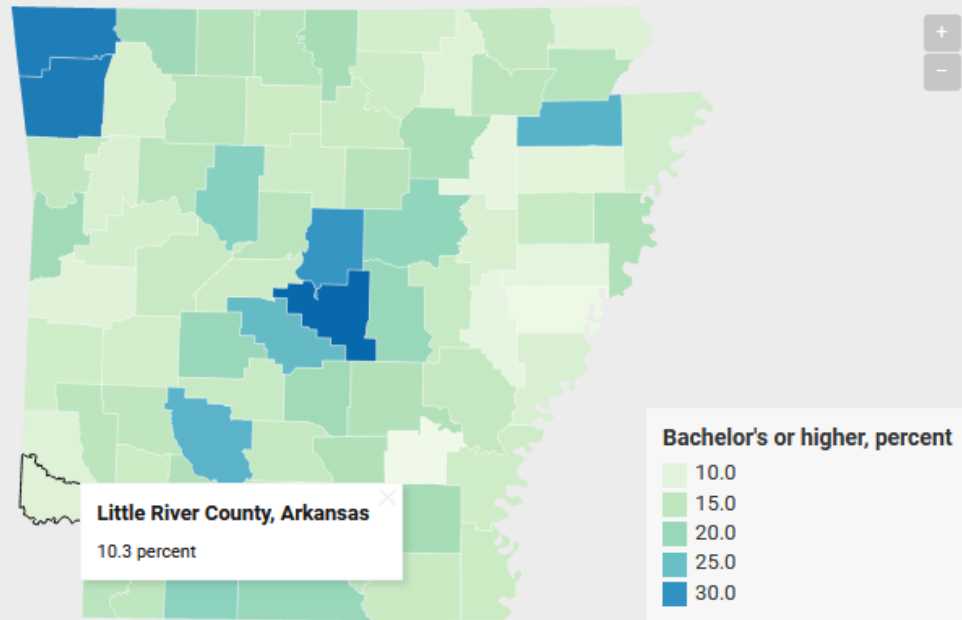
With the onset of Covid-19, the correlation between broadband availability & speed and education attainment has never been more evident. High speed broadband increases knowledge transfer from the Internet and is more efficient and available in urban areas of the US than rural. With a shift from manufacturing occupations to knowledge-based occupations, bandwidth has a direct impact on economies and quality of life.

According to the 2014-2018 American Community Survey 5-Year Estimate for Little River County, AR, Educational Attainment percent of high school graduate or higher was 88.2 which is just below the national average of 88.4%. The number of residents in Little River County obtaining bachelor's degrees or higher is one of the lowest percentages in the state.

See Bachelor attainment diagram next page.

**ARKANSAS — Percent of people holding bachelor's or higher by county in 2017 |
Percentage point change from 2010 to 2017**

**NATIONAL — Percent of people holding bachelor's or higher in 2017: By county |
By state
Percentage point change from 2010-2017**



Map: Emily Walkenhorst • Source: U.S. Census Bureau American Community Survey, 2013-2017 • Get the data • Created with Datawrapper

Broadband Needs

Based on statics provided by FCC for providers offering speeds $\geq 25/3$ Mbps, 52.88% of the population within the proposed service area have 0 providers and 37.71% of the population only have 1 provider. The percentage of the population that has either 0 or 1 providers offering $\geq 25/3$ Mbps is 90.59%. US Census reports that households in Little River County with a computer is 81%, but that households with a broadband Internet subscription is 62.6%.

The 200/10 speed listed for Cable One Inc. (now Sparklight) may be speed that the company can provide, but this speed doesn't represent the bandwidth provided in lower packages and doesn't account for available bandwidth during peak times. Gigabit Passive Optical Networks (GPON) provide 1/1 Gbps Fiber-to-the-Home connectivity reliably and consistently delivering triple-play services (data, voice, IPTV). This technology is proven and scalable to meet future bandwidth demands. Rural subscribers with providers that haven't adopted and employed GPON technology will find their bandwidth unable to adequately support today's or future triple-play service requirements.

Internet Service Provider relationship needs

According to FCC provider statistics, over half of the residents (**52.88%**) in the Little River County, AR have 0 providers that can provide $\geq 25/3$ Mbps. Excluding satellite, the Location Summary lists Cable One Inc. (now Sparklight) and AT&T as only Internet Service Providers capable of speeds $\geq 25/3$ Mbps, but if these speeds are accurate, they are not available to the 70.81% rural underserved residents with 0 providers.

Financial needs

Funds from this grant will provide a means of pursuing state and federal grants. Local providers and telecommunication companies that serve rural areas operate from small budgets and have limited resources. Realizing a return on a Fiber-to-the-Home investment is not realistic. The labor cost of completing state and federal grant applications is prohibitive and there is no guarantee that grants will be awarded, and expenditures reimbursed. In 2019 & 2020, CT&T Engineering and applicants from Arkansas Telecommunications companies and local providers applied for and were awarded United States Department of Agriculture's Rural Utility Service Reconnect Grants. Activities required to complete these grants include:

- Account Setup/Information – service agreements, financial statements, organizational charts, legal opinion, key management staff resumes, workforce descriptions
- Service Areas – identify NFSA/PFSA, CLEC/ILEC, underserved, route miles, passings
- Network Design – equipment, technology, existing infrastructure, proposed network, timeline, capital investment workbooks
- Financial – capital investment schedule, service areas, service offerings - subscriber projections, depreciation schedule, long term debt schedule, amortization schedule, cash flow activities
- Environmental – construction map, route descriptions, questionnaires, floodplain, federal & tribal lands, endangered species
- Evaluation Criteria – government and community support letters, identification of – farms, businesses, education centers, health centers, opportunity zones
- License & Agreements – building lease, CPCN, fiber lease agreement, network management, pole attachment, spectrum lease agreement, tower lease agreements, video franchise agreements

Depending on the size of the project, one application can take between 300-500 hours and \$30,000-\$50,000 to complete. These are the combined cost of the applicant and engineering consultant firm.

Annual Budget Calendar Year 2020 (see supporting documentation)

Projected General Fund Revenue	3,360,473.76
Total Budget	3,097,775.99

Community Relationship Needs

Educational institutions, businesses, and the medical community all stand to benefit from high-speed broadband that is supported by a Fiber-to-the-Home infrastructure. GPON offers more download/upload speeds providing high quality and reliable Internet services such as video-conferencing essential for both remote learning and business applications and telemedicine which allows medical staff to diagnosis, create treatment plans, and prescribe medicine during Covid-19 epidemic. Letters provided by Ashdown School District Superintendent, Domtar Ashdown Mill, UA Cossatot, and county Economic Development found in Supporting Documentation section show support for Little River County's broadband initiative.

Description of Plan

Little River County, AR will act as the fiscal agent for the UAMS Rural Broadband grant and has selected CT&T Engineering as the consulting firm that will assist with completing business plan. CT&T Engineering's central office is strategically located in North Little Rock, AR and has served Arkansas telecommunication companies and providers for 38 years. Once the FTTH infrastructure is in place, Little River County will contract Extreme Broadband as the Internet Service Provider. CT&T Engineering has a history of successfully guiding private and public sector entities through state and federal (i.e., ARDOF, RUS ReConnect) grant applications, award processes, and construction. The following sections are time intensive categories and activities included in mays grant applications.

Eligibility and Project Documentation

Before dedicating time and energy to a grant application, it is important to review grant application guidelines. Within guidelines eligibility criteria; bandwidth, financial, and percent of underserved requirements should be realized. Applicants should also be prepared to provide financial history which can include three years of annual audits. Depending on the grant type, applicant provided information can be extensive and can include but not limited to the following:

- Articles of Incorporation
- Copies of Real Estate Deeds and Real Property Schedule
- Evidence of Good Standing with the Secretary of State
- Resumes of Key Management
- Legal Opinion
- Organizational Chart
- Board of Directors
- Executive Summary – workforce, existing operations, key management

Description of Project and Technology

High-level project description, funding and technology types are fields contained in project information sections. To reach underserved rural areas, CT&T would utilize a Gigabit Passive Optical Network (GPON) Fiber to the Premise (FTTP) network architecture to provide high speed broadband to a new service area. GPON was designed as a “future-proof” solution that supports advances of end user technology without upgrading the entire network infrastructure. This project minimizes operating expenses by limiting the amount of equipment to maintain and replace. GPON networks do not require powered devices between the central office and the

premise. GPON consist of OLT (Optical Line Terminals), optical splitters, and ONT (Optical Line Terminals). Fiber cables (12 to 144 strand fiber cable depending on passing quantity) run from OLTs to 1:32 optical splitters and terminate into ONTs at the customer premise. The Calix E7-2 is an environmentally hardened modular platform that can be deployed in a central office or at a remote location. Its modular architecture is scalable and protects carrier investments by preventing equipment obsolescence. The Calix E7-2 product line is widely deployed and meets all of the core standards required to provide telecom and datacom services.

Description of Service Areas & Network

Online eligibility maps are used to locate geographic areas defined by grants as underserved. Service areas contain the number of passings, route miles, and facilities that are used in budget calculations. Once service areas are established, network topologies are designed from households, central & remote offices distances and facilities. Topologies reveal the type of network equipment needed and quantities that are also used in budget calculations.

Environmental

Before construction can begin, environmental concerns need to be identified and addresses. GIS and CAD departments create construction maps that are used to define route miles, coverage areas, and ground disturbance within the project area. These areas are searched and scanned for flood plains, formally classified lands, farm & tribal lands, and other environmentally significant landscapes. Construction Maps are also used to locate plant and animal habitats and endangered species. In the event endangered species are found within the project area, informal consultations are initiated by USDA and reviewed by Fish & Wildlife Service to decide if avoidance surveys are necessary.

Financial

Preparing and completing required financial statements and reports can be extensive and tedious. Capital Investment Workbooks (CIW) list quantities and total costs for network equipment, fiber, drops, support assets and other construction cost. These costs are calculated per funded and non-funded service areas. These figures are used to build a Capital Investment Schedule that breaks down capital costs over the life of the project. Service Revenues are based on service offerings or data packaged offered by an Internet Service Provider and projected subscribers in a proposed service area. If grants require Capital Investment Schedules, then Depreciations Schedules will need to be provided for the life of the project (up to 5 years). As part of financial health reporting, Long Term Debt and Amortization Schedules layout and summarize companies' debt during the project. Financial statements that a grant can require include: Non-Operating Revenue, Cash Flow, Network Access Services Revenue, Income Statements, Assumptions, Liabilities, and Balance Sheets.

License and Agreements

Obtaining project license and agreement documentation is another time-consuming activity and can include the following:

- Right of Way
- Broadband Plan - Pre-Subscription
- Building Lease Agreement
- Fiber Lease Agreement
- Internet & Network Management Service Agreement
- Tower Lease Agreement
- Wireless Spectrum License
- Video Service Agreement
- Special Permits (Federal, Encroachment, Pole Attachment, Bridge, etc.)
- Certificate of Public Convenience and Necessity (CPCN)

Six Month Grant Application Consulting Service Timeline.

Review	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
30 Day Review Period	Determine Eligibility	Identify proposed service areas	Network Design - Equipment	Capital Investment Workbook	Financial Statements	Evaluation Criteria
	Financial Documentation	Determine underserved premises	Network Descriptions	Subscriber Projections	Environmental Construction Map	Certifications\Compliance
	Account Documentation	Field Surveys	Network Diagrams	Depreciation Schedules	Environmental Documentation	License & Agreements
	Apply – RUS Reconnect	Create fiber routes		Long-Term Debt Schedule		Community Support
				Amortization Schedule		Final Grant & Report Submission – Rural Broadband ID award

Budget

Budget Categories	Cost
Engineering Studies	\$30,000
Broadband Grant Consulting	\$40,000
Surety Bond	\$5,000
Total Request	\$75,000

Budget Justification

The figures presented in this budget were calculated from cost summaries created for state and federal grants (RDOF, Reconnect) that were submitted in the past five years. Budgets contained within these grants were reviewed by governing bodies and approved. The costs listed in this budget were figured by using the average number of hours required to complete each item.

Engineering Studies – (300 hours) of engineering services was factored into this budget. These services include demographic analysis from CT&T's Geographic Information Systems (GIS) department to determine underserved areas and propose new service areas. Create fiber routes and calculate required distances and passings. Conduct return on investment (ROI) analysis and development business plan. Identify property owners and secure right-of-way and easements. Funds from this cost item will allow the applicant to actively pursue federal funding opportunities that target underserved rural subscribers.

Federal Broadband Grant/Loan – (400 hours) This cost includes application documentation, grant writing, mapping, design, environmental, budgeting and submission. All of these activities will occur within the six-month timeline. CT&T has Professional Engineers licensed in the state of Arkansas that review and certify/stamp each grant application.

Bipartisan support for rural broadband initiatives Rural Digital Opportunity Fund (RDOF) and USDA's Rural Utility Service (RUS) Reconnect program have resulted in \$20.4 billion and \$1,329,434,671 respectively invested in high-speed broadband infrastructures. In 2019 & 2020, CT&T Engineering constructed budgets for Arkansas telecommunication companies and private sector providers that ranged from \$3.8 - \$5 million. Of the six RUS reconnect grants applied for in Arkansas, five have been awarded and one is pending review. The amount awarded from these grants totaled \$18.85 million and connects 3,591 underserved rural households to FTTH networks.

Surety Bond – a credit rating above 650 is expected, but 6% was used to ensure cost for this item was sufficient.

Supporting Documents

This section contains community support letters from education, business, medical, and government entities withing Little River County.



ASHDOWN SCHOOL DISTRICT
Office of the Superintendent
751 Rankin Street
Ashdown, AR 71822
870-898-3208 FAX 870-898-3709



August 19, 2020

FROM: Casey Nichols, Superintendent
TO: Broadband Grant Committee
RE: Letter of Support

The Ashdown Public School District is proud to support the initiative to expand broadband services within our boundaries. While additional coverage in this area has always been desirable, the current pandemic has amplified our deficiency to a critical level. With teaching and learning often occurring off-site, the demand for reliable and adequate internet coverage is now a necessity.

In closing, I encourage you to strongly consider investing in the students of our great district and county. Your partnership is greatly anticipated, and much appreciated.

Sincerely,

Casey Nichols
Superintendent
Ashdown Public Schools



Domtar
Ashdown Mill
285 Highway 71 South
Ashdown, AR 71822
Tel.: (870) 898-2711

November 13, 2020

RE: Broadband Grant Support

To Whom It May Concern:

I am pleased to submit this letter on behalf of the Domtar Ashdown Mill in support of the grant application for funds to improve broadband coverage for Little River County. By receiving these funds, the County will be able to improve and increase much-needed broadband coverage for the area. As one of the largest employers of the region, we know this project is critical to continued growth and success, not only for the County, but for all of Southwest Arkansas.

Domtar had a long-standing commitment to ongoing development and strengthening of our community's economic growth and success, and we recognize that the necessary broadband coverage is a critical component.

Our mill has a strong and active working relationship with Little River County, and we are pleased to support this endeavor to ensure success with this project should the grant funds be awarded. We look forward to growing our partnership with the County and supporting this initiative.

Your consideration of their timely grant request is appreciated.

Sincerely,

Tammy Waters

Tammy Waters
Manager, Communications & Govt. Relations



183 College Drive / De Queen, AR 71832 / 870.584.4471 / 800.844.4471 <http://www.cccua.edu>

August 22, 2020

To the Grants Administration Team,

It is with great pride that I write this letter of support on behalf of the Little River County so they may obtain an Arkansas Rural Connect grant to help establish marked improvement in their broadband capabilities. The importance of this grant is highlighted by the public health emergency brought about the recent COVID-19 pandemic where we are now seeing an increased reliance on broadband services, which should be considered necessary expenditures.

Communities can no longer be competitive without sufficient broadband. Students need access to durable internet services and our health care professionals need access to all of the telehealth capabilities they can obtain.

Please accept my letter of support for this worthwhile project

Sincerely,

A handwritten signature in blue ink, appearing to read "Steve Cole", with a stylized flourish at the end.

Dr. Steve Cole
Chancellor, UA Cossatot



November 10, 2020

To Whom It May Concern:

As Economic Development Director for both Little River County and the coming Little River Logistics Park, I would like to voice my support for the grant application for funding submitted by Extreme Broadband and C,T,&T Engineering. Our county has desperately needed high speed internet capabilities for several years and throughout the issues of the pandemic, that need was exacerbated.

During normal times of operations, our businesses have had difficulty competing in online methods because we lacked the speed and consistency in our area to allow them to really promote, market, and sell online. Many times our retail establishments have been unable to accept debit or credit cards because a line was cut fifty miles or more away. Our services have no redundancy so they are at the mercy of things happening outside of our community. Domtar Paper Manufacturing has a large facility here and even they lack the redundancy needed to assure their internet needs are met without interruption.

UA Cossatot is the home to a variety of services to our community. In addition to education, they provide workforce services, industry testing, extension offices and my office. The internet available is slow and sometimes not adequate for the load during the semester as students and professional services vie for service. During the pandemic when students could no longer utilize the computer lab, many had to park in the parking lot to do their work because they had no reliable service at their home in the rural areas. The public schools had similar issues in trying to meet the educational needs of students. They had to resort to sending home paper packets with written instructions because there were so many that could not get service. The students not only could not use computers to assist in their learning, but they could not get instruction from the teachers online.

Additionally, many residents throughout our county were unable to keep in person doctors' appointments for various types of ailments during the pandemic. Most were also unable to utilize telemedicine that many provide due to a lack of service. With the additional of higher speed, consistent internet service these residents would be able to stay in contact with out of town medical services and specialists either in their home or through local existing medical facilities.

Extreme Broadband can bring desperately needed services to address the many identified deficiencies, both direct and indirect, if awarded these grant funds. Although the costs for these grant funded services are costly, they are a necessary expenditure to address this continuing emergency and to be better prepared for any future emergencies that might arise. Therefore, please accept my letter as support of this application as a representative for area businesses and workforce development.

Sincerely,

Vickie Williamson

Vickie Williamson

Economic Development Director