



Alabama Broadband  
Accessibility Fund |  
Southern DeKalb  
Application-Revised

Farmers Telecommunications Cooperative, Inc.

## Farmers Telecommunications Cooperative, Inc. Information

<b>Project Name:</b>	Southern DeKalb County - Alabama Broadband Accessibility Grant
<b>Legal Name of Entity:</b>	Farmers Telecommunications Cooperative, Inc.
<b>Mailing Address:</b>	P.O. Box 217   144 McCurdy Ave. N. Rainsville, AL 35986
<b>Name and Title of CEO:</b>	Fred Johnson, Chief Executive Officer
<b>Name and Title of Contact:</b>	Shane Trotman, Senior Operations Supervisor
<b>Phone Number and Email of Contact:</b>	1-(256)-638-2144 ext. 2096 <a href="mailto:strotman@staff.farmerstel.com">strotman@staff.farmerstel.com</a>
<b>Name and Title of Additional Contact:</b>	Taylor Richards, Marketing Assistant /Digital Marketing Coordinator
<b>Phone Number and Email of Additional Contact:</b>	1-(256)-638-2144 ext. 2018 <a href="mailto:trichards@staff.farmerstel.com">trichards@staff.farmerstel.com</a>
<b>Autonomous System Number (ANS):</b>	40020
<b>List Internet Exchange Membership:</b>	Does not apply
<b>PeeringDB entries:</b>	Does not apply

# A. Project Description

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## 1. Proposed Funded Service Area (PFSA)

Farmers Telecommunications Cooperative, Inc. (FTC) recognizes the importance of having high speed broadband for building the future network of tomorrow. Many rural communities are being left behind, including residents in the southern portion of DeKalb County, Alabama.

\*Please note that the location name **Southern DeKalb** is used within this application to represent the entire proposed funded service area (PFSA), which consists of portions of the following communities in southern DeKalb County, Alabama: McKestes, Fairview, Viewpoint, Dawson, Skirum, Oak Hill, Painter, Whiton, Geraldine, Crossville, New Harmony, and Hopewell.

The proposed funded service area (PFSA) upon which this grant application is based was selected specifically by FTC for its unique characteristic within the FTC incumbent local exchange service territory as being unable to receive a minimum of 25 Mbps download and 3 Mbps upload (25/3) service via the existing facilities in use. Residents in the PFSA currently receive Internet service via DSL over twisted copper pairs at speeds less than 1 Mbps for many of the more remote locations, to about 20 Mbps at the locations closest to the serving wire center. The existing copper network is shown in more detail in **Attachment A, Project Description – Existing Network**.

The PFSA will require approximately 106.12 route miles of buried and aerial fiber-optic cable in a mountainous region that has layers of rock to contend with throughout much of the service area. It is important to note that Farmers Telecommunications Cooperative was able to reach more than 90% of its customers with fiber connectivity without grant assistance, and these remaining unserved areas are arguably the most rural and difficult to serve.

<b>Number of Households to be Served</b>	773
<b>Number of Businesses / Industries to be Served</b>	5
<b>Number of Community Anchors to be Served</b>	0

For clear identification of households, businesses and community anchors, refer to the PFSA maps in **4. Preliminary Technical Evaluation**.

In order for a block to qualify as urban, it must have a density of 1,000 people per square mile. The Census Bureau defines rural as any population, housing, or territory NOT in an urban area. The proposed funded service area of Southern DeKalb is 43.02 square miles which includes 18.37 locations (households) per square mile. The average number of people per household is 2.36. Therefore, there are approximately 43.35 persons per square mile in the proposed funded service area. This area qualifies as a rural area.

This table, provided from census.gov, shows the percentage of the county population living in rural areas as of the 2010 Census. Counties with less than 50 percent of the population living in rural areas are classified as mostly urban; 50 to 99.9 percent are classified as mostly rural; 100 percent rural are classified as completely rural.

2015 Geography Name	2010 Census Total Population	2010 Census Urban Population	2010 Census Rural Population	2010 Census Percent Rural
DeKalb County, Alabama	71,109	7,018	64,091	90.1

The Southern DeKalb proposed funded service areas are located in **portions** of Geraldine, AL (35974) zip code, Crossville, AL (35962) zip code, Collinsville, AL (35961) zip code, and Dawson, AL (35963) zip code. The towns of Geraldine, Crossville, and Collinsville are incorporated and Dawson is unincorporated. The population of Geraldine is 896 with a total of 380 total households. Crossville has a total population of 1,862 and a total of 645 households. Collinsville has a total population of 1,983 and a total of 596 households. Dawson has a total population of 1,704 and a total of 661 households. Any area within this state not included within the boundaries of any incorporated city or town having a population in excess of 25,000 inhabitants to the last federal census is defined as a rural area.

The demographics for Geraldine, AL are representative of the entire proposed funding service area. 16.5% of all families in this area live below the poverty level. 20.7% of homes with children under 18 years of age live below the poverty level. 20.5% of DeKalb County persons live in poverty. Workers have a mean travel time to employment of 26.9 minutes. 43.3% of population 16 and over are not in the labor force. 18.9% of the population receive Food Stamps/SNAP benefits. 5% of the population has no health insurance coverage. Median house value is \$121,900 compared to Alabama’s, which is \$128,500. The median household income is \$39,091 compared to the state of Alabama being \$44,758. The mean household income is \$54,782. Per capita income is \$22,303 and Alabama’s is \$24,736.

DeKalb County is part of Alabama’s Appalachian Region which is considered one of the most impoverished regions of the United States.

**The Appalachian Regional Commission (ARC)** was created by Congress in 1965 to bring the 13 Appalachian states into the mainstream of the American economy. The Commission is a partnership of federal, state, and local governments, and was created to promote economic growth and improve the quality of life in the 13-state region stretching along the Appalachian Mountains from southern New York to northern Mississippi.

FTC's goal to obtain the Alabama Broadband Accessibility Act grant funding to expand broadband into rural Southern DeKalb County absolutely meets the stated ARC objectives listed below.

1. Invest in entrepreneurial and business development strategies that strengthen Appalachia's economy.
2. Improve the education, knowledge, skills and health of residents to work and succeed in Appalachia.
3. Invest in critical infrastructure- especially broadband, transportation, and water/wastewater systems.
4. Strengthen Appalachia's community and economic development potential by leveraging the Region's natural and cultural heritage assets.
5. Build the capacity and skills of current and next generation leaders and organizations to innovate, collaborate and advance community and economic development.

### **Tennessee Valley Authority (TVA) Special Opportunities County (SOC):**

TVA designates two of the 13 AL TVA Counties as Special Opportunities Counties (SOC). Only counties with the lowest per capita personal income, the highest percentage of residents below the poverty level, and the highest average annual unemployment rates are eligible for the SOC program. The list of eligible counties is updated annually. The designation is for one-year periods and DeKalb County has been designated multiple times within the past 10 years. DeKalb County is currently a TVA SOC county.

The lack of broadband in Southern DeKalb prevents economic growth, creates educational challenges, and generates a barrier for members within the communities to have quick and reliable access to public safety and health care resources. These communities are in desperate need of broadband to strengthen their economy and economic development, improve education and skills of residents to work and succeed, to build a generation for tomorrow who will have the resources to keep alive and advance their rural community.

## **2. Types of Technology to be Deployed and Future Usage Projections**

The copper wireline network will be replaced with an all fiber-optic FTTH network utilizing a combination of Active Ethernet (AE) and Passive Optical Network (PON) designs providing fiber connectivity to each home. Service will be delivered over the Calix E series platforms. FTC will also offer industry-best carrier class Wi-Fi inside the home using the Calix GigaSpire to deliver a mesh-enhanced experience throughout the home. The fiber connectivity to the side of the home will deliver broadband speeds up to 1 Gig (1,000 Mbps) symmetrical with unlimited scalability, allowing this network to grow to meet future broadband needs.

Each of the PFSA establishments will be passed with a fiber-optic cable network providing a dedicated fiber pre-assignment to each establishment as well as 20% overhead in

distribution fiber capacity for growth in any area. Additionally, 20% overhead in feeder fiber capacity allows for field GPON cabinets to be deployed meeting future “Greenfield” demands within any portion of the PFSA.

As requested by the customer, drops will be placed to each establishment and terminated in network access points. FTC has already deployed about 1,700 miles of fiber-optic cable in other markets and connected over 12,800 locations with fiber. FTC is very confident that all of the processes needed to connect any home within the PFSA have already been addressed and any home can be served, usually with a 3 week or less wait time.

The PFSA will be fed from seven network locations. All seven locations are existing telecom huts or cabinets already established with redundant fiber feeds back to FTC’s NOC, and all have existing generator and/or battery backup, and existing 10 Gbps redundant transport equipment. The additional electronic costs are for additional access line cards, SFP transceivers, and field splitter cabinets with splitters. The electronic cost estimate is much lower than what it would have been if FTC were not able to leverage the existing switch hut locations and associated power components. The proposed network to provide these services is shown in more detail in **Attachment A, Project Description – Proposed Network**.

### 3. Types of Services to be Offered

Voice, broadband, and security services will be offered to every home and business within the PFSA. Standard broadband data speeds will be symmetrical - 100 Mbps download and 100 Mbps upload, with 1 Gig (1,000 Mbps) download and 1 Gig (1,000 Mbps) upload also available.

FTC will offer two (2) tiers of broadband service with no data caps to customers within the PFSA. Tier 1 will have symmetrical speeds of 100 Mbps priced at \$73.00 per month. Tier 2 will have symmetrical speeds of 1 Gig (1000 Mbps) priced at \$93.50 per month. IP voice and unlimited long distance service will be available as well.

With access to broadband, security and home automation services will be available including security monitoring, burglary alarms, video surveillance, fire alarms, emergency panic alarms, and severe weather monitoring.

## 4. Preliminary Technical Evaluation

### Project Cost Estimate

#### Initial Construction Costs

UNIT	QTY	PRICE	EXT LABOR	EXT MATERIALS	EXT TOTAL
BFO12	156,616	\$3.09	\$314,563.24	\$169,380.20	\$483,943.44
BFO144	1,200	\$3.97	\$3,096.60	\$1,667.40	\$4,764.00
BFO24	141,400	\$3.12	\$286,759.20	\$154,408.80	\$441,168.00
BFO48	52,260	\$3.18	\$108,021.42	\$58,165.38	\$166,186.80
BFO96	13,076	\$3.76	\$31,957.74	\$17,208.02	\$49,165.76
CO144(E)	26,300	\$3.34	\$57,097.30	\$30,744.70	\$87,842.00
CO216(E)	13,400	\$2.74	\$23,865.40	\$12,850.60	\$36,716.00
CO24(10M)	11,520	\$3.27	\$24,485.76	\$13,184.64	\$37,670.40
CO24(E)	35,500	\$2.28	\$52,611.00	\$28,329.00	\$80,940.00
CO288(E)	1,900	\$4.98	\$6,150.30	\$3,311.70	\$9,462.00
CO48(10M)	3,600	\$3.45	\$8,073.00	\$4,347.00	\$12,420.00
CO48(E)	36,654	\$2.46	\$58,609.75	\$31,559.09	\$90,168.84
CO96(10M)	2,700	\$3.83	\$6,721.65	\$3,619.35	\$10,341.00
CO96(E)	20,824	\$2.87	\$38,847.17	\$20,917.71	\$59,764.88
FIG8A(12)	28,174	\$2.00	\$36,626.20	\$19,721.80	\$56,348.00
FIG8A(12)(E)	12,184	\$2.00	\$15,839.20	\$8,528.80	\$24,368.00
UO96	3,000	\$5.00	\$9,750.00	\$5,250.00	\$15,000.00
ROCK	5,000	\$10.00	\$50,000.00	\$0.00	\$50,000.00
Make-Ready / Pole Changeouts	1	\$20,000.00		\$0.00	\$20,000.00
Fiber termination panels (144F)	5	\$4,000.00	\$2,500.00	\$17,500.00	\$20,000.00
Field GPON Cabinet (288F)	2	\$7,000.00	\$2,000.00	\$12,000.00	\$14,000.00
1x32 Splitter Module	36	\$875.00	\$2,700.00	\$28,800.00	\$31,500.00
1x2x8 Splitter Module	5	\$2,650.00	\$12,500.00	\$750.00	\$13,250.00
Calix AXOS E7 FTTP OLT -	5	\$9,000.00	\$5,000.00	\$40,000.00	\$45,000.00
Engineering / Permitting	1	\$382,000.00		\$0.00	\$382,000.00
<b>Total</b>	560,308		\$1,157,774.93	\$682,244.19	<b>\$2,242,019.12</b>
	106.12 (miles)				

**Middle Mile Feeder Fiber Costs**

UNIT	QTY (ft)	PRICE	EXT LABOR	EXT MATERIALS	EXT TOTAL
BFO12	7,700	\$3.09	\$15,465.45	\$8,327.55	\$23,793.00
BFO24	8,200	\$3.12	\$16,629.60	\$8,954.40	\$25,584.00
BFO48	7500	\$3.18	\$15,502.50	\$8,347.50	\$23,850.00
BFO96	9724	\$3.76	\$23,765.46	\$12,796.78	\$36,562.24
CO144(E)	8400	\$3.34	\$18,236.40	\$9,819.60	\$28,056.00
CO24(E)	4800	\$2.28	\$7,113.60	\$3,830.40	\$10,944.00
CO288(E)	900	\$4.98	\$2,913.30	\$1,568.70	\$4,482.00
CO96(10M)	4,800	\$3.83	\$11,949.60	\$6,434.40	\$18,384.00
CO96(E)	4400	\$2.87	\$8,208.20	\$4,419.80	\$12,628.00
FIG8A(12)	2100	\$2.00	\$2,730.00	\$1,470.00	\$4,200.00
58,524			\$122,514.11	\$65,969	<b>\$188,483.24</b>
11.08 (miles)					

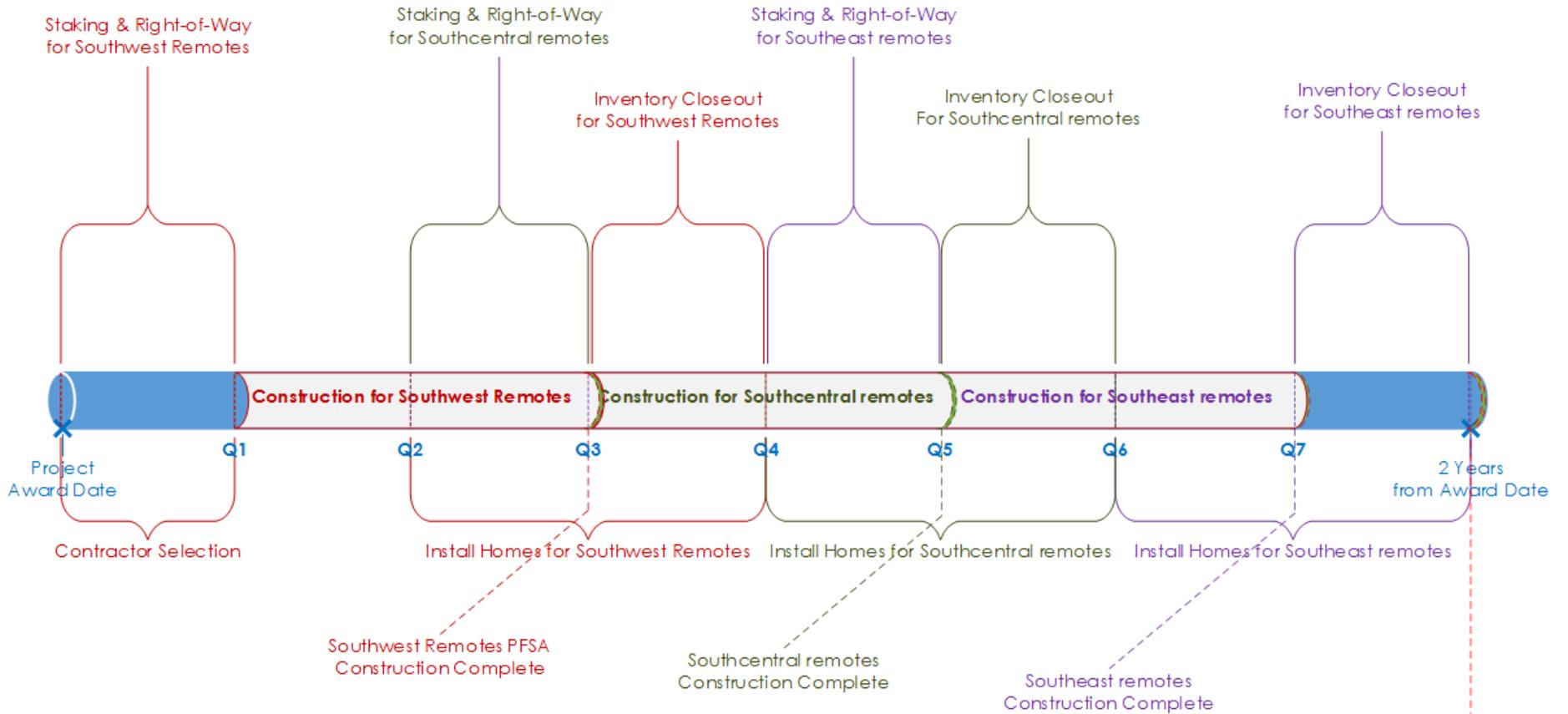
**Costs to Connect/Install Homes Passed**

UNIT	QTY	PRICE	EXT LABOR	EXT MATERIALS	EXT TOTAL
Buried Drop	579	\$249.00	\$124,020.00	\$34,344.00	\$144,171.00
NAP Closure & Splicing Tray	579	\$330.00	\$82,680.00	\$127,200.00	\$191,070.00
ONT, Enclosure, & Battery Backup	579	\$454.00	\$41,340.00	\$247,404.00	\$262,866.00
Gigaspire & Inside Wire	579	\$330.00	\$82,680.00	\$127,200.00	\$191,070.00
			\$330,720.00	\$536,148.00	<b>\$789,177.00</b>

**Summary**

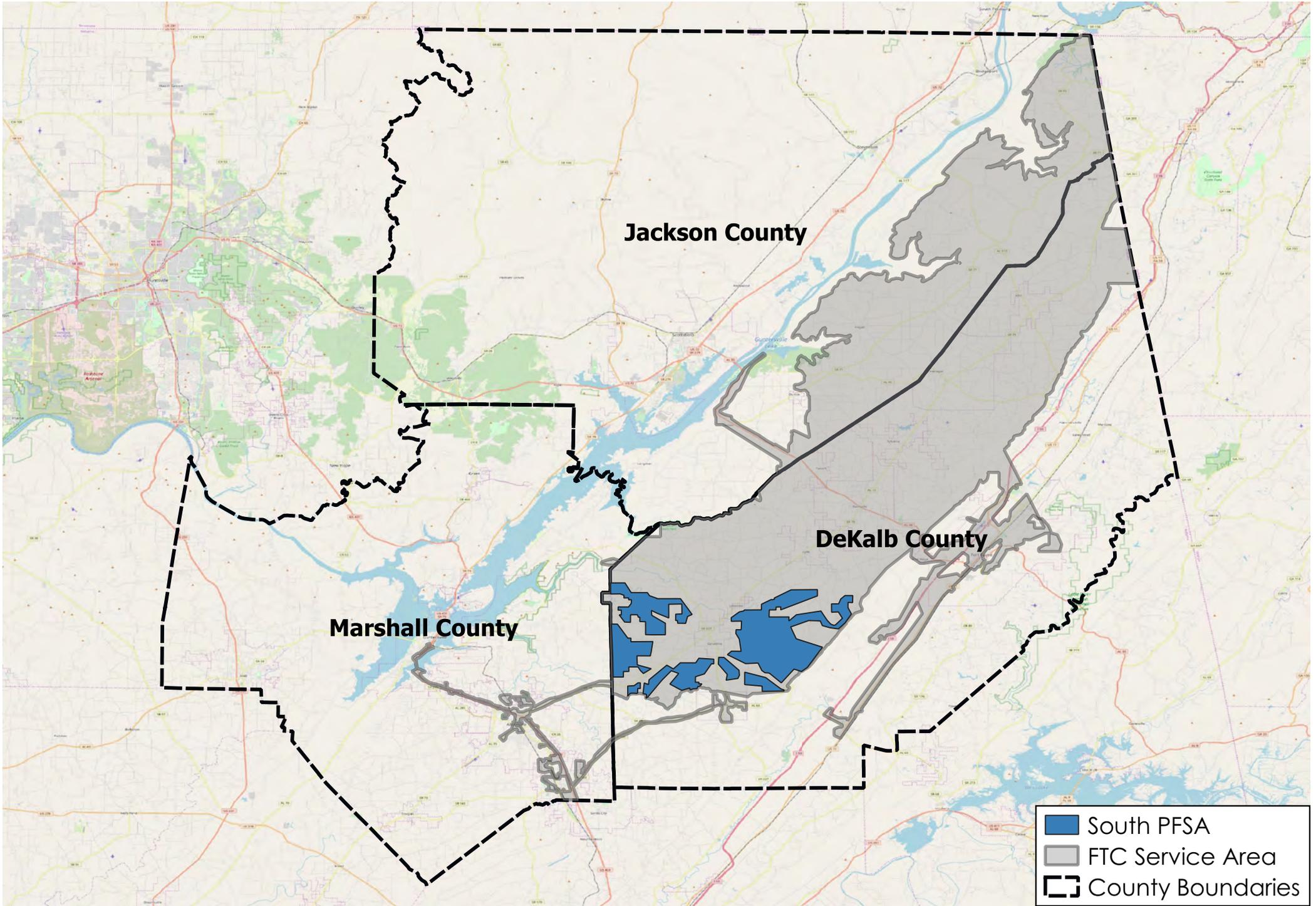
Initial Construction Costs	\$2,242,019.12
Middle Mile Feeder Fiber Costs	\$188,483.24
Costs to Connect/Install Homes Passed	\$789,177.00
<b>Total Project cost</b>	<b>\$3,219,679.36</b>
<b>35% Grant Coverage</b>	<b>\$1,126,887.78</b>

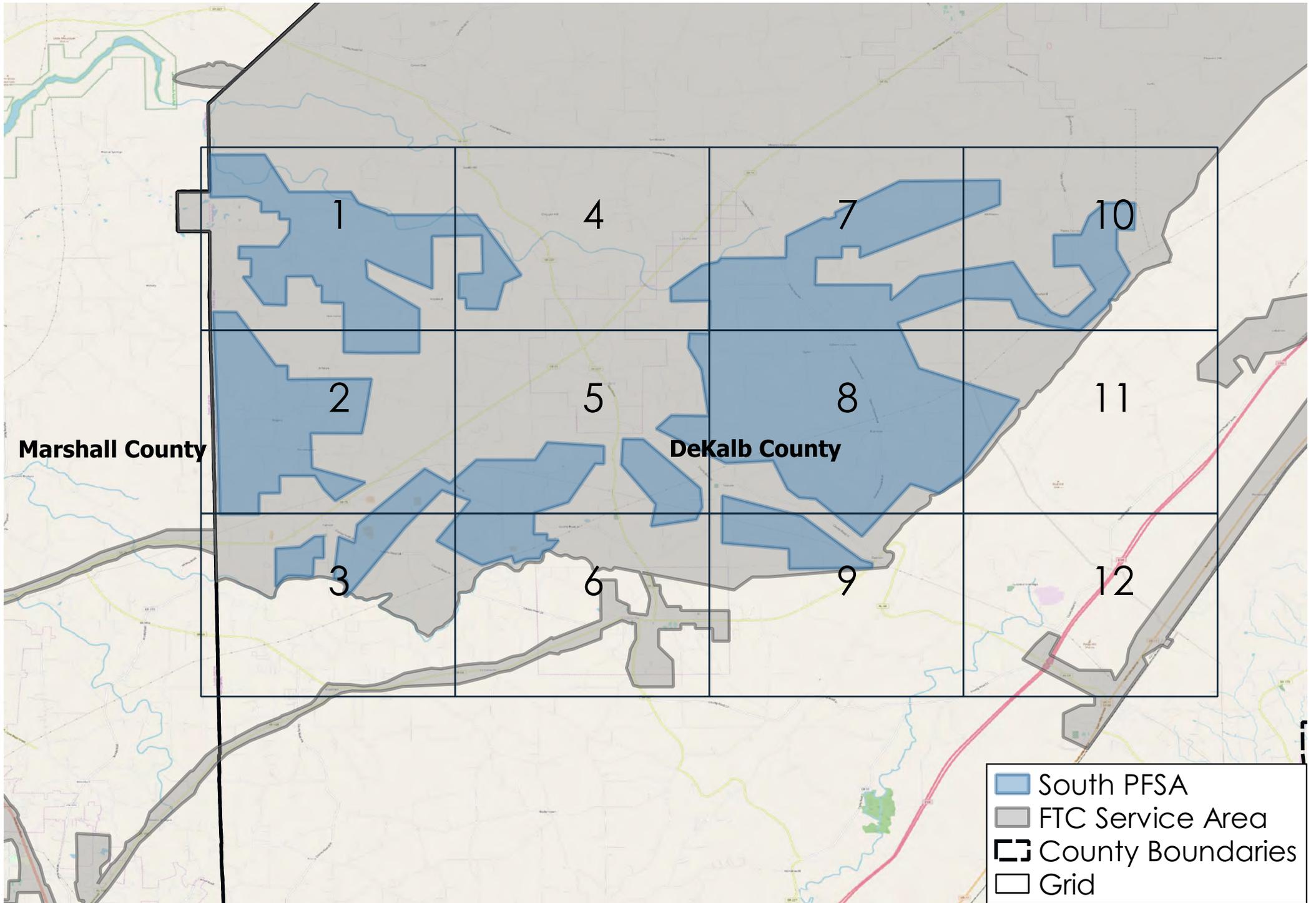
# Project Schedule and Timeline

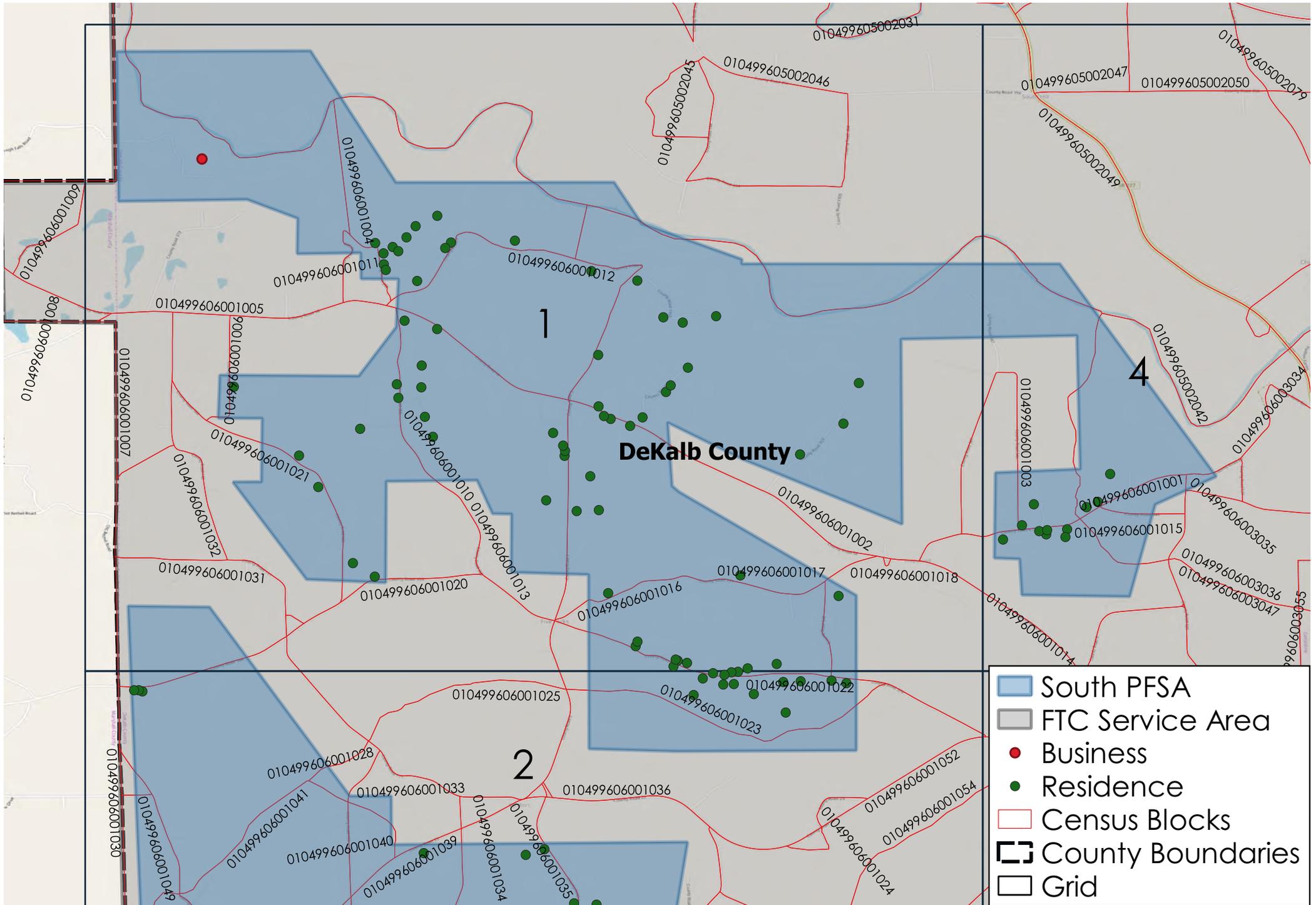


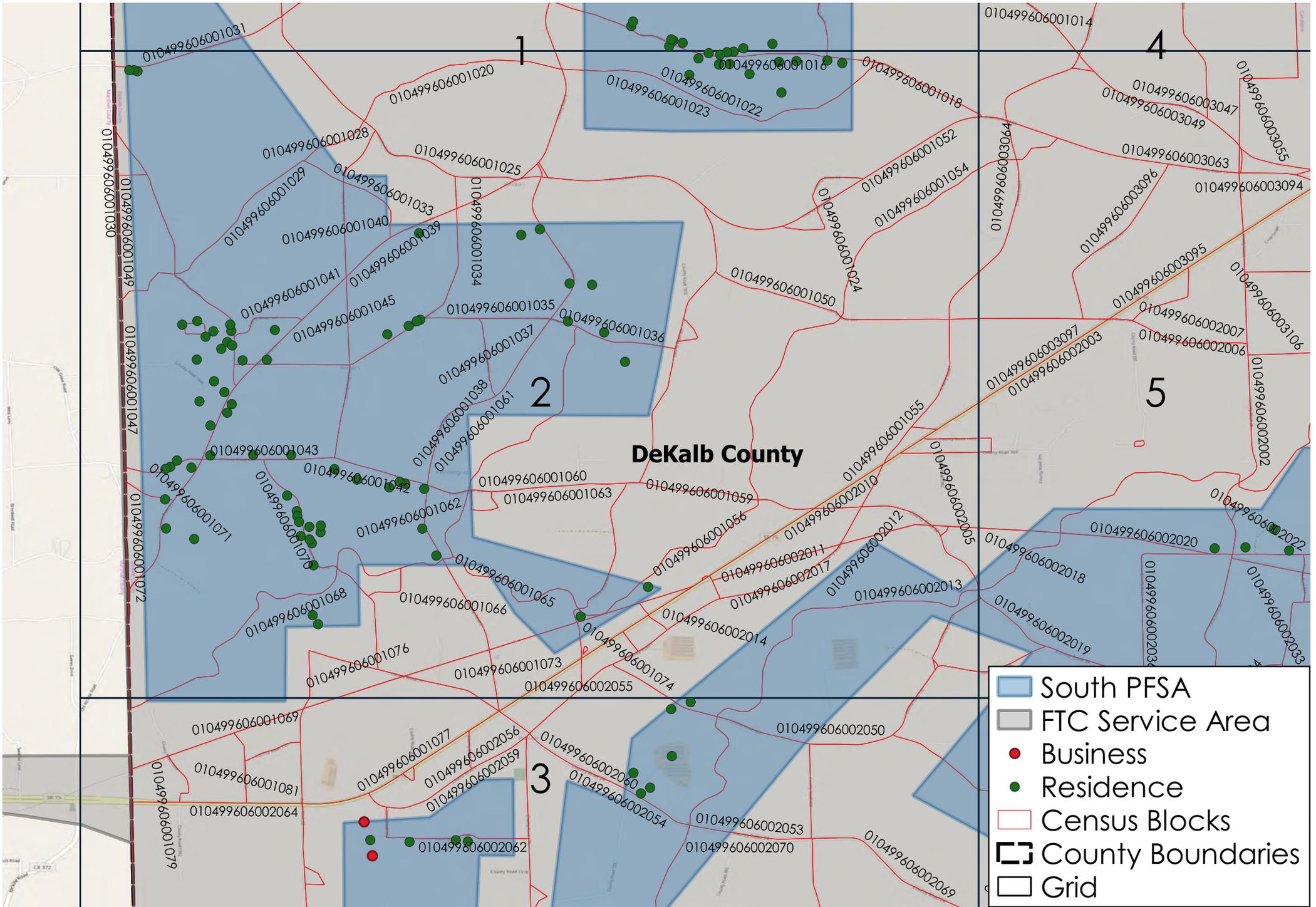
Southwest Remotes – HPWL, NHMY, WHTN, PNTR  
 Southcentral Remotes – SKRM, FRV W, MKTS  
 Southeast Remotes – OKHL, DWSN, VWPT

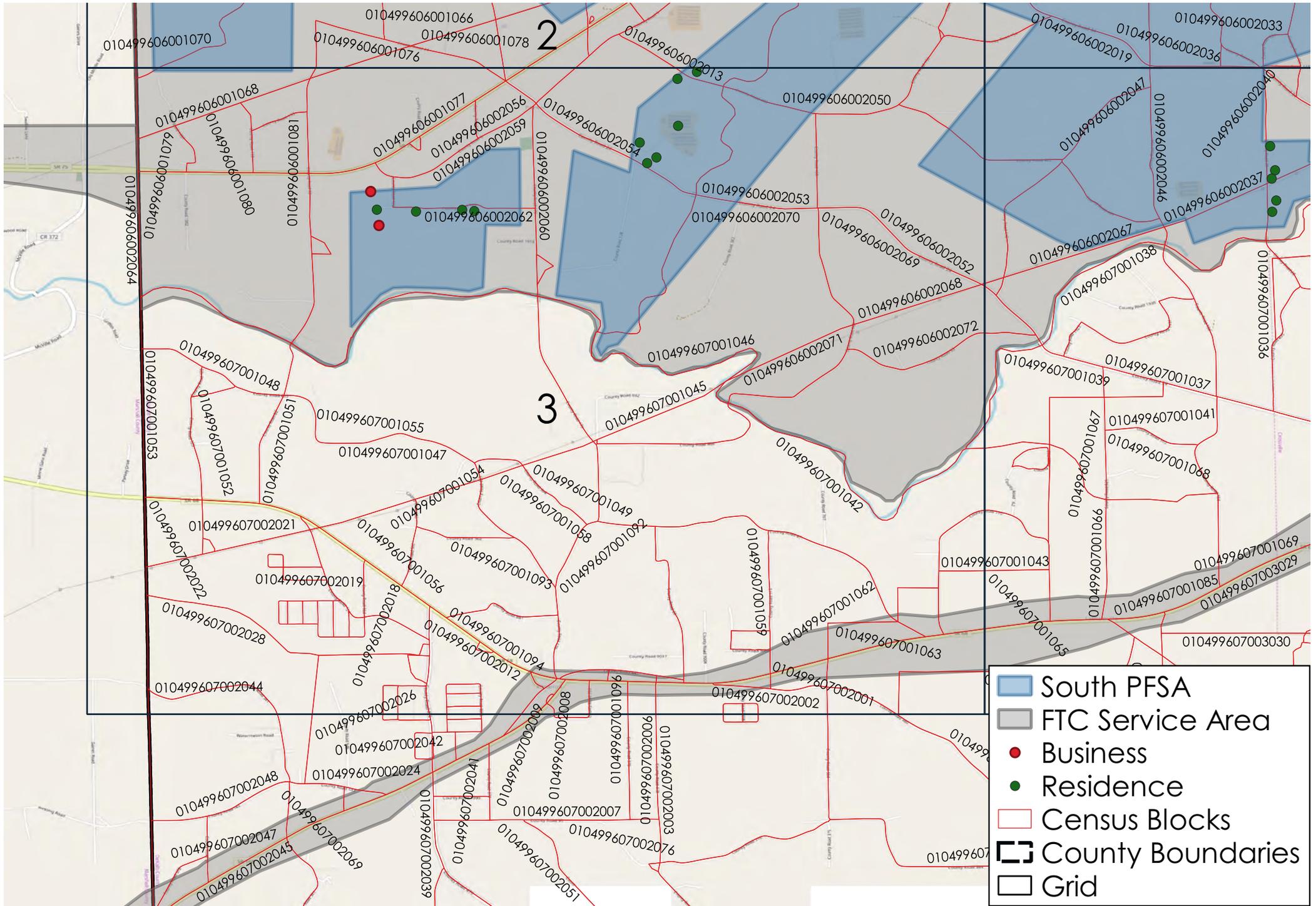
Installation Complete  
 For all homes in all PFSA



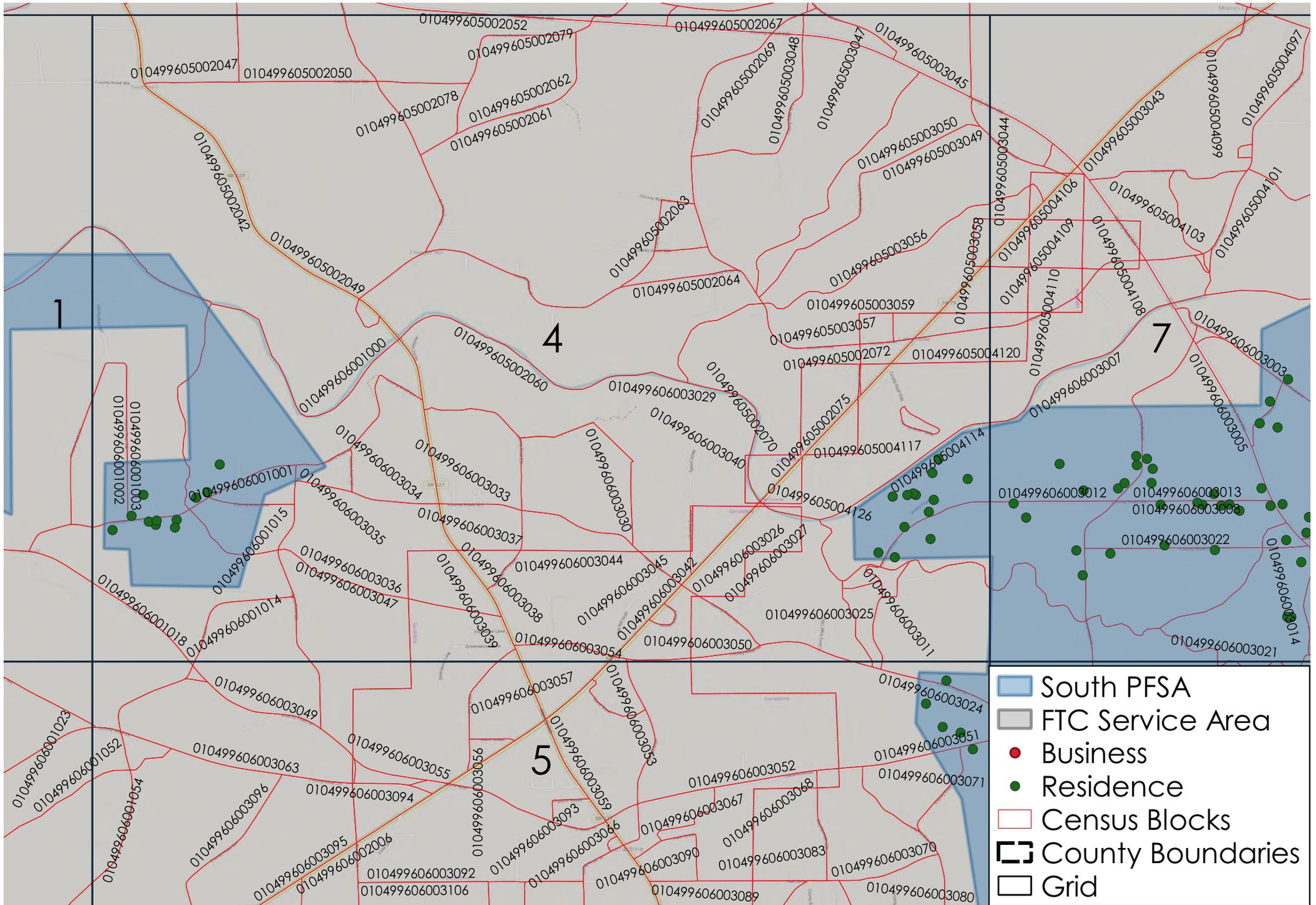




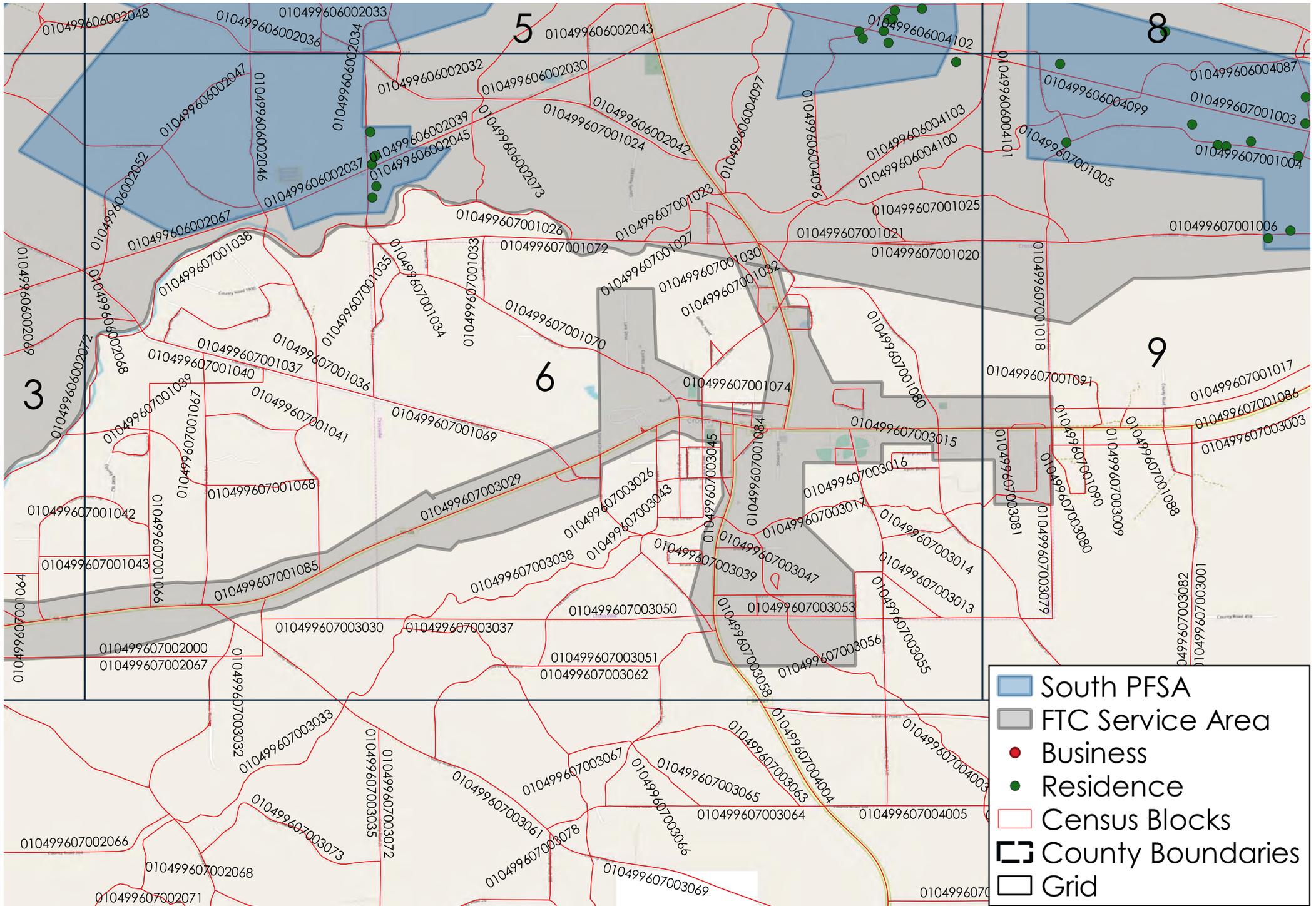




- South PFSA
- FTC Service Area
- Business
- Residence
- Census Blocks
- County Boundaries
- Grid

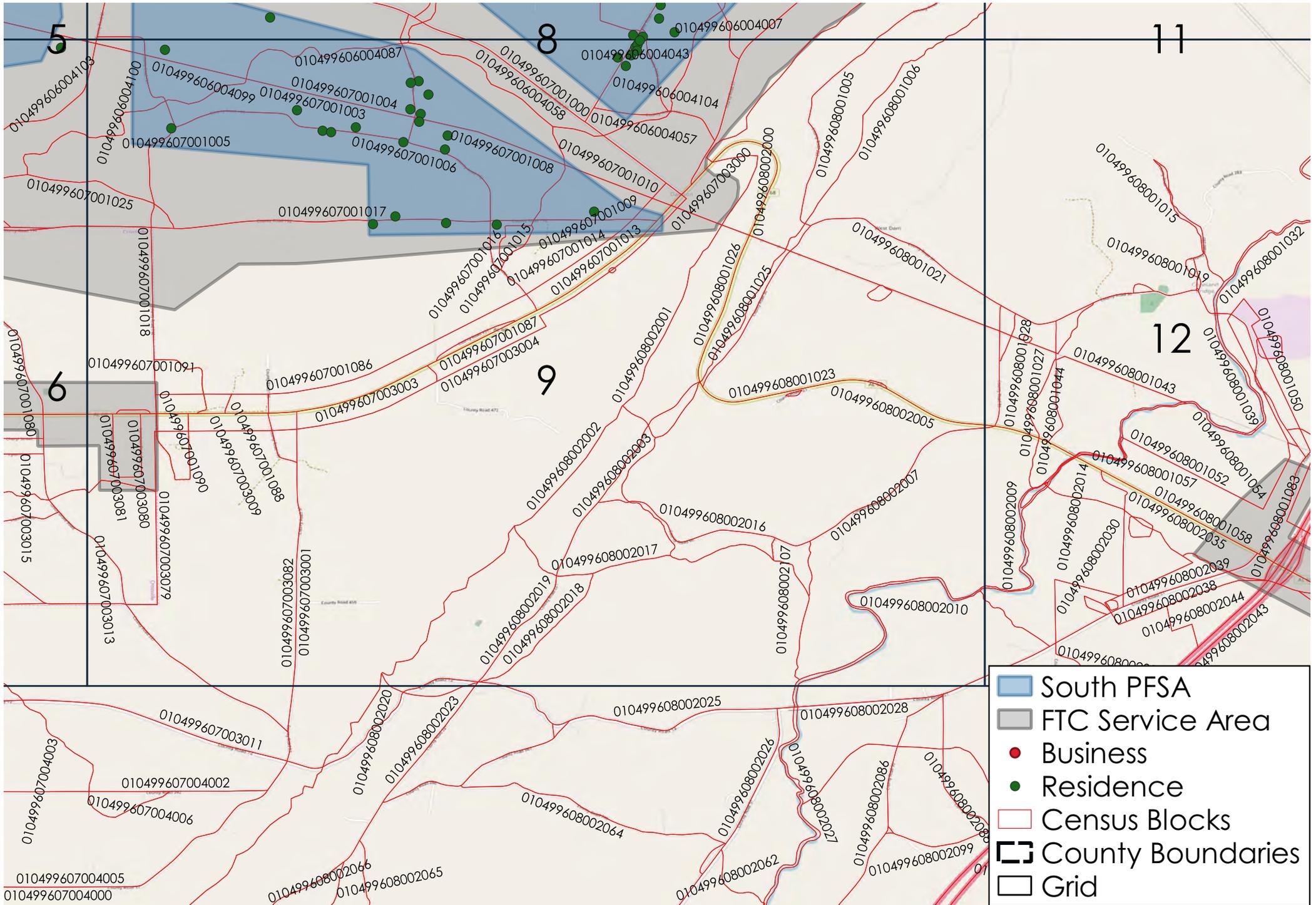




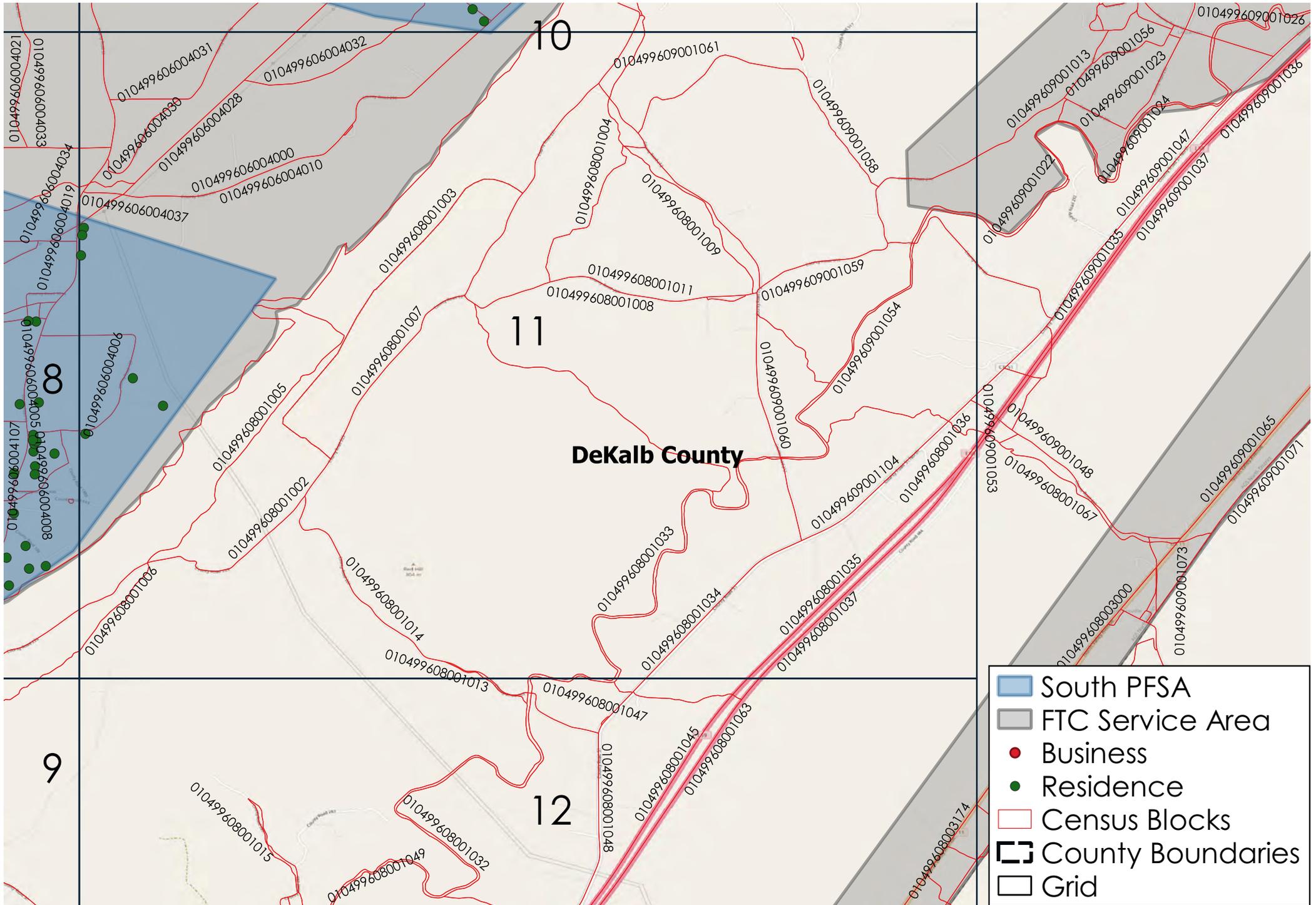












CERTIFICATION

I, the undersigned Professional Engineer, have reviewed and do hereby certify that the data included in this ADECA Broadband Grant Application is correct to the best of my knowledge and belief and that the costs and timeline for construction are reasonable and prudent. I based my technical evaluation of this project on my years of experience of working on similar projects in size and scope.

3/11/20

Date

*Carol Leigh Brackett*

Carol Leigh Brackett  
Alabama Registered Professional Engineer No. 25055



## 4. Preliminary Technical Evaluation – Continued

Additionally, FTC certifies that customers receiving speeds greater than 25 Mbps download and 3 Mbps upload (25/3) will not be served through this project.

Although the FCC Map shows that broadband service is available within portions of the PFSA, FTC documentation has clearly identified these locations as not being served at a minimum speed of 25 Mbps download and 3 Mbps upload (25/3) with either FTC's wireline or fixed wireless broadband service. These portions of the PFSA where the FCC Map incorrectly shows that broadband service is available are shown in detail in the map shown in **Attachment A, Project Description - PFSA Areas in Question**.

This discrepancy is due to the size of the Census Blocks. If one person within the Census Block has broadband available, the reporting mechanism lists all subscribers within this block as having the same service level available. FTC is the incumbent service provider for broadband and voice services for the entirety of the Southern DeKalb County PFSA, and has served this area for more than 50 years. Because of this, FTC has developed detailed mapping records of households within the Southern DeKalb County PFSA footprint. The subscribers within the area of the PFSA are unable to receive the minimum service threshold according to internal documentation.

## 5. Technical and Managerial Capabilities

Farmers Telecommunications Cooperative, Inc. is the largest member-owned telecommunications cooperative in the state of Alabama. Directly through the Cooperative, along with its wholly-owned subsidiary, Farmers Telecommunications Corporation, thousands of homes and businesses across DeKalb, Jackson, and Marshall counties are served. We are dedicated to bringing world-class telecom services to the rural areas, cities, and towns in our service area.

Serving the northeastern-most corner of Alabama south and east of the Tennessee River, FTC has long borne a history of technological progress and commitment to the economic infrastructure of its served areas. FTC deployed Alabama's first digital switch in 1976. In 2007, it embarked upon an RUS financed \$36,000,000 overbuild of optical fiber to a planned 72% of its ILEC locations. Through careful refinement of its engineering design, persistence in wisely using its financing resources, and a general responsiveness to changing economics, FTC stretched this original budget and was able to achieve 92% fiber availability within its ILEC area.

Our optical fiber network offers customers access to some of the fastest Internet speeds in the country, including gigabit access in most areas. This optical fiber network positions the region to attract new jobs, support economic growth, increase access to telemedicine and introduce improved opportunities in education.

With the ever-increasing demands for smart homes, FTC also offers its Connected Life Security and Home Automation services to protect what matters most, home and family.

As features and technology continue to evolve, we continue our commitment to providing the best and most advanced voice services to homes and businesses in the region.

In November of 2015, NTCA - The Rural Broadband Association, the premier association representing nearly 900 independent, community-based telecommunications companies that are leading innovation in rural and small-town America, awarded FTC as a Certified Gig-Capable Provider for delivering gigabit broadband speeds and enabling technological innovation in its service area. FTC was one of the first companies to have this designation, which has now grown to 150 companies.

In May of 2018, FTC designated and recognized the 20 cities and towns in its service area as being certified Gig Communities in order to promote economic growth in rural Northeast Alabama. FTC's gigabit-speed Internet network is available to all the city and town municipalities and industrial parks within its service area.

In September of 2018, NTCA - The Rural Broadband Association also honored FTC with the Smart Rural Community Showcase award for deploying advanced technologies and leveraging those technologies to enable innovation in the areas of economic development and commerce, education, enhanced health care, government services, security and energy use. The NTCA Smart Rural Community initiative recognizes and celebrates the efforts of rural telecommunications providers and their communities to deliver technologies that make rural communities vibrant places in which to live and do business. The goal of the initiative is to foster the development of Smart Rural Communities throughout rural America by recognizing trailblazers, like FTC, and providing resources to assist broadband providers and connected industries.

In January of 2019, FTC was awarded a grant through the Alabama Broadband Accessibility Fund that allowed us to extend our world-class optical fiber network to the Pea Ridge community. This project was completed in December of 2019 and 21 of the 39 projected homes have been connected.

In July of 2019, FTC was awarded an additional grant through the Alabama Broadband Accessibility Fund that allowed us to extend our world-class optical fiber network to the Fabius community. The outside plant components of this project were completed in November of 2019 and FTC crews are currently in the process of placing drops and installing fiber to homes. This project is slated to be complete in March of 2020.

In October of 2019, Calix - a global provider of the cloud and software platforms, systems and services required to deliver unified networks, recognized FTC as one of the 2019 Innovations in Next Generation Network award recipients. FTC received this award for demonstrated outstanding creativity to deploy best-in-class services and innovation in the

use of cloud and software platforms, systems and services to transform business models, networks and the subscriber experience.

In November of 2019, FTC received a \$2 million loan as part of the first round of USDA's ReConnect Pilot Program investments. These funds are the lynchpin in FTC's plan to extend its fiber-to-the-home network to 100% of the Cooperative members. The project consists of building approximately 85 miles of fiber and will make fiber available to an additional 1,676 homes in these communities.

In the decades since FTC was founded, the technology and services we provide have changed immensely for the people we serve across DeKalb, Jackson, and Marshall counties. But some things haven't changed. Just as in 1952, we remain focused on serving our customers and strengthening our local connections to better carry out our cooperative mission. We're proud to be member-owned and to provide the advanced, reliable telecom services that keep our neighbors connected.

FTC is professionally led by J. Frederick Johnson, MBA CPA, its CEO. Mr. Johnson has served the rural telecommunications and rural electric industry for 36 years, first in an auditing capacity, then nine years as the CFO of a rural electric cooperative, followed by 26 years at FTC, the past 17 years as its CEO. Mr. Johnson was responsible for securing the funding for the fiber buildout project of \$36 million, of which, \$24 million was financed with USDA with the N-Loan project. This project brought world-class broadband to the majority of its members. His efforts have led the company to expand in profitable CLEC markets, paving the way to reduce FTC's reliance on universal service funding support. He is also very active in working with state and federal policymakers to ensure that there continues to be a focus on expanding broadband to rural America.

Mr. Johnson relies heavily upon an Assistant General Manager, Chris Bryant, with over 30 years of experience at FTC. He manages all department heads and supervisors that are responsible for designing, building, and deploying fiber to the customer premise and connecting the customers to fiber services. Under his supervision, approximately 1,700 route miles of fiber have been built and roughly 12,800 locations are connected with fiber services.

Tyler Pair, the company's CFO, has 28 years of accounting experience with FTC and a strong knowledge of the reporting requirements of being a RUS borrower. Under his leadership, the company's financial reporting, internal control policies, and record retention policies allowed for a clean closing audit for the N-Loan project and no deficiencies were found. He leads his team to ensure the company operates in compliance with US GAAP standards. His continued efforts have kept the company financially strong and the company continues to find new revenue streams that make the company less reliant on universal service funding support.

FTC's network engineering and operations manager, Charles Austin, designs and

implements the company's broadband network to ensure it complies with industry best practices and provides an exceptional customer user experience. During his time at FTC, he has led the company's efforts in a comprehensive network redesign, added complete network redundancy and has implemented the next generation customer access equipment. His expertise in owning and managing a technical support company has allowed FTC to create a new trouble reporting process that has brought significant savings to the company while providing a better customer experience.

Goodrich "Dus" Rogers, the manager of business development and customer service has leveraged his economic development experience to grow FTC. His relationships and deep understanding of the economic development process have guided the company to build broadband networks in areas of need and importance for community and economic growth. He and his teams' efforts have added over \$2 million in annualized revenue to the company.

Brandi Lyles, the manager of marketing and public relations, is diligent in building and maintaining the companies' brand and presence within the community. She continually works to ensure that the company provides and meets the customers' needs with its products and services. She plans events and publishes customer education information to promote broadband adoption. Her efforts have secured the company as being Gig-certified by NTCA and recognized as being a "Smart Rural Community" designated by NTCA.

FTC's engineering and operations group is led by 30-year veteran Shane Trotman who was personally responsible for the majority of the oversight of FTC's most recent optical fiber overbuild. Mr. Trotman's wealth of outside plant engineering and operations experience coupled with his professional business training affords him an outstanding platform upon which to base the design and execution phases of optical fiber networks.

This was the primary leadership team responsible for FTC's successful deployment of the first widely adopted optical fiber gigabit capable network within the state of Alabama and one of the first such in the Southeast based upon an active Ethernet platform. FTC's optical network now reaches approximately 95% of its ILEC locations, 100% of its CLEC locations and serves a population of over 87,000 residents.

The balance of FTC management ranks is comprised of well-educated and experienced professionals, all considered well versed in their particular area of responsibility. The senior staff alone, apart from Johnson and Bryant, offers a combined 78 years of experience in their respective areas of responsibility.

6. Does not apply to FTC

7. Does not apply to FTC

8. Middle Mile Projects

The proposed funded service area (PFSA) upon which this grant application is based was selected specifically by FTC for its unique characteristic within the FTC incumbent local exchange service territory as being unable to receive a minimum of 25 Mbps download and 3 Mbps upload (25/3) service via the existing facilities in use. Residents in the PFSA currently receive Internet service via DSL over twisted copper pairs at speeds from less than 1 Mbps for many of the more remote locations, to about 20 Mbps at the locations closest to the serving wire center. In order to serve the entirety of the PFSA, middle mile projects are required to reach portions of the funded area.

Isolated pockets of FTC subscribers do receive VDSL broadband via Calix's E3-48 platform over very short copper loops and achieve speeds greater than 25/3 over copper pairs. These areas do not have fiber optic cable present, but due to the 25/3 broadband service availability, the areas were not included in the PFSA. Two of these areas, Peek's Corner (PEEK), and Snyder (SNDR) are located along feeder routes into portions of the PFSA. Therefore, in order to provide broadband to subscribers in portions of the PFSA, middle mile fiber must be built through the PEEK and SNDR areas. The cost of the middle mile builds can be found in **4. Preliminary Technical Evaluation – Project Cost Estimate** in this application, and shown individually at the bottom of the maps labeled **Attachment A Project Description, Middle Mile Projects Map**.

Isolated pockets of homes adjacent to the PFSA have broadband service available through Spectrum Internet. These areas were not included in the PFSA. Three of these Spectrum Internet areas, Painter (PNTR), Oak Hill (OKHL), and Skirum (SKRM) are located along feeder routes into portions of the PFSA. Therefore, in order to provide broadband to subscribers in portions of the PFSA, middle mile fiber must be built through these three areas. The cost of the middle mile builds can be found in **4. Preliminary Technical Evaluation – Project Cost Estimate** in this application, and shown individually at the bottom of the maps labeled **Attachment A Project Description, Middle Mile Projects Map**.

## 9. Economic Development Projects

### a. Healthcare Challenges

There are no hospitals located within the PFSA. However, with expanding broadband access to underserved areas, healthcare could improve dramatically with the use of telehealth services. Telemedicine provides 24/7 access to patient health portals, telemedicine clinicians, remote patient monitoring, telepsychiatry solutions, store and forward technologies, patient-care education, etc. Medicare's newly passed telehealth policy will require significant advances in services as part of the (CHRONIC) Care Act. Broadband access in rural areas like DeKalb County, AL will be necessary to carry out the intentions of these healthcare advances. The intentions of some of the policy changes are to allow the patient's home to serve as the originating site for telehealth services rather than having to commute to a medical clinic. With telehealth

services available like remote patient monitoring and store and forward technologies, expensive and unnecessary hospital visits can be reduced. Research indicates that Telehealth reduces hospital admissions by 25% and overall length of stay by 59%. Telehealth access will enable patients to have convenient access to specialists and eliminate the costs to commute long distances and reduce the hours of work missed due to travel. Video classes and remote care have helped the CDC's National Diabetes Prevention Program as well. It is expected that more telehealth coverage will include services offered by certified diabetes educators, respiratory therapists, audiologists, occupational therapists, speech-language therapists, and physical therapists. Broadband access would provide many educational resources to help maintain and/or prevent poor health conditions. Broadband can also provide important healthy lifestyle resources that can improve the quality of life for those living in this poverty- stricken area.

23% of DeKalb County, AL population is in poor or fair health which is slightly higher than Alabama's that is 21%. 15% of the DeKalb County population is in frequent physical distress and 14% is in frequent mental distress. Counties in the southern and Appalachian regions of the United States tend to have the highest incidence of diabetes prevalence and DeKalb County, AL is at 12% compared to the national rate of 7.2%. 22% of the county are adult smokers. 31% of the county's population is classified as obese adults. 32% are physically inactive and only 48% have access to exercise opportunities. It is reported that 36% of the population gets insufficient sleep. 12% experience food insecurity. There are 18% of DeKalb County's population that are uninsured. The ratios for doctor to patient are as follows: Primary Care Physicians 2,450 to 1, Dentists 3,550 to 1 and Mental health providers 5,910 to 1. 31% of children in DeKalb County are in poverty. It is reported that there has been 69 preventable hospital stays in 2018. The serving hospitals for this area are in Fort Payne, AL (21.3 miles or 28 minutes away) and Boaz, AL (16.6 miles or 22 minutes away).

#### b. Educational Challenges

Students from this area attend the DeKalb County Schools. Most attend either Crossville or Geraldine. Both of these schools are designated as Title I schools. Crossville Elementary and Middle School have 100% of students receiving free or reduced lunches. Crossville High School has 80% of students receiving free or reduced lunches. Geraldine, both elementary and high school, has 67% of students receiving free or reduced lunches.

The school system has implemented the Google classroom throughout all schools. Students use Chromebooks and iPads to access many different learning programs such as IXL, Moby Max, PLATO, Global Scholar, Compass Learning, Odysseyware, Accelerated Math, ACT preparation programs, ACCESS distance learning courses, and more. Some students participate in the Virtual Academy where their entire coursework and curriculum is completed in an online learning experience.

The lack of broadband at home for these students is a barrier and limits their ability to work on collaborative assignments, access teacher support documents, denies access to necessary research, and limits their ability for online tutoring assistance. Also, the lack of broadband limits students' ability to participate in The Virtual Academy if they so choose.

Learning does not stop at the high school level. Today's learning opportunities are limitless in the postsecondary education world with broadband access. Many classes are available online now that provide flexibility for those in college. Many college students choose to continue to live at home so they can work and attend college. Some adults with families and full-time jobs choose to go back to college. With broadband access, anyone can complete college coursework at their convenience. Today, broadband internet access is not a luxury in education, it is a necessity.

With expanding broadband access, those without a high school diploma could enroll online with an Adult Education Program that will give them full access to the MyGED™ online portal to study, schedule, check scores, and learn about jobs and college. With broadband access in the homes of DeKalb County School's students, they will have access to all the tools that they need to be on a level playing field with other students with different socioeconomic backgrounds. They will have complete access to the cloud-based learning programs provided by the school, online research capabilities, the ability to enroll in online tutoring programs, collaborate with other students and teachers on assignments, etc.

c. Public Safety Issues

DeKalb County, AL sits in the path of being at a very high risk for tornadic activity. On average, DeKalb County experiences at least two tornadoes per year and averaging at least one fatality as a result. It is documented that there have been 134 tornadoes since 1950 in DeKalb County. The most destructive of those being April 27, 2011 which resulted in thirty-seven deaths and over 200 injuries. Therefore, public safety is of the utmost importance to our first responders. A broadband network enables first responders to share critical information, video and other important data to address mission-critical communications needs of our public safety agencies. During emergencies and when natural disasters occur, first responders need a reliable communications network with access to dedicated bandwidth. Broadband is necessary to share large volumes of data reliably, securely and quickly - including photos, videos, building plans, maps and medical information - that can save lives during times of destruction. FTC has been a trusted partner of our local first responders for years. In fact, FTC hosted the first responders command center for DeKalb County at its headquarters in Rainsville, AL during the April 27, 2011 disaster. It played host to the EMA (local and state), Sheriff's Department, Red Cross, State Troopers, local authorities and government officials for approximately three weeks during the immediate recovery period. FTC had the back-up power and communications network capabilities needed by the first responders' team. Broadband access would be a critical need in these areas should a need arise for a disaster recovery command

center. FTC would dedicate resources to ensure that all public safety needs were met in regards to communications assistance.

Technology today demands IP connectivity to take advantage of the latest products and services. Some of these include: Burglar and Fire Alarm Monitoring, Weather Alert Notifications, Managed Video Surveillance, Personal Emergency Response Systems, Home Automation – Interactive Systems, Access Control, etc.

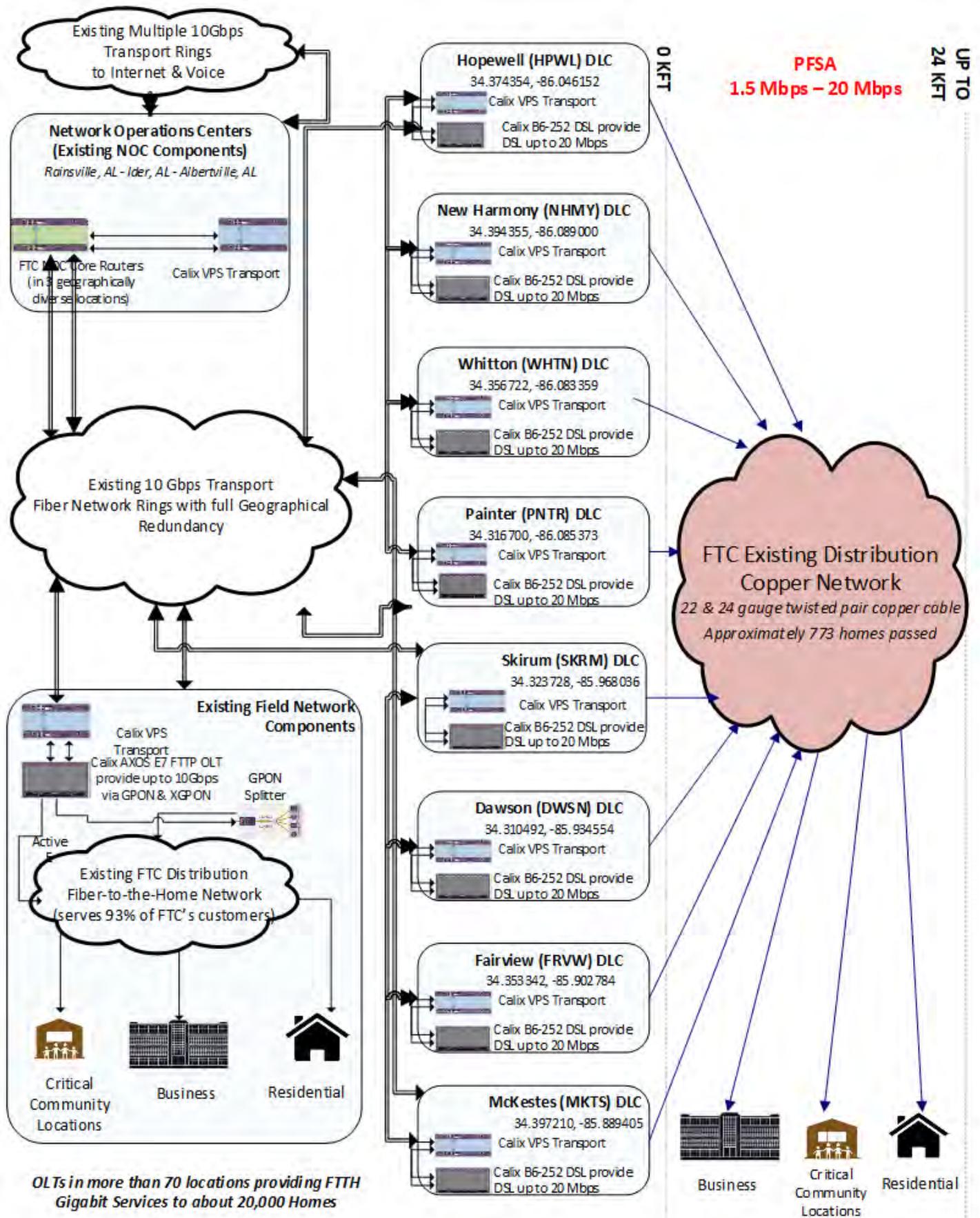
Many of these applications are vital for rural residents (especially the elderly). These applications are vital for rural small businesses as well: agricultural (poultry farms), medical clinics, banking, manufacturing and educational facilities. Rural municipals (gas, water, sewer and electric) rely heavily on remote connectivity for monitoring their operations.

With Broadband access, residents would be enabled to subscribe to FTC security services. Security systems, home monitoring and video surveillance assist in protecting families, homes, businesses, properties and valued possessions.

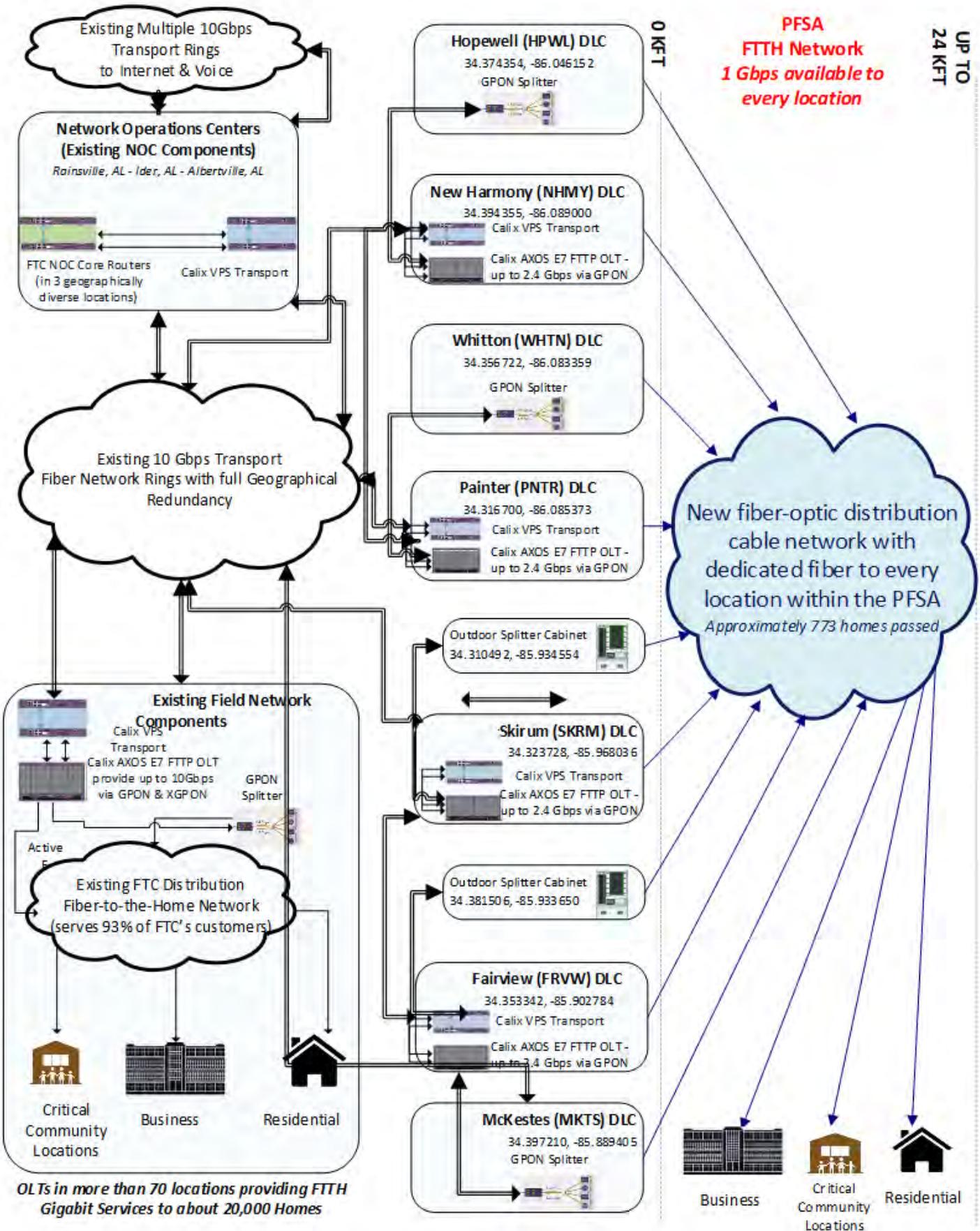
# Attachment A, Project Description



# Attachment A, Project Description – Existing Network

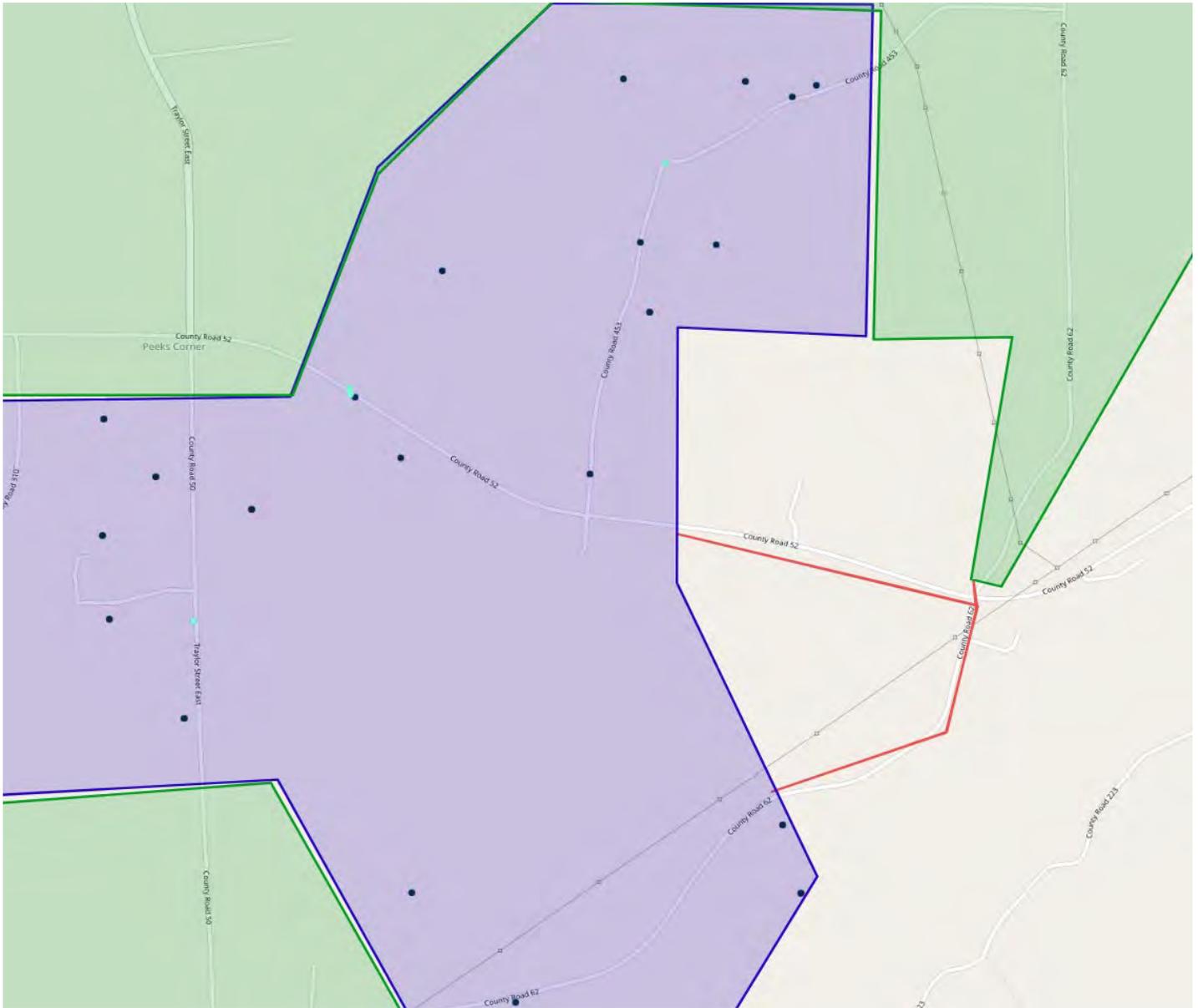


# Attachment A, Project Description – Proposed Network



# Attachment A Project Description - Middle Mile Project Maps

## Peek's Corner (PEEK) Middle Mile Fiber

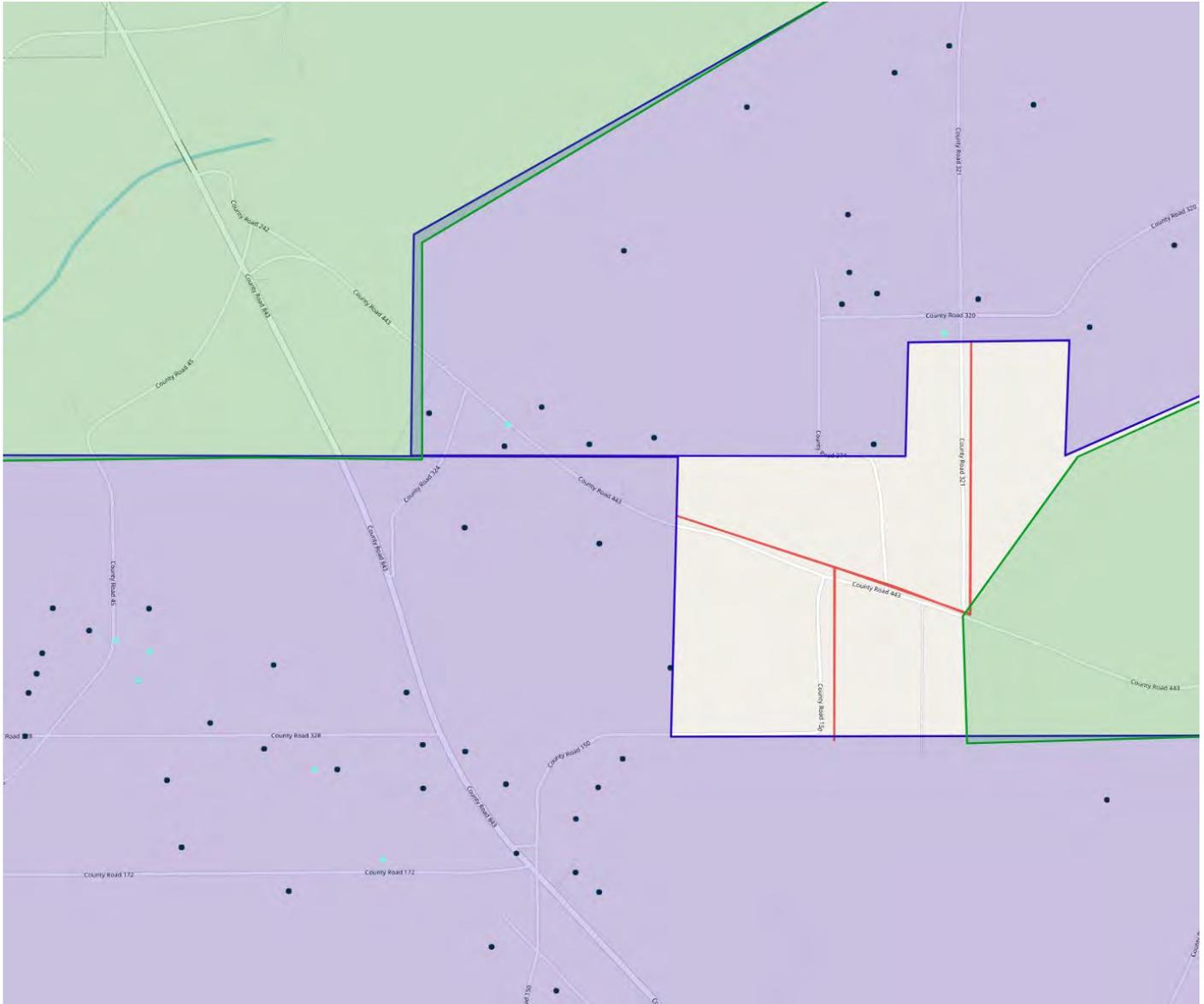


### Legend

	Proposed Grant Area (PFSA)
	Current FTC Fiber Availability
	Middle Mile Area (has 25/3 broadband available)
	New PFSA Feeder Fibers

UNIT	QTY (ft)	PRICE	EXT TOTAL
BFO24	2,800	\$3.12	\$8,736
CO96(10M)	4,800	\$3.83	\$18,384
Total	7,600		\$27,120

# Snyder (SNDR) Middle Mile Fiber

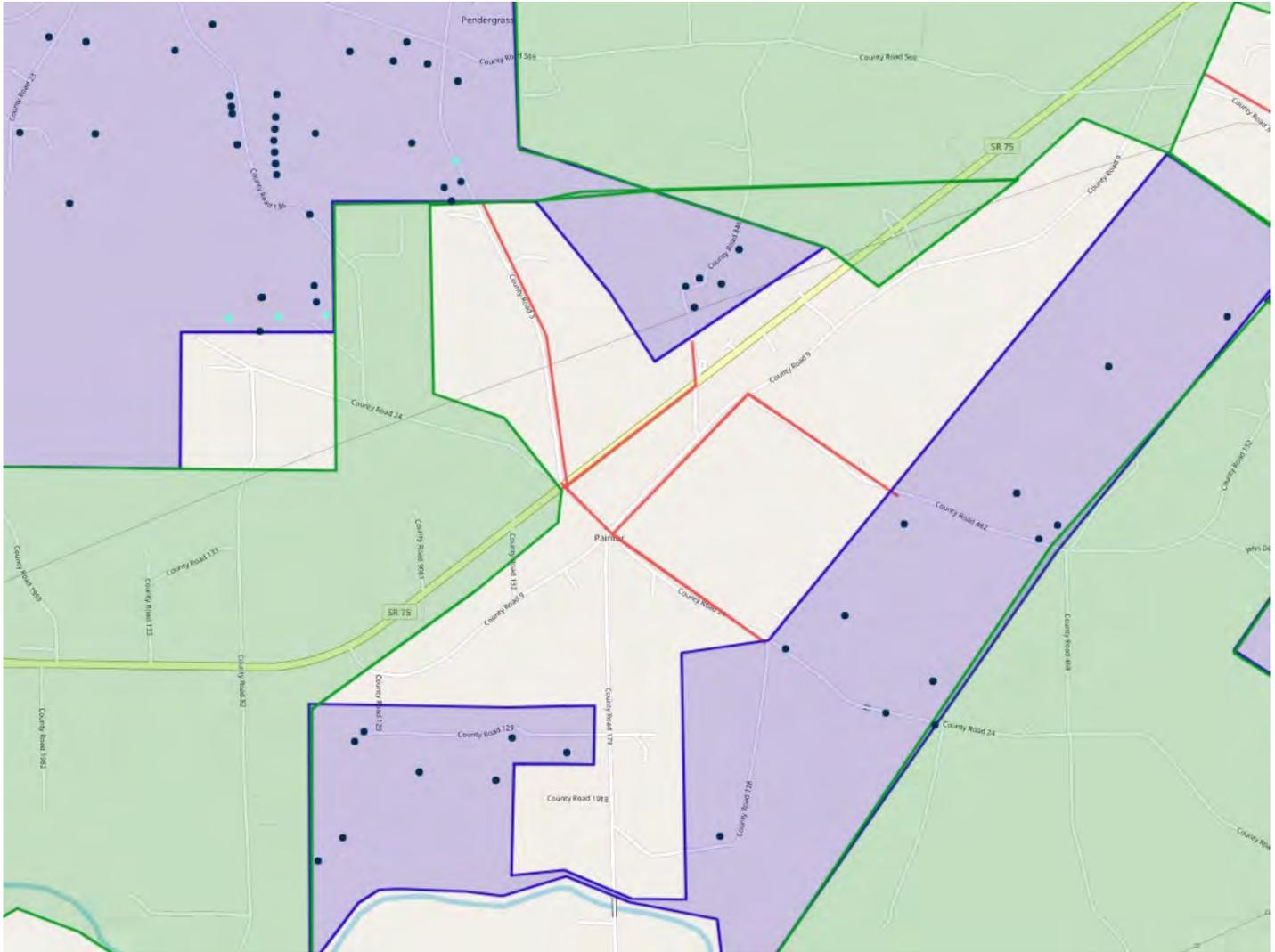


## Legend

	Proposed Grant Area (PFSA)
	Current FTC Fiber Availability
	Middle Mile Area (has 25/3 broadband available)
	New PFSA Feeder Fibers

UNIT	QTY (ft)	PRICE	EXT TOTAL
BFO24	2,900	\$3.12	\$9,048
BFO12	2,300	\$3.09	\$7,107
BFO12	1,400	\$3.09	\$4,326
Total	6,600		\$20,481

# Painter (PNTR) Middle Mile Fiber



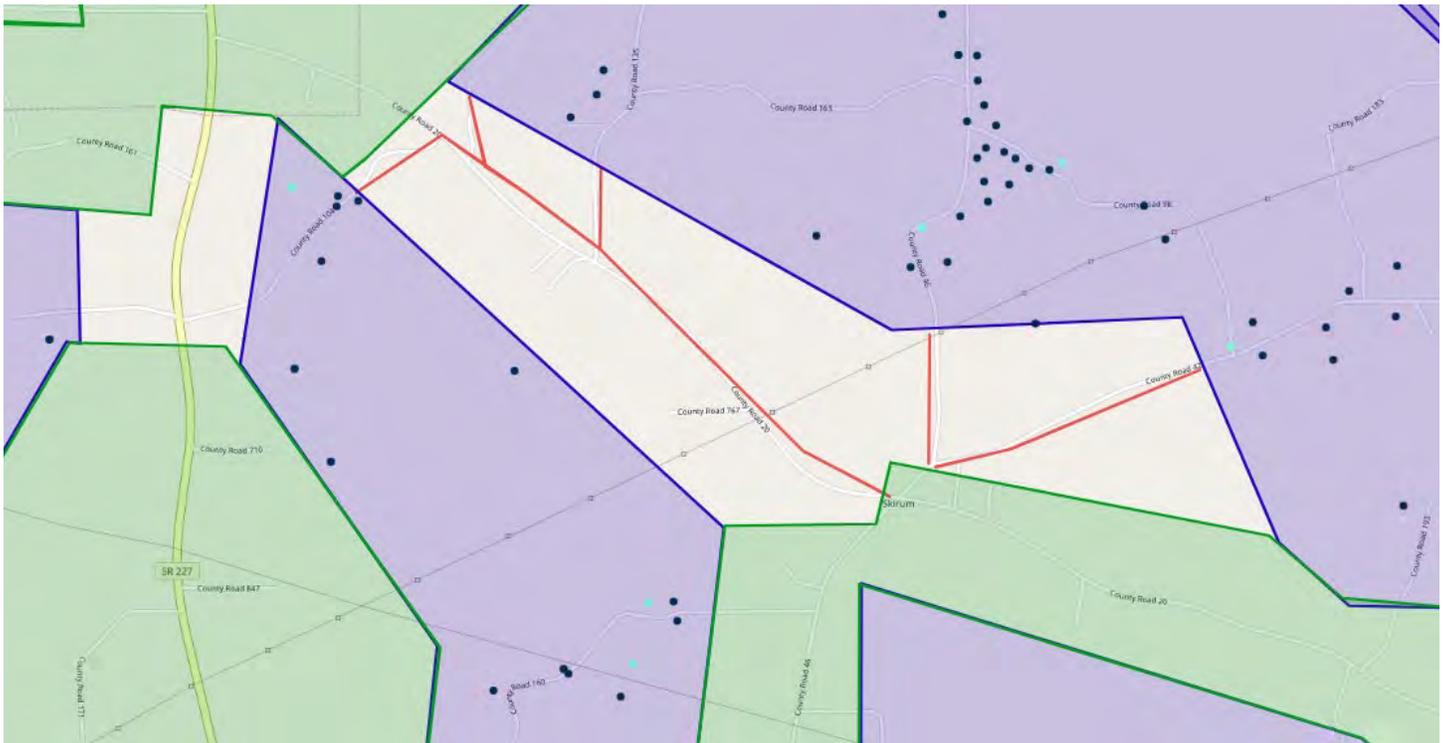
## Legend

	Proposed Grant Area (PFSA)
	Current FTC Fiber Availability
	Middle Mile Area (has 25/3 broadband available)
	New PFSA Feeder Fibers

UNIT	QTY (ft)	PRICE	EXT TOTAL
BFO24	2,500	\$3.12	\$7,800
BFO96	2700	\$3.76	\$10,152
CO144(E)	5900	\$3.34	\$19,706
CO24(E)	3000	\$2.28	\$6,840
CO288(E)	900	\$4.98	\$4,482
CO96(E)	4400	\$2.87	\$12,628
FIG8A(12)	2100	\$2.00	\$4,200
<b>Total</b>	<b>21,500</b>		<b>\$65,808</b>



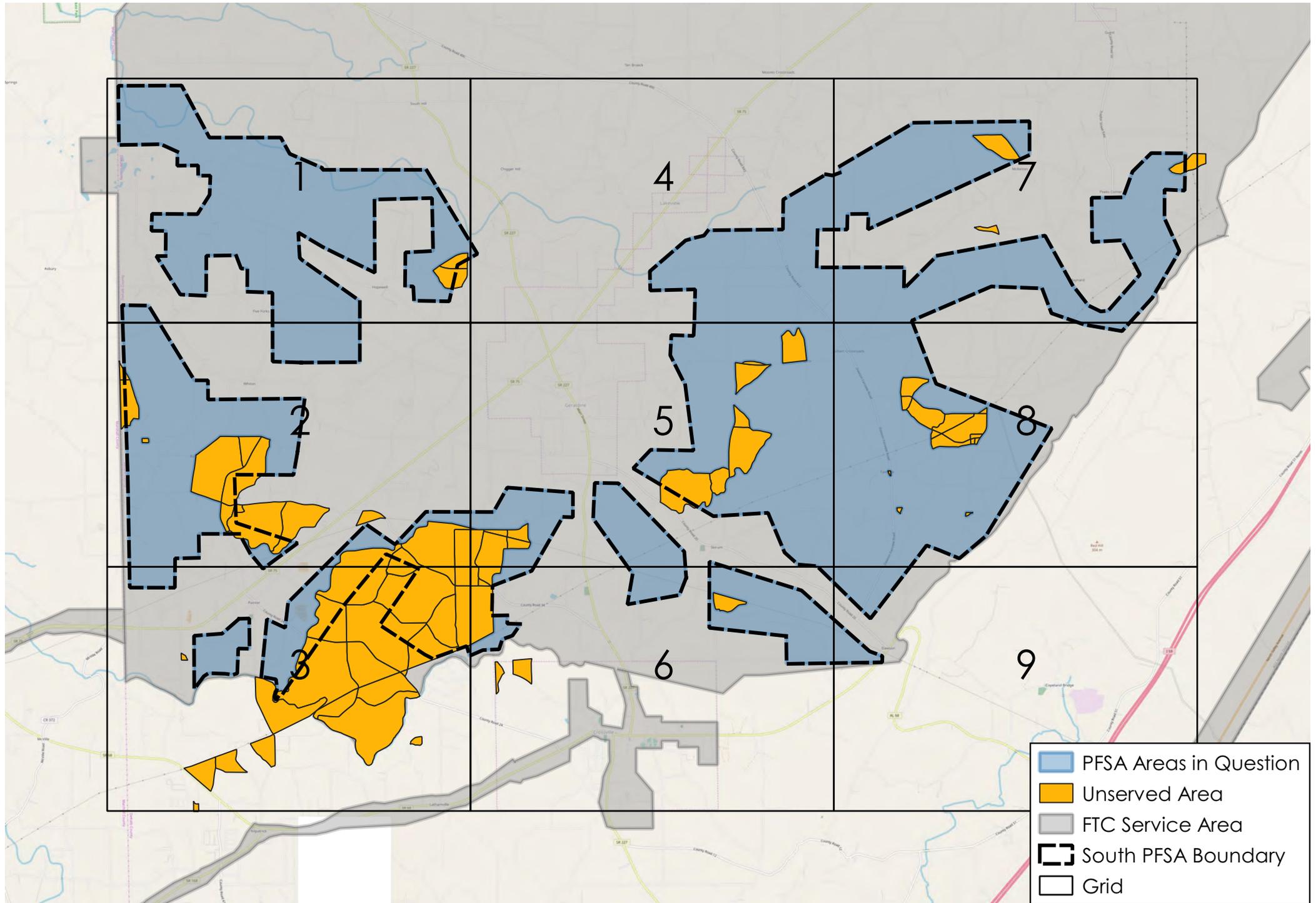
# Skyrum (SKRM) Middle Mile Fiber



## Legend

	Proposed Grant Area (PFSA)
	Current FTC Fiber Availability
	Middle Mile Area (has 25/3 broadband available)
	New PFSA Feeder Fibers

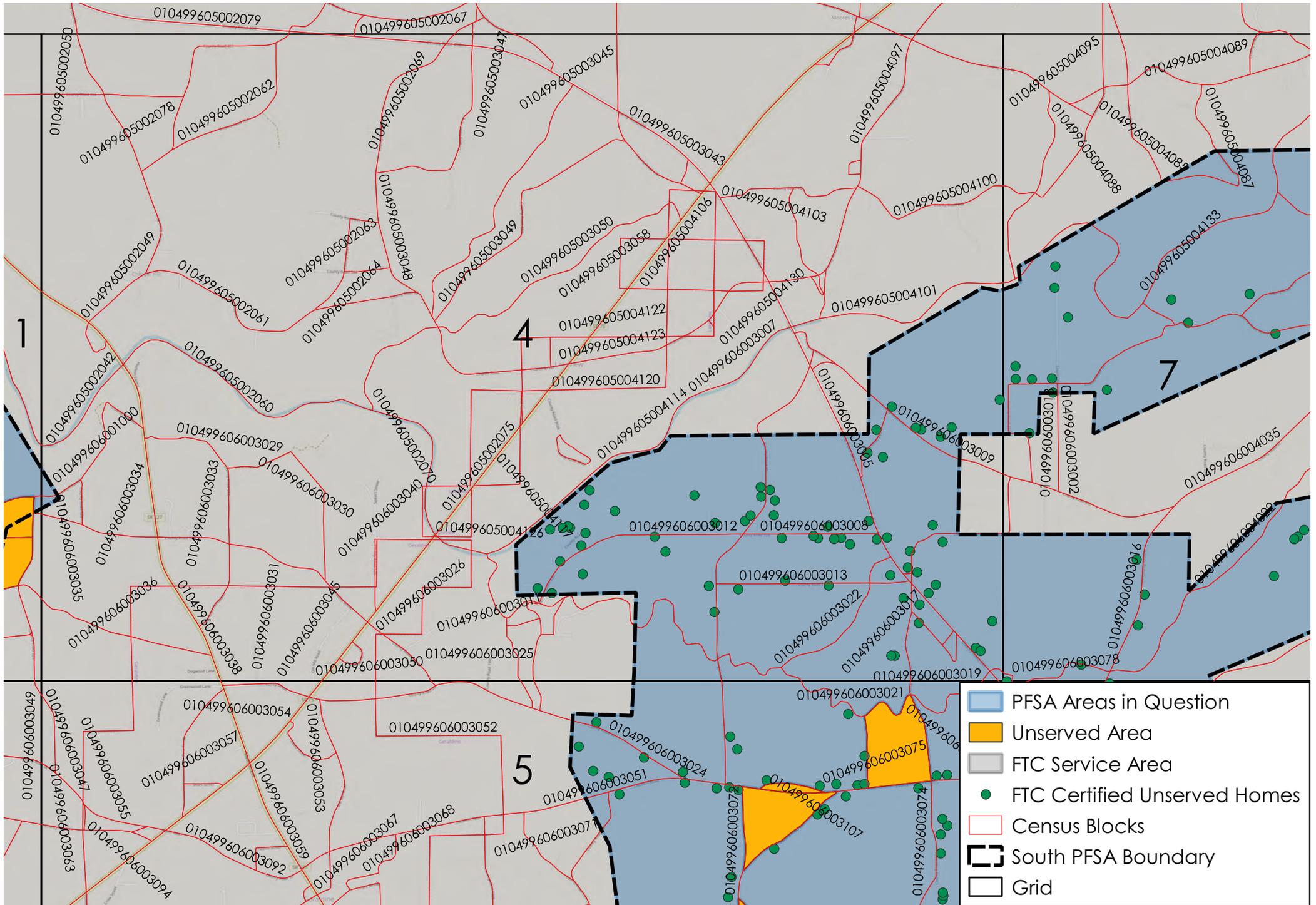
UNIT	QTY (ft)	PRICE	EXT TOTAL
BFO48	5300	\$3.18	\$16,854
BFO48	2200	\$3.18	\$6,996
BFO96	7024	\$3.76	\$26,410
CO144(E)	2500	\$3.34	\$8,350
CO24(E)	1800	\$2.28	\$4,104
<b>Total</b>	<b>18,824</b>		<b>\$62,714</b>

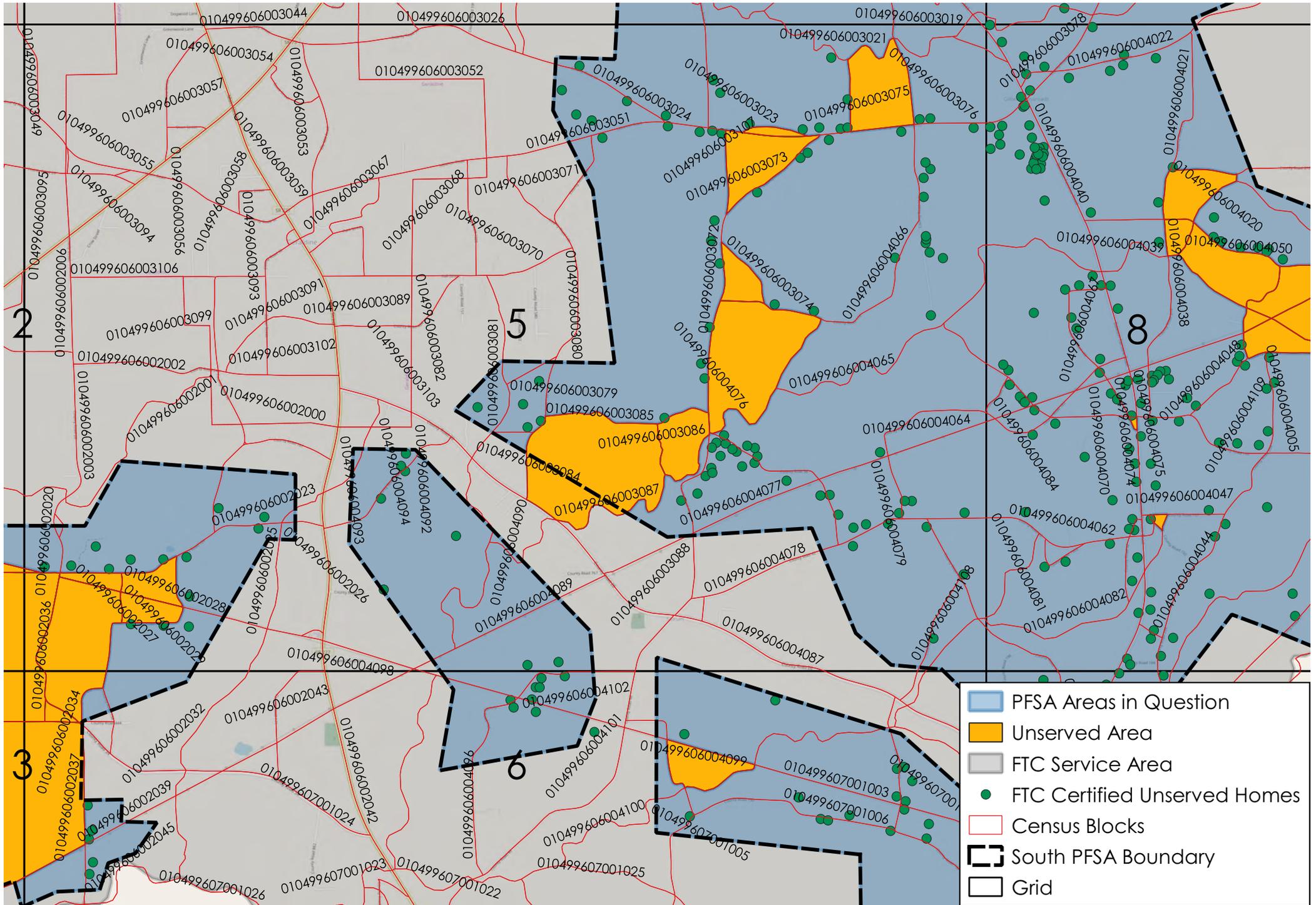






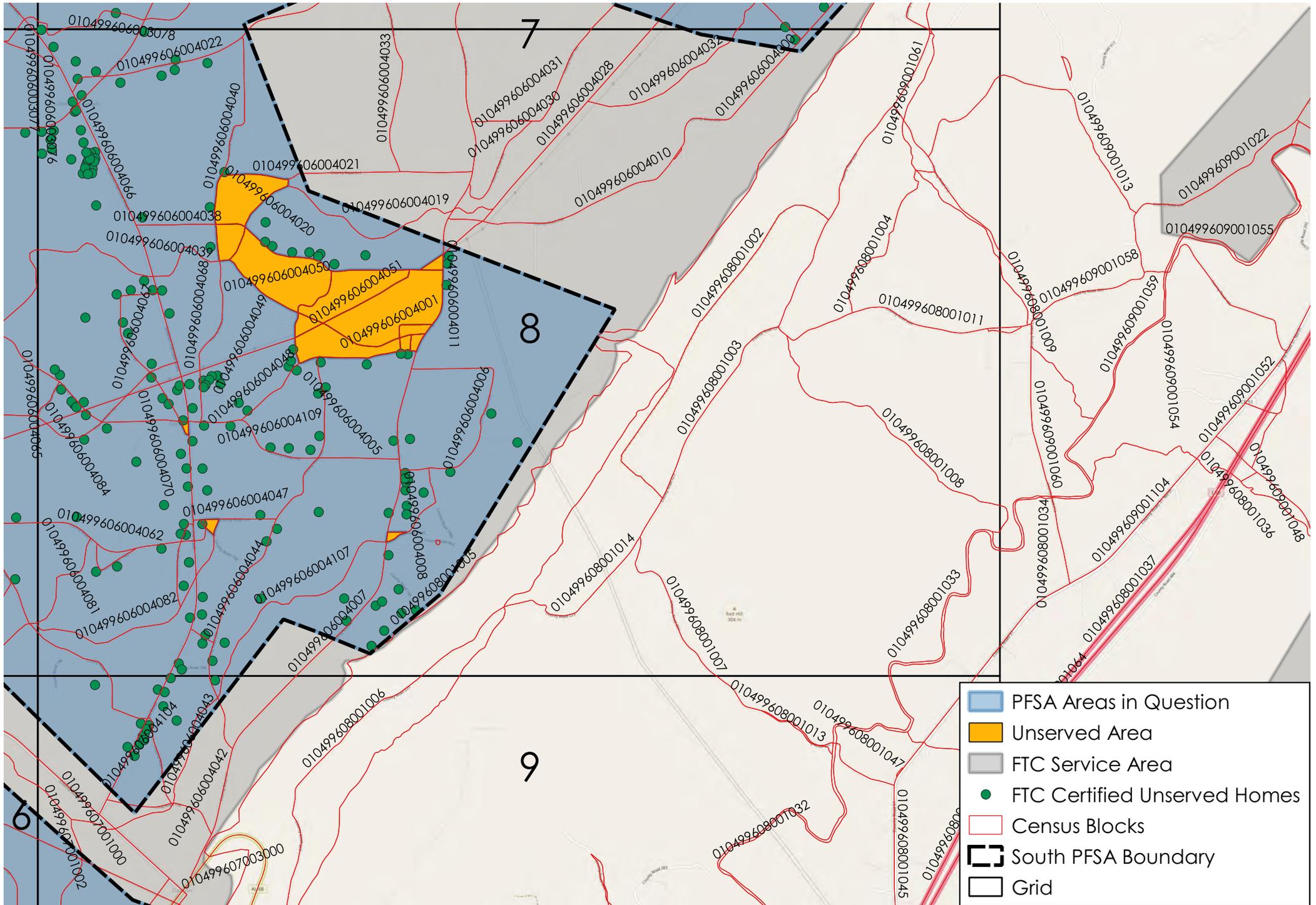




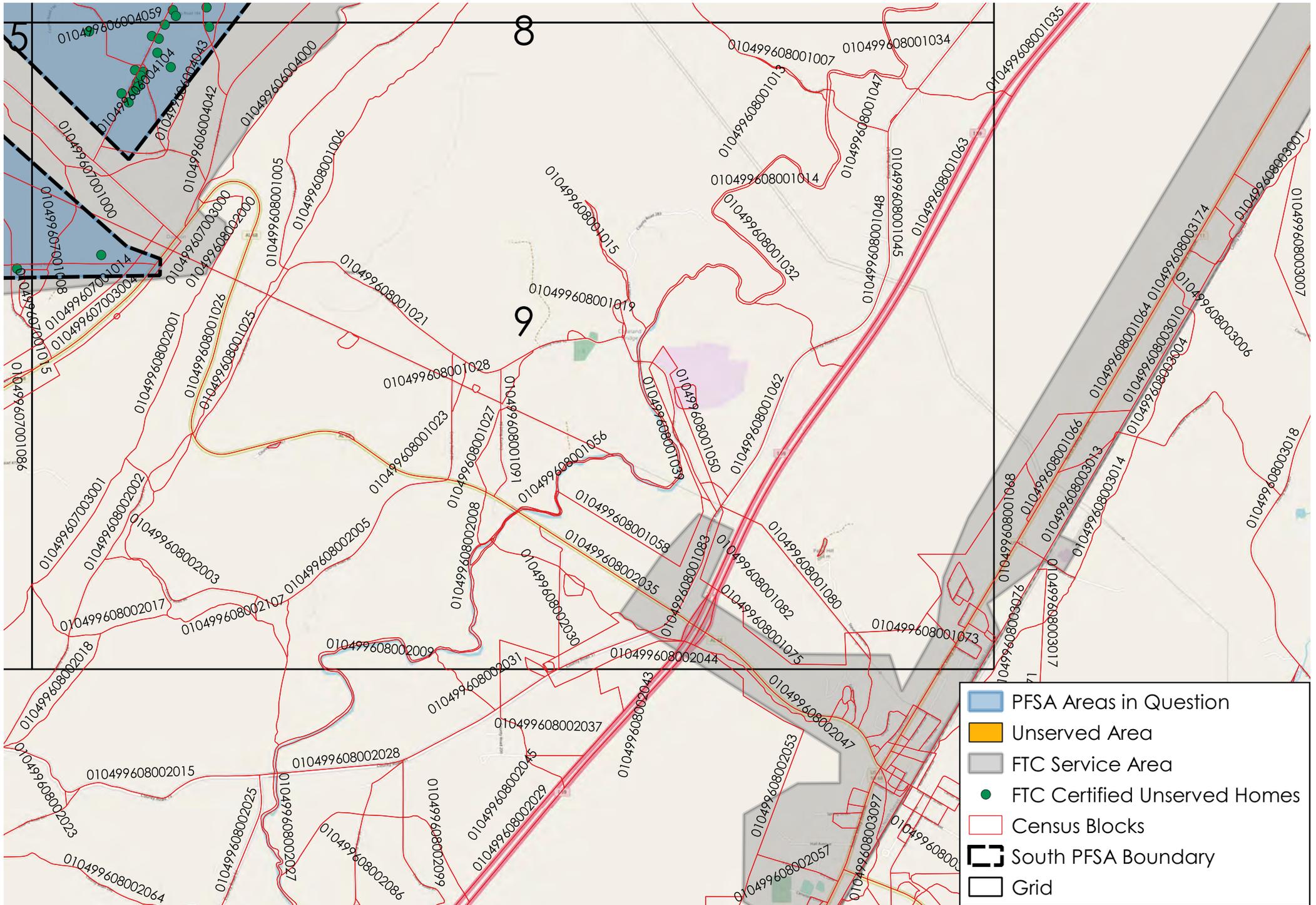








- PFSA Areas in Question
- Unserved Area
- FTC Service Area
- FTC Certified Unserved Homes
- Census Blocks
- South PFSA Boundary
- Grid



	PFSA Areas in Question
	Unserved Area
	FTC Service Area
	FTC Certified Unserved Homes
	Census Blocks
	South PFSA Boundary
	Grid

## B. Application Budget

Total Project Cost	\$3,219,679.36
65% of Total Project Cost (minimum match)	\$2,092,791.58
35% of Total Project Cost (grant maximum)	\$1,126,887.78
<b>Total Grant Amount Requested (not to exceed \$1.5 million)</b>	<b>\$1,126,887.78</b>

### 1. Eligible Expenses

Eligible project expenses are subdivided into two categories, initial construction and installation costs.

Initial construction costs include engineering/design, materials, labor, and make-ready (pole changeouts, etc.) for buried and aerial distribution fiber. These expenses are shown in the first four rows in the table below, totaling \$2,430,502.

Subsequent to the completion of initial construction, FTC expects to incur an additional \$850,676 in costs associated with transitioning 773 subscribers currently receiving services over copper to an optical fiber network. These costs include the materials, labor, and electronics required to connect the subscribers to the newly constructed network additions. These costs are shown in the **Cost to Connect\Install Homes Passed** table below.

A detailed listing of the materials and labor units can be found in **4. Preliminary Technical Evaluation – Project Cost Estimate** in this application.

#### Budget Item

Initial Build Costs	Total Cost	Grant	Match
Engineering/Design	\$382,000	\$133,700	\$248,300
Materials	\$748,213	\$261,875	\$486,339
Labor	\$1,280,289	\$448,101	\$832,188
Other (Make-Ready / Pole Changeouts)	\$20,000	\$7,000	\$13,000
<b>Total Initial Build</b>	<b>\$2,430,502</b>	<b>\$850,676</b>	<b>\$1,579,827</b>

Costs to Connect/Install Homes Passed	Total Cost	Grant	Match
Construction/Installation (Includes buried drop, NAP closure, ONT, battery backup, residential gateway, inside wiring, installation labor)	\$789,177	\$276,212	\$512,965

## 2. Financial Resources

FTC does not expect any adverse financial issues arising out of the project upon which this grant application is based. The consolidated enterprise, with assets of approximately \$82 Million and annual operating revenues of approximately \$34,000,000, now maintains approximately 1,700 route miles of optical fiber and serves as the most robust component of the telecommunications infrastructure within a geographic area covering 632 square miles with a population of approximately 80,792.

FTC reported net margins of \$1,522,611 and \$1,061,325 for 2018 and 2017, respectively. During 2018, FTC retired \$1,569,883 in both long-term and short-term debt. FTC also continues to maintain a strong position with regard to the equity of its members. On December 31, 2018, total member equity was \$47,977,827 or 58.5 % of total assets.

In addition to its strong financial performance and solid equity position, FTC has been able to sustain positive cash flows sufficient to meet operating obligations, service its long-term debt, continue to retire member equity, and self-fund minor plant expansion. FTC reported net positive cash flows of \$512,724 and \$2,650,933 for 2018 and 2017, respectively. Due to its current cash position and, if needed, access to debt capital, FTC is confident that financing will not be a barrier to constructing and maintaining the assets associated with the Southern DeKalb PFSA.

## 3. Partners and Subcontractors

- A. Project management – Farmers Telecommunications Cooperative (FTC) has already deployed approximately 1,700 miles of fiber-optic cable in other markets and connected more than 12,800 locations with fiber, largely through an RUS FTTH loan program. Project management was conducted by FTC staff. Project management for this program will also be performed by FTC staff members.
- B. Engineering –
  - a. **System design** – Has already been completed as a joint effort by FTC engineering staff and engineering consultants, LADD Engineering
  - b. **Staking of routes** – Will be completed as a joint effort by FTC engineering staff and qualified engineering consultants
  - c. **Permitting** – Will be performed by FTC engineering staff
  - d. **Right-of-Way** – Will be performed by FTC engineering staff
  - e. **Inspect** – Will be performed by FTC engineering staff
  - f. **Inventory & Close-out** – Will be completed as a joint effort by FTC engineering staff and qualified engineering consultants
- C. Contractor selection – Will be performed by FTC staff members.
- D. Construction – Will be completed as a joint effort by FTC crews and private contractors chosen as part of FTC’s bid or vetting process. Contractors will be highly qualified and

trained in all code and RUS guidelines. Construction contracts for projects of this size in the past have been awarded to Red Stag, Electricom, Benchmark, and others.

- E. Splice and test – Will be performed by private contractors chosen as part of FTC’s bid or vetting process. Contractors will be highly qualified and trained in all code and RUS guidelines. Splicing contracts for projects of this size in the past have been awarded to Red Stag, QB Telecom, and others.
- F. Customer location connection – Will be performed by FTC crews.

#### 4. Federal Funds Associated with Project

FTC is an Eligible Telecommunications Carrier with respect to FCC Rules. As such, FTC is a recipient of Federal Universal Service support from the Connect America Fund. However, FTC has deployed optical fiber to more than 95% of its incumbent local exchange subscribers and is therefore not subject to further build out requirements commonly associated with the FCC’s Alternative Connect America Model (ACAM) or the Connect America Fund Phase II auction (CAFI). With respect to the project upon which this grant application is based, FTC has not applied for nor has it received any funds or grants through other federal universal service funding programs designed specifically to encourage broadband deployment in the areas applied for. FTC was approved for a \$2 million interest-bearing loan from USDA Rural Utilities Service ReConnect Pilot Program which will be used to assist in deploying service as contemplated by this project. Even if this was a non-interest-bearing loan or grant it would not exceed 60% of the total cost of this project.

# Attachment C, Other Program Priorities



## C. Other Program Priorities

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### Does this project seek to leverage grant funds through private investment?

**Yes.** Farmers Telecommunications Cooperative, Inc. intends to leverage grant funds through its own private investment. As evidenced in the schedule below, every \$1.00 of grant funds leverages \$1.86 in investment by FTC.

#### Initial Construction Costs

Cable & Wire Facilities	1,924,752.36
Engineering	382,000.00
Central Office Electronics	123,750.00
Subtotal	<u>2,430,502.36</u>

#### Cutover and Installation Costs

Installation/Connection Costs	335,241.00
Customer Premise Equipment	453,936.00
Subtotal	<u>789,177.00</u>

#### Grant/Private Investment

Total Investment	3,219,679.36
Less Grant Funds Requested	1,126,887.78
Private Investment	<u>2,092,791.58</u>

**Ratio Private/Grant Funds Invested** **1.86**

### Will this project be an extension of existing infrastructure?

**Yes.** The PFSA will be fed from seven network locations. All seven locations are existing telecom huts which already have both battery backup and standby generator power backup to be used in extended power failure situations. These locations have fiber-optic 10 Gbps transport feeds through a fully redundant ring offering diverse paths back to the Network Operations Center (NOC) in Rainsville, AL. FTC has four links to the public Internet:

1. A 10Gbps link from Ider, AL to the Internet peering facilities at 56 Marietta in Atlanta, GA, carried by iRis networks.
2. A 10Gbps link from Rainsville, AL to the Internet peering facilities at 56 Marietta in Atlanta, GA, carried by iRis networks.
3. A 10Gbps link from Rainsville, AL to the Internet peering facilities at Elk Grove in Chicago IL, carried by iRis networks.

4. A 5Gbps link from Rainsville, AL to the Internet peering facilities at Elk Grove in Chicago IL, carried by iRis networks.

In January, 2020, FTC will add a 10Gbps link from Albertville, AL to the Internet peering facilities at 56 Marietta in Atlanta, GA, to be carried by AT&T.

The build will also take advantage of existing Calix Active Ethernet access cards that are currently serving other FTTH customers adjacent to the PFSA. Although additional network equipment will be added as demand requires, using the existing telecommunications huts, 10 Gbps transport feeds, and access cards will allow FTC to serve the Southern DeKalb PFSA subscribers with the best network possible while leveraging existing infrastructure to lower costs.

**Does this project serve locations with demonstrated community support?**

**Yes.** FTC has received support from individuals within the community in hopes that the proposed project comes to fruition. Letters have been received from local and state legislative delegates, elected officials, and community leaders.



# Northeast Alabama Community College

Office of the President  
Dr. David Campbell

November 6, 2019

Kenneth W. Boswell  
Director, Alabama Department of Economic and Community Affairs  
P.O. Box 5690  
Montgomery, AL 36103-5690

Dear Mr. Boswell,

Farmers Telecommunications Cooperative, Inc. (FTC-Rainsville, AL) is applying for the 2020 Alabama Broadband Accessibility Fund Grant in hopes to expand their fiber network to provide high-speed broadband internet access to rural Jackson and DeKalb County areas. The areas that will receive the service are Pleasant View, Browntown, Bowman's crossroads, and potentially Gorham's Bluff and DeKalb County areas of Deer Head Cove, Fox Mountain, Peek's Corner, and areas in southern DeKalb county around Dawson/Skirum/Fairview/Painter.

The areas identified are currently underserved and cannot get internet speeds of at least ten (10) megabits per second download and one (1) megabit per second upload.

Broadband is essential in today's information economy infrastructure. This service will help rural areas compete with information for commercial and economic development. This area is also an integral part of the Google Data Center community.

It would be helpful for our residents to have an option for telecommuting and for our students taking existing courses online. These rural areas are located in the Northeast Alabama Community College service area, yet the students do not have a viable broadband option for taking online classes.

We believe these grants will greatly enhance the quality of life for the members of these rural areas and sincerely appreciate any assistance you can give us.

Sincerely,

Dr. David Campbell  
President, Northeast Alabama Community College



# Northeast Alabama Community College

Post Office Box 159

Rainsville, Alabama 35986-0159

256-638-7044 / 256-228-6004, ext. 2294

Fax: 256-638-3052 [www.nacc.edu](http://www.nacc.edu)

*Chad Gorham*

*Dean of Instruction- Interim*

*Director of Extended Day/*

*Distance Education Programs*

*gorhamchad@nacc.edu*

Kenneth W. Boswell  
Director, Alabama Department of Economic and Community Affairs  
P.O. Box 5690  
Montgomery, Alabama 36103-5690

November 13, 2019

Dr. Mr. Boswell,

Please accept this correspondence as my most sincere statement of support for Farmers Telephone Cooperative, Inc. in their effort to secure a 2020 Alabama Broadband Accessibility Fund Grant, which would help to provide broadband internet to one of the most rural and depressed areas of Jackson and DeKalb Counties. Currently, the internet service in and around the Pleasant View, Browntown, Bowman's Crossroads, and Gorham's Bluff communities of Jackson County and the Deer Head Cove, Fox Mountain, Peek's Corner, Dawson, Skirum, Fairview, and Painter communities of DeKalb County is poor and very unreliable. These particular communities are unable to reach internet speeds of at least ten (10) megabits per second download and one (1) megabit per second upload. The overall impact that quality broadband internet would have on these areas would be tremendous.

Through my employment as the Director of Distance Education at Northeast Alabama Community College (NACC) and my service to Jackson County Schools as the president of the Board of Education, I fully understand the importance of reliable internet service. There are a number of students enrolled in distance education/online courses at NACC that reside within underserved broadband areas. These students often find the internet service that is available within their home and community leaves them at a disadvantage compared to students who live in areas where quality high-speed internet service is readily available. Students living in underserved areas often have to travel to areas with free public internet access, or back to the NACC campus, in order to participate in their online courses. A fairly high number of these students are actually high school students participating in dual enrollment courses through the college. Many online courses require students to participate in live-feed presentations and other cooperative learning projects. Subpar internet connections and internet speed often make this task almost impossible.

With the awarding of this grant, students from at least nine schools would be greatly impacted. Students residing within the aforementioned communities make up enrollments at a number of K-

8 schools as well as the following K-12 and high schools: Pisgah High School, Section High School, Sylvania High School, Fyffe High School, Crossville High School, Geraldine High School, Collinsville High School, Valley Head High School, and Ider High School. The vast majority of these students qualify for free or reduced price lunches based off of total household income. Just as broadband internet would positively impact students enrolled in college residing within these areas, it would also greatly benefit the children enrolled in these local public schools. With reliable internet connection, students would be able to research topics of interest, complete school assignments, explore potential career fields, participate in virtual field trips, get assistance with homework and school projects, and collaborate with not only peers within their school but also from around the world.

Jackson County, as a whole, has been one of the counties in North Alabama that has seen a decline in overall population over the past ten years. The downturn in population is due, in part, to the decline of available employment opportunities throughout the county. Many businesses and industries have either closed completely or moved operations outside of Jackson County, greatly impacting the overall spirit of our area. The same can be said for DeKalb County. The impact of losing so many textile jobs nearly ten years ago is still being felt to this day. Since the announcement and construction of the new Google Data Center in Jackson County has begun, a hint of optimism can be sensed around both Jackson and DeKalb Counties. Students can now be heard talking about career opportunities in high-tech fields such as those that Google and similar tech giants will employ. Jackson County in particular has found itself at a very pivotal point in time and is on the verge of turning a corner that should bring about change - positive change - which many could never have imagined. The 2020 Alabama Broadband Accessibility Fund Grant that Farmers Telephone Cooperative, Inc. is seeking could prove to be a critical piece of realizing and materializing this change.

I want to reiterate my sincere and unwavering support for the positive impact that Farmers Telephone, Inc. has helped to bring to Jackson and DeKalb Counties and for their current efforts to bring critical broadband service to the underserved areas. Please carefully consider this request and help Farmers Telephone, Inc. and the other valued stakeholders move rural communities in Jackson and DeKalb Counties forward.

Respectfully,



Chad Gorham

# DEKALB COUNTY ECONOMIC DEVELOPMENT AUTHORITY



November 26, 2019

Kenneth Boswell, Director  
Alabama Department of Economic and Community Affairs  
Post Office Box 5690  
Montgomery, Alabama 36103-5690

Dear Mr. Boswell,

I completely support Farmers Telecommunications Cooperative (FTC) efforts to apply for the 2020 Alabama Broadband Accessibility Fund to build a strong fiber optics system in rural DeKalb County areas of Deer Head Cove, Fox Mountain and Peek's Corner. These areas are currently underserved and cannot get internet speeds of 25 Megabytes per second download and 3 Megabytes per second upload. Providing broadband accessibility to our most rural citizens empowers their ability to provide for their family and themselves.

First, as the county's economic developer, it has been satisfying to promote the fact that our county is the first GIG ready county in Alabama. When I tell potential industries that they will be able to connect to FTC fiber optics system with speeds up to 100 times faster than the 10 megabits per second (Mbps) and 40 times faster than broadband (which is faster than Huntsville), interest to locate to our county increases. We have seen a record number of requests for information from corporations. Our existing industries have also set record numbers as they expand. With 22 projects and over \$31 million dollars in 2019, industries are showing their commitment to locate and stay in our county. Truly, FTC is a major part of our economic wellbeing.

Secondly, education is often overlooked as a key factor in economic growth and development. The opportunity to provide access to the internet in our rural areas unlocks options such as a career in the technical and STEM pathways which gives our students additional insight into their strengths and possibilities. Another powerful option is utilizing the DeKalb County Career Tech Dual Enrollment Program through Northeast Alabama Community College. The Broadband Accessibility Act will provide our rural students with the best possible education right at their fingertips.

I would be glad to talk with you about my strong support of FTC and this Broadband Accessibility Fund at your convenience. Again, I would like to reiterate how important FTC is to our County for economic growth for us now and for our future workforce.

Sincerely,

A handwritten signature in black ink, appearing to read "Jimmy Durham".

Jimmy Durham  
Executive Director  
DeKalb EDA

DR. JASON BARNETT  
Superintendent of Education



## DEKALB COUNTY SCHOOLS

BOARD MEMBERS  
Randy Peppers, Chairman  
Robert Elliott, Vice Chairman  
Mark Richards  
Carol Hiatt  
Monty Darwin

Alabama Department of Economic and Community Affairs  
ATTN: Kenneth Boswell  
PO Box 5690  
Montgomery, AL 36103-5690

December 18, 2019

Grant Committee:

Farmers Telecommunications Cooperative's mission statement of "We Keep You Connected" and Google's mission statement of "to organize the world's information and make it universally accessible and useful" are two of the most important mission statements for DeKalb County Schools faculty and student body. FTC and Google are two of the strongest partners we have in providing our students a relevant and personalized educational experience that prepares them for their future. As educators it should be our mission to educate our students in critical thinking, evaluation of information and its applicability to the topic at hand and the appropriate application of the information we are receiving or reviewing. To this end, FTC assists us in providing proper internet connectivity, a prerequisite for preparing a student to be successful in his or her academic career as well as in his or her work post-secondary, whether that be college or career.

In DeKalb County we are very fortunate to have Farmers Telecommunications Cooperative serve our local schools and communities through internet, phone, security and television service. I have reaped the benefits of their service both as a residential and education customer through their agreement with the Alabama Supercomputer Authority. The services FTC provides our schools as our internet provider has allowed us to transition to the Google Education Suite, which allows teachers and students access to the entire suite of Google programs as well as Google Classroom. This partnership is overhauling the learning experience for our nearly 9,000 students. We also integrate 12,000 computers on our network daily so that teachers can participate in professional learning activities for themselves and their colleagues, and facilitate student learning through the use of Promethean Boards, digital streaming services, interactive learning software and formative assessment tools to better inform their practice as teachers. Students also use this technology to learn digitally through the use of Chromebooks and iPads on services and programs such as IXL, Moby Max, PLATO, Global Scholar, Compass Learning, Odysseyware, Accelerated Math, ACT preparation programs, ACCESS distance learning courses, etc... DeKalb County has also expanded its offerings to a virtual School whereby



P.O. Box 1668 | 306 Main St. W  
Rainsville, AL 35986



[www.DeKalbK12.org](http://www.DeKalbK12.org)



Phone: (256) 638-6921  
Fax: (256) 638-6972

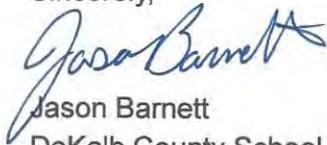
students complete their entire academic coursework via an online learning experience.

As a parent and educator, the ability to use technology as a tool for learning is highly instrumental and an absolute necessity in a child's formative education and assuredly even more important in preparing students for a successful post-secondary experience, whether they choose to enter the workforce or a college of their choice. Today's employers require an ever-changing skill set that is surrounded in Science, Technology, Engineering and Math (STEM). In order for our area to be vital, we must be able to integrate these subjects and learning experiences into the education of our students.

There is a bright spot to this, however. As previously mentioned, FTC has been, is, and will continue to be a great partner in bringing economic growth and connectivity to our communities. With the assistance of the Alabama Broadband Accessibility Fund, FTC could expand its fiber network to provide high-speed broadband internet to the Deer Head Cove and Fox Mountain on the north end of DeKalb County and areas in southern Dekalb County around Peek's Corner, Dawson, Skirum, Fairview and the Painter community where many of our students reside and would benefit exponentially from this digital expansion. As we know, learning does not and should not stop when students pass through the school doors. This grant would aide in giving them the same affordable internet access as their peers after school hours.

It is with the students and communities of DeKalb County in mind that I request your consideration of awarding Farmers Telecommunication Cooperative an Alabama Broadband Accessibility Grant and support Farmers Telecommunications Cooperative's mission statement of "We Keep You Connected" to areas where Gig and fiber internet connectivity was once inconceivable. If I can be of further assistance, please feel free to contact me at [jbbarnett@dekalbk12.org](mailto:jbbarnett@dekalbk12.org) or at 256-638-6921.

Sincerely,



Jason Barnett  
DeKalb County School Superintendent





## ALABAMA STATE SENATE

ALABAMA STATE HOUSE  
SOUTH UNION STREET, 7TH FLOOR  
MONTGOMERY, ALABAMA 36130-4600  
334.261.0858

**STEVE LIVINGSTON**  
STATE SENATOR - DISTRICT 8  
DISTRICT OFFICE:  
POST OFFICE BOX 623  
SCOTTSBORO, ALABAMA 35768

### COMMITTEES:

CHAIRMAN, FISCAL RESPONSIBILITY AND ECONOMIC DEVELOPMENT  
RULES  
FINANCE AND TAXATION GENERAL FUND  
AGRICULTURE, CONSERVATION AND FORESTRY  
BANKING AND INSURANCE  
TRANSPORTATION AND ENERGY

November 4, 2019

Alabama Department of Economic and Community Affairs  
Attn: Mr. Kenneth Boswell  
P.O. Box 5699  
Montgomery, AL 36103

Mr. Boswell:

Farmers Telecommunications Cooperative, Inc. is applying for the 2020 Alabama Accessibility Fund Grant in hopes to expand their fiber network to provide high-speed internet access to areas in rural DeKalb County, Alabama. I understand that the areas of Deer Head Cove, Fox Mountain, Peek's Corner, and a few areas in Southern DeKalb County to include Dawson, Skirum and Painter are currently on their list. I know that these areas are currently considered underserved in regards to broadband internet.

As you are aware broadband access is essential to economic development, education and commerce and I see this as an opportunity for DeKalb County to push the needle of success forward. There is much growth in Northeast Alabama and it doesn't show signs of slowing down. We need an infrastructure that can and will support that growth.

As a proponent of Economic Development, I stand firmly behind this grant and Farmers efforts to continue to expand this necessary service ever further. I ask that you give every consideration to this request and if I can provide any further information please do not hesitate to contact me directly.

Respectfully,

A handwritten signature in black ink, appearing to read "Steve Livingston".

Steve Livingston  
Senator, District 8



ALABAMA STATE SENATE  
ALABAMA STATE HOUSE  
11 SOUTH UNION STREET, 7TH FLOOR  
MONTGOMERY, ALABAMA 36130-4600  
334.261.0876

CLAY SCOFIELD  
STATE SENATOR, DISTRICT 9  
DISTRICT OFFICE:  
412-A GUNTER AVENUE  
GUNTERSVILLE, ALABAMA 35976  
256.582.0619

COMMITTEES:  
CHAIRMAN, Confirmations  
VICE CHAIRMAN, Rules  
Finance & Taxation Education  
Banking & Insurance  
Fiscal Responsibility & Economic Development  
Agriculture, Conservation and Forestry

November 8, 2019

Mr. Kenneth Boswell, Director  
Alabama Department of Economic and Community Affairs  
401 Adams Avenue  
Montgomery, AL 36104

Subject: 2020 Alabama Broadband Accessibility Fund

Dear Director Boswell,

I strongly support Farmers Telecommunications Cooperative, Inc., Rainsville, AL (FTC) for their efforts for support through the 2020 Alabama Broadband Accessibility Fund to build fiber in rural DeKalb County. The areas of request are of Deer Head Cove, Fox Mountain, Peek's Corner, and areas in southern DeKalb County around Dawson, Skirum, Fairview, and Painter. Also, areas in Jackson County around Pleasant View, Browntown, Bowman's Crossroads, and possibly Gorham's Bluff. These are all areas that are underserved. The minimum level of service for this grant is for areas that cannot get 25/3MBPS down/up.

The residents in these communities have little option for telecommuting and students are hindered with online coursework. Students in this area are in commutable distance to several technical schools, community colleges, and universities, however, they do not have Broadband needed to take online classes or to even review assignments placed in online blackboards.

DeKalb County ranks 2<sup>nd</sup> in Alabama in poultry and cattle production and we know that Broadband can help grow industry. Without expanding this service, commercial and economic development for this rural area will be stifled and stunted. The lack of Broadband has had a negative impact on the economy and we continue to see rural areas without key infrastructure losing population as the quality of life is much impacted by lack of access to technology. This project will be a huge help for the citizens in this rural area.

I am confident that this grant will greatly enhance the quality of life for the members of these communities and appreciate any assistance you can give through favorable consideration of this grant application.

Sincerely,

A handwritten signature in cursive script, appearing to read "Clay Scofield".

Senator Clay Scofield



# ALABAMA HOUSE OF REPRESENTATIVES

11 S. UNION STREET, MONTGOMERY, ALABAMA 36130

REP. NATHANIEL LEDBETTER  
MAJORITY LEADER

STATE HOUSE: 334-242-7492

October 23, 2019

Alabama Department of Economic and Community Affairs  
Attn: Director Kenneth Boswell  
P.O. Box 5690  
Montgomery, AL 36103

Director Boswell:

Allow me to begin by saying just what an important role broadband accessibility plays in our modern world. Citizens of this state function at a much higher level in their daily lives by being able to quickly utilize these services.

One company in particular, I feel, has played a tremendous role in making sure those living in rural areas are provided the same high-speed telecommunication services as those living in more urban locations. Farmers Telecommunications Cooperative, Inc. (FTC-Rainsville, AL) has worked tirelessly to try and reach rural Alabama, as I am well aware through their efforts in my district. Of course, such effort cannot be made without assistance. Currently, FTC is applying for the 2020 Alabama Broadband Accessibility Fund Grant. They do so in hopes of building fiber in the rural DeKalb County areas of Deer Head Cove, Fox Mountain, and Peek's Corner as well as several areas in southern DeKalb County.

I offer my full support to FTC and their endeavor to secure funding. I respectfully request that you give every consideration to their application, as I feel it is well deserved.

Please do not hesitate to reach out should you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Nathaniel Ledbetter".

Representative Nathaniel Ledbetter  
House Majority Leader  
District 24



# Town of Geraldine

P.O. Box 183 ~ 41343 AL Hwy 75 ~ Geraldine, AL 35974  
Phone (256) 659-2122 ~ Fax (256) 659-5135

**December 10, 2019**

*Mayor Chuck Ables*

*Clerk Donna Johnson*

*Police Chief Heath Albright*

**Alabama Department of Economic and Community Affairs**

**Attn: Director Kenneth Boswell**

**P.O. Box 5690 Montgomery, Al 36103**

**Director Boswell:**

**I remember having the honor of sitting with you at the 50<sup>th</sup> Anniversary Banquet of TARCOG at the Burritt Museum in Huntsville a couple of years ago. I spent a lot of time bragging on Farmers Telecommunications Cooperative, Inc. (FTC) for their vision and effort to bring Broadband to DeKalb County and beyond. We had Gigabit speed internet available to business and households before Huntsville, Birmingham, Montgomery or most any other place in Alabama. You showed a real interest and I mailed you a couple of copies of their "Connected" magazine so you could see the passion they have for making things better for the rest of us.**

**FTC is applying for the 2020 Alabama Broadband Accessibility Fund Grant. Their desire to build fiber to rural areas such as Peek's Corner, Deer Head Cove, and Fox Mountain will greatly enhance the quality of life for residents in our area. I am amazed at the amount of "homework" my grandchildren are required to complete at home and fiber network is very beneficial to them. Beyond personal benefits it is a great tool that is necessary for Economic growth and I realize how fortunate we are to have FTC working for us. I know our Senator Scofield has been a Champion for Rural Broadband along with Senator Livingston, and Representatives Ledbetter, Rich and Kitchens from our area.**

**I really appreciate your leadership and I sincerely ask that you give FTC strong consideration for this grant. I support their efforts wholeheartedly because I know many of the FTC employees personally and President Fred Johnson, Board members, and employees work hard every day to make life better for us. Thanks for your service to our great State.**

**Chuck Ables**

**Mayor**

**Council**

*Pro-Tem Larry Lingerfelt, Terry Harris, Jackie Rogers, Stanley Rooks, Tim Gilbert*

**Will this project serve the highest number of unserved homes, businesses, and community anchor points for the least cost?**

**Yes.** To bring gigabit services to this area, the PFSA will require approximately 106.12 route miles of buried and aerial fiber-optic cable in a mountainous region that has layers of rock to contend with throughout much of the service area. The estimated costs to place the outside plant components of this 106.12 route miles of fiber is \$1,815,019.12. Additionally, approximately 11 route miles of middle mile fiber will be required to reach portions of the PFSA. The costs of the middle mile fibers are approximately \$188,483.24. By utilizing GPON splitter cabinets, FTC has lowered the quantity and size of the fiber optic feeds, thus reducing the OSP cost from what a 100% Active Ethernet network would have cost.

The PFSA will be fed from seven existing network locations. The locations are existing telecom huts already established with redundant fiber feeds back to FTC's NOC, and each have existing generator backup, and existing 10 Gbps redundant transport equipment. The additional network equipment costs are for additional access line cards with SFP transceivers. The network equipment cost estimate of \$45,000.00 is much lower than what it would have been if FTC were not able to leverage the existing switch hut locations and associated power components. Finally, engineering costs for the project are estimated to be \$382,000.00.

Of the 773 homes and businesses passed, FTC has projected to connect 579 homes and businesses. The cost to add a network access point (NAP) to the fiber optic cable, place an aerial or buried drop, mount an optical network terminal (ONT) at the house, and provide fiber-optic connectivity is estimated to average \$1,033.00 per home/business or \$598,107.00 total. Likewise, the cost to add customer premise equipment inside the home using Calix Gigaspire to deliver Mesh-Enhanced Carrier Class Wi-Fi, is estimated to be \$330.00 per home/business or \$191,070.00.

These estimates utilize what is considered by the industry as the most efficient and cost-effective means to deliver gigabit service directly to the home, and are backed by FTC's experience in having already deployed more than 1,700 route miles of fiber-optic cable and connecting more than 12,800 locations.

**Does this project emphasize the highest broadband speeds?**

**Yes.** Standard broadband data speeds will be symmetrical - 100 Mbps download and 100 Mbps upload, with 1 Gig (1,000 Mbps) download and 1 Gig (1,000 Mbps) upload also available.

**Will this project provide material broadband enhancements to hospitals located in rural areas?**

**No.** There are no hospitals located within the PFSA. However, with expanding broadband

access to underserved areas, healthcare could improve dramatically with the use of telehealth services. Telemedicine provides 24/7 access to patient health portals, telemedicine clinicians, remote patient monitoring, telepsychiatry solutions, store and forward technologies, patient-care education, etc. Medicare's newly passed telehealth policy will require significant advances in services as part of the (CHRONIC) Care Act. Broadband access in rural areas like DeKalb County, AL will be necessary to carry out the intentions of these healthcare advances. The intentions of some of the policy changes are to allow the patient's home to serve as the originating site for telehealth services rather than having to commute to a medical clinic. With telehealth services available like remote patient monitoring and store and forward technologies, expensive and unnecessary hospital visits can be reduced. Research indicates that Telehealth reduces hospital admissions by 25% and overall length of stay by 59%. Telehealth access will enable patients to have convenient access to specialists and eliminate the costs to commute long distances and reduce the hours of work missed due to travel. Video classes and remote care have helped the CDC's National Diabetes Prevention Program as well. It is expected that more telehealth coverage will include services offered by certified diabetes educators, respiratory therapists, audiologists, occupational therapists, speech-language therapists, and physical therapists. Broadband access would provide many educational resources to help maintain and/or prevent poor health conditions. Broadband can also provide important healthy lifestyle resources that can improve the quality of life for those living in this poverty- stricken area.

23% of DeKalb County, AL population is in poor or fair health which is slightly higher than Alabama's that is 21%. 15% of the DeKalb County population is in frequent physical distress and 14% is in frequent mental distress. Counties in the southern and Appalachian regions of the United States tend to have the highest incidence of diabetes prevalence and DeKalb County, AL is at 12% compared to the national rate of 7.2%. 22% of the county are adult smokers. 31% of the county's population is classified as obese adults. 32% are physically inactive and only 48% have access to exercise opportunities. It is reported that 36% of the population gets insufficient sleep. 12% experience food insecurity. There are 18% of DeKalb County's population that are uninsured. The ratios for doctor to patient are as follows: Primary Care Physicians 2,450 to 1, Dentists 3,550 to 1 and Mental health providers 5,910 to 1. 31% of children in DeKalb County are in poverty. It is reported that there has been 69 preventable hospital stays in 2018. The serving hospitals for this area are in Fort Payne, AL (21.3 miles or 28 minutes away) and Boaz, AL (16.6 miles or 22 minutes away).

**Will this project support local libraries in this state for the purpose of assisting the libraries in offering digital literacy training pursuant to state library and archive guidelines?**

**No.** There are no local libraries located within the PFSA.

While there are not any physical libraries within the PFSA, broadband access in rural DeKalb County would enable access to online libraries such as the Camellia Net-Alabama's Digital

Library, Open Library, Project Gutenberg, Google Books, Library of Congress online, and the Alabama Virtual Library - which is free to all citizens in the state. With broadband access, libraries are available anytime and anywhere to anyone.

**Is the applicant a certified Minority Business Enterprise under the Alabama Minority Business Enterprise Program? Or is it certified under another Disadvantaged Business Enterprise Program?**

**No.**

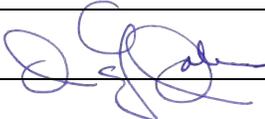
# Attachment D, Certifications



## D. Certifications

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1. FTC certifies that it is a non-governmental entity.
2. FTC certifies that all new customers served as a result of this project will have access to an Internet connection that provides a capacity for transmission at an average speed per customer of at least 25 Mbps download and at least 3 Mbps upload.
3. FTC certifies that that all new customers served as a result of this project are not located within the boundaries of any incorporated city or town having a population in excess of 25,000 inhabitants, according to the last federal census.
4. FTC certifies that it has the technical and managerial capabilities to complete the project within two years of the effective date of the grant agreement.
5. FTC certifies that the area to be served does not have at least one provider of terrestrial broadband service that is either:
  1. offering a connection to the Internet meeting the minimum service threshold; or
  2. is required, under the terms of the Federal Universal Service Fund or other federal or state grant, to provide a connection to the Internet at speeds meeting the minimum service threshold by March 28, 2023.

Certification	
I the undersigned am authorized to obligate my entity and enter into agreements for my organization. I understand that the above certifications do not guarantee funding and a grant agreement will be executed prior to project funds being expended. I further understand that if the above statements cannot be verified, no grant funds will be awarded under this program. Finally, to the best of my knowledge the above certifications are true and correct.	
Signature of Applicant: 	Date: 03/11/20
Title of Applicant: Chief Executive Officer	