



Alabama
Broadband
Accessibility Fund |
Fabius Grant
Application

Farmers Telecommunications Cooperative, Inc.

Farmers Telecommunications Cooperative Information

Project Name: Fabius Alabama Broadband
Accessibility Grant

Mailing Address: P.O. Box 217 | 144 McCurdy Ave. N.
Rainsville, AL 35986

Legal Name and Entity: Farmers Telecommunications
Cooperative, Inc.

Name and Title of CEO: Fred Johnson, Executive Vice
President and General Manager

Name and Title of Contact: Taylor Richards, Marketing Assistant
/Digital Marketing Coordinator

Phone Number and Email of Contact: 1-(256)-638-2144 ext. 2018
trichards@staff.farmerstel.com

Attachment A, Project Description



A. Project Description

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 of the Fabius and Maxwell communities in Jackson County, Alabama.

*Please note that the location name **Fabius** is used within this application to represent the entire PFSA, which consists of the Fabius and Maxwell communities in Jackson County, Alabama.

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 10 Mbps download and 1 Mbps upload 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 8 Mbps at the locations closest to the serving wire center.

The PFSA consists of approximately 22 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.

| Households | Businesses | Community Anchors |
|-------------------|-------------------|--------------------------|
| 47 | 1 | 0 |

For clear identification of households, businesses and community anchors, refer to the PFSA engineering maps in Attachment A in the Preliminary Project 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 Fabius is 3.899 square miles which includes 12.3 locations (households) per square mile. The average number of people per household is 2.47. Therefore, there are approximately 30.38 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 |
|-------------------------|------------------------------|------------------------------|------------------------------|---------------------------|
| Jackson County, Alabama | 53,227 | 12,233 | 40,994 | 77.0 |

The Fabius Community is located in the Flat Rock, AL (35966) zip code in Jackson County. The proposed funded service area (PFSA) also serves a small portion of residents in the Bryant, AL (35958) zip code. Both of these areas are unincorporated. Jackson County demographics are representative of the proposed funding service area. 15.8% of all families in this area live below the poverty level. 27.2% of homes with children under 18 years of age live below the poverty level. It is estimated that a total of 18.8% of the total population live below the poverty level. Workers have a mean travel time to employment of 25 minutes. 46.3% of the population is not in the labor force. 11.9% of the population has no health insurance coverage. Median house value is \$103,800 compared to Alabama's, which is \$128,500. The median household income is \$38,422 compared to the state of Alabama being \$44,758. The mean household income is \$50,214. Per capita income is \$20,487 and Alabama's is \$24,736.

Jackson County is part of Alabama's Appalachian Region, which is considered one of the most impoverished regions of the United States. Jackson County has also been designated as a Tennessee Valley Authority (TVA) Special Opportunities County (SOC) multiple times within the past 10 years and as recently as 2016. 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. While underserved, the rural community of Fabius has no other option but to face these challenges with little to no assistance. The lack of broadband in this community prevents economic growth, creates educational challenges, and generates a barrier for members within the community to have quick and reliable access to public safety and health care resources. The community of Fabius is 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 this 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 B and Calix E series platforms. FTC will also offer industry-best Carrier Class Wi-Fi inside the home using Calix Gigacenter to deliver Mesh-Enhanced Carrier Class Wi-Fi experience throughout the home. The fiber connectivity to the side of the home will deliver broadband speeds of 1 Gig (1,000 Mbps) symmetrical with unlimited scalability, allowing this network to grow to meet future broadband needs.

Each of the establishments in the PFSA will be passed with a fiber-optic cable network providing a dedicated fiber pre-assignment to each establishment as well as 20% overhead in fiber capacity for growth in any area. Should the number of homes in any given area increase by more than 20%, the GPON design architecture allows the ability to increase the number of homes served by up to 32 times the original number. Having a dedicated fiber to each home will also allow unlimited future scalability of bandwidth requirements; the fiber optic connection for 10 Gig or even 100 Gig will use the same fiber connection with updated electronics.

As requested by the customer, drops will be placed to each establishment and terminated in network access points. FTC has already deployed about 1,800 miles of fiber-optic cable in other markets and connected over 11,500 customers with fiber. So 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.

3. Types of Services to be Offered

Voice, broadband and security 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.

Broadband data services (capable of supporting up to 1 Gig (1,000 Mbps) Symmetrical) to the end user will include: support for telemedicine; internet access for video; voice and data services; support for schools/colleges and long distance learning opportunities; and access to on-line governmental services and information.

The Applicant is proposing with this system design to provide the PFSA customers with two (2) tiers of broadband service with no data caps. Tier 1 will have symmetrical speeds of 100 Mbps priced at \$70.81 per month. Tier 2 will have symmetrical speeds of 1 Gig (1000 Mbps) priced at \$90.81 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, severe weather monitoring and home automation services.

4. Preliminary Project Evaluation

| FARMERS TELECOMMUNICATIONS COOPERATIVE NORTH END DESIGN COST ESTIMATE BY REMOTE AREA | | | | | Not Eligible | |
|--|-----------|----------|--------|---------------------|--------------|--------------------|
| REMOTE | CABLE | QUANTITY | PRICE | COST | QUANTITY | COST |
| STGN | BFO12 | 19,300 | \$3.09 | \$59,637.00 | 3,800 | \$11,742.00 |
| STGN | BFO24 | 15,500 | \$3.12 | \$48,360.00 | 0 | \$0.00 |
| STGN | BFO72 | 2,100 | \$3.50 | \$7,350.00 | 0 | \$0.00 |
| STGN | BFO180 | 6,000 | \$5.73 | \$34,380.00 | 0 | \$0.00 |
| STGN | CO12(10M) | 9,800 | \$3.20 | \$31,360.00 | 0 | \$0.00 |
| STGN | CO12(E) | 20,398 | \$2.21 | \$45,079.58 | 2000 | \$4,420.00 |
| STGN | CO24(E) | 21,000 | \$2.28 | \$47,880.00 | 0 | \$0.00 |
| STGN | CO48(E) | 6,300 | \$2.46 | \$15,498.00 | 5200 | \$12,792.00 |
| STGN | CO72(E) | 3,116 | \$2.64 | \$8,226.24 | 0 | \$0.00 |
| STGN | CO96(E) | 6,200 | \$2.87 | \$17,794.00 | 0 | \$0.00 |
| STGN | CO144(E) | 5,500 | \$3.34 | \$18,370.00 | 0 | \$0.00 |
| STGN | CO180(E) | 2,700 | \$3.58 | \$9,666.00 | 0 | \$0.00 |
| | | | | \$343,600.82 | 0 | \$0.00 |
| | | | | \$343,600.82 | | \$28,954.00 |

117,914 (ft)
22.33 (mi)

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.

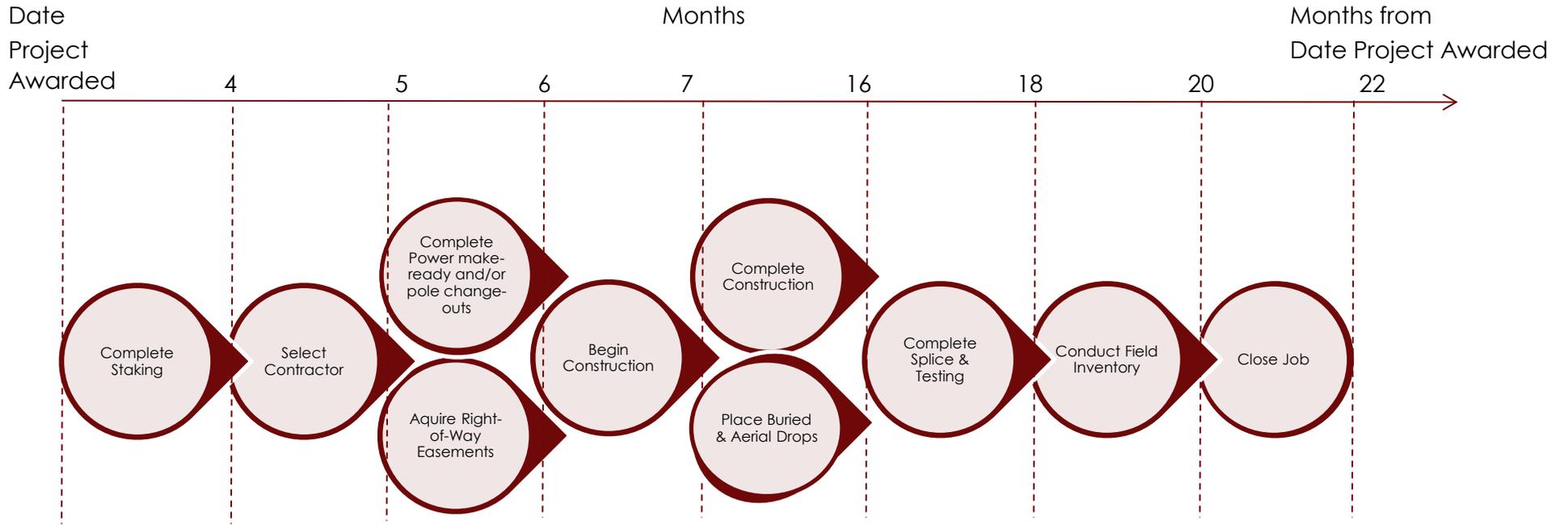
9/27/18

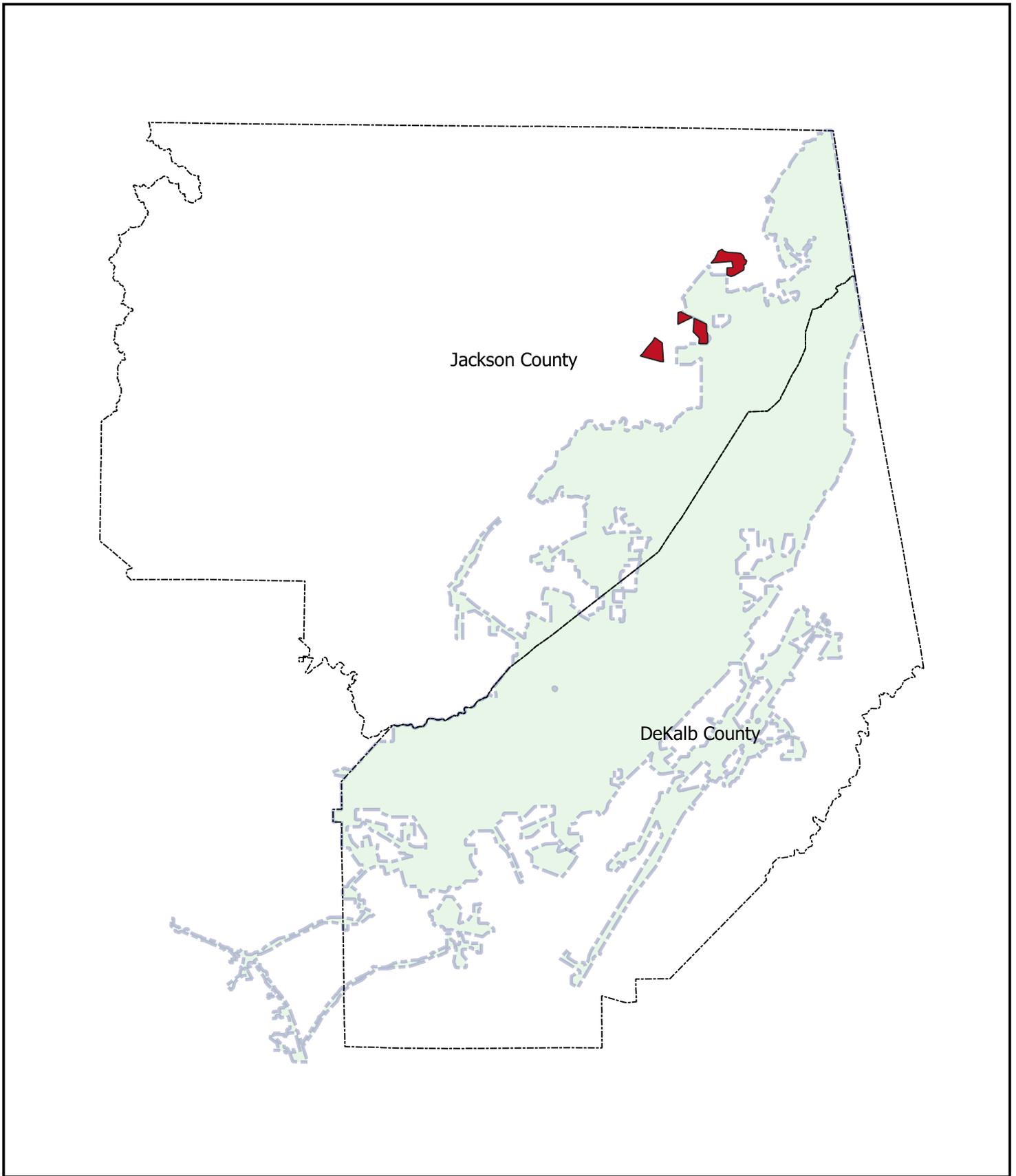
Date

Carol Leigh Brackett
Carol Leigh Brackett
Alabama Registered Professional Engineer No. 25055



Preliminary Technical Evaluation Project Schedule & Timeline

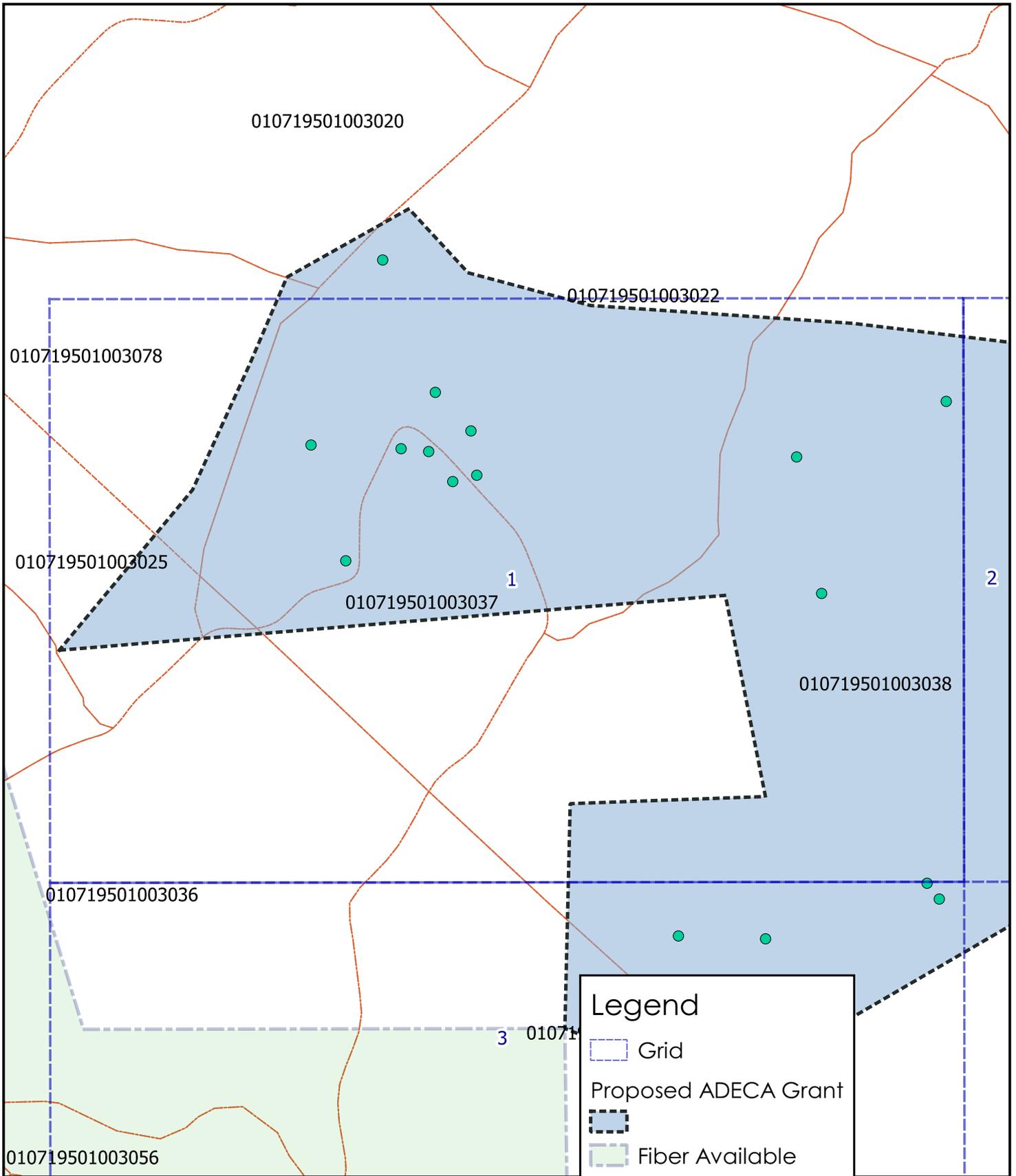


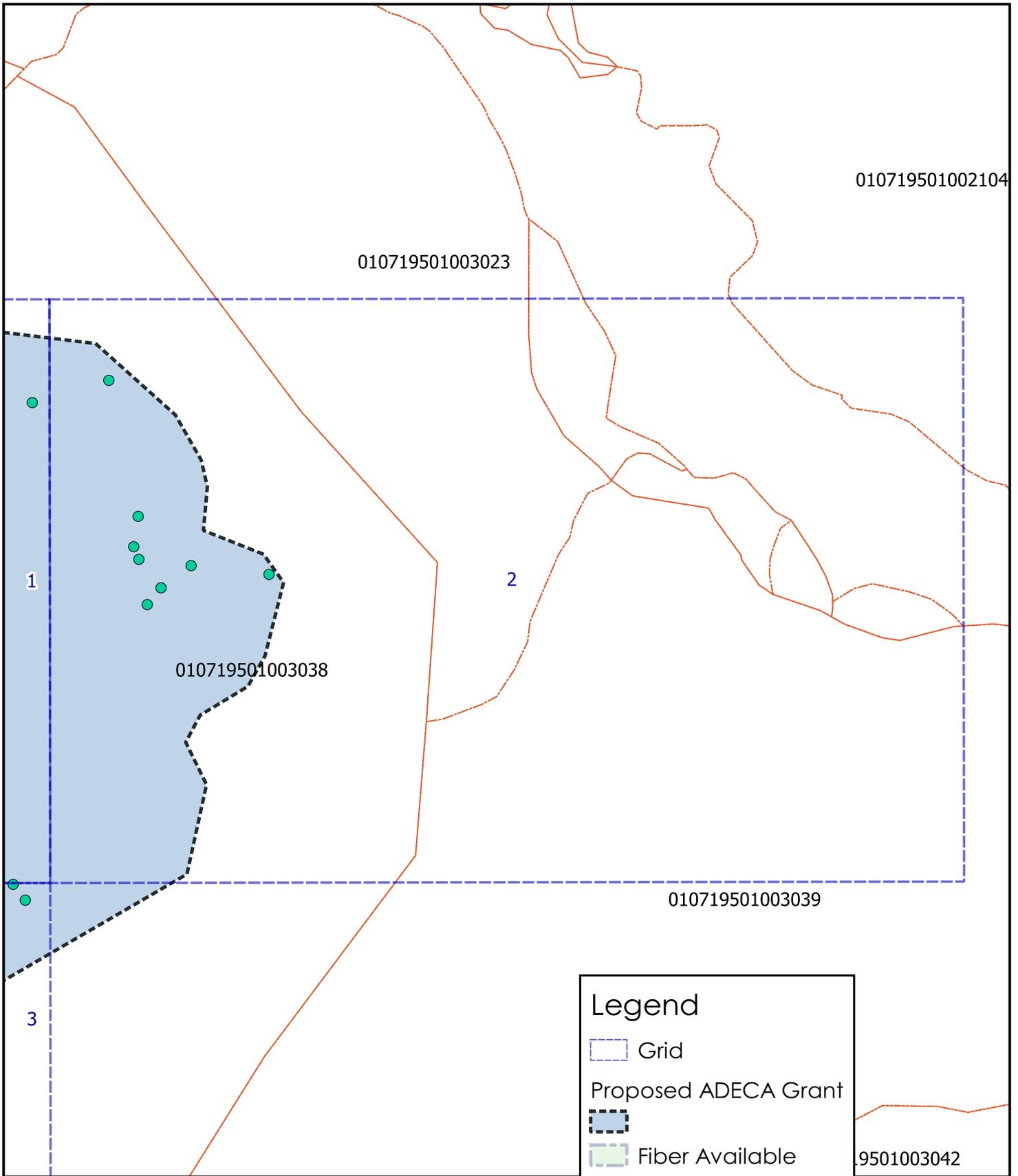


ADECA Grant 2018 - Fabius

Legend

- Proposed Fabius Grant Area
- Current FTC Fiber Availability
- Alabama Counties

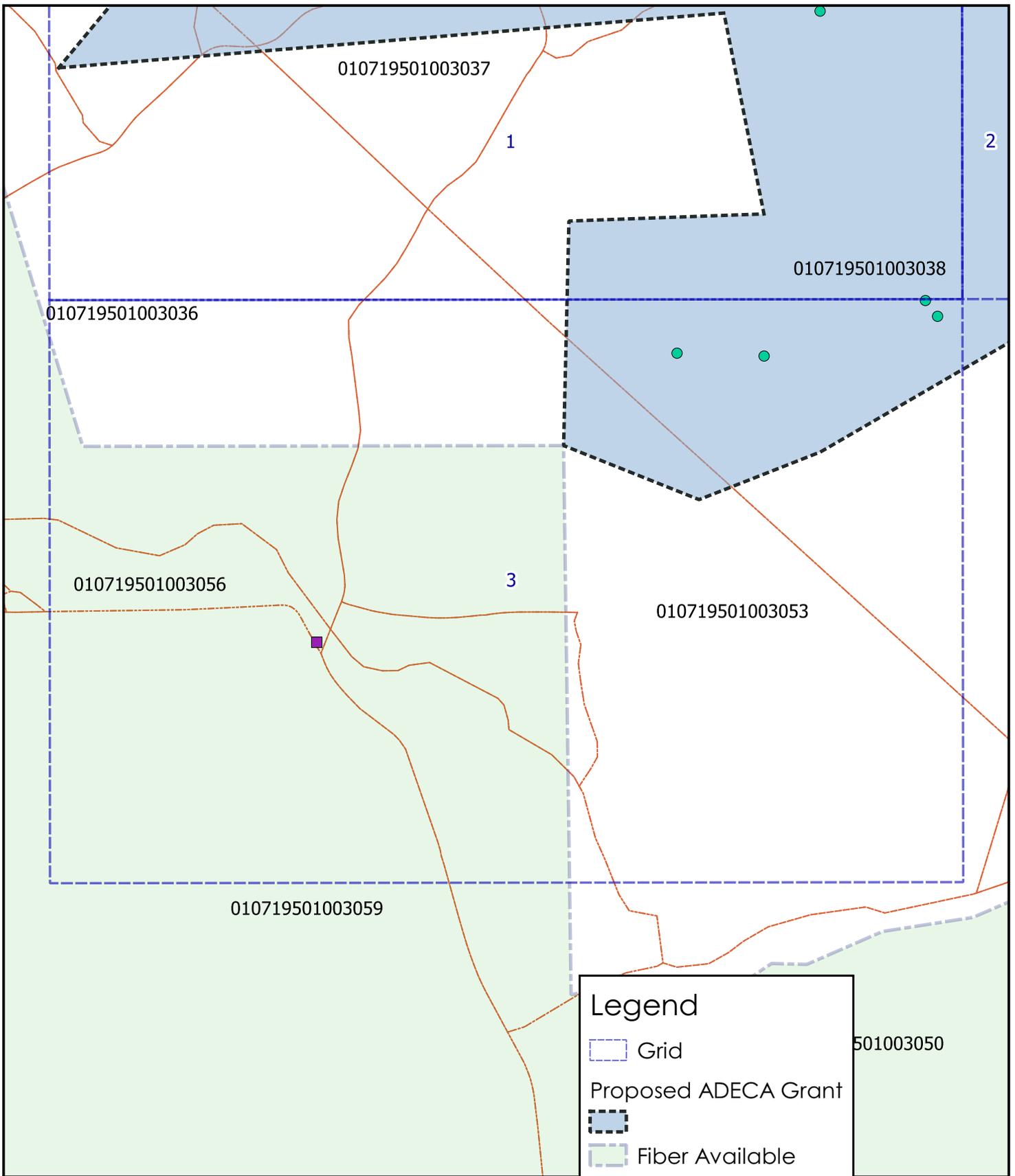




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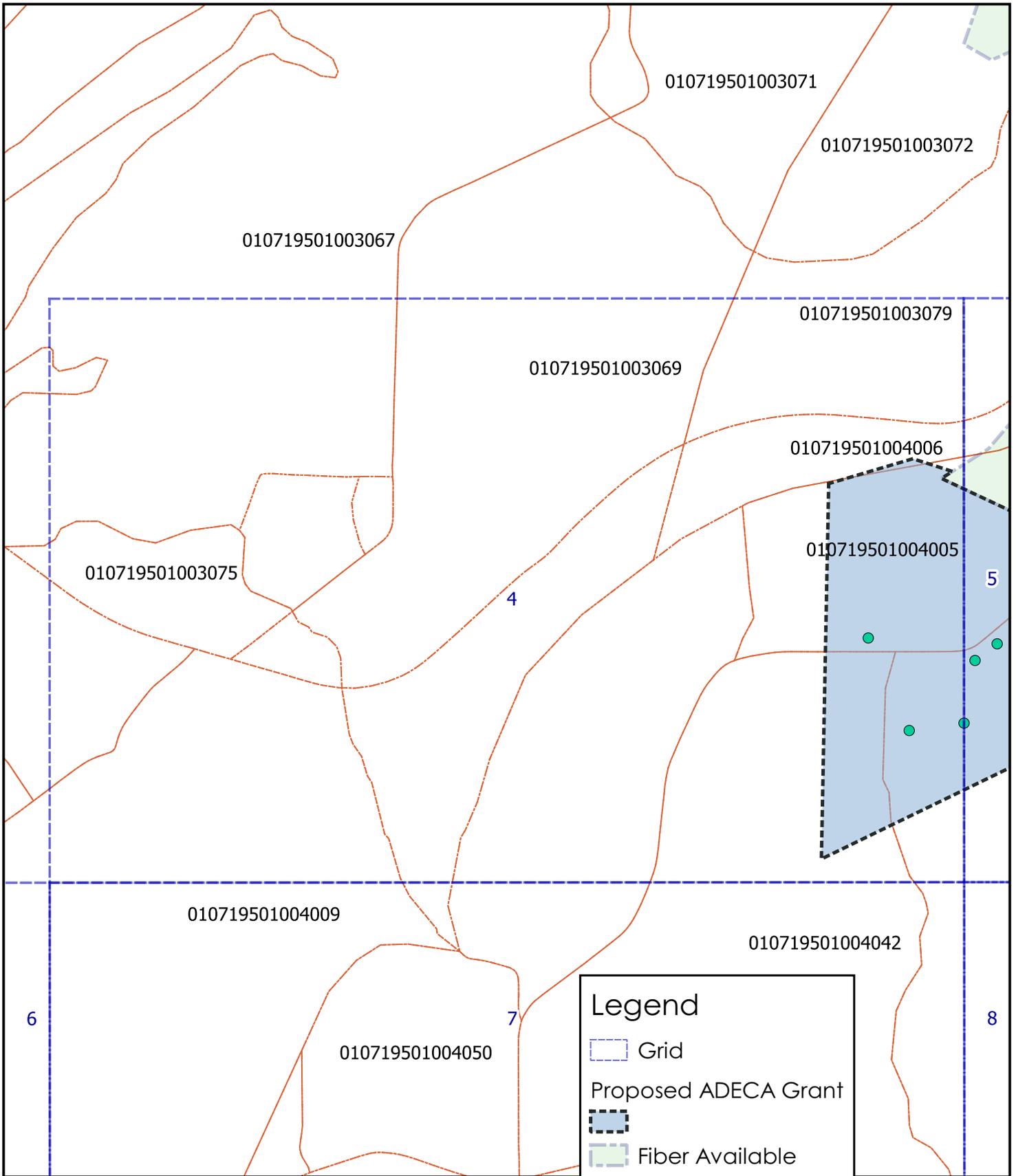
- Grid
- Proposed ADECA Grant**
-
- Fiber Available
- Census Block
- Customers**
- Residential
- Business
- CO Facilities**
- Fiber and Copper
- Fiber Only
- Copper Only





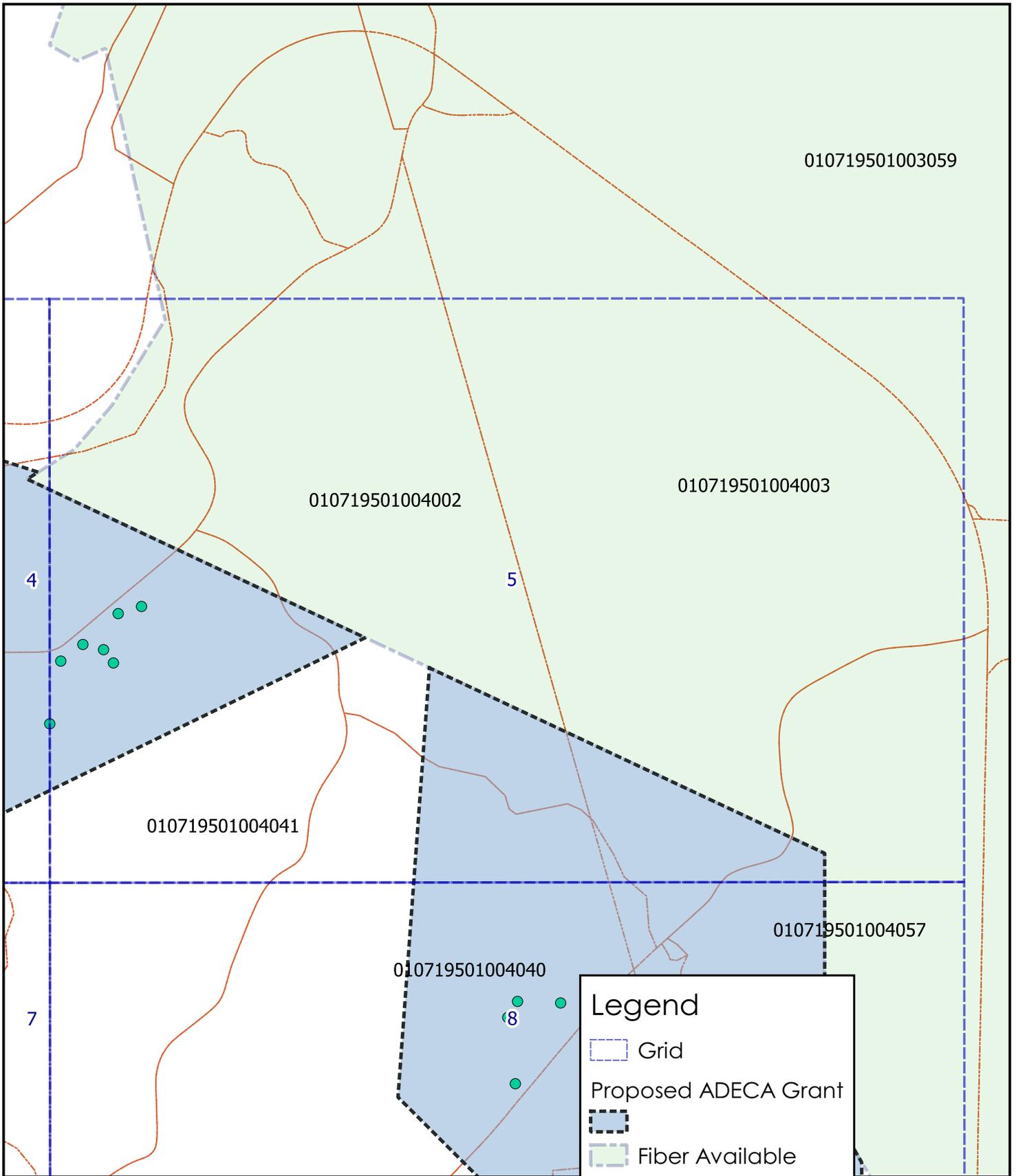
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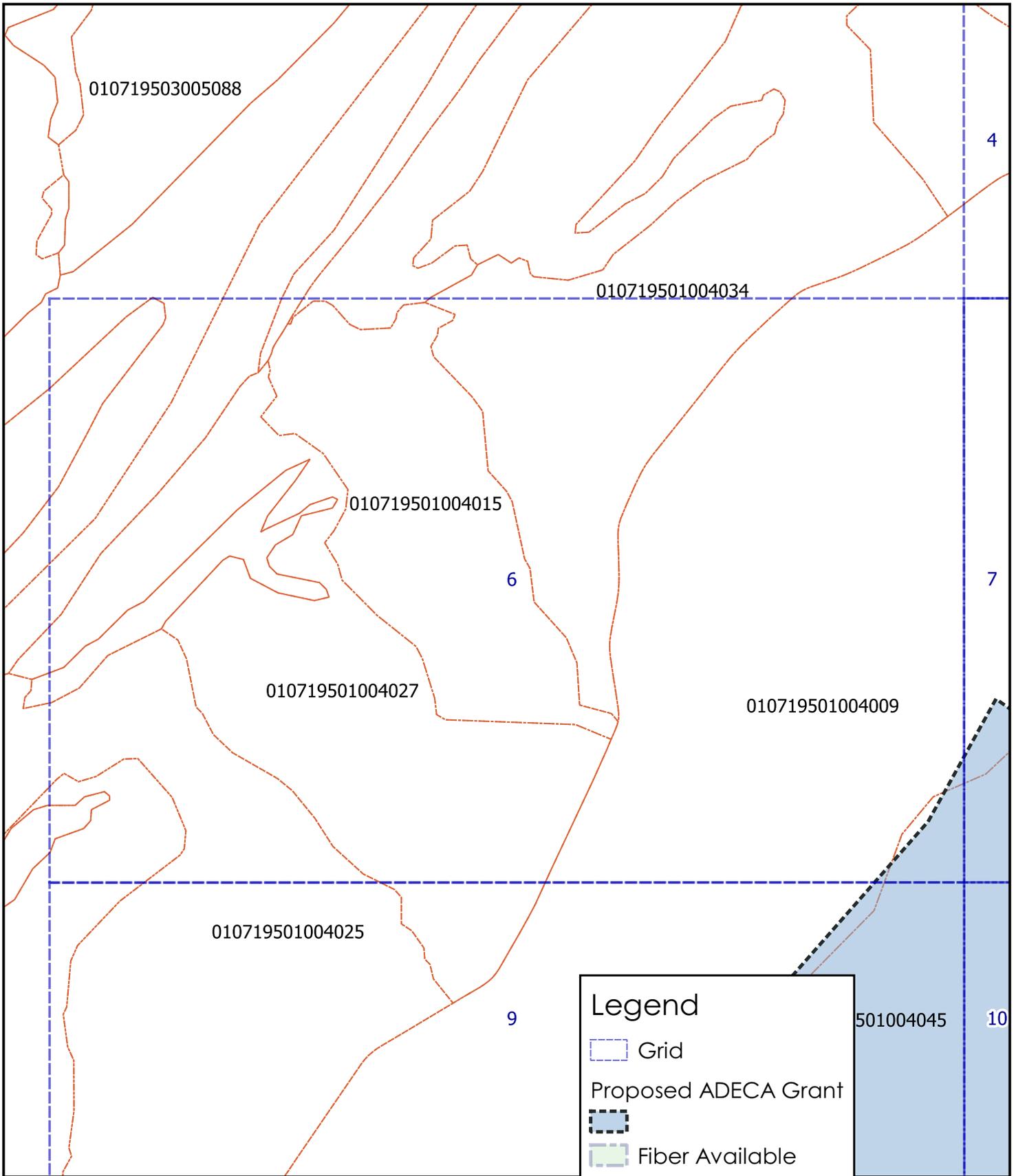
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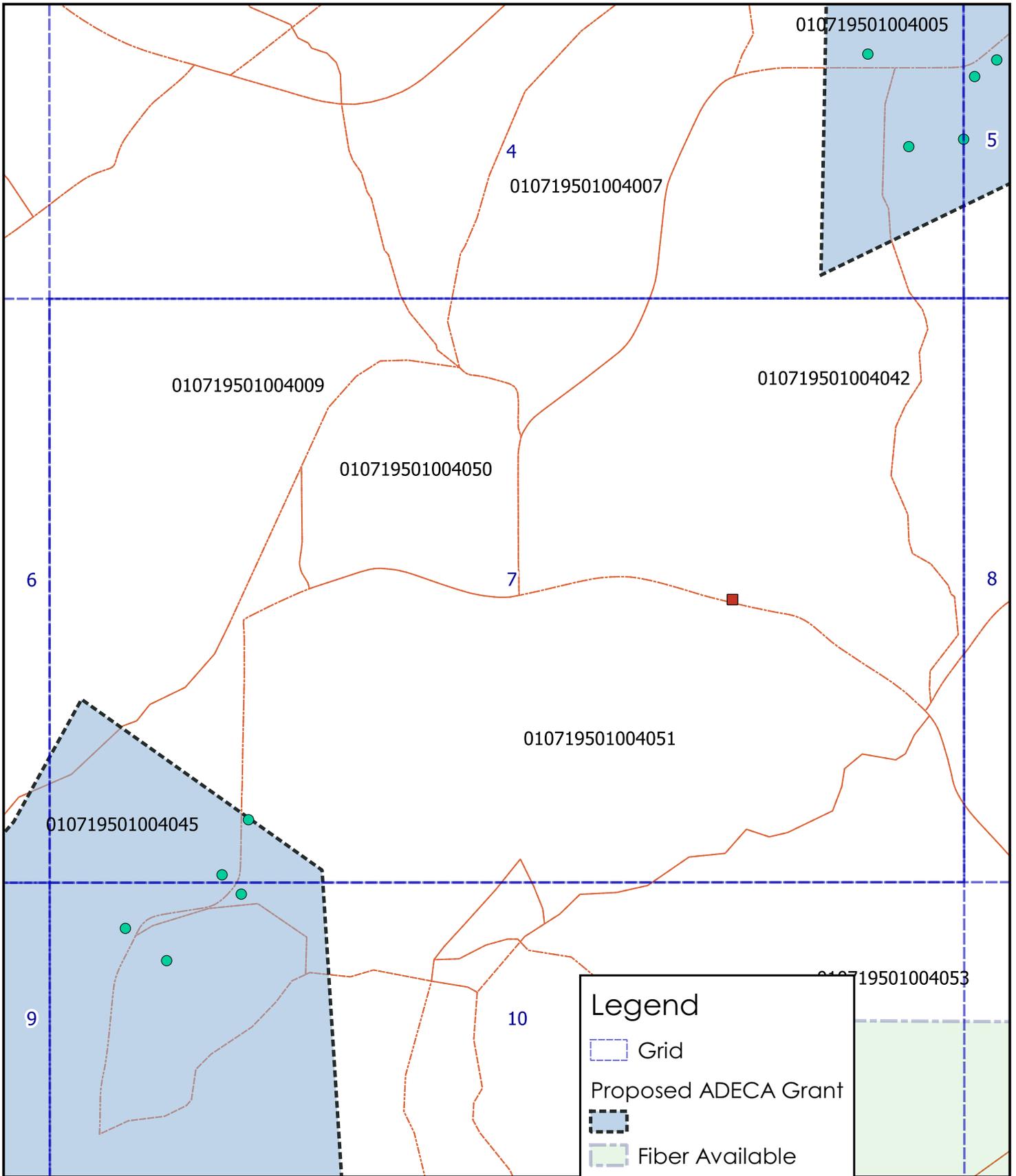
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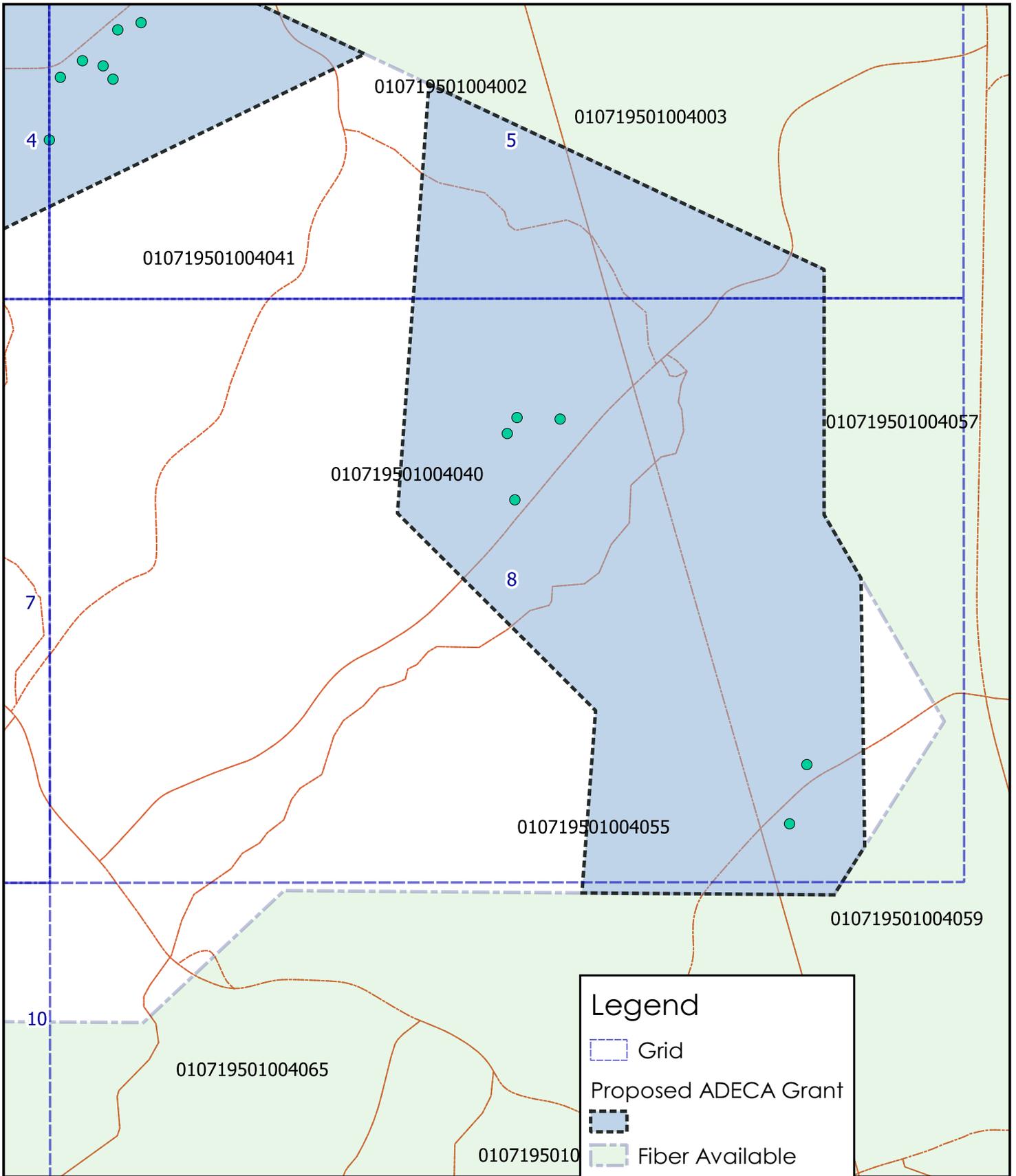
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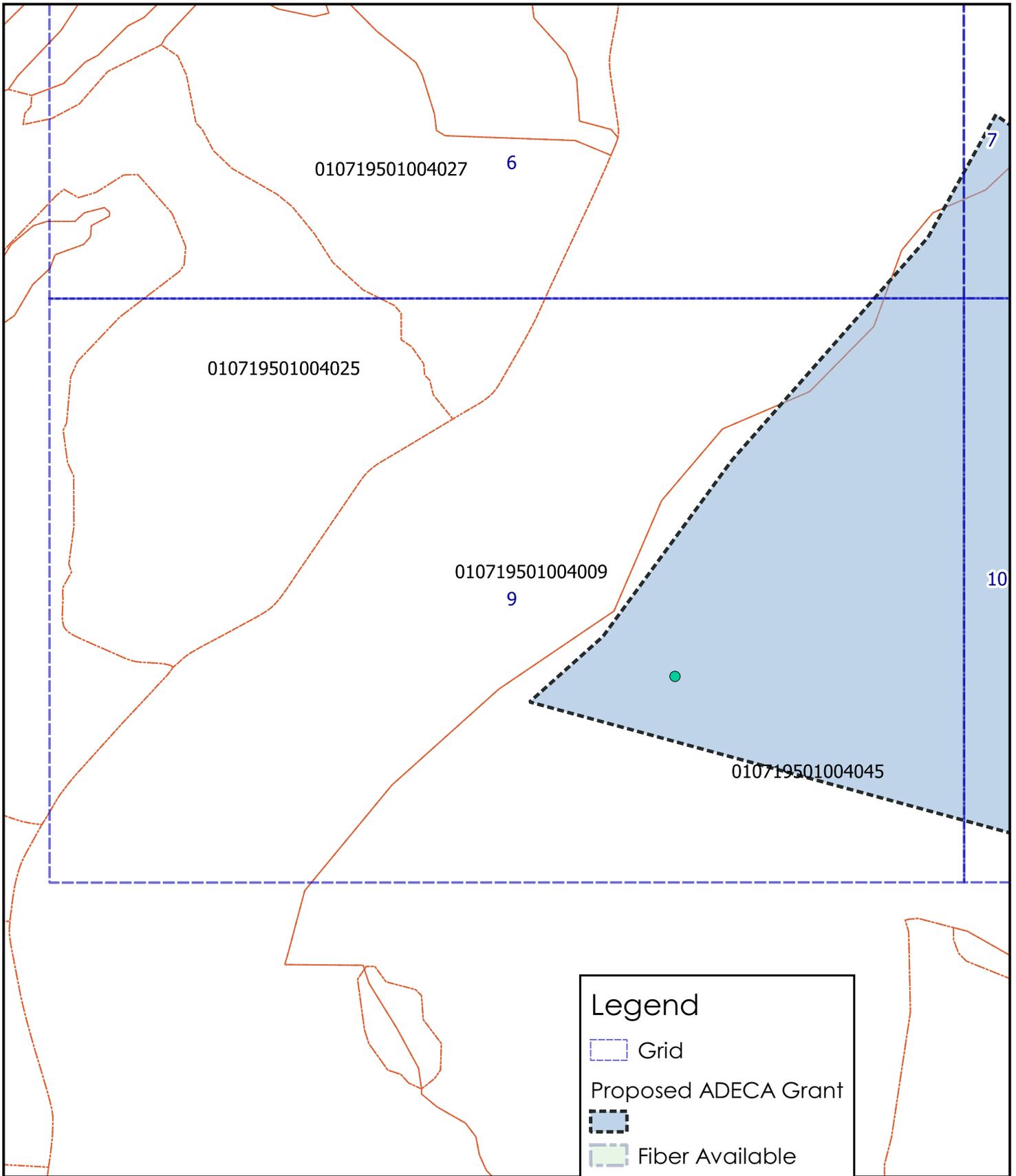




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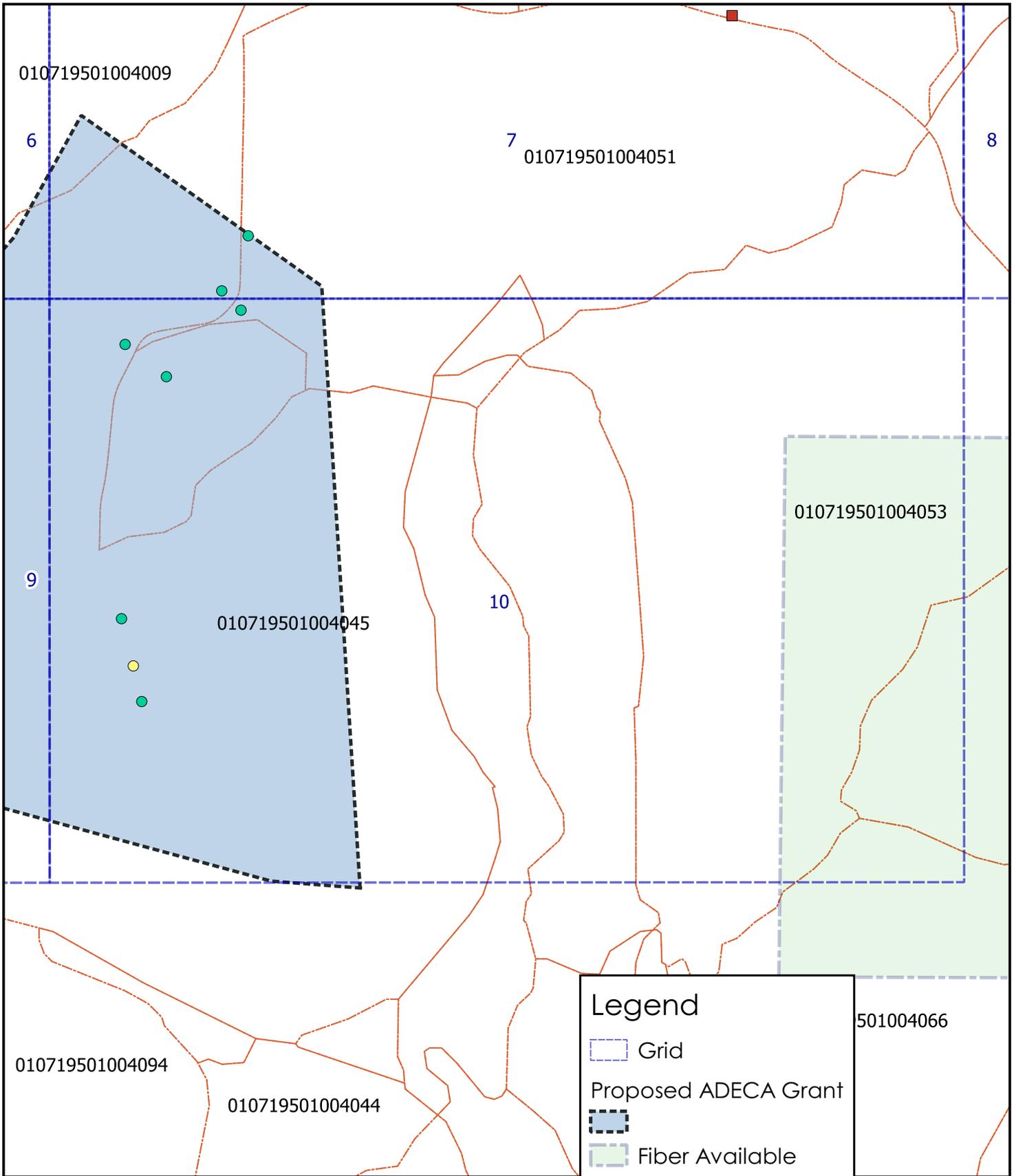




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5. Technical and Managerial Capabilities

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 a 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 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 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 25 years at FTC, the past 16 as its CEO. Mr. Johnson relies heavily upon an Assistant General Manager, Chris Bryant, with over 29 years of experience at FTC. FTC's engineering and operations group is led by 28 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 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 92% of its ILEC locations, 100% of its CLEC locations and serves a population of over 80,000 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 74 years of experience in their respective areas of responsibility.

Attachment B, Application Budget



B. Application Budget

The proposed project will provide internet speeds of at least:

Project Type A: 10 Mbps download and 1 Mbps upload
Project Type B: 25 Mbps download and 3 Mbps upload

Total Project Cost \$ 443,340.55

20% of Total Project Cost

Total Grant Amount Requested \$ 88,668.11

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.

1. Eligible Expenses

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

Initial construction costs include installed costs for buried and aerial distribution fiber totaling \$314,647. A detailed listing of the record units in question is as follows:

| | Quantity | | | Cost | | |
|--------------|----------|--------------|--------|-------------------|--------------|-------------------|
| | Eligible | Not Eligible | Total | Eligible | Not Eligible | Total |
| Cable | | | | | | |
| BFO12 | 15,500 | 3,800 | 19,300 | \$ 47,895 | \$ 11,742 | \$ 59,637 |
| BFO24 | 15,500 | - | 15,500 | \$ 48,360 | \$ - | \$ 48,360 |
| BFO72 | 2,100 | - | 2,100 | \$ 7,350 | \$ - | \$ 7,350 |
| BFO180 | 6,000 | - | 6,000 | \$ 34,380 | \$ - | \$ 34,380 |
| CO12(10M) | 9,800 | - | 9,800 | \$ 31,360 | \$ - | \$ 31,360 |
| CO12(E) | 18,398 | 2,000 | 20,398 | \$ 40,660 | \$ 4,420 | \$ 45,080 |
| CO24(E) | 21,000 | - | 21,000 | \$ 47,880 | \$ - | \$ 47,880 |
| CO48(E) | 1,100 | 5,200 | 6,300 | \$ 2,706 | \$ 12,792 | \$ 15,498 |
| CO72(E) | 3,116 | - | 3,116 | \$ 8,226 | \$ - | \$ 8,226 |
| CO96(E) | 6,200 | - | 6,200 | \$ 17,794 | \$ - | \$ 17,794 |
| CO144(E) | 5,500 | - | 5,500 | \$ 18,370 | \$ - | \$ 18,370 |
| CO180(E) | 2,700 | - | 2,700 | \$ 9,666 | \$ - | \$ 9,666 |
| Total | | | | \$ 314,647 | \$ - | \$ 343,601 |

In addition to the construction costs detailed above and to complete the initial construction phase of the Fabius project, FTC anticipates incurring engineering and electronics costs of \$62,929 and \$18,878 respectively.

Subsequent to the completion of initial construction, FTC expects to incur an additional \$46,886 in costs associated with transitioning 50 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.

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 over 1,800 route miles of optical fiber and serves as the most robust component of the telecommunications infrastructure within a geographic area covering 590 square miles with a population of approximately 80,792.

FTC reported net margins of \$1,061,325 and \$2,072,946 for 2017 and 2016 respectively. During 2017, FTC retired \$2,760,130 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, 2017, total member equity was \$48,714,299, or 60 % 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 \$2,617,268 and \$510,405 respectively for 2017 and 2016. 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 Fabius project.

3. Partners and Subcontractors

A. Project management – Farmers Telecommunications Cooperative (FTC) has already deployed over 1,800 miles of fiber-optic cable in other markets and connected more than 11,500 customers 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 primarily be handled by 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 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. Construction contracts for projects of this size in the past have been awarded to Red Stag, Electricom, 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 80% 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 (CAFII). Thereby, with respect to the project upon which this grant application is based, FTC has not applied for nor has it received any funds through other federal universal service funding programs designed specifically to encourage broadband deployment in the areas applied for.

Attachment C, Other Program Priorities



C. Other Program Priorities

FTC publishes a 16-page bimonthly customer newsletter that provides numerous articles on broadband use. It provides many resources and examples of how others use broadband. The newsletter also provides internet safety tips. FTC will market to this community with direct mail advertising to gain broadband adoption.

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

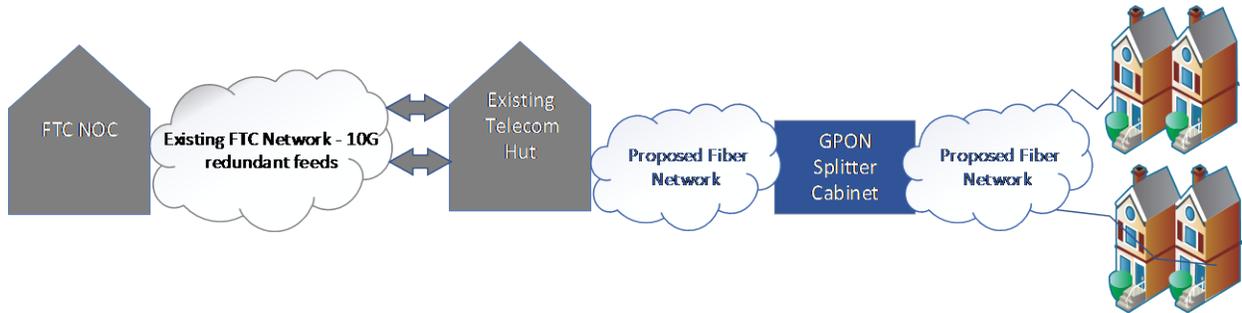
Yes. Farmers Telecommunications Cooperative, Inc. intends to leverage grant funds through its own private investment. As evidenced in the schedule below, every \$1.00 of grant funds leverages \$4.46 in investment by FTC.

| | |
|--|-------------|
| <u>Initial Construction Costs</u> | |
| Cable & Wire Facilities | 343,601.00 |
| Engineering | 68,720.00 |
| Central Office Electronics | 20,616.00 |
| Subtotal | 432,937.00 |
| <u>Cutover & Installation Costs</u> | |
| Installation/Connection Costs | 37,000.00 |
| Customer Premise Equipment | 14,200.00 |
| Subtotal | 51,200.00 |
| <u>Grant/Private Investment</u> | |
| Total Investment | 484,137.00 |
| Less Grant Funds Requested | 88,668.00 |
| Private Investment | 395,469.00 |
| Ratio Private/Grant Funds Invested | 4.46 |

Will this project be an extension of existing infrastructure?

Yes. The PFSA will be fed from our existing Shotgun network location telecommunications hut, which already has both battery backup and standby generator power backup to be used in extended power failure situations. This location has fiber-optic 10 Gbps transport feeds through a fully redundant ring

offering diverse paths back to the Network Operations Center (NOC) in Rainsville, AL. The build will also take advantage of existing Calix Active E 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 hut, 10 Gbps transport feeds, and access cards will allow FTC to serve the Fabius 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, community leaders, vested business representatives and community members. These letters are available for review.



JACKSON COUNTY LEGISLATIVE DELEGATION

P.O. Box 623 Scottsboro, Alabama 35768

Office: 256-218-3090

Fax: 256-218-3092

August 29, 2018

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

Mr. Boswell:

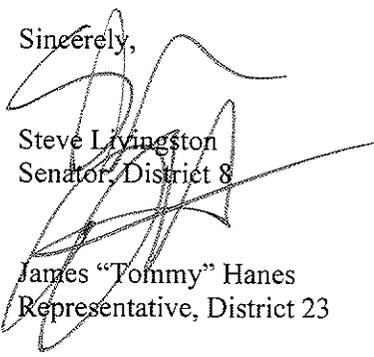
Farmers Telecommunications Cooperative, Inc. (FTC-Rainsville, AL) is applying for the 2018 Alabama Broadband Accessibility Fund Grant in hopes to expand their fiber network to provide high-speed broadband internet access to a rural area located in Jackson County near the Flat Rock/Fabius community. The 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 allow rural areas to compete with information for commercial and economic development. This area is also an integral part of the Google Data Center community.

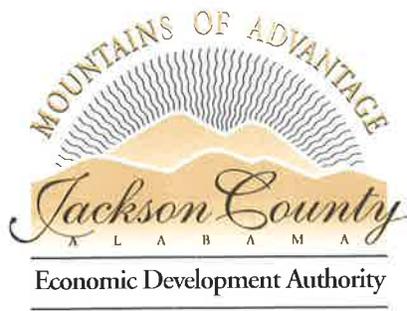
It would be helpful for our residents to have an option for telecommuting and for our students taking existing courses online. This rural area is located approximately 35 miles from Northeast Alabama Community College, yet the students do not have a viable broadband option for taking online classes.

We believe this grant will greatly enhance the quality of life for the members of these rural areas and respectfully request that you give every consideration to this application for funding.

Sincerely,


Steve Livingston
Senator, District 8

James "Tommy" Hanes
Representative, District 23



September 1, 2018

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 2018 Alabama Broadband Accessibility Fund Grant in hopes to expand their fiber network to provide high-speed broadband internet access to a rural area located in Jackson County near the Flat Rock/Fabius community. 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.

The Jackson County Economic Development Authority is the organization responsible for leading the industrial recruitment for our county, as well as fostering an environment where our existing industry can prosper and grow. Broadband is essential in today's information economy infrastructure and has become one of the infrastructure requirements just as power and water. 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.

Not only will it help the businesses themselves, but it will open them up to a new and better trained workforce. It would be helpful for our residents to have an option for telecommuting and for our students taking existing courses online. This rural area is located approximately 35 miles from Northeast Alabama Community College, yet the students do not have a viable broadband option for taking online classes.

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

Sincerely,

Shelia Shepard
President/CEO



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

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

August 29, 2018

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 2018 Alabama Broadband Accessibility Fund Grant which would help to provide broadband internet to one of the most rural and depressed areas of Jackson County. Currently, the internet service in and around the Flat Rock/Fabius area is poor and very unreliable. This area of the county 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 this area 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 to them puts 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, many students from at least three schools would be greatly impacted. Students residing in and around the Flat Rock/Fabius community make up a portion of the overall enrollment of Flat Rock Elementary School, North Sand Mountain High School, and Pisgah 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 this area, it would also greatly benefit the children enrolled in these local public schools. With this 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. This decline is due, in part, to the decline in available employment opportunities throughout the county. Many businesses and industry have either closed completely or moved operations outside of Jackson County, greatly impacting the overall spirit of our area. With the recent announcement of a new Google Data Center locating in Jackson County, a hint of optimism can now be sensed around the county. 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 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 2018 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 Flat Rock/Fabius area. Please carefully consider this request and help Farmers Telephone, Inc. and the other valued stakeholders move rural communities in Jackson County forward.

Respectfully,



Chad Gorham



Northeast Alabama Community College

Office of the President
Dr. David Campbell

September 1, 2018

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 2018 Alabama Broadband Accessibility Fund Grant in hopes to expand their fiber network to provide high-speed broadband internet access to a rural area located in Jackson County near the Flat Rock/Fabius community and also in Dekalb County in the New Home community east of Henagar.

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,

A handwritten signature in blue ink, appearing to read "David Campbell", is written over a horizontal line.

Dr. David Campbell
President, Northeast Alabama Community College

Mark Jensen

1144 Co Rd 690, Flat Rock AL 35966
256-632-6341
mallenj55@gmail.com

10/17/2018

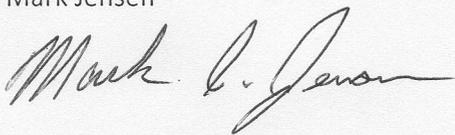
Kenneth W. Boswell
Director, Alabama Department of Economic and Community Affairs
P.O. Box 5690
Montgomery, AL 36103-5690

Sir,

In addition to working as a programmer in Fort Payne, I operate a software development company out of my home and have done so for the past 10 years. Despite numerous requests for improved internet capabilities, I have had to continue operating with a DSL connection. This makes support calls and files transfers tedious at the least, not to mention attempting to work remotely for my current employer. VPN connections lag significantly which obviously decreases performance and thus affects profitability significantly.

The thought of finally being able to achieve gigabit speed is exciting, to say the least. Please give serious consideration to the proposal presented by Farmerstel to help those of us who choose to live on the fringes of their service area to have more choices that are currently not available to us.

Respectfully submitted,
Mark Jensen



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

Yes. The PFSA consists of approximately 22 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 22 route miles of fiber is \$314,647.00. 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 an existing network location. The location is an existing telecom hut already established with redundant fiber feeds back to FTC's NOC, and it has existing generator backup, and existing 10 Gbps redundant transport equipment. The additional electronic costs are for additional access line cards, SFP transceivers, and two field splitter cabinets with splitters. The electronic cost estimate of \$18,878.00 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 \$62,929.00.

Of the 47 homes and 1 business passed, FTC has projected to connect 38 homes and 1 business. 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 \$740.00 per home/business or \$28,860.00 total. Likewise, the cost to add customer premise equipment, industry-best Carrier Class Wi-Fi inside the home using Calix Gigacenter to deliver Mesh-Enhanced Carrier Class Wi-Fi, is estimated to be \$284.00 per home/business or \$11,076.00.

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 1,800 route miles of fiber-optic cable and connecting over 11,500 customer 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 as defined in Section 22-21-20, Code of Alabama 1975?

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 Jackson County, AL will be necessary to carry out the intentions of these healthcare advances. The intentions of some of the policy changes is 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 specialist and eliminate the costs to commute long distances and reduce the hours of work missed due to travel. Video classes and remote care has 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.

20% of Jackson County, AL population is in poor or fair health. 14% of the Jackson County population is in frequent physical distress and 15% 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 Jackson County, AL is at 14% and the national rate is 7.2%. 22% of the county is adult smokers. 37% of the county's population is classified as obese adults. 32% are physically inactive and only 47% have access to exercise opportunities. It is reported that 38% of the population gets insufficient sleep. 14% experience food insecurity. There are 14% of Jackson County's population that is uninsured. The ratios for doctor to patient are as follows: Primary Care Physicians 1,810 to 1, Dentists 3,070 to 1 and Mental health providers 2,370 to 1. 24% of children in Jackson County are in poverty. It is reported that there has been 83 preventable hospital stays in 2018. The serving hospitals for this area are Highlands Medical Center in Scottsboro, AL (27.6 miles or 32 minutes away) and DeKalb Regional Medical Center in Fort Payne, AL (30.5 miles or 33 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 Jackson 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.

Attachment D, Certifications



D. Certifications

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 10 Mbps download and at least 1 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 for any area served as a result of the project there is not at least one provider of terrestrial broadband service that is either:
 - i. offering a connection to the internet meeting the minimum service threshold; or
 - ii. 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 within five years of the effective date of the Broadband Accessibility Act.

| 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: 10/24/18 |
| Title of Applicant: Executive Vice President and General Manager | |