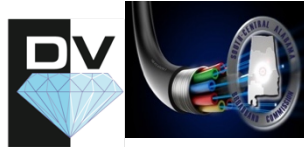


**GETWIREDALABAMA  
PROPOSAL FOR FIBER AND FIXED WIRELESS INTERNET  
ALABAMA BROADBAND ACCESSIBILITY FUND  
GRANT PROPOSAL**

---



---

**Alabama Broadband Accessibility Fund  
2020 Round One Grant Application**

---

**Project Name: GETWIREDALABAMA-Dallas**

**Legal Name of Entity: DV GWA, LLC**

---

**Mailing Address:**

**Name and Title of CEO: C. Peek  
Name and Title of Contact: C. Peek  
Phone Number and Name of Contact: 833-342-8227  
Autonomous System Number: To Be Provided  
List Internet Exchange Number: To Be Provided  
PeeringDB Entries: To Be Provided**

## **A. PROJECT DESCRIPTION**

A discussion of the area served including boundaries, number of households, businesses, and any community anchors (libraries, schools, police and fire stations, hospitals, etc.). This response shall also identify if the project area is located within an unincorporated area and provide information regarding how the area meets the definition of rural (US Census data). Please complete the following table.

|  |                   |
|--|-------------------|
| NUMBER OF HOUSEHOLDS TO BE SERVED              | 9253 <sup>1</sup> |
| NUMBER OF BUSINESSES / INDUSTRIES TO BE SERVED | 504               |
| NUMBER OF COMMUNITY ANCHORS TO BE SERVED       | 48                |

### **A. (1) Introduction**

The boundaries of the areas we will serve will be the underserved areas covered by the one of four projects which will be in Lowndes, Macon, Wilcox, and Dallas Counties. **This application is for Dallas County.** These four projects are Phase I of a much larger regional build, The boundaries include census tracts consistent with ADECA broadband maps, and our internal research that shows where one or more of the following conditions are met:

- There is no Internet access at all
- Internet speeds are less than 25MBS down/3MBS up
- Citizens in these underserved areas often use their mobile phones for Internet

---

<sup>1</sup>Represents data from the 2010 Census for the subject projects, the community anchors were compiled from regional surveys and includes schools, libraries, government institutions, and other community stakeholders in the U.S. Census.

- Citizens use satellite, which is not ubiquitous or reliable,

Other options for Internet access are not sustainable or affordable , that speeds are less than 25/3 in the underserved and unserved areas, that citizens in these underserved areas often use their mobile phones for internet, that some citizens use satellite which is not ubiquitous or reliable, and that there are other options that aren't sustainable are affordable.

We include in the exhibits a list of Community Anchor Institutions (CAIs) for all four projects, but the **list of CAIs specifically allocate the CAIs for Dallas.** that we will reach or plan to reach in two years. Please see Exhibit C- "Community Anchor Institutions".

GWA is a project sponsored by the South-Central Alabama Broadband Commission (SCABC) - a consortium of seventeen counties in south-central Alabama and its private partner DV GWA, LLC. This proposal provides a detailed analysis of the deployment plan and business case for broadband and high-speed connectivity using fiber as a lead solution supplemented by CBRS, unlicensed communication bands, TV White Space (TVWS) and Fixed Wireless Internet (FWA) access to make connectivity and reach to as broad a region possible to as many persons, households, businesses and government institutions as practical for Get Wired Alabama (GWA).

Recognizing that "one size does not fit all", we look at scenarios that are typical of rural markets to include community sizes, topography, population density, foliage coverage, demographics and a host of other variables to indicate market and deployment opportunities. The technology design integrates the best of existing infrastructure, right of ways and easements, existing fiber, available interconnects, and related wired and wireless activities.

Our deployment plan accounts for capital expenses (capex), operating expenses (opex), customer premises equipment (CPE), and installation variables, plotted against key market factors such as household and subscriber density, spectrum breadth and depth, and topography. We then developed a business and deployment model — mainly a combination in each case to reinforce sustainability and system refresh as needed. Lastly, we integrate locations to leverage the new Opportunity Zone (OZ) Program and also blended deployment for unserved and underserved areas that will maximize public sector objectives for service to unserved an underserved area and for opportunities for investors to realize risk adjusted returns.

### **Locations to be served – Rural and Unincorporated Areas**

#### **TARGET MARKET ANALYSIS**

Our primary target markets in **Dallas** represents locations that are rural and ‘unserved’ or ‘underserved’. The Alabama Broadband Accessibility Act (“The Act”) outlines that rural is “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, according to the last federal census.” We define underserved as any combination of the following:

1. Sub-par service quality. We consider this to be a service below the minimum of 25/3. This would include areas being served by DSL, Satellite or Mobile Device “Hot spots”.
2. Inordinately high prices or lack of meaningful competition.
3. A limited service area roadmap from incumbent fixed broadband providers.

**Dallas** is one of four locations are a subset of a larger region. Many locations in rural areas need better broadband, in the form of more competition, faster speeds, and lower prices. According to a 2019 Broadband access study by Microsoft, Alabama ranks



48<sup>th</sup> in access to broadband in the nation with 71% lacking access<sup>2</sup>. While 39% of households in rural America don't have access to broadband<sup>3</sup>, Alabama is twice that coming in at 68% and of those that do, most only have a choice of one broadband provider.

**Dallas** is part of a Phase I four project, multi-project, multi-jurisdictional grant application. **Dallas** is considered a separate Project as defined by ADECA and thus the project specifics for **Dallas** County are included. Per the 2010 Census and The Delta Regional Authority (DRA) report which works to improve regional economic opportunity by helping to create jobs, build communities, and improve the lives of the 10 million people who reside in the 252 counties and parishes of the eight-state Delta region, Alabama's Delta region is comprised of 20 counties in the southwestern and southeastern areas of the state. Thirty-three percent (33%) of Alabama's land area is included within the Delta Regional Authority's jurisdiction, the fourth highest percentage among the eight DRA states. Alabama's Delta area has a much lower population density than the remainder of the state, and only 9% of Alabama's total population resides in the Delta region.

The 20 Delta counties include 16 in the southwestern part of the state: Butler, Choctaw, Clarke, Conecuh, **Dallas**, Escambia, Greene, Hale, Macon, Marengo, Monroe, Perry, Pickens, Sumter, Washington, and Wilcox in the southeastern portion: Barbour, Bullock, Macon, and Russell. According to DRA criteria using unemployment rates and per capita income figures, all 20 Delta region counties within Alabama are classified as "distressed". In addition, according to DRA statistics a staggering 90.0% of Alabamians

---

<sup>2</sup><https://blogs.microsoft.com/on-the-issues/2019/04/08/its-time-for-a-new-approach-for-mapping-broadband-data-to-better-serve-americans/>.

<sup>3</sup><https://theconversation.com/reaching-rural-america-with-broadband-internet-service-82488>.

in the Delta region are classified as experiencing “persistent poverty”. This compares with 43.3% of all residents in the 252-county, eight-state DRA region, and just 28.4% of Alabama residents statewide.

Many locations in rural areas need better broadband, in the form of more competition, faster speeds, and lower prices. . In its’ latest Broadband Access Report, The FCC reports that approximately 19 million Americans still lack access to fixed-broadband service at threshold speeds. In rural areas, nearly one-fourth of the population —14.5 million people—lack access to this service<sup>4</sup>.

According to a 2019 Broadband access study by Microsoft, Alabama ranks 48<sup>th</sup> in access to broadband in the nation with 71% lacking access<sup>5</sup>. While 39% of households in rural America don’t have access to broadband<sup>6</sup>, Alabama is twice that coming in at 68% and of those that do, most only have a choice of one broadband provider.

(THE REMAINDER OF THIS PAGE IS INTENTIONALLY BLANK

---

<sup>4</sup> <https://www.fcc.gov/reports-research/reports/broadband-progress-reports/eighth-broadband-progress-report>

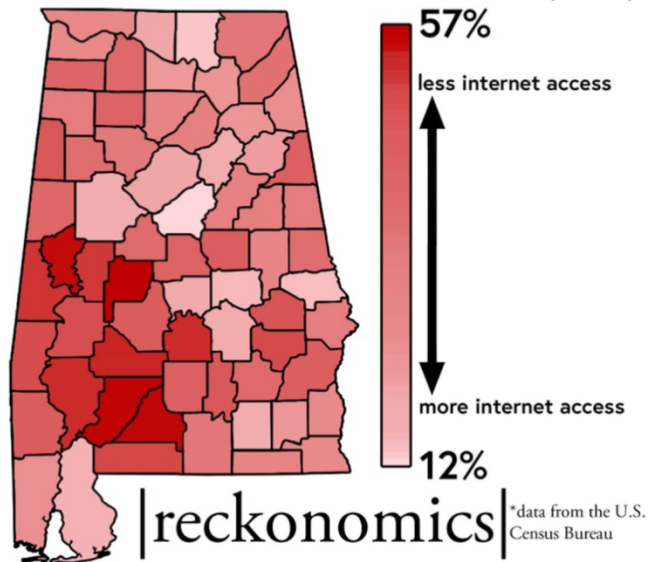
<sup>5</sup><https://blogs.microsoft.com/on-the-issues/2019/04/08/its-time-for-a-new-approach-for-mapping-broadband-data-to-better-serve-americans/>

<sup>6</sup><https://theconversation.com/reaching-rural-america-with-broadband-internet-service-82488>

## The Dallas Region In The Black Belt

“Rural Alabama, particularly the Black Belt and other southern counties, struggle with internet access.”<sup>7</sup> “The 10 counties with the highest percentage of households without internet access are all in South Alabama.” *Id.*

### Households without internet access (2017)



Six of those (counties) are in the Black Belt. Many of these counties also struggle with poverty...”. *Id.*

Unquestionably, the areas in this grant proposal and the four projects in this proposal all fall within the areas denoted by the U.S. Census as highly underserved at more than 50%.

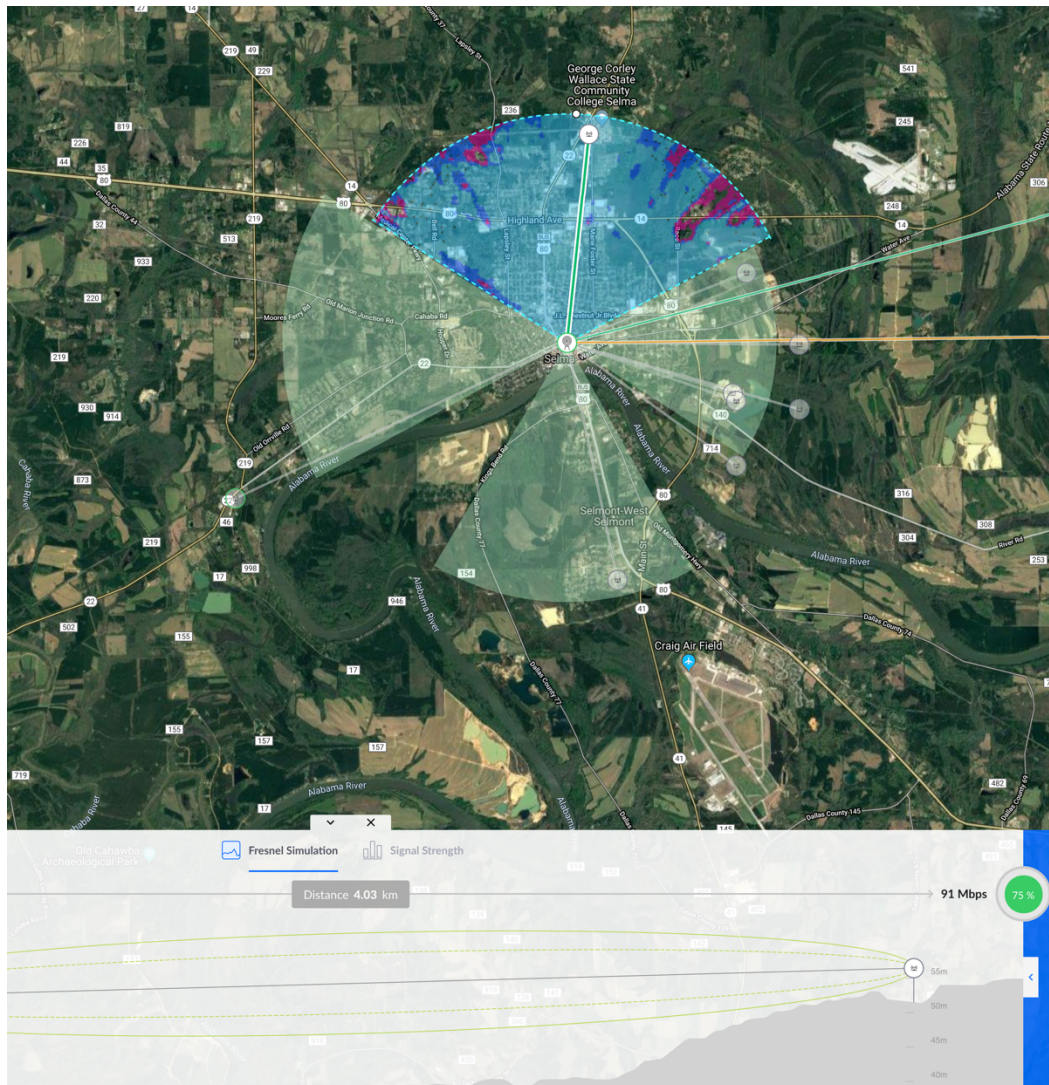
## Dallas County Specifics

Description: Our survey and research demonstrates that 41% of the 16,487 HHs are underserved or unserved. Within our target area, there are 6,330 HH with 504 active businesses and a density of 700+ homes per square mile. We identified 38 census tracts that are unserved or underserved. We will deliver service availability to 629 opportunities where DSL, Satellite or No internet at all is the alternative and then to multiple unserved

---

<sup>7</sup> RURAL DISCONNECT: MAJORITY IN SOME ALABAMA COUNTIES DON'T HAVE INTERNET ACCESS: 12/27/19. AL.COM.

areas throughout the region. This OZ consists of 1,378 homes located in the Southeast of Dallas County/Selma.



### Dallas County/Selma Alabama 4 Sector Deployment

Solution: We will provide the residential market with 50MBS service and the business market with 100MBS service using fiber backhaul to the tower connectivity and 5.8 GHZ, with beamforming as supplemented by TVWS.

## **A.(2) Objective and Methodology**

**A discussion of the technology to be deployed (fiber, cable, DSL, etc.). Additionally, include a discussion of future usage projections and the ability to upgrade.**

### **STATE OF THE MARKET**

Discussed below is a summary of the technologies to be deployed together with the future usage projections. Important to how we discuss our deployment plans is a careful and thoughtful understanding of the market along with the ability to expand service.

The objective of this grant request for Dallas as part of a four separate projects is to present the best case for fiber for backhaul to connect to fix wireless devices. The emphasis is on fiber and the licensed solutions for TVWS, sub- 6 GHz and mmWave scenarios in rural unserved markets in hard to reach areas. Our approach is from the perspective of a single broadcast site's total cost of ownership (TCO) in order to build a sustainable solution that also can be refreshed, as needed, after 5 years. TCO is defined as the cost of deployment, against expected penetration and revenue that supports the objectives of sustainability.

Providing fast broadband to rural areas presents difficult technology and economic challenges. The primary challenge is how to deliver access to broadband internet (defined as speeds greater than 25mps up and 3 down) at a cost that customers are willing to pay. Wireline solutions that work well in urban settings - fiber,

Cable, DSL - can be prohibitively expensive in rural areas if not extended and used wisely with lower cost solutions. Homes and businesses near small towns are often too dispersed to make the rollout of high-speed fixed-line solutions economically viable. Fixed

wireless technologies, while the best, have been unable to scale for a variety of reasons leaving satellite internet as the only option which is noted to be very unsatisfactory<sup>8</sup>. As a result, more than a third (37%) of rural Americans don't have a broadband connection at home.<sup>9</sup>

Delivering fast broadband to rural areas is not simply a matter of providing convenience or faster downloads. Access to fast broadband has profound economic implications. The rise of industries, such as precision farming, remote patient health care, e-commerce, smart energy, and the increase in online education, are only some of the ways fast broadband can transform the quality of life for rural populations.

We intend to use new emerging wireless technologies to solve the problems and take advantages of new opportunities outlined above. Over the next few years, millions of Americans will have a new option for broadband access when used with emerging fixed wireless technologies. This new option is being driven by three factors:

- 1) **Technology.** A combination of advances in network equipment, CPE, and the advent of devices to connect to fiber backhaul to transform fixed wireless access (FWA) from a broadband option of last resort into a viable extension of fiber to the outermost areas. FWA offers a viable option for hard to reach areas, possibly with faster service and lower prices to accommodate the affordability of high-speed internet in rural areas that lack the area median income to afford “big city” prices. In areas that are un-served or under-served, fiber and FWA can be a game changer for rural broadband access.

---

<sup>8</sup>[https://www.consumeraffairs.com/internet/wild\\_blue.html](https://www.consumeraffairs.com/internet/wild_blue.html)

<sup>9</sup><https://www.pewresearch.org/fact-tank/2019/05/31/digital-gap-between-rural-and-nonrural-america-persists/>

- 2) **Additional Spectrum.** The FCC has reallocated massive blocks of spectrum bands including 5G LTE, Citizens Band Radio Service (CBRS), TV White Space (TVWS). These new bands spanning from VHF bands to upper Millimeter Wave provide new options for creating use cases for using fiber backhaul to bring service to the unserved and underserved and complementing existing fill-in coverage gaps that can't be reached by our lead strategy of fiber.
- 3) **Government Policy.** Political will is required for deployments and we have the political will by letters of support and the organization of the public partner. Providing broadband in rural markets typically requires government subsidies. Over the last decade, there have been many high visibility failures of municipal broadband projects, mostly in wireline broadband.<sup>10</sup> As a result, the Federal Communications Commission is revamping its rural broadband subsidies in a big way. In 2017, FCC Chairman Ajit Pai announced the formation of a Rural Broadband Auctions Task Force and in 2019, the CBRS auction, the Connect America Fund (\$1.5 Billion) and the Rural Digital Opportunity Fund (RDOF-\$20.4 Billion) were announced.

**Technology To Be Deployed:**

From a technology/spectrum perspective, our principle findings are that we will need fiber as a lead backhaul solution, access to towers and public structures, and infill reach and penetration with FWA. In addition, we will be able to opportunistically target anchor institutions to improve the economics of fiber where applicable.

---

<sup>10</sup><https://www.nytimes.com/2019/02/06/opinion/rural-broadband-fcc.html>.

- 1) **Fiber.** Unquestionably, the use of fiber connectivity solutions is superior. It has the most proven delivery of speeds and long-term reliability. We will use this for backhaul as well as opportunities where this makes economic sense.
- 2) **Small Towns with densities over 1,000 homes per mile (HPM).** Here, with fiber as the middle mile, MMWave or licensed 3.5 GHz spectrum make FWA viable in sub- 6 GHz spectrum for both 5G and LTE. We believe FWA provides a good alternative, especially in cities with only one wireline provider, high cost or where FTTH is under-built or too costly to build for economic viability.
- 3) **Rural home “clusters”.** A good market for FWA based on mid-band, unlicensed spectrum (5.8 GHZ) are where there is decent density 100+ HPM. The proliferation of former farm fields turned into “exurban” house clusters means the majority of these homes can assist the business case given the lower cost of the technology and the availability of potential customers. Many of these areas need fiber to the tower to serve these destinations.
- 4) **Low density rural markets.** Historically, these are the areas traditionally underserved or unserved. As a result, Wireless Internet Service Providers (WISPs), using unlicensed spectrum, have been successful in select areas. The opportunity for licensed FWA in the TVWS in these areas is case by case. Clearly the case for wireless is most compelling in areas where the existing cable or fiber infrastructure is sub-par or doesn't reach the outer-parts of a region.

### **Key Technologies and Market Variables**

For backhaul, connectivity devices, and in some instances for FTTP, we will use Adtran products. Designed with fiber deployment in mind, the ADTRAN Total Access



5000 Series provides plenty of backplane capacity, offering high-capacity switching and bandwidth for ultra-broadband services. Optical Line Terminals (OLTs) provide 10 Gbps symmetric of dedicated bandwidth per PON or up to 1 Gbps per end user, enabling the delivery of advanced solutions like IPTV across an all-Ethernet architecture. ADTRAN's Optical Network Terminals (ONTs) provide carriers with a variety of delivery options for residential, business, and mobile backhaul opportunities.

ADTRAN Total Access 5000 Series provides an ultra-flexible, high-capacity, deep fiber solution. The Total Access 5000 Series is a carrier class Multi-service Access and Aggregation Node (MSAN) that bridges the gap between existing and the next-generation networks like 10G PON. With a pure Ethernet core, the system supports services over copper and fiber, easily scaling to support even the most bandwidth intensive applications. The Total Access 5000 Series provides the bandwidth and Ethernet switching capabilities needed to deliver a highly profitable service offering and meet a variety of legacy and emerging service requirements.

Our deployment planning and product integration uses the grid below to drive the selection criteria for the appropriate technology in each of our deployment scenarios. Rather than impose a strict criteria, there are many variables to planning.

| Category                      | Definition  | How Figured Into the Deployment Modeling   |
|-------------------------------|---|--|
| Technology & Market Variables |   |  |
| Spectrum Band & Capacity      | <ul style="list-style-type: none"> <li>• Which band</li> <li>• Amount of spectrum needed, in MHz,</li> <li>• Max range of propagation</li> <li>• Capacity per cell site.</li> </ul> | <ul style="list-style-type: none"> <li>• Fiber: 1Gps-End User/backhaul</li> <li>• 5.8 GHz: 40-80 MHz in mid-band is required. Range ~2.5 mi with good LOS. Capacity: Need minimum of 1GHz per cell site balanced with range.</li> <li>• CBRS (3.5) GHz: 20-80 MHz in mid-band is required. Density requirement is doubled. Range ~2.5</li> </ul> |

|                        |   |   |
|------------------------|---|---|
|                        |   | mi with partial LOS. Capacity: Need min. of 1GHZ per cell site balanced with range.<br>• TVWS: 20-40 MHz in low-band is required. Range ~5 mi with good LOS. Capacity: Need minimum of 1GHZ per cell site balanced with range.    |
| Density                | <ul style="list-style-type: none"> <li>• # of households per square mi</li> <li>• Must hit 80% of HH in area</li> </ul>   | <ul style="list-style-type: none"> <li>• Minimum: &lt; 20 HH/mi</li> <li>• Desired: &lt; 100 HH/mi</li> </ul>   |
| Topography & Geography | <ul style="list-style-type: none"> <li>• Line-of-Sight (LOS):<br/>HH CPE must have LOS to the nearest node</li> <li>• Foliage/Weather: density of foliage, rain, and humidity are factors. Denser foliage presents challenges – might have to create taller antenna structure</li> <li>• Type of terrain: flatter easier</li> </ul> | <ul style="list-style-type: none"> <li>• For 5.8 need LOS from AP to CPE. For mid-band LTE, and TVWS can more easily penetrate buildings</li> <li>• Weather/foliage more subjective<br/>– i.e. low-medium-high</li> </ul>         |
| Building Materials     | <ul style="list-style-type: none"> <li>• Buildings present challenges, net to plan for outside transceiver.</li> <li>• Brick, type of glass, other materials influence DB signal loss into buildings and location of CPE</li> </ul>   | <ul style="list-style-type: none"> <li>• Not specifically incorporated in model, but impacts LOS requirements; proximity of node; whether CPE can be indoor/outdoor (Assume 100% outdoor transceiver on 5.8 and 50% on</li> </ul> |

The following factors are incorporated into, where permissible, the cost parameters of the grant request:

- Equipment Opex – CPE, routers, switches, radios, and antennas  
(contained in maintenance costs).
- Construction, tower erection, fiber deployment, devices, site acquisition and certain right of ways and easements.

- Costs specific to MDUs – such as cable costs from rooftop into dwelling (average that out to CPE & installation costs)
- Fiber connectivity and maximizing Adtran products and services as a strategic technology partner.

## **OPEN NETWORK**

The open network will be used to enable multiple service providers/institutions to compete to deliver access to fee-based broadband over a single community-owned infrastructure to consumers residing in unserved and underserved areas. This will provide no-cost access to broadband-based programs such as virtual workforce development, distance learning, telemedicine, e-health education, electronic records development, and health information management to enhance access to quality healthcare and education for vulnerable populations.

We will provide always on intranet/local video connectivity to regional connected households, businesses, schools, libraries, medical/health care providers, 2- and 4-year colleges/universities, community support organizations, including providers of outreach and support; help facilitate greater use of broadband services by vulnerable populations, and job- creating strategic facilities (e.g. eCommunity Technology Centers) located in state or federally designated economic development areas such as Enterprise and Opportunity Zones.

### **Usage Projections**

We intend to reach up to 35% of the unserved and underserved market as subscribers. Our deployment forecast, coverage, and POP connected are as follows and based on FCC Rural Unserved POPs:

## **Dallas (9253 Unserved POPS)**

HH Covered: Year 1-15% ,Year 2-25%,Year 3-60%, and Year 4-80%

Population under coverage Yr. 1-1388, Yr. 2-,2313 Yr. 3-5552, Yr. 4-7418

Population connected Yr. 1-10%-925, Yr. 2-15%-1388, Yr. 3 20%-1851, Yr. 4-35% 3239

### **A.(3) A discussion of internet speeds, service tier and pricing levels, data caps, etc.**

At a high level, the minimum requirement is that the fiber and the FWA solution must be competitive and complimentary with the prevailing (or near- to medium- term projected) FBB solution. The two consumer-facing essential components of broadband are speed (uplink/downlink) and capacity. We believe 25 Mbps is the minimum download speed and 3mbps the upload speed to support streaming video and to support multiple devices connected simultaneously. With fiber and many integrated technologies, we believe we can far exceed the FCC minimum speeds and achieve 100/50 Mbps. Latency is also important and is defined as an average of under 5 ms. Today in the United States, average consumption in FBB households is about 268 GB/month, which is projected to grow to nearly 500 GB/month by 2022<sup>11</sup>. This is primarily due to the increase in video demand or 'Netflixing' in a household and eGaming. In a rural market setting, we believe a prospective provider must be able to support consumption of 200 GB/month per household.

Our technology vendors, RADWIN, discussed later, advance that their FWA solutions achieves speeds of nearly 200 Mbps. FWA coupled with market leading FBB products from Adtran provides a solution for affordability, speed, lack of latency, and other areas that will propel connectivity for rural, underserved and unserved Alabamians.

### **Pricing, data caps, service tier and pricing levels**

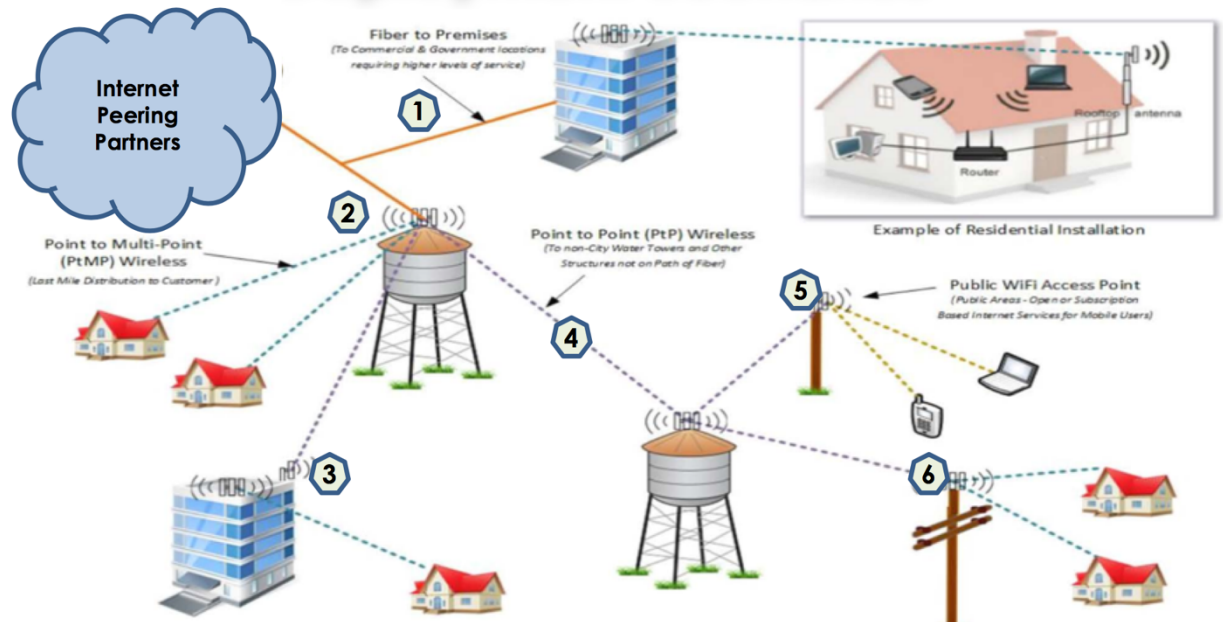
---

<sup>11</sup><https://www.telecompetitor.com/report-u-s-household-broadband-data-consumption-hit-268-7-gigabytes-in-2018/>.

We have a robust model that takes into effect the affordability, reach, and other factors. Our pricing levels are as follows:

|   |         |
|---|---------|
| <i>Residential Subscription Fees Charged by the Operator - BASIC PLAN (10 GB)</i> | \$29.95 |
| <i>Residential Subscription Fees Charged by the Operator - 50GB</i>               | \$59.95 |
| <i>Residential Subscription Fees Charged by the Operator – Unlimited</i>          | \$89.95 |

## Deployment Scenarios



Our approach is also unique in that it goes beyond merely a cost comparison of FWA vs. fixed network alternatives. We also consider the market situation and the state of the FBB level of service and competition.

**A.(4). Project Technical Engineering Evaluation. A preliminary technical evaluation of the project that is certified by an engineer. The evaluation shall include a project cost estimate, project schedule and timeline to include a**

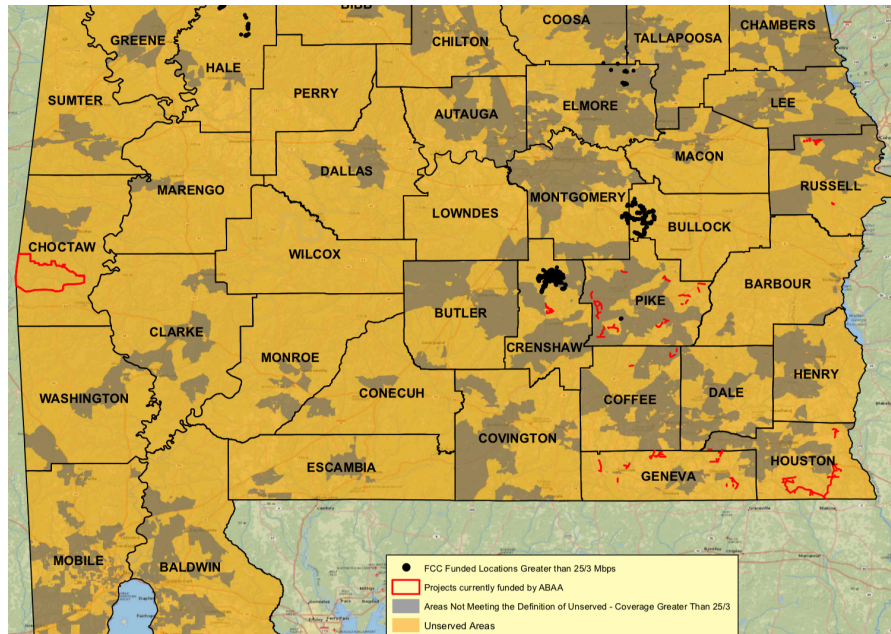
**completion date of no more than two years, and maps showing the proposed project area. Maps shall be in .shp, .kml, or .kmz formats.**

Please see the initial engineering evaluation included as an Exhibit A to this grant application from Frank Garrett, PE who conducted a preliminary evaluation in 2016 which hasn't changed materially as to fiber and tower cost. Cam Kilton, and expert in Wireless and FWA opined on that portion of the project which is also included in the Exhibits. The opinions of the connectivity solutions, done for the greater of the entire project components includes have cost specifically allocated just for **Dallas** and the preliminary opinions used here for project completion as part of the grant application and involved connectivity and FTTH. We have bifurcated out of the entire project the cost estimates **Dallas**. The completion dates in the information from the technology vendors integrated with RADWIN is for 18 months. The KMZ maps of Lowndes are included herein and added as an Exhibit to the grant application.

Our maps shall included herein clearly show area eligibility (unserved areas and rural areas). We used the ADECA Broadband map showing unserved areas (<http://adeca.alabama.gov/broadband>). Other methodology to document an area as eligible is unserved included items from public reports, U.S. Census, AL.COM, Microsoft

Surveys, and other verifiable sources. We add these citations in the footnotes. Our counties in the four project areas comports with the ADECA Map below.





Per the ADECA Maps, **Dallas** is an unserved county as noted in compiled maps with the counties and each of the four separate projects noted herein.

**Dallas** is depicted here as part of the four counties we have submitted grant applications for.







#### **A.(5). Operators Technical and Managerial Capabilities**

We have a very experienced team with wide and varied experience and capable team. The team has over 100 years of actual design, deployment, operations, and telecommunications experience. Coupled with our technology partner and with the Professional Services of Adtran to design and deploy the network, we have substantial experience. A summary of the key team members are:

##### **a) Public and Private Sector Network Construction, Design, and Management Team**

The initial management team and advisors for the mobilization, preconstruction, and vendor operation selections phase of the project are outlined below. ADTRAN is a provider of telecommunications networking equipment and internetworking products and adapted telephony technology for use in enterprise-wide area networks. ADTRAN is a supplier of local loop access and deployment products for fiber, wireless, ISDN, and Digital Data Service (DDS) digital services. ADTRAN supplies multi-service access platforms and Integrated Access Devices (IADs) for converged voice and data networks. The management team has identified the needs and network operator's activities long term. Post-closing, Diamond, with a strategic investor involved to examine the major companies mentioned above in Phase II, will assist us in project management and the selection of a capable, diverse management team to manage the forward construction and operation of network.

RADWIN has a rich history of engineering and deploying Broadband Wireless Access (BWA) products and services to a broad set of broadband services providers worldwide. RADWIN has a 20+ year proven track record with over 1 Million radios installed in 170 different countries.

RADWIN believes that our product solutions, services, and broadband service provider experience will provide Get Wired Alabama (GWA) with a strategic partner that not only will provide a set of best in class products but also a long-term relationship. RADWIN has proposed product solutions that are available in the market today but also those which are scheduled to be general market in early 2020 in time for planning and deployment with GWA.

We also entered into a lease of CBRS space with 4-Tech Media, LLC. This allows GWA to become a Eligible Telecommunications Company (“ETC”) for other purposes.

b) Board of Advisors

We have recruited an excellent private sector board of advisors. Elliott Bryant, who is a former AT&T National Executive Director of Broadband and Mobility. Peter T. Lewis, the first person to coin the term “Internet of Things” (IoT) and founder and COO of Cellular One. Peter led the design and buildout of first U.S. cellular system serving DC and Baltimore. Frank Miller, former VP of Access and Wireless-CenturyLink and the former CTO for CIENA rounds out an excellent board of directors.

**President/COO-Private Utility Concessionaire Executive-Mark Swanson**

Mr. Swanson is a proven telecom industry leader with 23 years of delivering cutting edge technology solutions. Swanson is a pioneer and national thought leader in cloud-based services in the telecommunications industry. He is a successful serial entrepreneur with four successful exits delivering over 800% ROI.

Swanson’s relevant telecom experience includes stints as Vice-President-Bright House Networks where he was responsible for creating new lines of business and leading new projects for a 9,000 employee, \$4 Billion MSO. He attended and has an MBA from

Georgia Tech and Military Degree from WestPoint. Mark is an expert in Telehealth and wrote and had approved the Charter Business plan for Telehealth.

### **C. Peek, Chairman**

Mr. Peek has an extensive background in public accounting, commercial lending, former U.S. Treasury official, venture capital formation organizer, and as an entrepreneur. He formed an entity that was greenlighted to be a SBA to Invest. Peek also had five years with a Big 4 CPA firm and a Regional CPA .

Peek has executed more than 400 senior and subordinated debt activities with banks and finance entities, deployed more than \$1.5B for the U.S. Treasury to states, as a fund of funds for private equity, loan pools and has been a voting member on capital and investment loan committees that deployed more than \$4B for the United States. He has a B.S. in accounting from Wilberforce and has completed 2 years of law school- University of Florida. Mr. Peek will amend his role to the concessionaire to executives in strategic utility and telco firms as part of the capitalization.

### **Executive Vice-President-Dwight Davis**

Dwight Davis has almost 30 years' experience in the IT & Telecommunication industry across the world. Most recently, Dwight was responsible for TV & Media Global Professional Services & Labs with Ericsson. He had P&L responsibility around \$100MM USD. Prior to joining Ericsson, Dwight spent one year with Converse where he was Head of Global BSS Portfolio with a P&L responsibility of over \$500MM USD.

At Alcatel-Lucent Dwight was Senior Vice President responsible for the end to end program management of the largest telecommunication 4G wireless broadband launch for Pan India for an Alcatel-Lucent customer. With P&L just north of \$1B USD. As part of

the leadership team in Mumbai, India, he successfully led the development of the blueprint to create a company the size of AT&T in less than two years-Rio.

In 2009, Dwight was named VP IPTV Multi-Media and Wireless Integration North America, Alcatel-Lucent. Dwight in a very short time increased IPTV revenue by 30% and Wireless revenue for the Tier 2-3 market by 43% along with improving customer satisfaction rating. He led the roll out of AT&T U-Verse.

Prior to joining Alcatel-Lucent, he worked in London for British Telecom. During this period, his focus was on developing the 21<sup>st</sup> Century Network strategy and delivery, Dwight held positions of Senior Director 21CN Operations, Director 21CN Testing and Director 21CN Plan and Build. With P&L responsibility over \$1.5B US\$D. Dwight has a B.S. from the University of Maryland.

#### **Leo Cloutier-Vice-President Technology**

Leo has been an Executive/Senior-level professional possessing extensive experience secured in progressive roles in multi-channel media, telecommunications, wireless communications, satellite, and video technologies and entrepreneurial/startup venture. Leo has advanced skills and has deployed and managed systems as SVP, Strategy and Business Development-Broghthouse Communications (now Charter/Spectrum).

#### **Cam Kilton, Executive Consulting Engineer**

Cam has been an outspoken customer advocate to the WISP community for nearly two decades and figured his largest impact can now come from working with manufacturers. Cameron spent the last two years as Director of Engineering Services at Baicells Technologies where is specializes in RF design and site selection for their

customers. Cameron also supported the pre-sales team with regular engagements with new customer opportunities. In addition to those primary duties, he oversaw the customer operations support team and has instituted various policies and procedures ensuring quick resolution to customer problems.

Cameron Kilton was also the Director of Operations and a member of the senior management team at RedZone Wireless. He was directly responsible for the design, engineering, construction and operation of RedZone's new LTE Advanced network. Cameron brings over 17 years of telecommunications industry experience to his current role. He has extensive knowledge and experience designing, building, and operating wireless broadband, cellular, AMI, and fiber-optic network systems.

**Project Design/FCC Subject Matter Expert- Private - Anthony R. Bowlds**

Mr. Bowlds has an extensive background in research, design and development in Telecommunications, Wireless Technology, Power, Energy, Education and System Architecture. He was a Network Engineer for TCS Corporation where he provided the security system and defense messaging system, developed the control systems, guided and assisted the engineers technically, developed the automated message handling system and developed secret information systems. He also led the technical plan and implementation of various designs for sophisticated and optimized systems designs.

Mr. Bowlds has a Bachelor of Science Degree in Electrical Engineering and an Associate of Science Degree in Applied Physical Science from the University of the District of Columbia in Washington, DC.

#### **A.(6) Pole Attachment Rates For Unaffiliated Entities Alabama 37-4-1 (7)**

We will comply with this section and our certification incorporates the compliance with the rates and standards promulgated by the Alabama legislature. Our rates will be the same or within 10% of the rates ordered by the FCC, ADECA, and the Alabama Public Service Commission.

#### **A.(7) Use of Minority and Disadvantaged Business Enterprises (DBEs)**

We have partnered, teamed with, and will use minority and women DBE firms (MWBE's) who have various DBE certifications. The firms will be involved in the management, technical design, deployment, customer service, installation, community engagement, and all phases of the Dallas project.

Some of the Minority firms and DBEs are based in Alabama and some are licensed to do business in Alabama or other jurisdictions. The summary of the firms are below with supplemental data on their certifications for them are in the Exhibit A.

#### **Ken Phillips and Phillips Communications Inc.**

Phillips is a very experienced cable, communications firm, based in Alabama. It is a Service Disabled Veterans Owned Business with a track record of deploying communications for the United States Armed Forces. We have signed a teaming agreement with Phillips to be a local market representative as we deploy in jurisdictions. The firms will be a part of planning and structuring of projects in the region.

#### **Grace Management Construction**

Grace is a DOT certified firm that is 100% MWDBE. They have experience at bring, tunnel installation, wiring, and cable. They have worked closely with the Maryland

Broadband Connection Activities and bring knowledge and skill sets when we need to lay fiber and bore in waterways, bridges, and tunnels.

### **United General Contractors**

UGC is a 100% MWBE based in Alabama and Washington, DC. They have substantial track record of installation, framing, and light carpentry. UGC will be helpful with the erection of structures, co-location cabinetry, maintenance, and other hosing apparatus needs. Also, where we need to make designs for home instillation, UGC will asst with the framing and home connectivity solutions.

### **Historically Black Colleges & Universities (HBCUs)**

We will partner with the state HBCUs as part of the U.S. Commerce's NTIA's Minority Broadband initiative. Alabama has 15 HBCUs-the largest number of HBCUs in America between colleges and universities and junior colleges. They will allow us to have connectivity with surrounding communities via their local colleges and universities.

### **Broadband Connect, LLC**

Broadband Connect, LLC is a Maryland based entity with a long history in the United States of deploying, design advisory, and construction. Currently, they are a contractor for all of Virginia for broadband and cabling in offices that Verizon delivers service to. They're a MWBE and will assist in the design and deployment of the network as well as all connectivity solutions there. Their certifications are applicable to Alabama.

### **Oasis Engineering**

Oasis is an Atlanta and Alabama based entity with substantial experience in environmental, technical engineering, and geo-technical services. They have substantial experience in broadband c connectivity. They are a Women Owned MWBE. We have a

signed a teaming agreement with Oasis. They have been integrally involved in the design, inventory of assets for the test projects, and other services.

**A.(8). A discussion of Middle Mile Projects (if applicable). The applicant shall demonstrate that the project will connect other service providers eligible for grants under this section with broadband infrastructure further upstream in order to enable such providers to offer broadband service to end users; provided that eligible projects under this subdivision may include projects in (i) an unserved area or (ii) a rural area that does not meet the definition of an unserved area but otherwise meets the requirements of this section, for which the grant applicant demonstrates, by specific evidence, the need for greater broadband speeds, capacity, or service which is not being offered by an existing service provider.**

The Telecommunications, Broadband, Using Electric Easement Accessibility Act (HR 400), passed earlier this year in the State of Alabama would allow for connectivity to electric middle mile projects. Recently, some of the rural electric coops have announced funding or partil funding from USDA and other locations. We would connect, where feasible, to these networks in our region and allow them the same with us.

That bill authorized the placement, construction, installation, operation, and use of broadband and other advanced communication capabilities and related facilities within electric easements by electric providers.

To the extent the Middle Mile Projects are announced are in function, we will seek to connect with them if the design and geographies work collaboratively with what we have designed and reach unserved and underserved populations. We will connect to and



leverage the infrastructure of our other three county project submitted alongside this application.

**A.(9) A discussion of hospital, public school, public safety, or economic development projects that do not meet the definition of unserved area, but otherwise meets the requirements of the program (if applicable). The applicant must demonstrate by specific evidence, the need for greater broadband speeds, capacity, or service which is not being offered by an existing service provider.**

We seek to provide broadband at sufficient speeds to assist hospitals to do telehealth, public schools to close the homework gap, public safety for emergency management, and to spur economic development through eCommunity Centers, and programs to impact recidivism of which national statistics show a 70% reincarceration rate when returning citizens have no jobs and job skills options.

Since we will also be involved in the National Telecommunications Infrastructure Act's Minority Broadband Initiative (NTIA-MBI) we also will assist in bringing telehealth for student counseling. Per, MeMed<sup>12</sup>:

- There is a **national shortage** of mental health workers and thus this creates major barriers for students seeking psychological and psychiatric care.
- › At least **85%** of youth in need of treatment do not get it, according to a national study in the International Journal of Health Services.
- › 30% of college freshmen report feeling frequently overwhelmed.
- › Poor access to care can have a dire outcome. The CDC reports **suicide** is the

second-leading cause of death among college-aged youth.

---

<sup>12</sup>MeMed brochure 2018.

Research consistently shows **there is a mental health crisis facing America's college students.**

The U.S. Healthcare system has an affordability crisis. We spend 2 1/2 times more on Healthcare than other developed nations yet achieve worse outcomes. The primary cost driver is chronic disease, which accounts for 3/4 of all Healthcare spending – a staggering \$2 trillion per year. <sup>13</sup>

HealthIT.Gov notes that for successful Telehealth for physical practices of 5-25 physicians have at least a 25/3 speed and hospitals 100Mbps speeds. <sup>14</sup>. In our region, there are HBCUs that would need connectivity to assist the student population.

### **Regional Impact**

Lowndes is part of a regional project in this grant request and will result in a broadband connectivity network between cities, counties, citizens, community anchor institutions (CAIs) such as fire and police, emergency responders, health care, child care, and commercial businesses. Please see other CAIs in our exhibits. Broadly, we will impact a greater part of the 20-county region that's a part of the network that is also underserved. In order to connect the region to the four projects, it takes a broader look at the need for greater speeds for various activities. The network will anchor a connection to unserved and underserved census tract as noted below:

---

<sup>13</sup>Vital Stream Research and Business quotes, P. 1

<sup>14</sup>What is the recommended bandwidth for healthcare providers? <https://www.healthit.gov/faq/what-recommended-bandwidth-different-types-health-care-providers>

#### South Central Alabama lacks broadband availability

- Lack of high speed Internet access is most prevalent in rural areas<sup>(1)</sup>
  - ~1.7 million people or 35% of Alabamans lack high-speed Internet
  - 20% urban vs. 56% rural Alabamans lack access
- States with lowest pop. density are 10x more likely to lack access than states with the highest density (Alabama ranked 27/50 states based on pop. density)<sup>(3)</sup>
- Incumbents such as T-Mobile are strongest in urban Northeast Alabama

#### Top Incumbents in Alabama

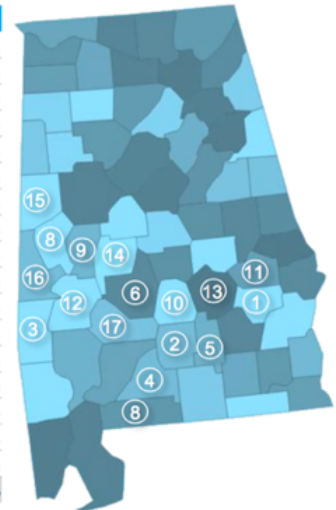
| Wireline (mbps)       | Down | Up   | Wireless (mbps)  | Down | Up   |
|-----------------------|------|------|------------------|------|------|
| Bright House Networks | 83.0 | 10.5 | T-Mobile         | 25.3 | 10.1 |
| Mediacom              | 70.1 | 17.1 | Verizon Wireless | 20.1 | 8.3  |
| Charter Spectrum      | 66.2 | 4.45 | AT&T             | 14.6 | 7.19 |
| XFINITY               | 65.1 | 21.6 | Sprint           | 9.78 | 4.13 |
| TWC                   | 56.8 | 8.43 |                  |      |      |

#### Broadband access is vital

- The White House declared broadband Internet as a "core utility" and similar to water, electricity, and sewer in terms of importance<sup>(4)</sup>
  - Alabama Black Belt is a Health Professional Shortage Area where broadband enabled telemedicine is a means of healthcare delivery

#### South Central Alabama Access to Broadband<sup>(2)</sup>

| ID      | County     | 25 mbs+ |
|---------|------------|---------|
| 1       | Bullock    | 0.20%   |
| 2       | Butler     | 33.1%   |
| 3       | Choctaw    | 13.3%   |
| 4       | Conecuh    | 44.5%   |
| 5       | Crenshaw   | 52.7%   |
| 6       | Dallas     | 84.5%   |
| 7       | Escambia   | 74.0%   |
| 8       | Greene     | 0.1%    |
| 9       | Hale       | 48.6%   |
| 10      | Lowndes    | 0.8%    |
| 11      | Macon      | 65.8%   |
| 12      | Marengo    | 11.3%   |
| 13      | Montgomery | 96.3%   |
| 14      | Perry      | 0.0%    |
| 15      | Pickens    | 5.2%    |
| 16      | Sumter     | 41.9%   |
| 17      | Wilcox     | 40.1%   |
| Average |            | 36.0%   |



Here, the GWA Network will meet first Dallas project, then the three other projects in this grant request, and then the broader region's economic development priorities such as:

\*Encourage job growth and business expansion in manufacturing, including advanced manufacturing, sustainable manufacturing, and manufacturing supply chains in the automobile sector. Alabama is the nation's 7<sup>th</sup> largest producer of automobiles. The Governor of Alabama announced in March 2018 that Toyota/Mazda will build a \$1.6 billion-dollar automotive manufacturing plant in Huntsville, Alabama that will employ 4,000 people and produce 300,000 vehicles per year. With broadband access, these counties can offer digital skills and training to assist the manufacture with tier 2 ad tier 3 support.

They already have an engine manufacturing plant in the state along with their network of suppliers. Mercedes, Hyundai, Honda, and others are already in Alabama. By adding broadband to the Black Belt counties, there can be distance learning and training to assist Black Belt residents to obtain jobs with suppliers and providers of services to the

automobile sector in other parts of the state. We will offer extended distance connect with the Historical Black Colleges and Universities (HBCU) in and near the region such as Alabama State and Tuskegee to offer training and digital retraining to help the state automobile industries.

\*Assist Black Belt communities that have been severely impacted by the withdrawal of other industries like garments and textiles, and meat processing. The broadband network will assist in establishing programs that support economic diversification, job creation, capital investment, workforce development and re-employment opportunities. This will be done via distance learning with the Alabama universities and existing partners like the HBCUs in Alabama. Also, these retraining and job-training programs will assist in reducing the recidivism rate in Alabama.

\* Improve emergency response. The Region in Alabama is known as “hurricane and tornado alley” and the broadband network will assist in assisting the resiliency of the Region in the face of disaster for emergency communications, banking, federal assistance, recovery efforts, and like activities with an effective communications system that can reach rural outpost.

- Environmental resources management. With broadband, the water and electric utilities can better manage water conservation and meter management, conservation, water tables, and other environmental management measures that will improve rural waters and power management in rural communities.
- Innovations. With broadband, the Region will be able to take advantage of the innovations in science and health care using Telemedicine. The Region is suffering from the withdrawal of a number of hospitals and clinics. Alabama is in the top 5 states with health care disparities and leads the country in health care issues with minority persons with diseases such as diabetes, obesity, high blood pressure, and heart disease.

We will implement a service provider neutral, community-owned, fiber, fixed wireless-white space broadband infrastructure that will deliver an up to 100% high speed wireless connectivity to the economically distressed communities of South-Central Alabama along with the target of this proposal and the region of the state known as the Black Belt.

### **Economic Development Priority Checklist**

- a) This projects will deploy High Speed broadband infrastructure to community anchor institutions.
- b) The project will deploy High Speed Broadband infrastructure and has incorporated a public-private partnership among government, non-profits and for-profits entities, and other key community stakeholders.
- c) This project will deploy High Speed broadband infrastructure in economically distressed areas
- d) This project will deploy High Speed broadband infrastructure to community colleges and Historically Black Colleges & Universities. This project will deploy High Speed broadband infrastructure to public safety entities.
- e) This project will deploy High Speed broadband infrastructure to hospitals and federally qualified health centers and assist in tele-medicine.
- f) This project will deploy High Speed broadband infrastructure and the applicant has proposed to contribute to job creation

by distance learning, agriculture training and technology training for unmanned aerial services such as drones and medical emergency activities.

- g) The project will deploy High Speed broadband with electrical cooperatives and utilities such as water management and conservation and electric grid management.
- h) The project will deploy High Speed broadband connectivity to the only federally recognized Indian Tribe in the state of Alabama.
- i) The project will assist in water table management and innovations in water security.

### **Comprehensive Community Infrastructure Components**

The locations and the greater GWA Cluster was formed to help eliminate the digital divide in the South Central “Black Belt” Alabama region. This is one of the most economically depressed regions in the country where most of the residents live below the national poverty level, and unemployment rates range from 4% to 9.3%<sup>15</sup>. Because many residents have withdrawn from job searches and re-employment, the unemployment rates have been projected to be as high as 3 times the reported rates.

With such economic hardship, the region’s incumbent Telco’s and cable companies have resisted upgrading their existing backhaul infrastructure to serve the project regions and the Black Belt footprint because of a lack of positive economic development in the region and a lack of broadband awareness. As a result, organizations,

---

<sup>15</sup>Alabama Department of Labor, Labor Market Information (LMI) Division, November 2017

schools, institutions, and agencies have been unable to introduce and sustain innovative programs that require adequate access to broadband-based services to achieve economies of scale.

As a result, organizations, schools, institutions, and agencies have been unable to introduce and sustain innovative programs that require adequate access to broadband-based services to achieve economies of scale. SCABC proposes a high-speed community-owned, service provider neutral, partially fiber optic network with wireless overlay that will connect anchor institutions, businesses and residences in its 20-county Cluster. The applicant proposes to connect nearly every CAI, home and business in this 20-county area and then market this connected network to third party service providers such as AT&T, Comcast, Brighthouse, etc. We expect the applicant to be attractive by eliminating large Telco's and other wireless company's capital expenditures.

A variety of community programs will be available through the "always on" connection. In addition to delivering the service, GWA proposes to implement Public Computer Centers which will be connected through standard service from an existing provider, or if within the applicant CAI Clusters. The applicant will implement the eCommunity Technology Center (eCTC) model, a community empowerment initiative that assists vulnerable populations with connecting to public assistance programs, provides access to information technology to improve personal income-generating capability, and provides advanced support services (distance learning, tele-health monitoring, telemedicine, eworkforce development and eGovernment) for the community-at-large.

The Dallas Federal Reserve denoted that the digital divide leads to further economic, social and political disparities for low-income and underserved populations.<sup>16</sup> Additionally, many job training programs are only offered online. For individuals who live in areas without workforce development centers or community colleges, or who lack transportation or experience barriers due to long distances, internet access could help them participate in training and certification programs.<sup>17</sup> (H)ouseholds with less educational attainment have lower rates of broadband adoption. Only 43 percent of individuals without a high school diploma use the internet, compared with 90 per- cent for those with a college degree.<sup>12</sup> Thus, to provide a curriculum that is relevant and prepares students for the job market, teachers are increasingly assigning homework that requires internet access. Low-income students are at distinct a disadvantage. It is common to hear stories of students doing their homework in fast-food restaurants or outside of school buildings after hours to access free Wi-Fi hot spots.<sup>13</sup> Eighty-four percent of the nation's K–12 teacher's report the digital divide is growing in their classrooms due to unequal access to essential learning technology resources at home.

Finally, access to banking and financial services is driven by connectivity solutions. Many persons do not bank in traditional brick and mortar bank and those need connectivity for daily life and solutions. The digital divide can be a barrier to improving the number of people with full access to banking. And, the reverse is also true: Closing the digital divide can open up opportunities for LMI individuals to gain access to safe financial

---

<sup>16</sup>Dallas Federal Reserve Report, "Closing the Digital Divide, Page 1.

<sup>17</sup>Id, Page 4



services and products, especially due to the rate at which technology is transforming banking and how people access services.<sup>18</sup>

### **Documentation of Persistent Poverty and Severely Distressed**

The South's economy is in the midst of long-term restructuring in which the big losers are agriculture-dependent rural areas. The Birmingham News published a series of articles entitled, "The Black Belt: Alabama's Third World," during the months of May, June, August, and October 2002, depicting the history of the region and the struggles experienced by the people living there today. This special report, which as updated in recent years, revealed the high unemployment rate, lack of economic development, and limited educational opportunities. A review of Dismantling Persistent Poverty in the Southeastern United States (University of Georgia, 2002), revealed results of a study that identified counties in Alabama with persistently the worse areas of poverty based on 2000, 1990 and 1980 Census data. The study concluded that there are 26 counties in Alabama with persistent poverty over the three census periods—and some of the poorest of all regions of the country. Fifteen of the twenty counties in the SCABC Cluster are on that list and are in Federal Enterprise Zones.

Also, Governor Ivey designated portions of the Black Belt counties as underserved and low-income when she nominated census tracts to the U.S. Treasury Secretary qualified census tracts for the Investment Innovation Opportunity Act in March 2018. *The Washington Post* did a deep review of one of the counties in the article *A Grim Bargain, Once a weakness, low-skilled workers who get paid little have become the Deep South's strength (December 2015).* The article was one of three in a series called *A REGION*

---

<sup>18</sup>Id, P. 5

*LEFT BEHIND: LOST OPPORTUNITY IN THE DEEP SOUTH. And the article noted... “Wilcox County sits in the center of Alabama’s Black Belt, a swath of dark-soiled farmland that over the previous decades had been drained of its economic blood: first with the mechanization of agricultural jobs, then with an exodus of people, finally with the shuttering of factories and mills. In a county that is 70 percent black, the historical inequities have dovetailed with a more modern inability to adapt economically. Between 2000 and 2010, Wilcox lost 30 percent of its jobs and 25 percent of its businesses. Its unemployment rate went from 8.7 percent to 26.3 percent.”*

The 2010 Census reaffirmed that the Black Belt region has fared no better. With the uptick in the economy in the last few years and a NYSE trading above 26,000 in 2017, economic areas like the Black Belt continue to be in a downturn and they are not participating in the economic growth of Alabama and America. The downturn has further impacted these economically distressed counties (average per capita income of \$13,544, is 63% of the national average of \$21,587) based on the best available 2010 Census data.

### **Delta Regional Authority (DRA)**

Established in 2000 by Congress, the Delta Regional Authority makes strategic investments of federal appropriations into the physical and human infrastructure of Delta communities. Led by the Delta Regional Authority Board-comprised of the Federal Co-Chairman, appointed by the President and confirmed by the U.S. Senate, and the governors of the eight states-the Delta Regional Authority fosters local and regional partnerships that address economic and social challenges to ultimately strengthen the Delta economy and the quality of life for Delta residents. The Delta Regional Authority

works to improve regional economic opportunity by helping to create jobs, build communities, and improve the lives of the 10 million people who reside in the 252 counties and parishes of the eight-state Delta region.

Alabama's Delta region is comprised of 20 counties in the southwestern and southeastern areas of the state. Thirty-three percent (33%) of Alabama's land area is included within the Delta Regional Authority's jurisdiction, the fourth highest percentage among the eight DRA states. However, as will be shown later in this section, Alabama's Delta area has a much lower population density than the remainder of the state, and only 9% of Alabama's total population resides in the Delta region.

The 20 Delta counties include 16 in the southwestern part of the state: <sup>[[[</sup>Butler, Choctaw, Clarke, Conecuh, Dallas, Escambia, Greene, Hale, Lowndes, Marengo, Monroe, Perry, Pickens, Sumter, Washington, and Wilcox in the southeastern portion: <sup>SEP</sup>Barbour, Bullock, Macon, and Russell.

According to DRA criteria using unemployment rates and per capita income figures, all 20 Delta region counties within Alabama are reclassified as "distressed". In addition, according to DRA statistics a staggering 90.0% of Alabamians in the Delta region are classified as experiencing "persistent poverty".

This compares with 43.3% of all residents in the 252-county, eight-state DRA region, and just 28.4% of Alabama residents statewide.

## **II. REGIONAL IMPACT**

The **Dallas** project footprint is near multiple Historically Black College/Universities, 2-year technical colleges, medical facilities, municipalities/faith-based/non-profits including Alabama State and Tuskegee.

The open network will be used to enable multiple service providers to compete to deliver access to fee-based broadband over a single community-owned infrastructure, to consumers residing in unserved and underserved areas; provide no-cost access to broadband-based ePrograms such as virtual workforce development, distance learning, telemedicine, e-health education, electronic records development, and health information management to enhance access to quality healthcare and education for vulnerable populations; provide always on intranet/local video connectivity to regional connected households, businesses, schools, libraries, medical/health care providers, 2- and 4-year colleges/universities, community support organizations, including providers of outreach and support; help facilitate greater use of broadband services by vulnerable populations, and job- creating strategic facilities (e.g. eCommunity Technology Centers) located in state or federally designated economic development areas such as Enterprise and Opportunity Zones; improve access to, and use of, broadband service by public safety agencies; and stimulate the demand for broadband, economic growth, and job creation.

**A. Regional Network Objectives**

**Among the many regional network objectives, the applicant will impact these institutions.**

1) HEALTHCARE evaluation, diagnosis, monitoring, and access in times of disaster using no-cost intranet or competitively priced internet-based telemedicine and videoconferencing technologies at Federally Qualified Health Centers (FQHCs), including:

a) Community Care Network (CCN) mobile clinics, and computers in first response vehicles to transmit data to area hospitals; provide e-health education and nutritional intervention strategies to mitigate health disparities.

b) Medical Records to assist in developing/deploying electronic medical records to provide patient information to medical providers 24/7; b) mobile devices for wireless monitoring of medical conditions at homes/community centers; c) personalized health/wellness/obesity counseling over cell phones, tablets and other items;

2) PUBLIC SAFETY: immediate reliable communications to coordinate emergency response, and video surveillance to reduce criminal activity;

3) EDUCATION/JOB TRAINING: create/retain jobs in healthcare, information technology and construction industries; entrepreneurship training; eEducation/training to prisoners to prevent repeat crimes; provide work ethic and OSHA training to promote job retention and workplace safety; train vulnerable groups to use broadband for job search, public assistance, e-learning, etc.

The supply-side catalyst for change, promote immediate Cluster demand for broadband, encourage efforts to increase/sustain broadband demand, and create incentives for private sector broadband investment. Collectively, the proposals promote synergy and leverage resources to further stimulate job creation/retention and bolster economic development, which results in greater impact of the EDA initiatives than the sum of their effects individually, with an ultimate outcome of a healthier, technologically smarter Alabama.

## **B. Special Regional Impacts**

### ***Hospital Closings***

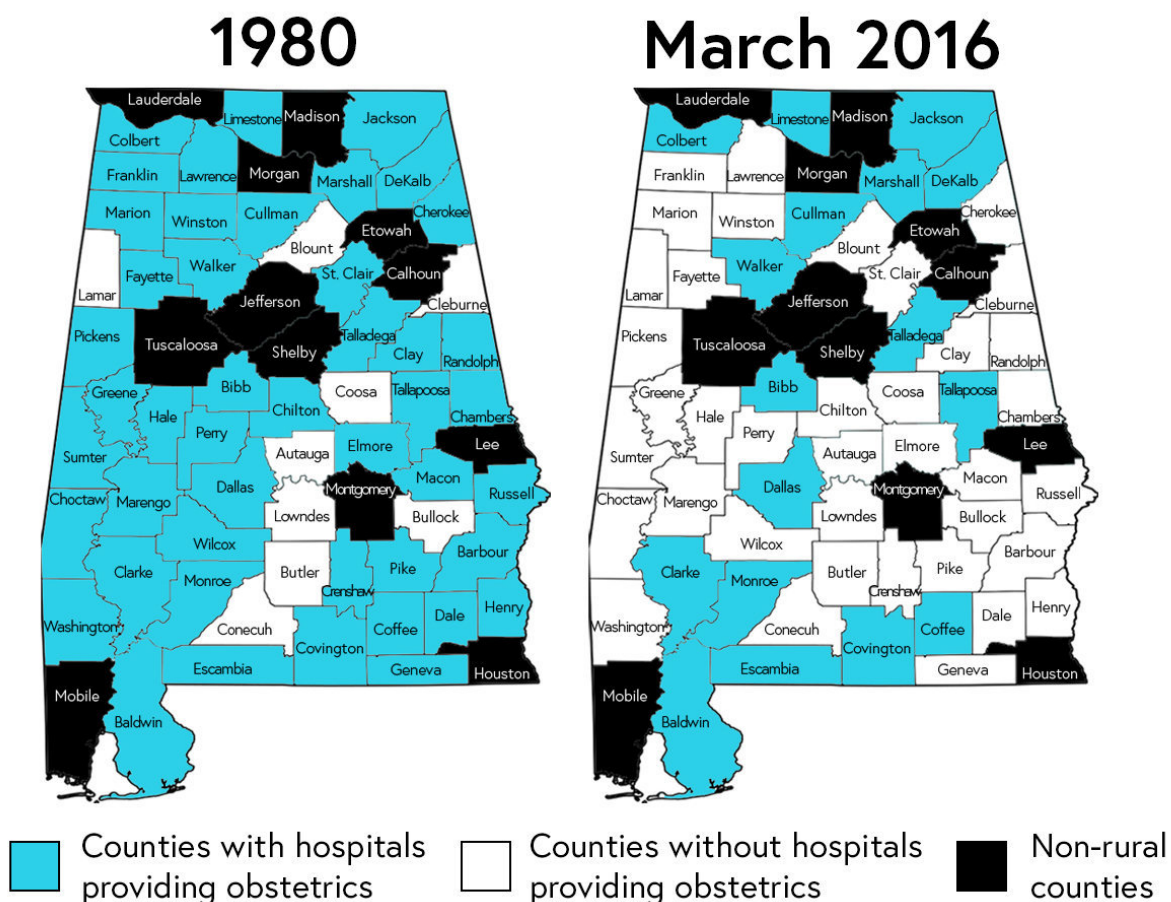
On September 1, 2017 a rural hospital serving one of Alabama poorest counties closed its doors after 60 years. The J. Paul Jones Hospital in Camden, Wilcox County, the birth place of Alabama's Governor Kay Ivey, will become one of seven rural hospitals that has closed over the last eight years, placing Alabama near the top of the list for rural hospital closures nationwide, according to experts who spoke to AL.com. "Alabama is without doubt facing a rural health crisis," said Jim Carnes, policy director at Alabama Arise, a non-profit advocate group for low-income residents. "The hospital closures, along with other medical facilities, have already had and will continue to have dire consequences for residents in rural areas."

In hospital chairman, George Alford's press release, explaining the hospital's closure and transition to an urgent care facility, he said that the county's high poverty rate of 40 percent, unemployment rate of 15.3 percent (June 2017) and the declining population of the region - currently at its lowest level since 1840. Wilcox County's population was predicted to hit just under 11,000 in 2016. It was 9,548 in 1840 but has been in decline since hitting 36,000 in 1900, according to Census statistics. Dale Quinney, Executive Director of the Alabama Rural Health Association (ARHA), a non-profit organization dedicated to preserving and enhancing the health of rural Alabama citizens, told AL.com that 41 out of 67 counties are projected to have less population in 2040 than they had in 2010.

According to the Demopolis Alabama Times, In January 2014 another Black Belt Hospital, Bryan W. Whitfield Memorial Hospital in Demopolis, Alabama in Marengo County, closed its labor and delivery unit laying off 5-10% of the hospital staff and

sending doctors and patients scrambling to find alternative service after being given 30 to 45 days to find labor and delivery services. The figure below depicts the status of obstetric care in rural Alabama.

## Change in access to obstetrics in rural Alabama counties



In the Black Belt's 12 rural counties, where poverty and health issues are most acute, the number of hospitals offering obstetrics has gone from 10 in 1980 to 1 in 2017.

### 9.(B) APPLICATION BUDGET

This section is worth up to 25 points. Points will be awarded based on verifiable information only.

For the table, please complete the shaded boxes. The unshaded boxes will populate automatically. If you are unable to use the formulas in the table, use the following formulas to calculate the percentages: i) 65 percent of total project cost is calculated by multiplying the total project cost by .65, ii) 35 percent of total project cost is calculated by multiplying the total project cost by .35. The total grant amount cannot exceed the lesser of 35 percent of total project costs, or \$1,500,000. If federal funds are involved in the project, please see number 4 below.

| GETWIREDALABAMA PROJECT COST              | Amount      |
|---|-------------|
| DALLAS                                    | \$4,813,029 |
| Total Project Cost                        |             |
| 65% of Total Project Cost (Minimum Match) | \$3,369,120 |
| 35% of Total Project Cost (Grant Maximum) | \$1,443,909 |
| <b>Total Grant Requested</b>              | \$4,813,029 |

Please complete the project budget sections below. Any additional documentation can be included in an attachment file titled Attachment B, Project Budget.

B.(1) Itemize eligible project expenses. Generally, eligible expenses will be limited to construction and construction related costs of broadband infrastructure. Operating expenses will not be eligible expenses. Any additional expenses associated with the project, but not part of the grant budget, should be included.

| Dallas             |             |                |                |
|--------------------|-------------|----------------|----------------|
| Budget Item        | Total Cost  | Grant          | Match          |
| Engineering        | \$142,750   | \$49,962.50    | \$92,787.50    |
| Materials          | \$50,254    | \$17,588.80    | \$32,664.92    |
| Labor              | \$210,000   | \$73,500.00    | \$136,500.00   |
| Construction       | \$335,025   | \$117,258.68   | \$217,766.12   |
| Other-Towers+Fiber | \$4,075,000 | \$1,222,500.00 | \$2,852,500.00 |
| <b>Total</b>       | \$4,813,029 | \$1,480,809.98 | \$3,332,218.54 |



**B. (2) A discussion of the applicant's necessary financial resources to:**

- a. Sustain service to the project area (business model); and
- b. Provide adequate project financing (additional documentation may be requested by ADECA).

We have entered into engagement letters, term sheets, commitment letters, and other forms of debt and equity financing that will supplement and fulfill all of the 65% of the grant request. All of our items are included in the exhibits to this grant proposal and are summarized below. Our business model entails subscription fees, interconnect fees for commercial phone carriers, commercial subscription fees, follow-on grants from US agencies, shared revenues from Telehealth and Distance Learning, smart city connections, and more. Dallas is one of four projects that will be in Phase I and of which is highlighted in this grant request.

**Citibank**

We signed an engagement agreement with Citibank to finance the larger network build with up to \$120,000,000 in senior debt. We include some excerpts from the presentations they made to us as an Exhibit B to the grant request. The engagement agreement will be renewed to reflect these items in our projects and the region.

**Goldman Sachs**

Goldman Sachs has conducted advanced due diligence on the project and our firm and discussed the issuance of a debt and equity tranche. Please see their letter of support in Exhibit B. We have discussed with Goldman Sachs to inject a minimum of \$50 million in equity and also to be a unitranche (debt and equity) supplier of capital.

**Arctaris Impact Partners, LLC**

Arctaris has signed a term sheet to inject up to conditional \$50,000,000 in equity and debt over three years. We have completed substantially all of their due diligence and

will create a drawdown schedule in part related to the grant activities here. An excerpt from the term sheet is included in Exhibit B along with a short form commitment letter for Phase I for the first \$5MM which can cover all 65% of the four projects..

### **Adtran**

Adtran has joined a strategic execution partner. Please see examples of their support as attached in Exhibit B. They will be an execution teaming partner into the project and join with us on this application and also in future federal applications that may result in low cost federal loans or grants.

### **AI First Alabama**

This entity has issues a Letter Of Intent for investing \$25 million. Please see the LOI in the exhibits.

**A discussion of any partners or subcontractors associated with the project's deliverables including but not limited to adoption, deployment, and service delivery. Please describe each party's role in the project.**

We have a solid prime and subcontractor list of persons, institutions, and entities we have engaged with. In Part, these are financings firms, contractors, builders, installers, and execution partners. A brief summary is included below and also the MWBEs are included in the response to question 7 on DBEs above and in the exhibits. Since we include a number of letters, excerpts, and data in the Exhibits, we only include the names of firms here and a brief discussion of their roles.

Citibank: Signed engagement to be renewed for the private placement of senior debt.

Operator: Proposal from Fujitsu operations after the network is established.

Technology architecture: FTTH with Fixed wireless from RADWIN products which include TV White Space, LTE, and other radios for underserved areas economically difficult to serve.

Towers & Fiber Construction- Vertical Bridge.

Revenue Discovery Systems-Billing and Collections for Network Operations

RADWIN-Fixed Wireless solutions provider

Adtran-FTTH, Gpon, and other fiber connectivity devices and equipment.

**B.(4) A discussion of any federal funds associated with the project. Please explain if the following provisions apply to your project.**

- a) Projects to serve unserved areas in which the grant applicant is either or both: (i) an existing or future service provider which has or will receive support through federal universal service funding programs designed specifically to encourage broadband deployment in an area without broadband access; or (ii) an existing or future service provider which has or will receive other forms of federal or state financial support or assistance, such as a grant or loan from the United States Department of Agriculture.**

We do not have grants funds planned for as an integrated part of the four projects. We reserve the right to use United States Treasury Bond Guarantee Program funds, New Market Tax Credit Funds, USDA connect, and FCC Rural Digital Opportunity Funds together with our banks and equity investor partners.

- b) Any award of state funds under this act, when combined with other forms of state or federal support or assistance dedicated to the project, other than interest—bearing loans, may not exceed 60 percent of the total project costs.**

We acknowledge this requirement. Our private partners will fund the other cost beyond the \$1.5 million/35% capital injections but our budgets herein for Dallas will not exceed the statutory limits.

C. Other Program Priorities

**Please answer each of the following questions either “yes” or “no.” For each “yes” answer, please provide a brief narrative and any supporting documentation in an attachment labeled Attachment C, Other Program Priorities. Any claims that cannot be verified will receive zero points in our scoring system. “No” answers will receive zero points in our scoring system. “Yes” answers (that can be verified) will receive up to 10 points.**

|  |  |                                |  |
|--|--|--------------------------------|--|
| Does this project seek to leverage grant funds through private investment? | YES<br><input checked="" type="checkbox"/> | NO<br><input type="checkbox"/> | If yes, include an explanation and documentation in a file titled Attachment C |
|--|--|--------------------------------|--|

|   |  |                                |  |
|---|--|--------------------------------|--|
| Will this project be an extension of existing infrastructure? | YES<br><input checked="" type="checkbox"/> | NO<br><input type="checkbox"/> | If yes, include an explanation and documentation in a file titled Attachment C |
|---|--|--------------------------------|--|

|  |  |                                |  |
|--|--|--------------------------------|--|
| Does this project serve locations with demonstrated community support? | YES<br><input checked="" type="checkbox"/> | NO<br><input type="checkbox"/> | If yes, include an explanation and documentation in a file titled Attachment C |
|--|--|--------------------------------|--|

|   |  |                                |  |
|---|--|--------------------------------|--|
| Will this project serve the highest number of unserved homes, businesses, and community anchor points for the least cost? | YES<br><input checked="" type="checkbox"/> | NO<br><input type="checkbox"/> | If yes, include an explanation and documentation in a file titled Attachment C |
|---|--|--------------------------------|--|

|   |                                     |                          |  |
|---|-------------------------------------|--------------------------|--|
|   | YES                                 | NO                       |  |
| Does this project emphasize the highest broadband speeds? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | If yes, include an explanation and documentation in a file titled Attachment C |

|  |  |                                |  |
|--|--|--------------------------------|--|
| Will this project provide material broadband enhancements to hospitals located in rural areas? | YES<br><input checked="" type="checkbox"/> | NO<br><input type="checkbox"/> | If yes, include an explanation and documentation in a file titled Attachment C |
|--|--|--------------------------------|--|

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?

YES ☒ NO ☐

If yes, include an explanation and documentation in a file titled Attachment C


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?

YES ☐ NO ☒

If yes, include an explanation and documentation in a file titled Attachment C

#### D. Certifications

1. The applicant certifies that it is a non-governmental entity.
2. The applicant certifies 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. The applicant certifies 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. The applicant 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. The applicant 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 |                   |
| Signature of Applicant:<br>   | Date:<br>12/29/19 |
| Title of Applicant: C. Peek, CEO   |                   |



**Exhibit A**  
**Project Description**

**RADWIN Proposal Summary**

**Preliminary Engineering Evaluation-Civil**

**Preliminary Engineering Evaluation-Wireless**

**RF Opinion**

**List of Community Anchors**

**Certifications of MBEs and DBEs.**

**4 Tech Media, LLC-CBRS Radio Access**

**KMZ Files**

**Exhibit B**  
**Project Budget**

**Budget Summaries (Upon request, we can provide line by line summaries)**

**Cost of Easements and Right of Way**

**Citibank Deck**

**Documentation of Private Investment-**

**Goldman Sachs**

**A1AL**

**Arctaris Termsheet or CL**

**Adtran Letter**

**Vertical Bridge**



**Exhibit C**  
**Other Priority Areas**

**HBCU Minority Broadband Initiative-Colleges and Universities**

**Extension of Existing Infrastructure**

**Selma Fiber Grid Map**

**Macon County poles, structures, bridges, etc. (supplied on request)**

**Printout of files-Macon County Infrastructure assets**

**Community and Stakeholder Support**

**Community Anchor Institutions**

**The SCABC Regional Graphic**

**Marketing Plan with governments-Supplied on request**

**Analysis of highest impact for least cost-See narratives and technology discussion**

**Plan for Community Connect and Centers and Libraries-In narratives-(Regional Impact)**