

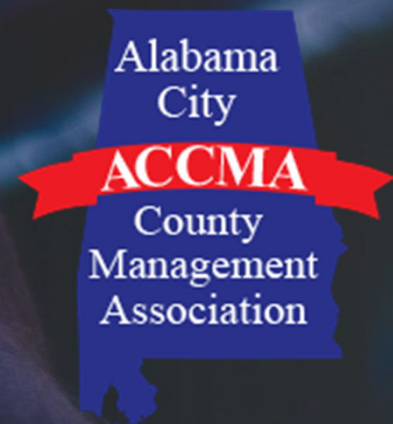


# BROADBAND EXPANSION

## THE BENEFIT OF COMMUNITY

### TEAMWORK

ACCMA Winter Conference  
January 28, 2021

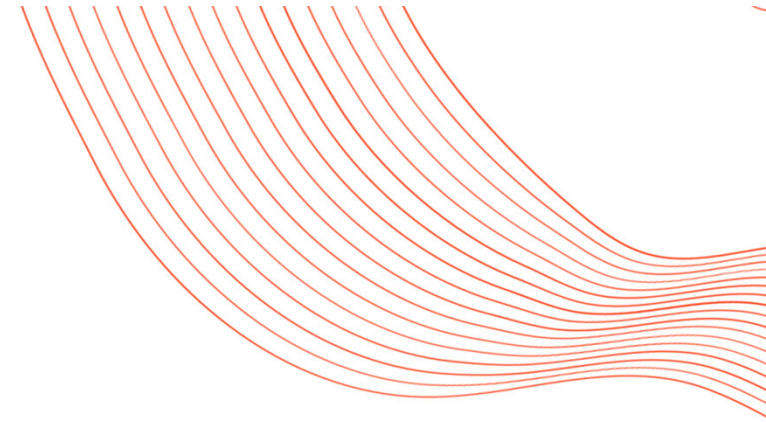


# AGENDA



- Welcome – Elmore County Chief Operations Officer  
Richie Beyer
  - Background Information
  - Broadband Study
  - Partnerships
- Jim Meads, President/CEO, Sain Associates
  - Feasibility Study
  - Project Implementation Plan
  - Education Hotspots
- Tom Stackhouse, President/CEO, CAEC and Central Access
  - CAEC Overview
  - Emergence of Central Access
  - Serving the Community with Broadband
- Closing and Q&A – Panel

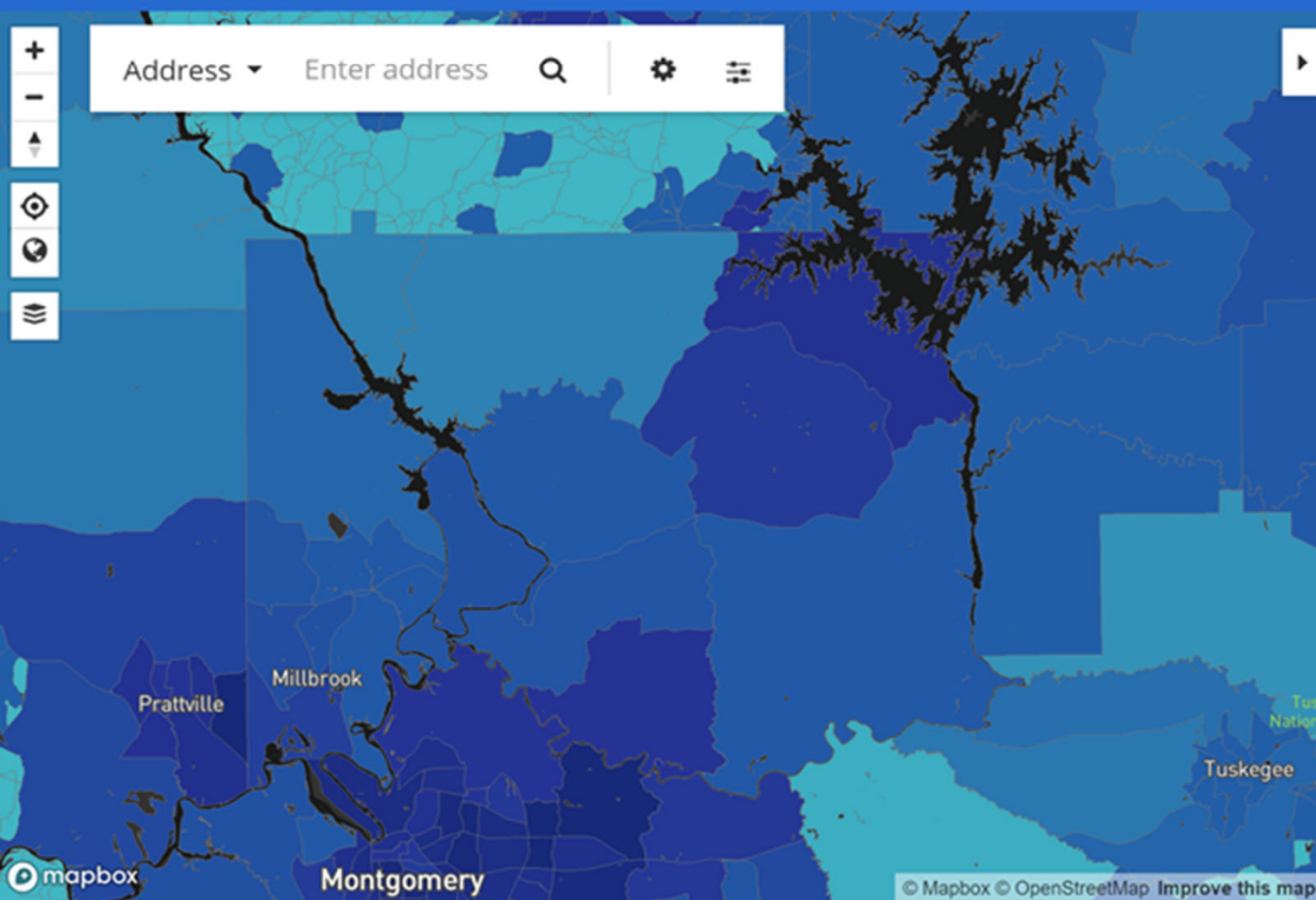
# BROADBAND ACCESSIBILITY



How important is broadband  
to your business?  
It's important  
667089:0448  
z uehfkkgC hq ruhfrlrj



*“Access to broadband is as important as roadway infrastructure. We see access to broadband as a major component of our economic development planning for Elmore County.”*



**All Providers Reporting Service** ⓘ

**Number of Fixed Residential Broadband Providers**

0 1 2 3 4 6 12 or more

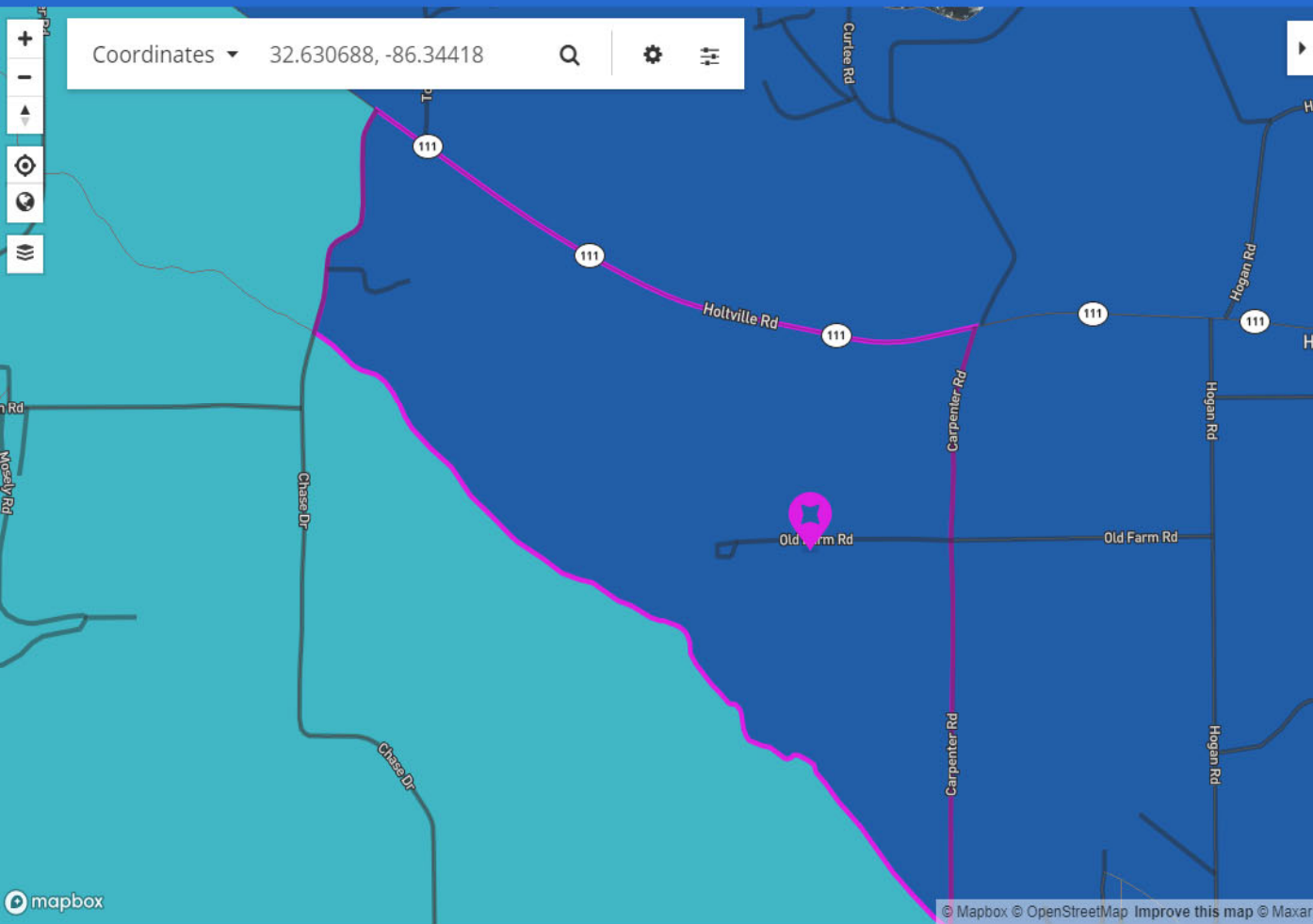
**Broadband** ⚙️

**Technology** ADSL, Cable, Fiber, Fixed Wireless, Satellite

**Speed** ≥ 25/3 Mbps

**Date** June 2019 (latest public release)

Please click on the map or search for a location.



**All Providers Reporting Service**

Census block ID: 010510301004000

**Number of Fixed Residential Broadband Providers**

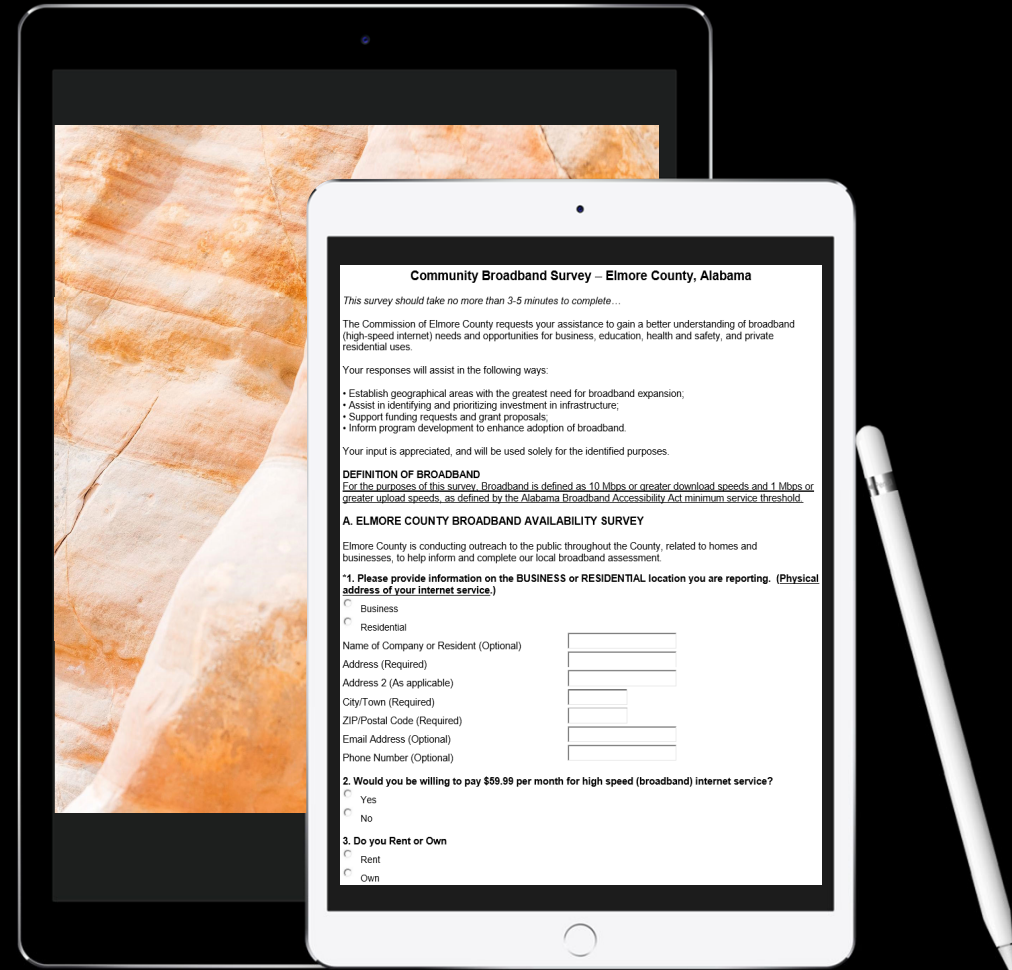
**Broadband**

**Technology** ADSL, Cable, Fiber, Fixed Wireless, Satellite, Other  
**Speed** ≥ 25/3 Mbps  
**Date** June 2019 (latest public release)

Provider	Tech	Down (Mbps)	Up (Mbps)
<a href="#">Charter Communications</a>	Cable	940	35
<a href="#">ViaSat, Inc.</a>	Satellite	100	3
<a href="#">Hughes Network Systems, LLC</a>	Satellite	25	3
<a href="#">AT&amp;T Inc.</a>	ADSL	18	0.768
<a href="#">AT&amp;T Inc.</a>	ADSL	6	0.512
<a href="#">VSAT Systems, LLC</a>	Satellite	2	1.3

# COMMUNITY BROADBAND SURVEY

- Survey asked about the following:
  - Address
  - Level of Service Feedback
  - Internet Speed Test for Each Location
  - Broadband Availability
- In addition to the survey, we obtained GIS data from the revenue commissioner's office and the Board of Education.



**Community Broadband Survey – Elmore County, Alabama**

*This survey should take no more than 3-5 minutes to complete...*

The Commission of Elmore County requests your assistance to gain a better understanding of broadband (high-speed internet) needs and opportunities for business, education, health and safety, and private residential uses.

Your responses will assist in the following ways:

- Establish geographical areas with the greatest need for broadband expansion;
- Assist in identifying and prioritizing investment in infrastructure;
- Support funding requests and grant proposals;
- Inform program development to enhance adoption of broadband.

Your input is appreciated, and will be used solely for the identified purposes.

**DEFINITION OF BROADBAND**  
For the purposes of this survey, Broadband is defined as 10 Mbps or greater download speeds and 1 Mbps or greater upload speeds, as defined by the Alabama Broadband Accessibility Act minimum service threshold.

**A. ELMORE COUNTY BROADBAND AVAILABILITY SURVEY**

Elmore County is conducting outreach to the public throughout the County, related to homes and businesses, to help inform and complete our local broadband assessment.

**\*1. Please provide information on the BUSINESS or RESIDENTIAL location you are reporting. (Physical address of your internet service.)**

Business

Residential

Name of Company or Resident (Optional)

Address (Required)

Address 2 (As applicable)

City/Town (Required)

ZIP/Postal Code (Required)

Email Address (Optional)

Phone Number (Optional)

**2. Would you be willing to pay \$59.99 per month for high speed (broadband) internet service?**

Yes

No

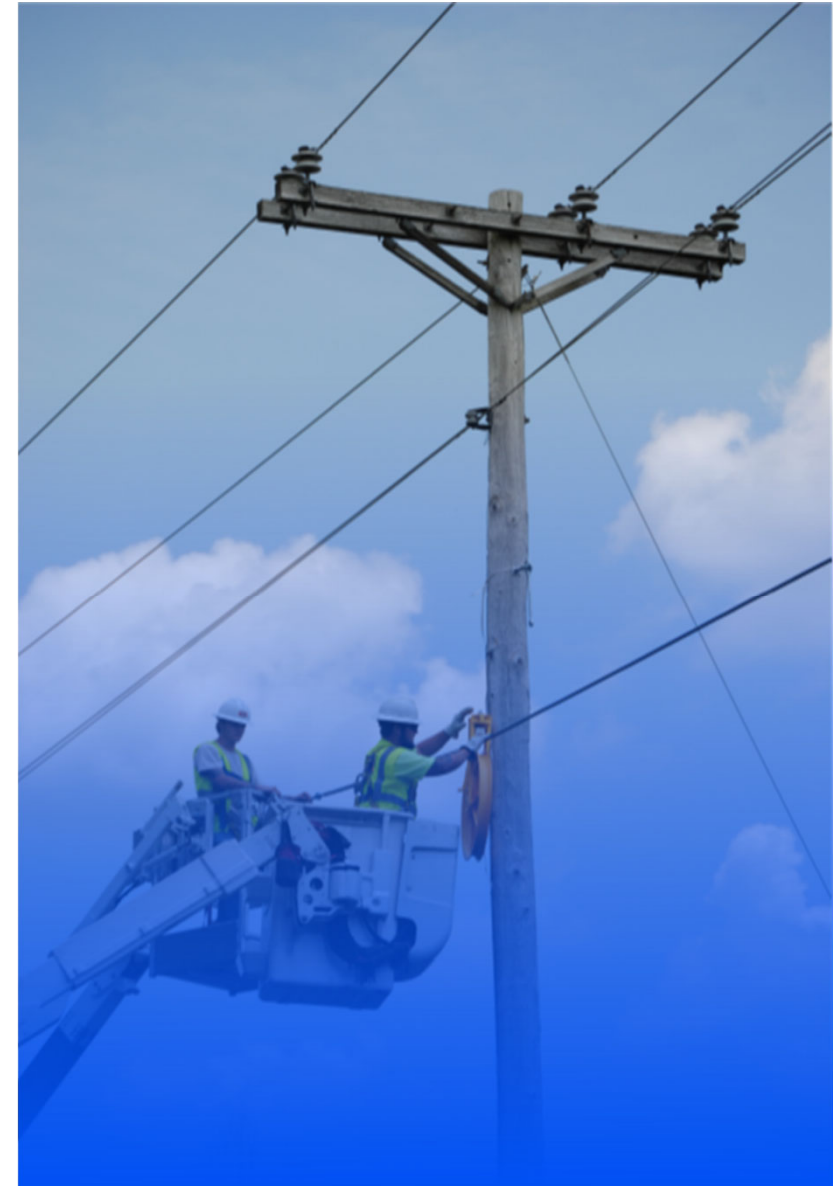
**3. Do you Rent or Own**

Rent

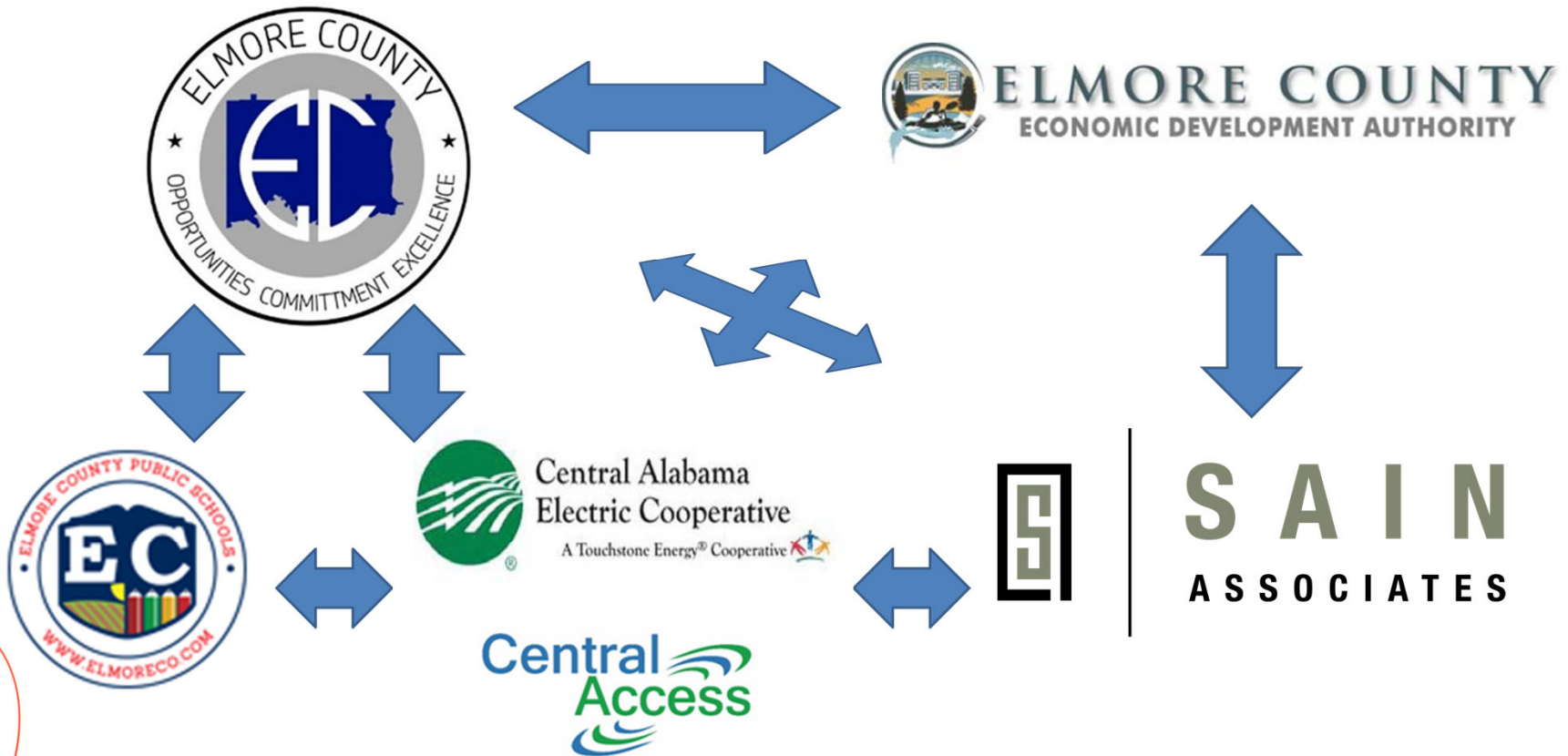
Own

# EXPANDING BROADBAND SERVICE

- Central Alabama Electric Cooperative (CAEC) recently formed Central Access to provide broadband service.
- Initial project plans included installing a fiber ring connecting the substations and offices and using the data from our Broadband Accessibility Study.
- To pinpoint the proper location of hotspots, the Board of Education provided bus route information showing students' population density along the routes throughout the county.



# PARTNERSHIPS



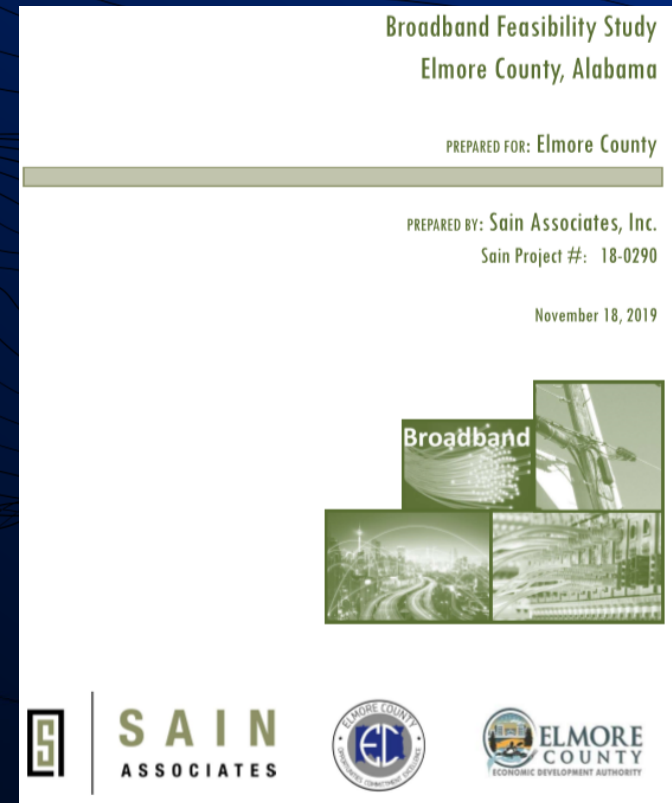


# FEASIBILITY STUDY

Community Broadband Survey data was given to Sain Associates, and they created a Broadband Feasibility Study.

## Objectives of the Study:

1. Define clear broadband coverage goals and benchmarks.
2. Document existing broadband infrastructure and coverage areas.
3. Develop a plan for addressing gaps in broadband service.
4. Develop short and long-term recommendations.
5. Compile information needed to apply for grant and/or other funding.

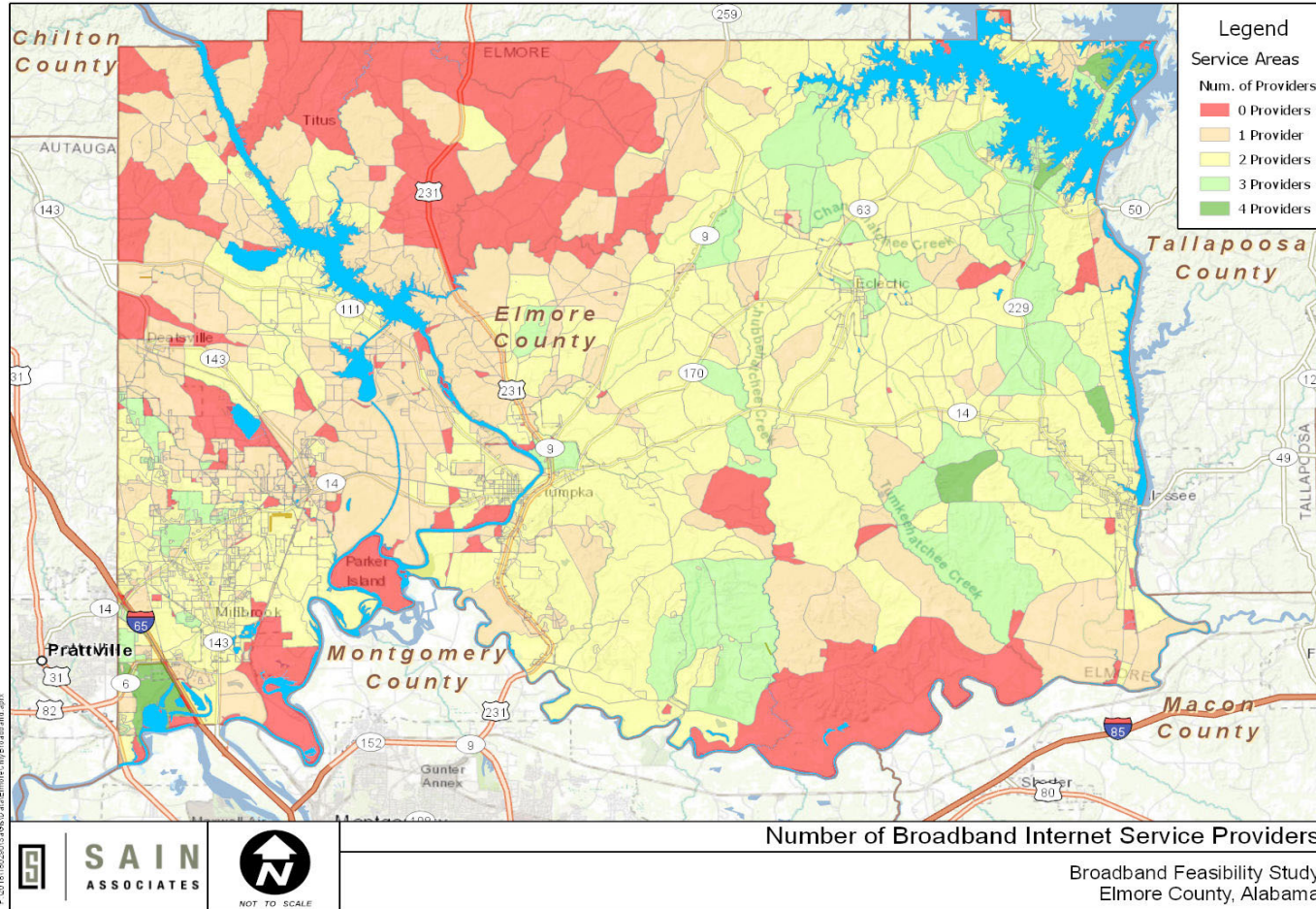


# PLANNING FUNDING

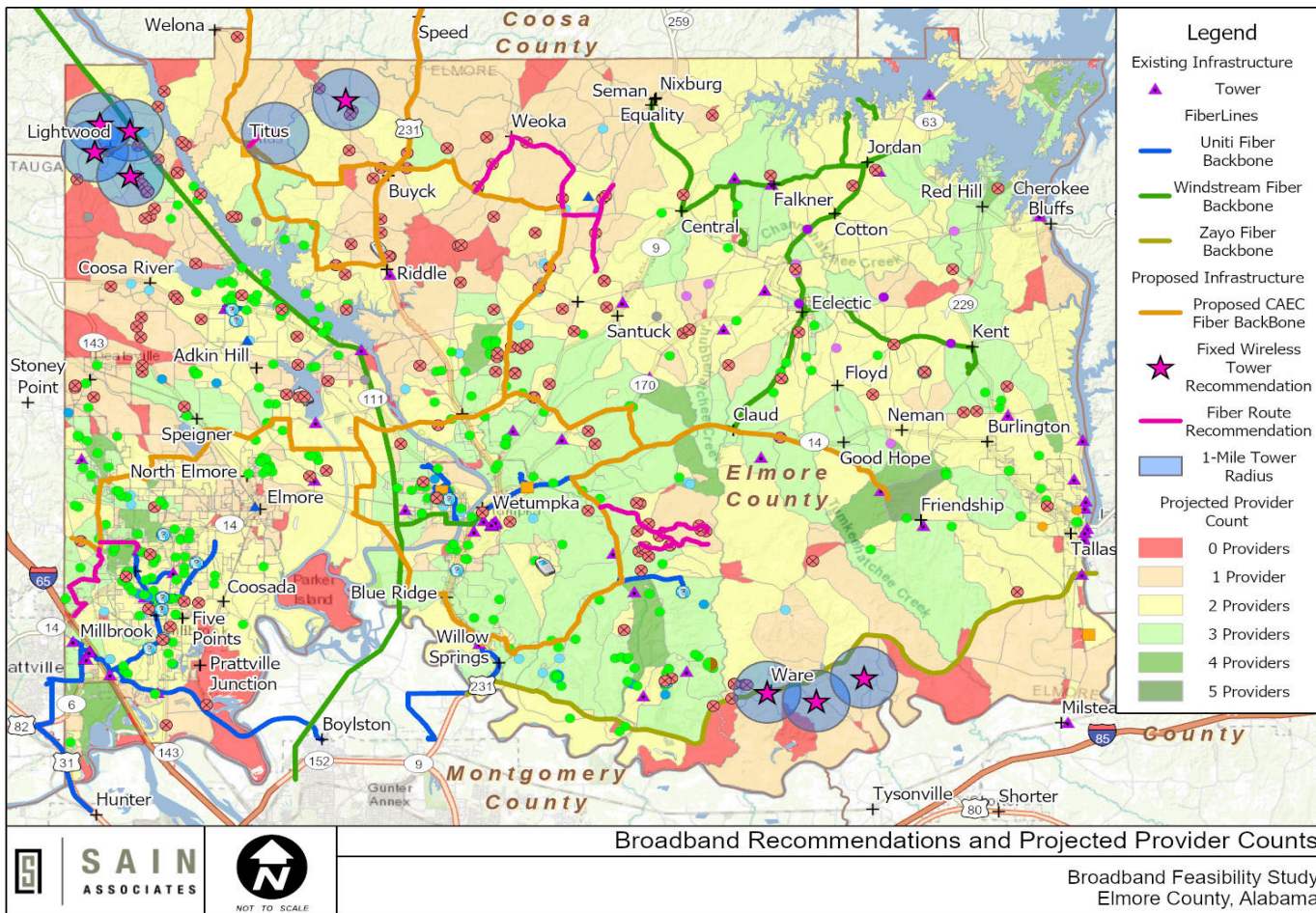
- Economic Development Authority
- Contribution by County and City organizations in a collaboration
- Grant funded through a Regional Planning Organization



# ORIGINAL MAP OF BROADBAND SERVICE PROVIDERS



# RECOMMENDATIONS/PROJECTED PROVIDER COUNTS



# STATISTICAL PROJECTIONS IN SERVICE

Area of Coverage	Current	5-Year Projection
0 Providers	17.4%	5.8%
1 Provider	25.6%	24.5%
2 or more Providers	51.6%	64.3%
Lakes and Rivers	5.4%	5.4%

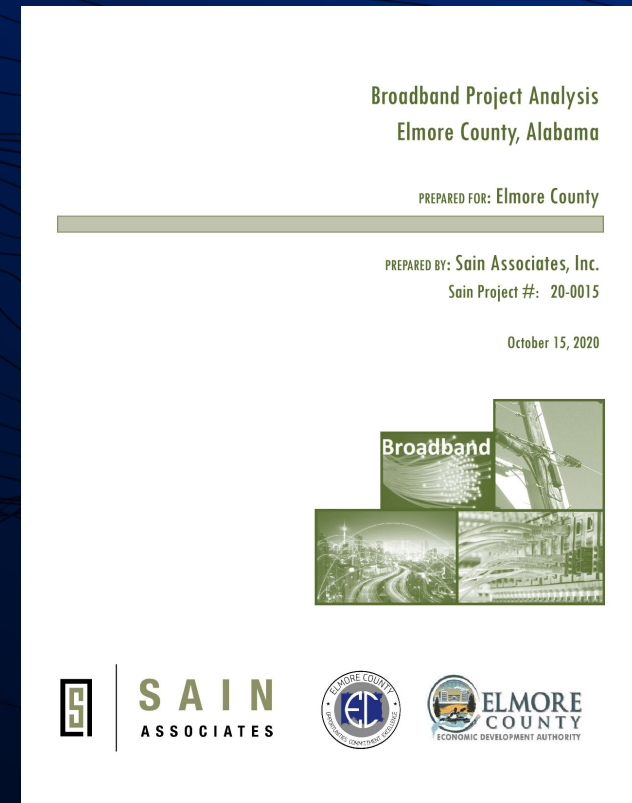


# PROJECT IMPLEMENTATION ANALYSIS

Based on the Broadband Feasibility Study, potential projects were analyzed with cost estimated and prioritized into an implementation plan that would meet the County goals and objectives.

## Objectives of the Study:

1. Determine parameters for analysis.
2. Develop detailed project areas.
3. Develop budgetary cost estimates.
4. Prioritize into a 5-year implementation plan.

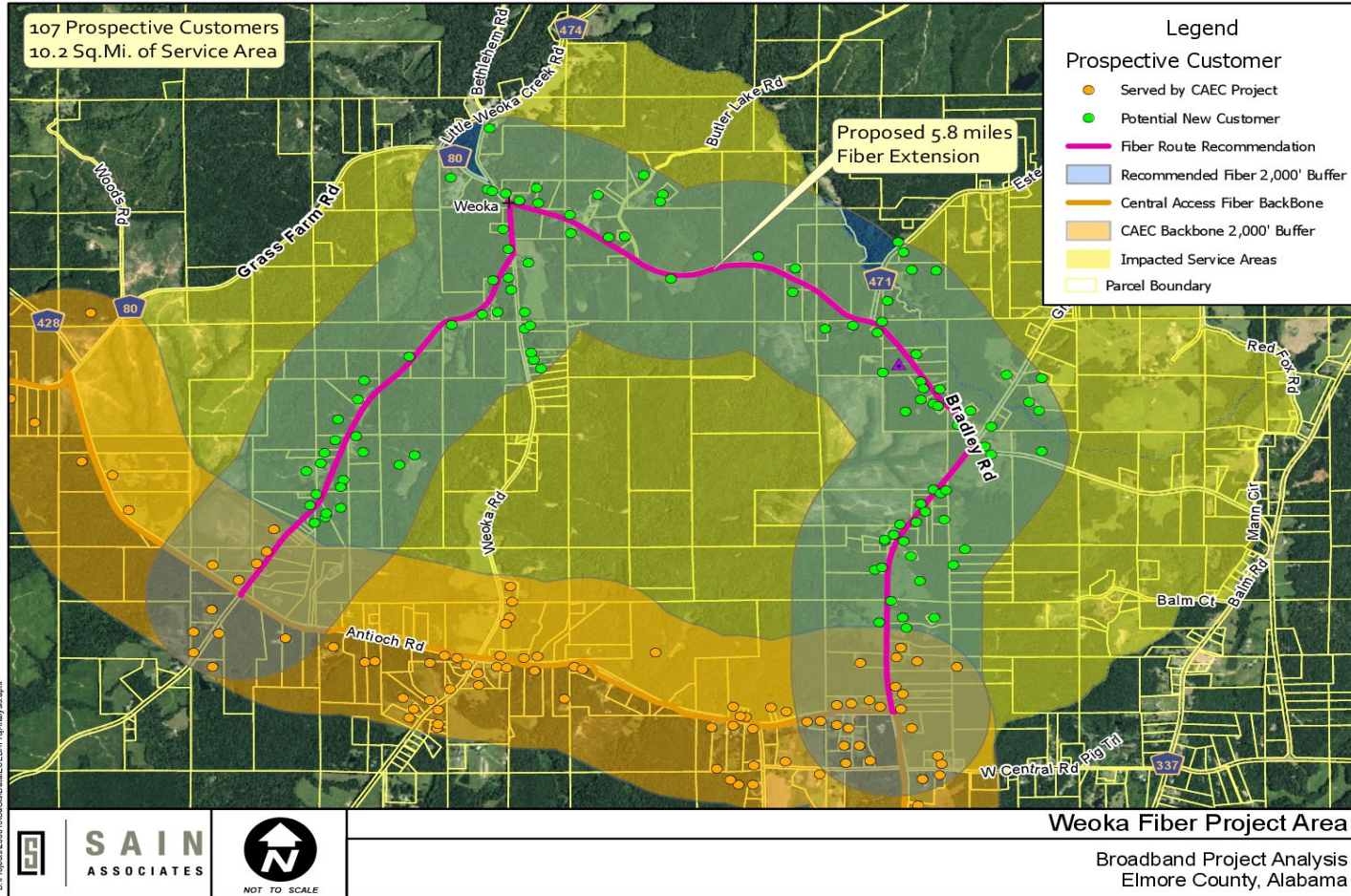


# PARAMETERS FOR ANALYSIS

- Number of potential customers
- Type of potential customer (residential vs. commercial)
- Number of potential school students to be served
- Amount of unserved or underserved area addressed by the project
- Total cost of the project
- Cost per potential customer

Project Name	Fiber Source	All Potential New Customers	Students in Proposed Service Area	Unserved Area Mitigated (sq.mi.)	Under-Served Area Mitigated (sq.mi.)	Service Area Coverage (sq.mi.)	Population Density per Sq. Mi.	Miles of Fiber	Cost of Fiber	Equip. for Existing Tower	Cost of Equipment	New Fixed Wireless Towers	Cost of New Tower	Construction Cost Estimate	Tie-On Cost 100% Opt-In	Total Cost at 100% Opt-In	Cost per Potential Customer
Atkin Hill Fiber	CA	430	252	0.4	6.1	9.8	216.8	9.7	\$ 509,250.00	0	\$ -	0	\$ -	\$ 509,250.00	\$ 2,150,000.00	\$ 2,659,250.00	\$ 6,184.30
Weoka FW***	CA	290	137	21.4	14.9	37.6	26.8	0.0	\$ -	2	\$ 65,000.00	1	\$ 207,500.00	\$ 272,500.00	\$ 362,500.00	\$ 635,000.00	\$ 2,189.66
Deatsville FW	UN	290	571	3.2	10.3	13.5	59.6	0.0	\$ -	1	\$ 32,500.00	1	\$ 207,500.00	\$ 240,000.00	\$ 362,500.00	\$ 602,500.00	\$ 2,077.59
Atkin Hill FW	CA	185	401	0.3	5.7	8.9	188.7	1.0	\$ 52,500.00	1	\$ 32,500.00	0	\$ -	\$ 85,000.00	\$ 231,250.00	\$ 316,250.00	\$ 1,709.46
Lightwood FW**	UN or CA	274	103	5.3	7.0	13.5	58.9	0.0	\$ -	0	\$ -	1	\$ 207,500.00	\$ 207,500.00	\$ 342,500.00	\$ 550,000.00	\$ 2,007.30
Balm Rd Fiber	CA	136	34	1.8	4.8	10.3	78.3	4.1	\$ 215,250.00	0	\$ -	0	\$ -	\$ 215,250.00	\$ 680,000.00	\$ 895,250.00	\$ 6,582.72
Weoka FW*	CA	260	105	19.2	12.6	33.1	28.6	3.4	\$ 178,500.00	1	\$ 32,500.00	1	\$ 207,500.00	\$ 418,500.00	\$ 325,000.00	\$ 743,500.00	\$ 2,859.62
Coosa River FW	CA	228	117	12.0	13.4	25.4	26.0	3.2	\$ 168,000.00	1	\$ 32,500.00	1	\$ 207,500.00	\$ 408,000.00	\$ 285,000.00	\$ 693,000.00	\$ 3,039.47
Ware FW	CA	297	135	18.8	16.8	38.6	22.2	0.1	\$ 5,250.00	1	\$ 32,500.00	3	\$ 622,500.00	\$ 660,250.00	\$ 371,250.00	\$ 1,031,500.00	\$ 3,473.06
Jackson Lake FW	UN	192	220	3.3	2.5	6.5	82.3	0.0	\$ -	0	\$ -	1	\$ 207,500.00	\$ 207,500.00	\$ 240,000.00	\$ 447,500.00	\$ 2,330.73
Ware FW	ZA	290	98	18.8	14.6	36.4	22.7	0.1	\$ 5,250.00	0	\$ -	3	\$ 622,500.00	\$ 627,750.00	\$ 362,500.00	\$ 990,250.00	\$ 3,414.66
Riddle Fiber	CA	131	56	11.4	4.3	15.7	47.7	9.9	\$ 519,750.00	0	\$ -	0	\$ -	\$ 519,750.00	\$ 655,000.00	\$ 1,174,750.00	\$ 8,967.56
Redland Fiber	CA	131	48	3.3	1.2	8.4	82.5	5.7	\$ 299,250.00	0	\$ -	0	\$ -	\$ 299,250.00	\$ 655,000.00	\$ 954,250.00	\$ 7,284.35
Hwy 231 Fiber	CA	63	32	1.6	4.1	6.1	74.1	4.1	\$ 215,250.00	0	\$ -	0	\$ -	\$ 215,250.00	\$ 315,000.00	\$ 530,250.00	\$ 8,416.67
Weoka Fiber	CA	107	29	7.5	2.4	10.2	55.9	5.8	\$ 304,500.00	0	\$ -	0	\$ -	\$ 304,500.00	\$ 535,000.00	\$ 839,500.00	\$ 7,845.79
Titus FW***	CA	97	44	9.1	5.3	14.4	16.2	0.0	\$ -	1	\$ 32,500.00	1	\$ 207,500.00	\$ 240,000.00	\$ 121,250.00	\$ 361,250.00	\$ 3,724.23
Buyck Fiber	CA	44	24	3.2	0.8	4.0	53.3	4.5	\$ 236,250.00	0	\$ -	0	\$ -	\$ 236,250.00	\$ 220,000.00	\$ 456,250.00	\$ 10,369.32
Eclectic FW	WS	95	365	0.9	4.7	5.6	27.7	0.5	\$ 26,250.00	1	\$ 32,500.00	1	\$ 207,500.00	\$ 266,250.00	\$ 118,750.00	\$ 385,000.00	\$ 4,052.63
Tallassee FW	ZA	53	1	0.2	8.9	9.2	11.5	0.6	\$ 31,500.00	0	\$ -	1	\$ 207,500.00	\$ 239,000.00	\$ 66,250.00	\$ 305,250.00	\$ 5,759.43
Totals^		2732	1963	114.4	106.3	241.6		52.7		8		11					

# DETAILED PROJECT MAP





# PROJECT IMPLEMENTATION PLAN

Project Name	Estimated Construction Cost	Population Served	Annual Expenditure
<b>Year 1</b>		<b>2,931</b>	<b>\$869,400.00</b>
Atkin Hill (Fiber Option)	\$611,100.00		
Balm Road Fiber	\$258,300.00		
<b>Year 2</b>		<b>1,496</b>	<b>\$816,600.00</b>
Weoka Fixed Wireless (Option B)	\$327,000.00		
Coosa River Fixed Wireless	\$489,600.00		
<b>Year 3</b>		<b>2,032</b>	<b>\$896,100.00</b>
Deatsville Fixed Wireless	\$288,000.00		
Jackson Lake Fixed Wireless	\$249,000.00		
Redland Fiber	\$359,100.00		
<b>Year 4</b>		<b>855</b>	<b>\$792,300.00</b>
Ware Fixed Wireless (Option A)	\$792,300.00		
<b>Year 5</b>		<b>1,201</b>	<b>\$882,000.00</b>
Riddle Fiber	\$623,700.00		
Highway 231 Fiber	\$258,300.00		
<b>Total Project Implementation</b>		<b>8,515</b>	<b>\$4,256,400.00</b>



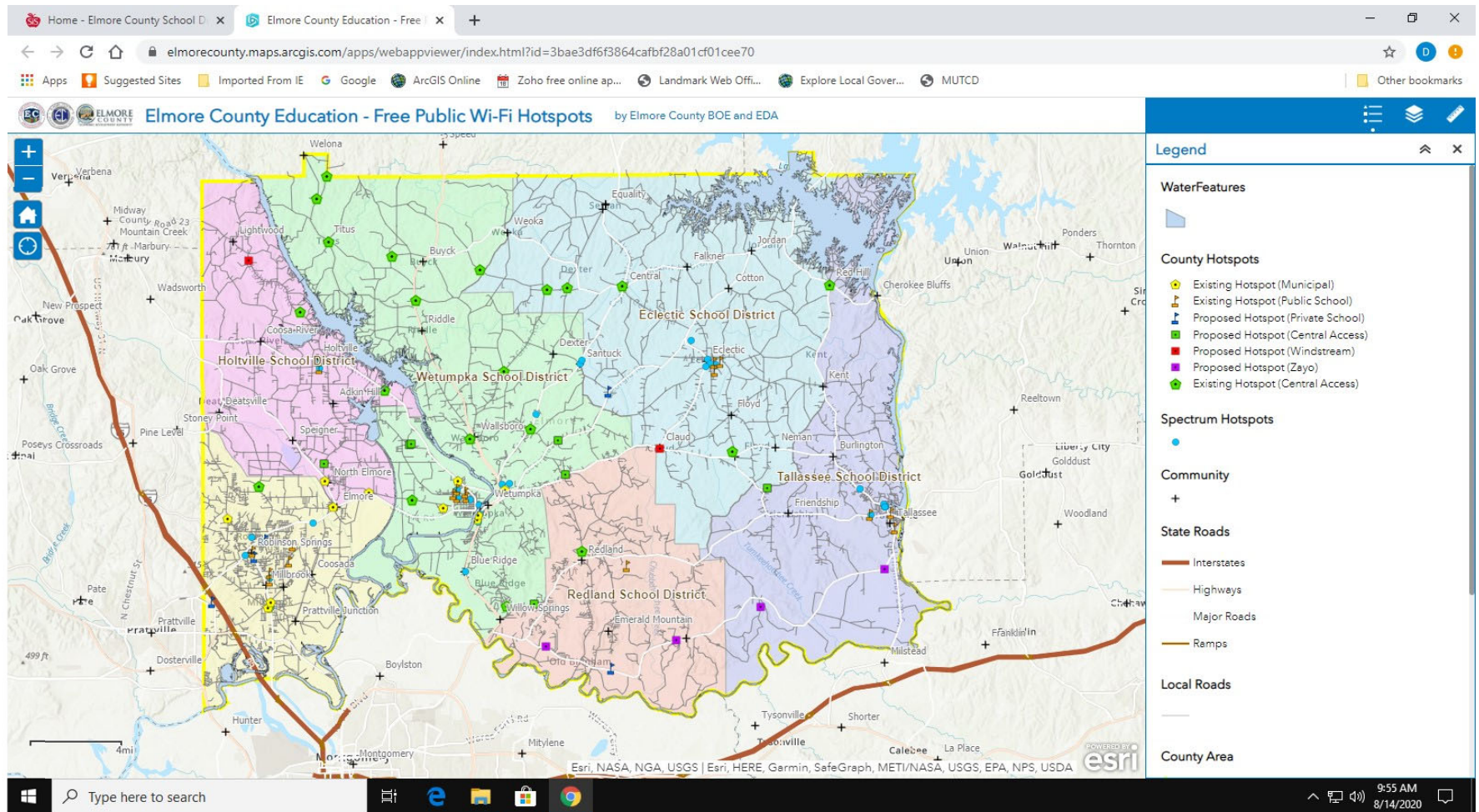
# EDUCATION HOTSPOTS

Immediate need for public broadband access for school students due to COVID-19 pandemic.

## Objectives of the Study:

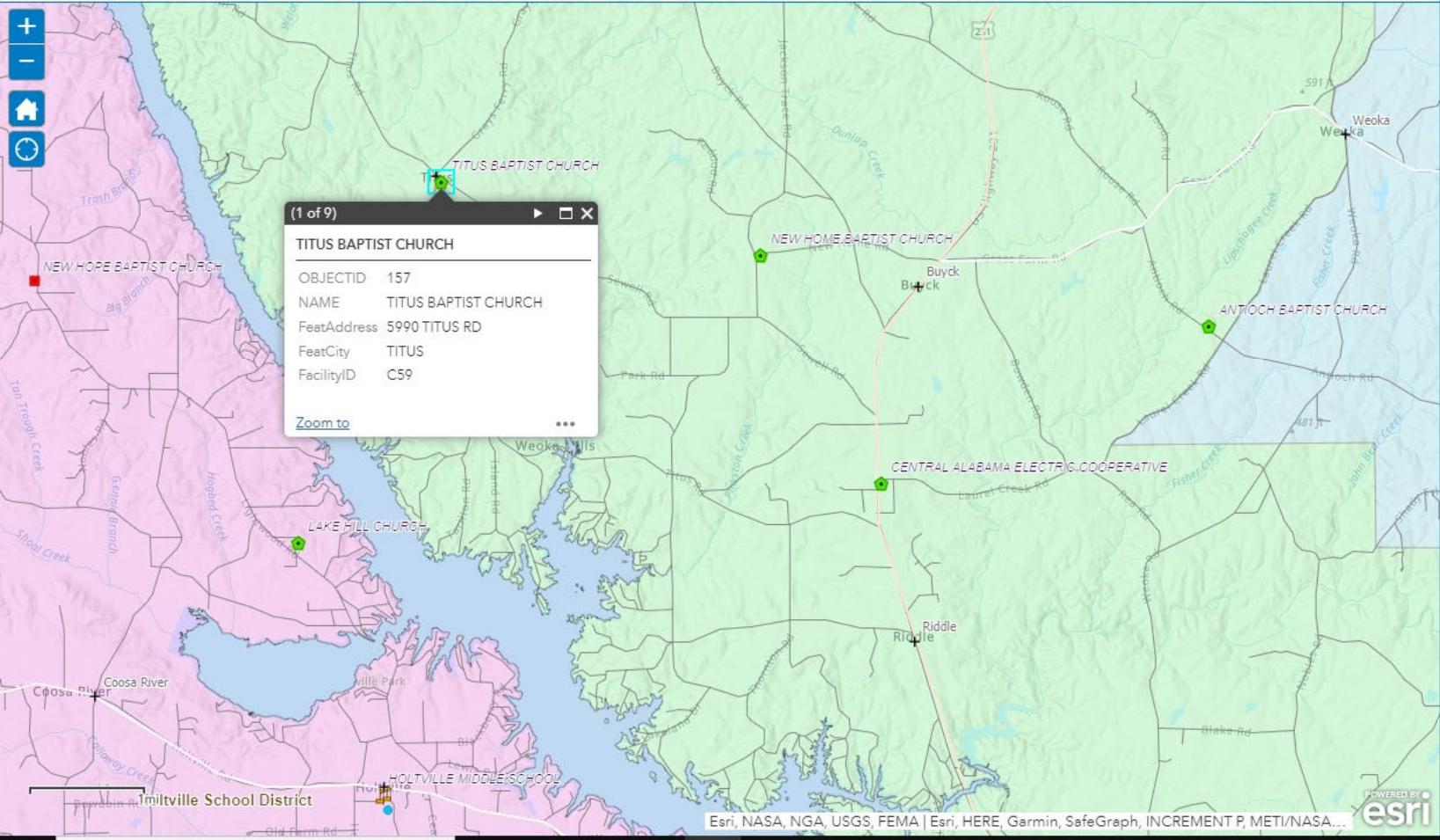
1. Identify concentrations of students in unserved and underserved areas.
2. Identify optimal hotspot locations in relation to new Central Access fiber and high student needs.
3. Develop public interactive map to help people locate the nearest hotspot.

# BOARD OF EDUCATION INTERACTIVE HOT SPOT MAP



# Elmore County Education - Free Public Wi-Fi Hotspots

by Elmore County BOE and EDA



### Legend

**WaterFeatures**

**County Hotspots**

- Existing Hotspot (Municipal)
- Existing Hotspot (Public School)
- Proposed Hotspot (Private School)
- Proposed Hotspot (Central Access)
- Proposed Hotspot (Windstream)
- Proposed Hotspot (Zayo)
- Existing Hotspot (Central Access)

**Spectrum Hotspots**

- 

**Community**

- +

**State Roads**

- Interstates
- Highways
- Major Roads
- Ramps

**Local Roads**

- 

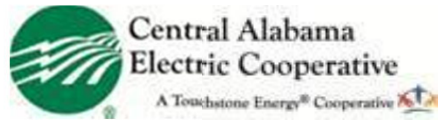
**County Area**

# ADDITIONAL BENEFITS

There were numerous unintended benefits resulting from the study and implementation of the education hotspots.

- Community access to broadband to the public at large at no cost
- The ability for the community to access telehealth/telemedicine services
- The ability for citizens to access unemployment filing and workforce development
- Provide broadband access to students for remote post-secondary schooling
- The ability for limited telework situations

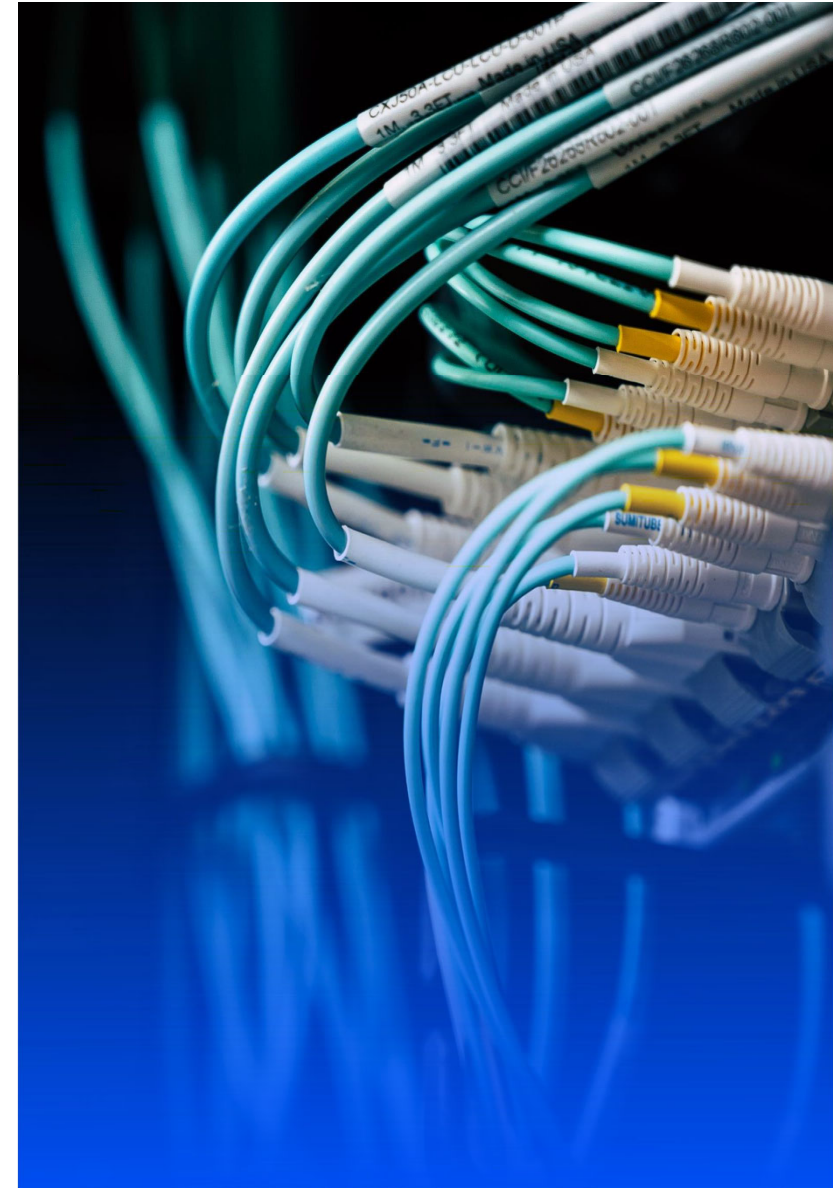
2021 ACCMA Winter Conference  
**Planning for the Future  
in the New Normal**



CENTRAL ALABAMA  
ELECTRIC COOPERATIVE &  
CENTRAL ACCESS

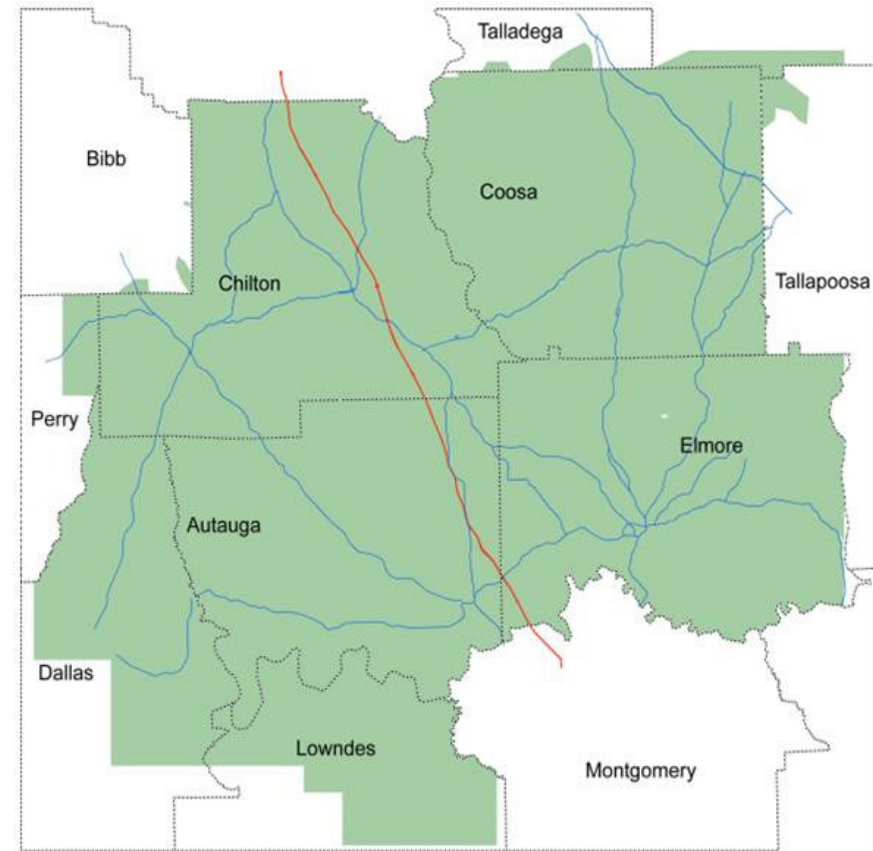
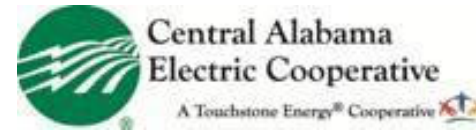
---

TOM STACKHOUSE,  
PRESIDENT/CEO



# CENTRAL ALABAMA ELECTRIC COOPERATIVE

- **\$300 million in Assets**
- **Serving in 10 counties**
- **45,000 services (100,000+ people)**
- **6,000+ miles of energized line**
- **5,000 square miles of area**
- **130 employees**





# RURAL ELECTRIFICATION

- Level the playing field for rural communities
- Quality of technology is a huge part
- Broadband driving people and business locations
- Will they stay and can they work remotely



# BUSINESS PLAN



## The Vision – Rural Connectivity

- Initially construct a 383-mile core ring to meet CAEC needs
- Explored feasibility to offer broadband to members
- Researched partnerships to provide service

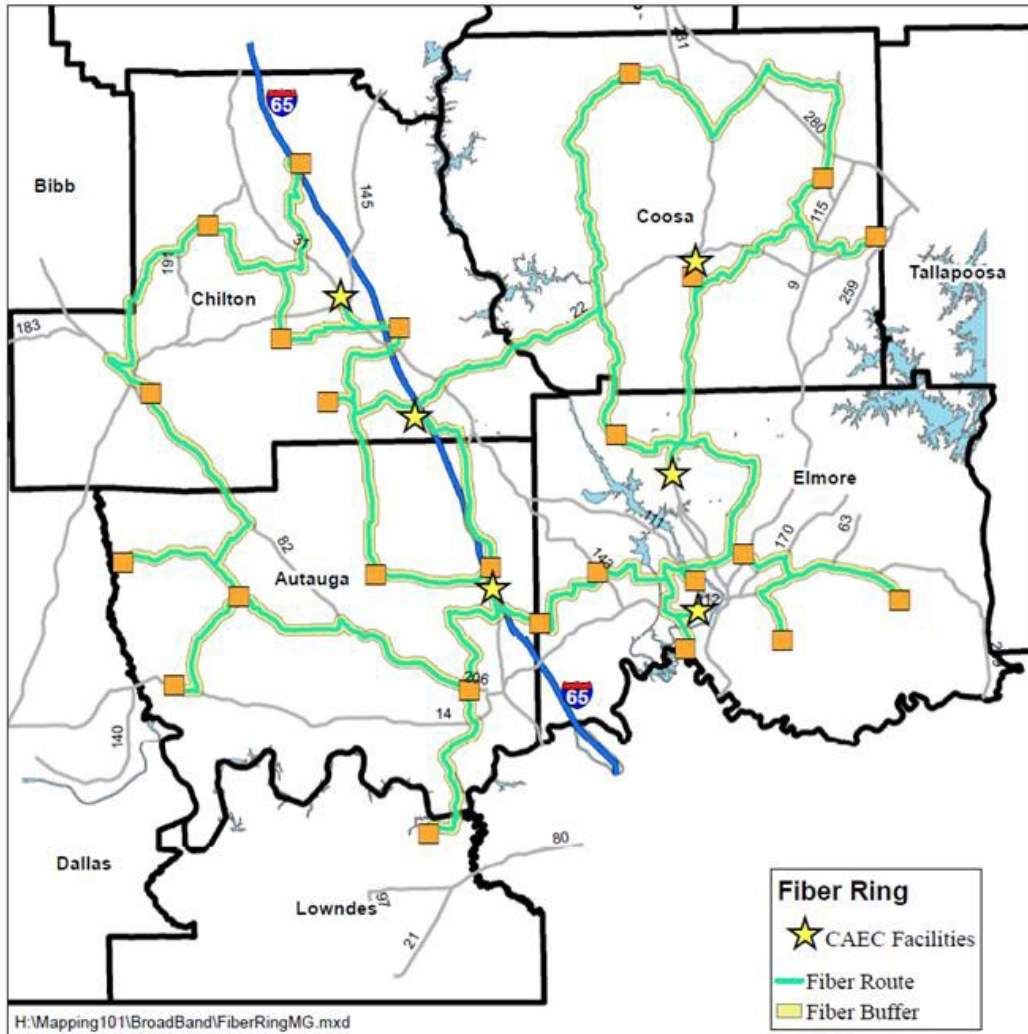


## The Result

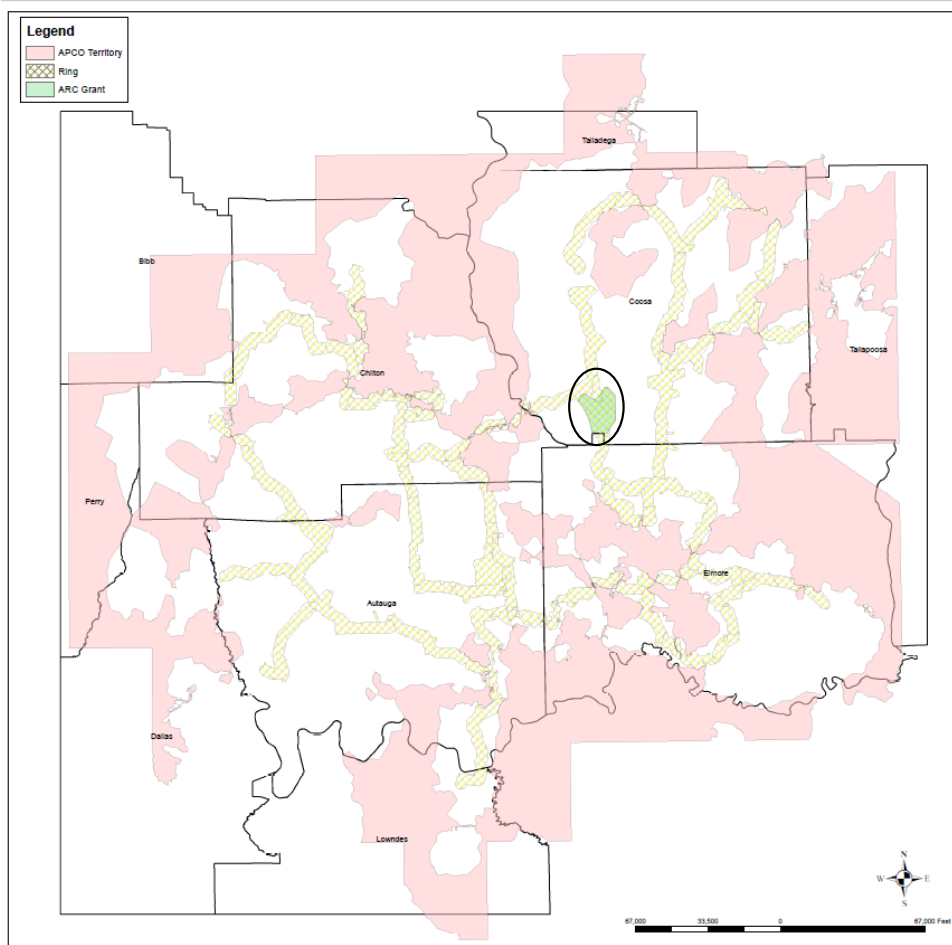
- CAEC created Central Access (CA) to offer broadband services
- CA leases fiber, workforce and management services from CAEC

# IMPLEMENTATION

- Construction of the core ring began in August of 2019.
- CAEC has continued to expand employee capacity and skills in order to lease the necessary workforce to operate Central Access.
- The CAEC reputation quickly branded Central Access as a reputable fiber provider.
- \$27.775 million in federal and state grants have been applied for and awarded.

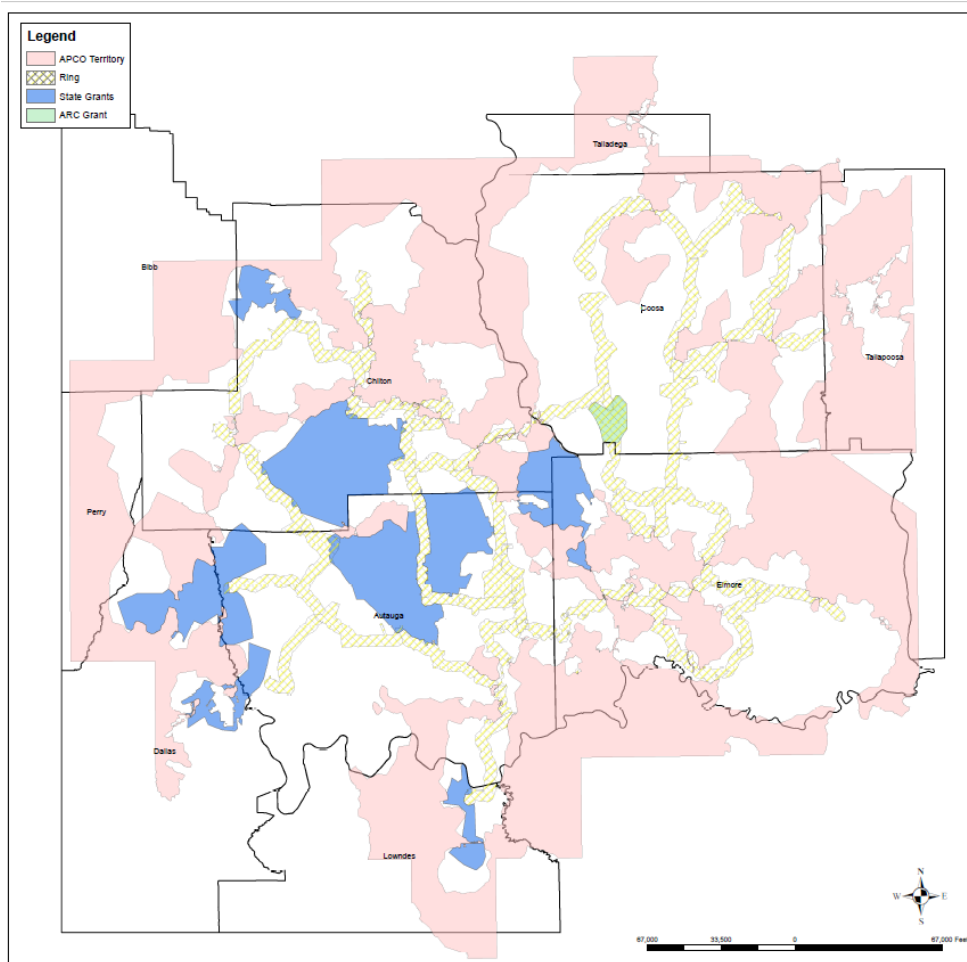


# CORE RING & CAEC FACILITIES



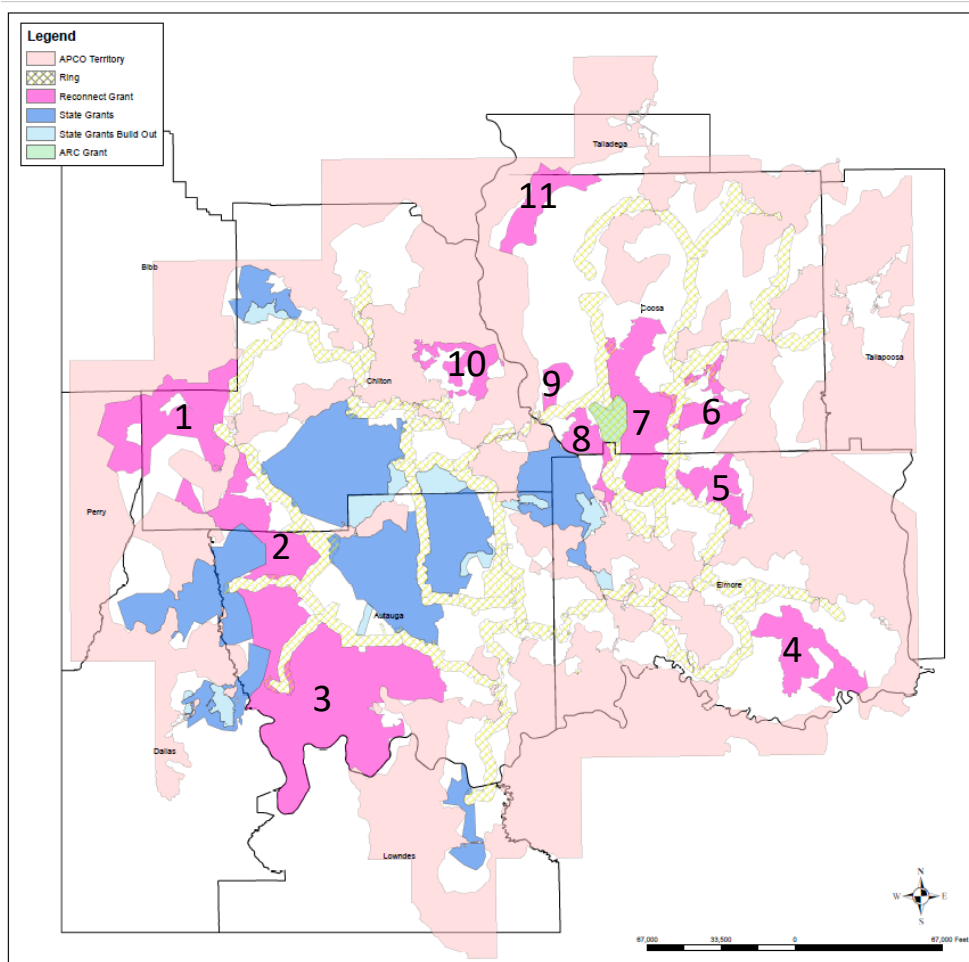
## FIRST GRANT

- Appalachian Regional Commission (ARC)
  - Federal Funding
  - Coosa County
  - \$324,362 total project
  - 69 households
  - One business



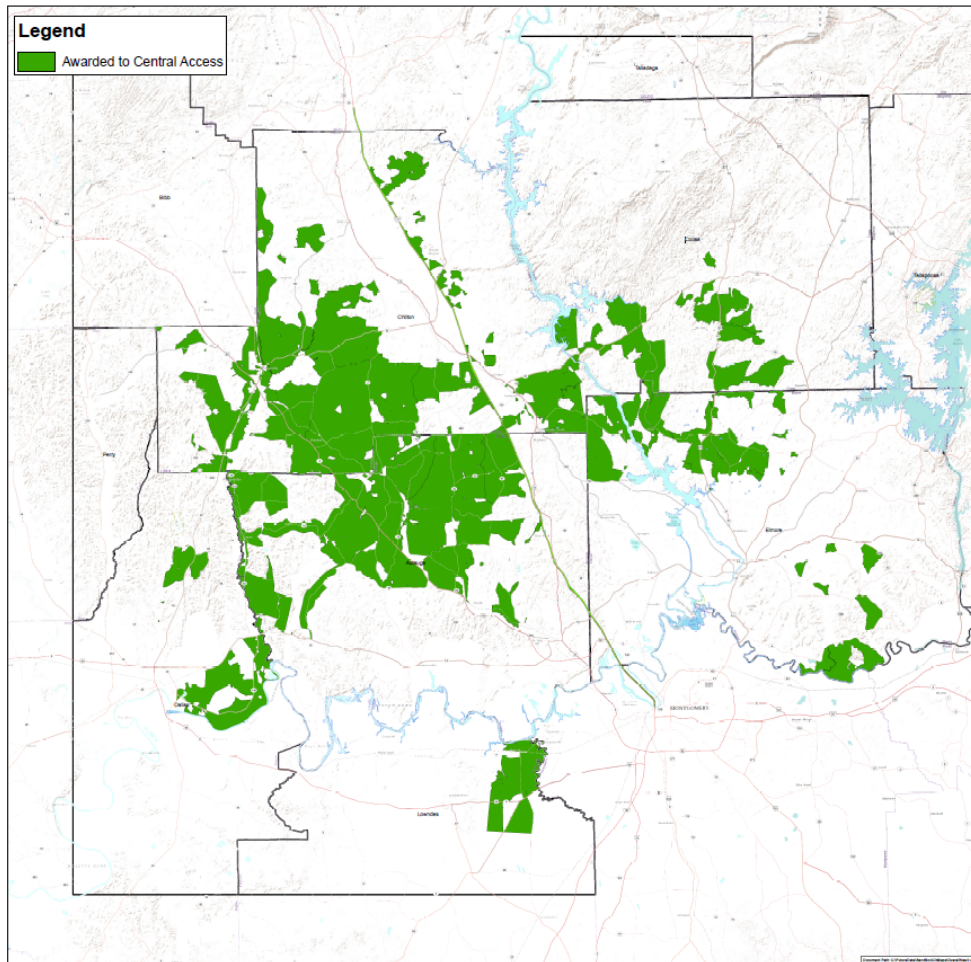
## SECOND SET OF GRANTS

- Alabama Department of Economic and Community Affairs (ADECA)
  - 8 separate grants
  - 35% funded (\$4.1 million)
  - Match - \$7.6 million
  - 4,545 households
  - 220 businesses
  - 41 community anchors



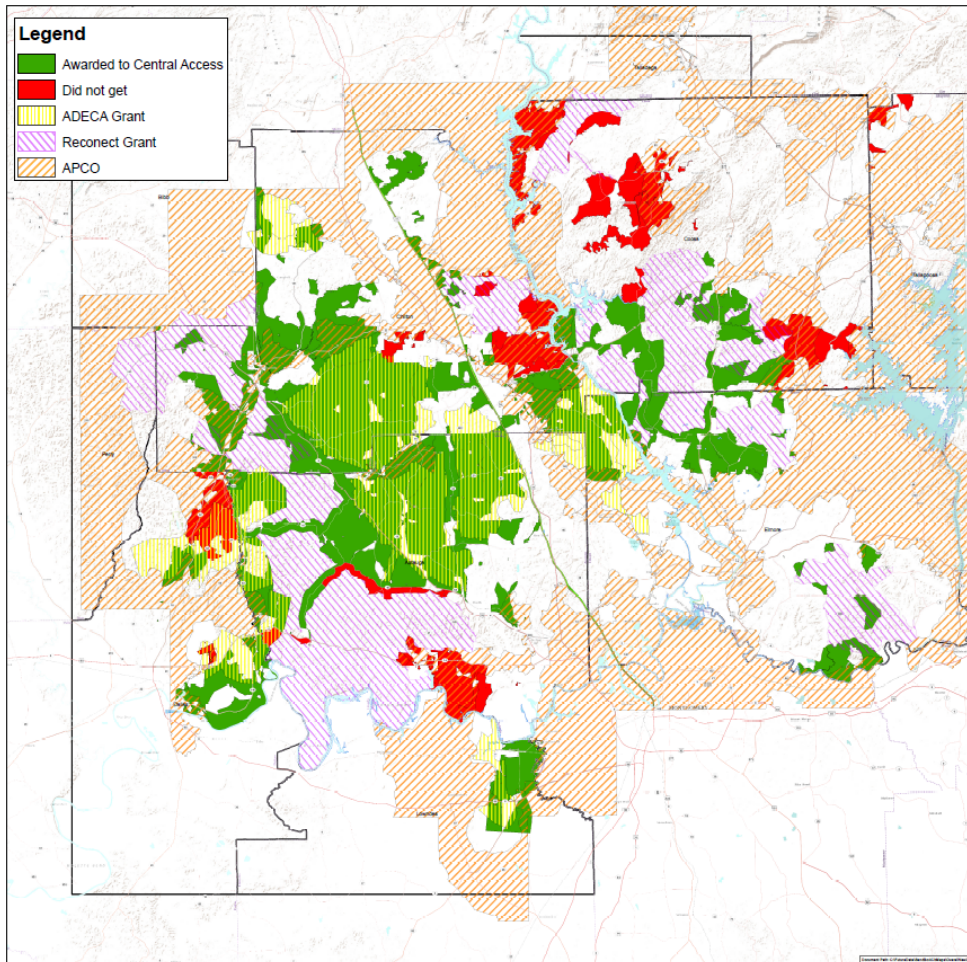
## THIRD GRANT AWARD

- USDA ReConnect
  - One Grant – 11 areas
  - 75% funded (\$8.6 million)
  - Match - \$2.8 million
  - 3,080 households & businesses



## FOURTH GRANT AWARD

- Rural Digital Opportunity Fund (RDOF)
  - FCC
  - 30 Census Block Groups
  - \$14.875 million (over 10 years)



## ALL GRANT AWARDS

ARC Grant - \$200,000

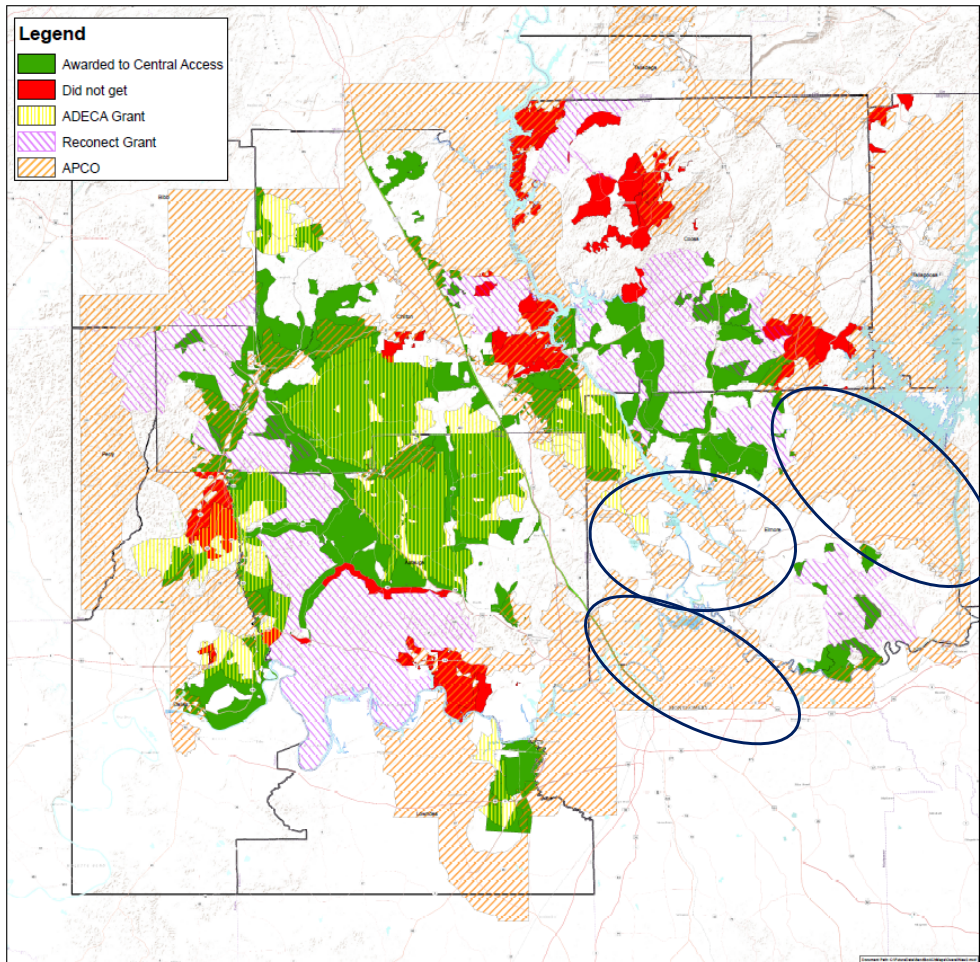
ADECA Grants - \$4,100,000

ReConnect Grant - \$8,600,000

RDOF - \$14,875,000

**TOTAL - \$27,775,000**





## REMINDERS

- 6,000+ miles of line; it takes time to build new broadband infrastructure; currently building ~80 mi/month
- Orange-lined areas are outside of CAEC's service territory (APCo)
- Central Access will be able to serve outside of CAEC service area – eventually

Speeds up to:	Price:	Take Rates:
200 Mbps	\$59.99	74%
500 Mbps	\$79.99	15%
1 Gb	\$99.99	11%
Misc.		
In Home WiFi	\$5.00	77%
Phone	\$19.99	15%



# RESIDENTIAL PRICING

For Symmetrical Speeds



# WHY DID WE DO THIS?

Although education, telehealth and economic development have historically been challenges for rural Alabama, COVID has shown us Broadband is *crucial* because connectivity is necessary for communities to survive!



# PATTERN FOR SUCCESS

**Thank you to the Elmore County Commission!**

- You recognized the County's need.
- You had a vision.
- You created a plan.
- You sought partnerships to help reach the goal.

# WHAT CAN YOU DO?

## Have a Vision for the Future

- Create a Team of Community Partners
- Map Broadband Infrastructure
- Prioritize Economic Development Areas
- Invest in Broadband Partnerships/Bring Others to the Table
- Advocate for Grants
- Promote Rural Equality

2021 ACCMA Winter Conference  
**Planning for the Future  
in the New Normal**



QUESTIONS?



# THANK YOU

**County Engineer Richie Beyer**  
**Elmore County**  
**334-567-1159**  
**[wrbechd@elmoreco.org](mailto:wrbechd@elmoreco.org)**

