BROADBAND EXPANSION THE BENEFIT OF COMMUNITY **TEAMWORK**

ACCMA Winter Conference January 28, 2021

Alabama City

ACCMA

County Management Association

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



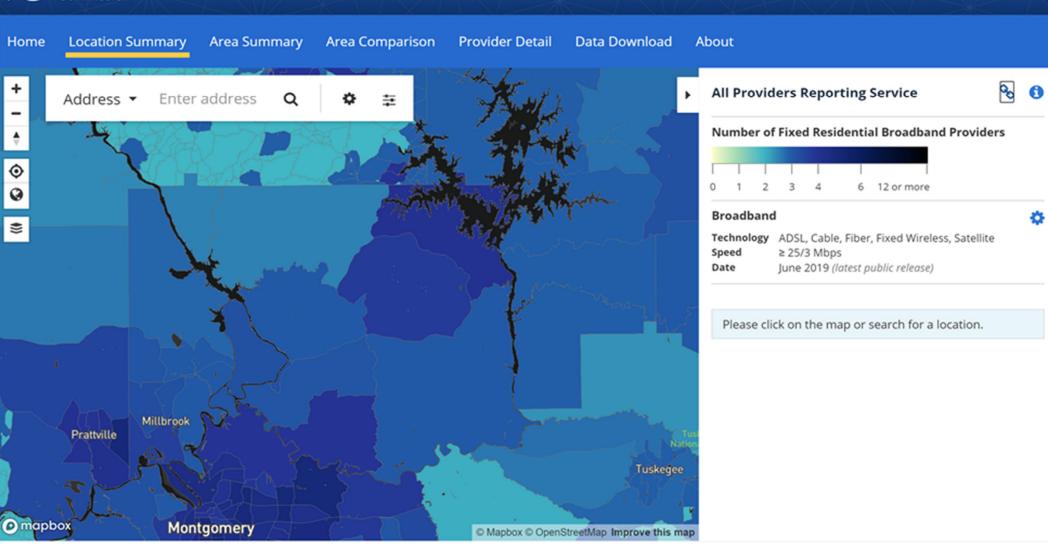
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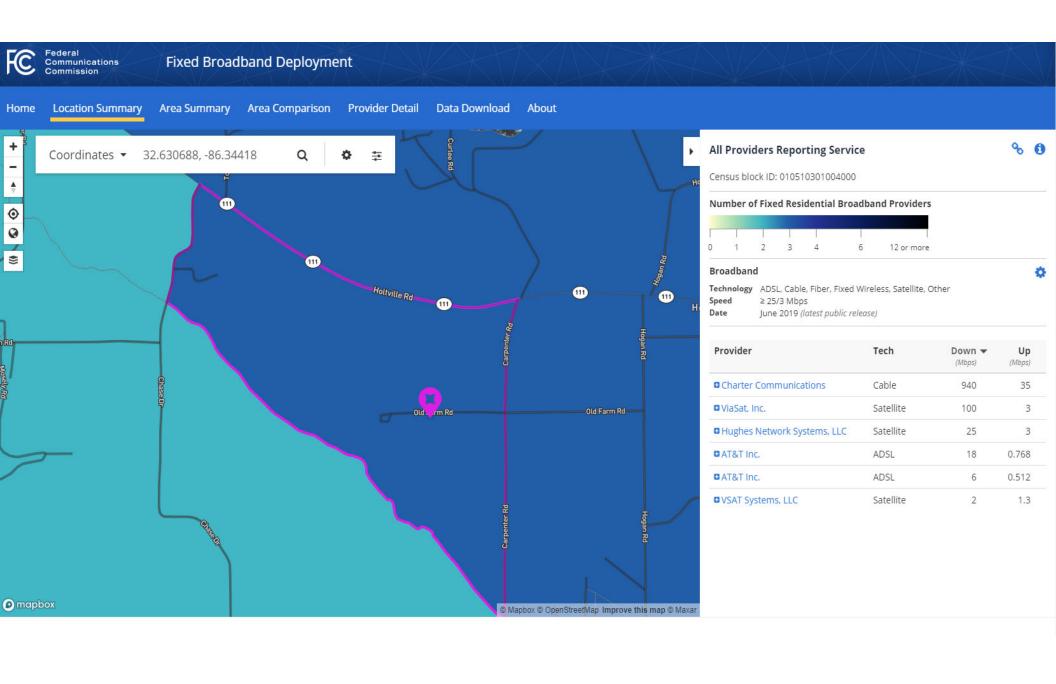


"Access to broadband is as important as roadway infrastructure. We see access to broadband as a major component of our economic development planning for Elmore County."



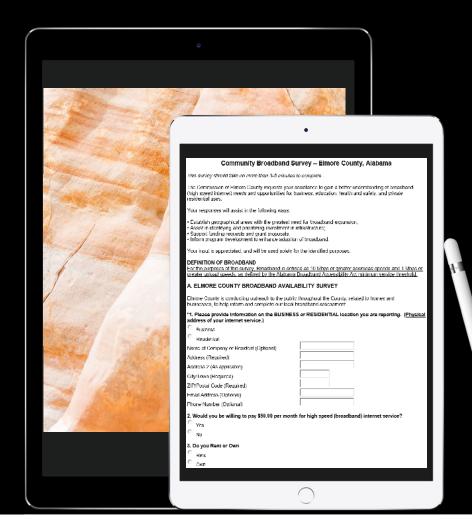
Fixed Broadband Deployment





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.



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.

Broadband Feasibility Study Elmore County, Alabama

PREPARED FOR: Elmore County

PREPARED BY: Sain Associates, Inc.
Sain Project #: 18-0290

November 18, 2019









PLANNING FUNDING

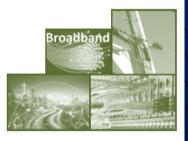
- Economic Development Authority
- Contribution by County and City organizations in a collaboration
- Grant funded through a Regional Planning Organization

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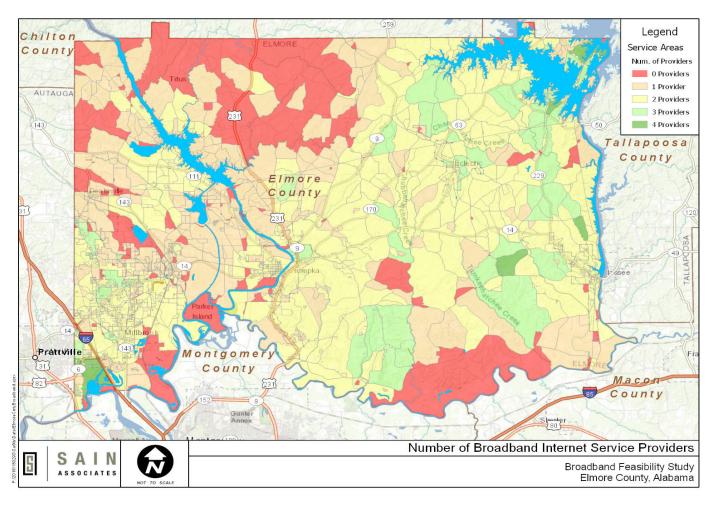




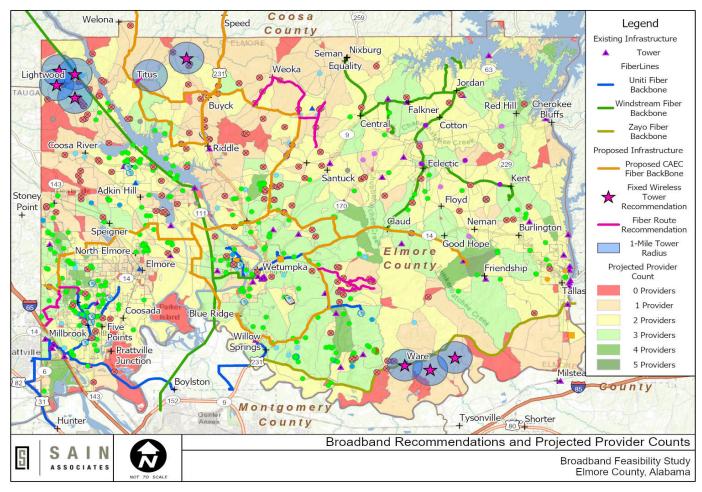




ORIGINAL MAP OF BROADBAND SERVICE PROVIDERS



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.

Broadband Project Analysis Elmore County, Alabama

PREPARED FOR: Elmore County

PREPARED BY: Sain Associates, Inc.
Sain Project #: 20-0015

October 15, 2020







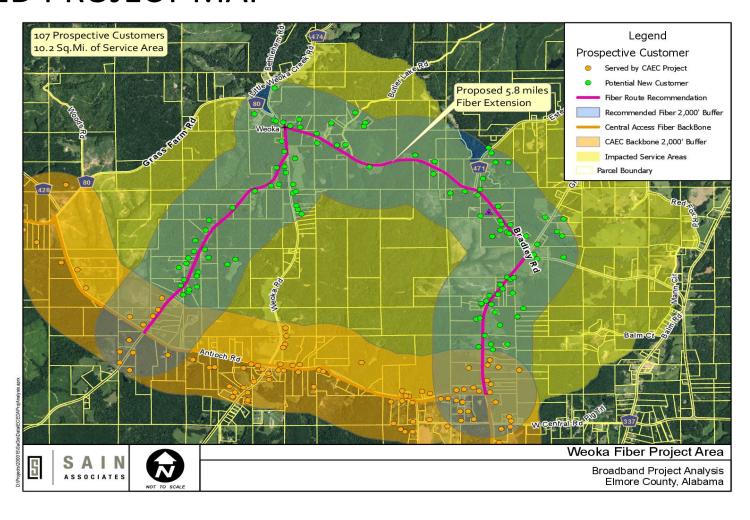


PARAMETERS FOR ANALYSIS

- 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

		All Potential	Students in	Unserved Area	Under-Served Area	Service Area	Population			Equip.		New Fixed					Cost per
	Fiber	New	Proposed	Mitigated	Mitigated	Coverage	Density per	Miles of		Existing	Cost of	Wireless	Cost of New	Construction	Tie-On Cost	Total Cost at	Potential
Project Name	Source	Customers	Service Area	(sq.mi.)	(sq.mi.)	(sq.mi.)	Sq. Mi.	Fiber	Cost of Fiber	Tower	Equipment	Towers	Tower	Cost Estimate	100% Opt-In	100% Opt-In	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	
Year 1		2,931	\$869,400.00	
Atkin Hill (Fiber Option)	\$611,100.00			
Balm Road Fiber	\$258,300.00			
Year 2		1,496	\$816,600.00	
Weoka Fixed Wireless (Option B)	\$327,000.00			
Coosa River Fixed Wireless	\$489,600.00			
Year 3		2,032	\$896,100.00	
Deatsville Fixed Wireless	\$288,000.00			
Jackson Lake Fixed Wireless	\$249,000.00			
Redland Fiber	\$359,100.00			
Year 4		855	\$792,300.00	
Ware Fixed Wireless (Option A)	\$792,300.00			
Year 5		1,201	\$882,000.00	
Riddle Fiber	\$623,700.00			
Highway 231 Fiber	\$258,300.00			
Total Project Implementation		8,515	\$4,256,400.00	



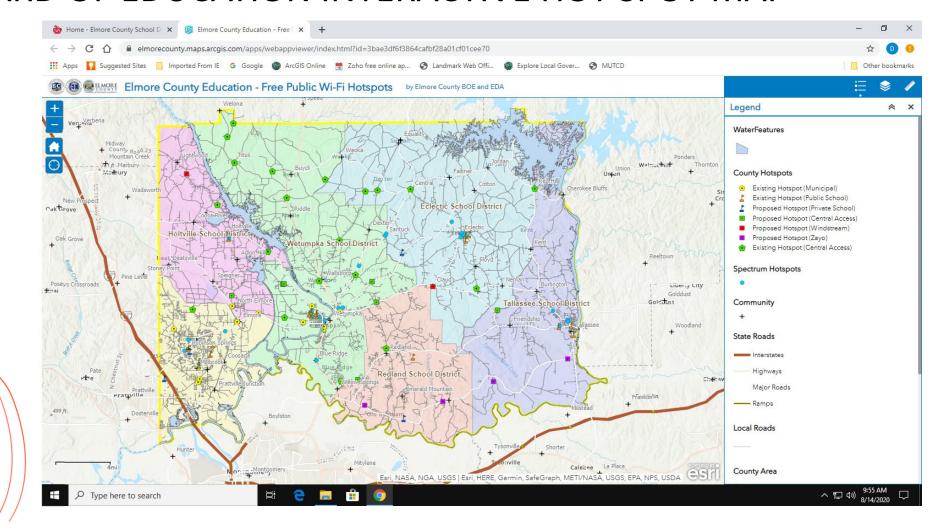
EDUCATION HOTSPOTS

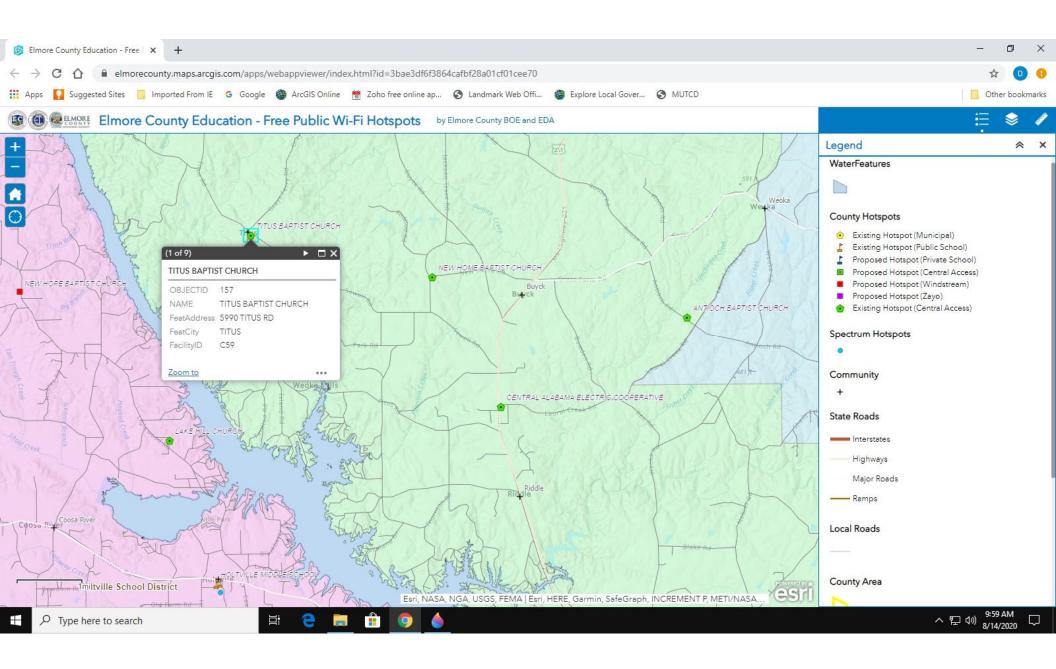
Immediate need for public broadband access for school students due to COVID-19 pandemic.

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





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









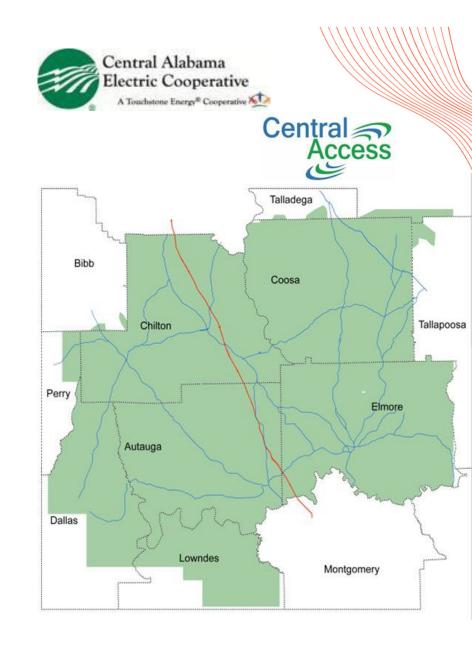
CENTRAL ALABAMA
ELECTRIC COOPERATIVE &
CENTRAL ACCESS

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

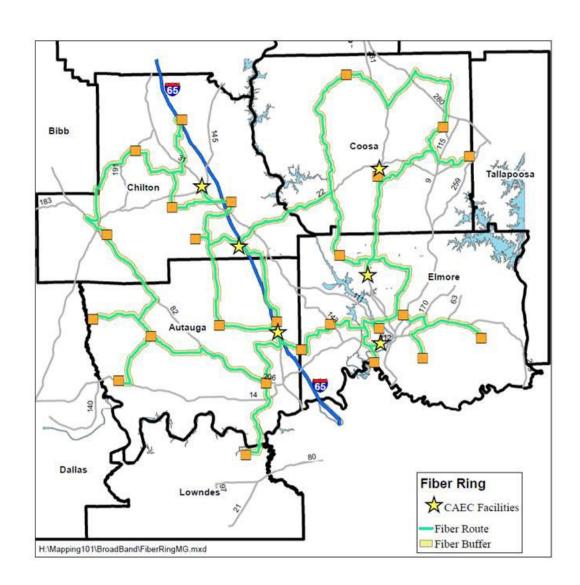


The Result

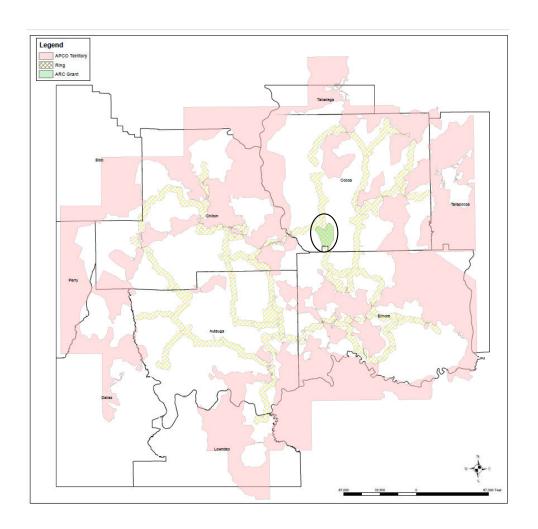
- CAEC created Central Access (CA) to offer broadband services
- CA leases fiber, workforce and management services from CAEC

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.

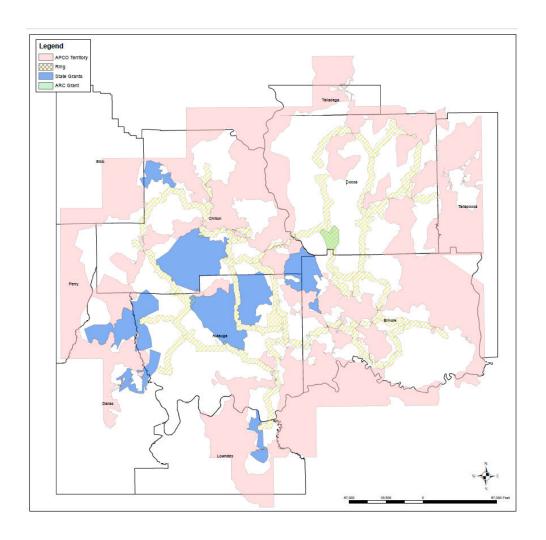


CORE RING & CAEC FACILITIES



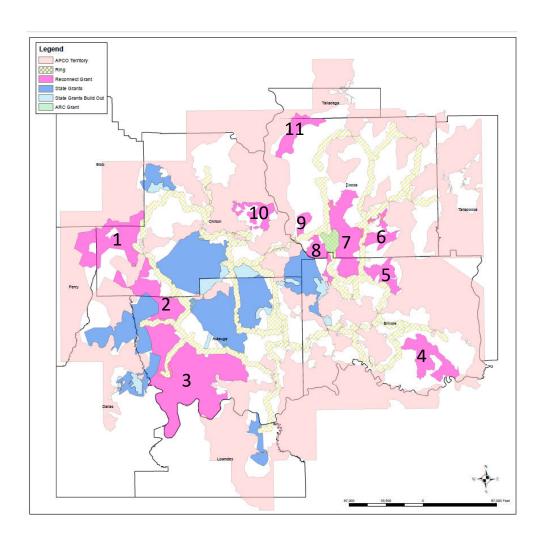
FIRST GRANT

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



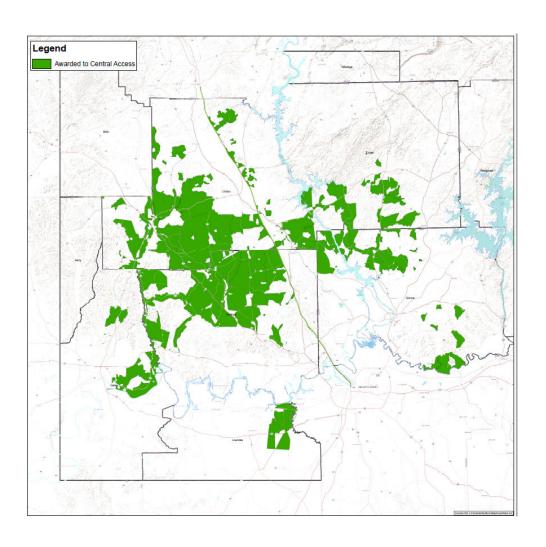
SECOND SET OF GRANTS

- 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



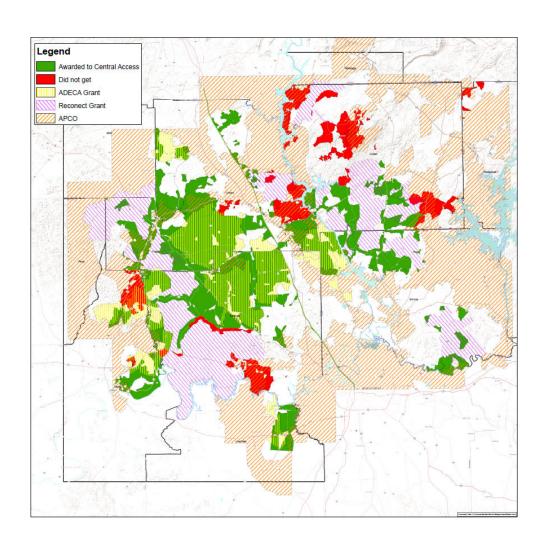
THIRD GRANT AWARD

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



FOURTH GRANT AWARD

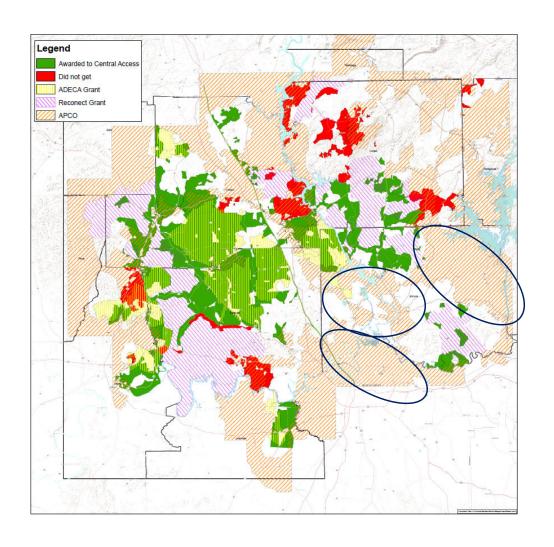
- Rural Digital
 Opportunity Fund
 (RDOF)
 - FCC
 - 30 Census Block Groups
 - •\$14.875 million (over 10 years)



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

















