Alachua County Rural Broadband Sept. 2022

Tommy Crosby, ACM

Jim Woodard, Project Manager

Purpose

- To accelerate the delivery of an affordable high-speed rural broadband network to ensure digital equity and competitive fairness in accessing on-line education, health, economic, and societal services and benefits.

Agenda

Regional Technology Planning Team
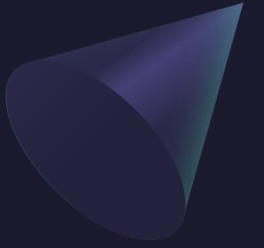
Available Technologies

Funding Opportunities

Feasibility Study

Potential Partners and Vendors

Short / Long Term Direction

Regional Technology Planning Team

ALACHUA

- Board of County Commissioners
- Library District
- Public Schools
- Department of Health
- Community Foundation
- NCFRPC
- City Administrators

BRADFORD

- Board of County Commissioners
- Public Schools
- City of Starke Manager

GILCHRIST

- Board of County Commissioners
- Gilchrist Fire

UNION

- Board of County Commissioners
- Public Schools
- Union County EMS
- UF/IFAS

UTILITY

- Central Florida Electric Cooperative
- Clay Electric

FIBER TRUNKS

- GRU.com
- UF Information Technology

FI. DEO Office of Broadband

- https://floridajobs.org/community-planning-and-development/broadband/office-of-broadband

- Speed Test is a priority

- Letters of Support from Anchor Institutions

- Completing the toolkit

- Funding Opportunities

Alachua County

Households	112,766
Population	247,336
Test locations	1,763
Total Tests	2,581
Percent participation	1.56%
Participation goal (10%)	11,277

Download

• No Service	74	4.2%
• 0-10 Mbps	470	26.7%
• 10-25 Mbps	272	15.4%
• 25-150 Mbps	576	32.7%
• 150+ Mbps	371	21.0%

Upload

No Service	74	4.2%
<3 Mbps	740	42.0%
3-10 Mbps	395	22.4%
10-25 Mbps	298	16.9%
25-150 Mbps	179	10.2%
> 150 Mbps	74	4.2%

	Min	Max	Med Mbps
Download	0.06	796.38	32.62
Upload	0.01	890.04	4.61

No service reasons: may total>100%

Not Available	95.83%
Don't Know How Computer	1.39%
Too Expensive	9.72%
No Computer	1.39%
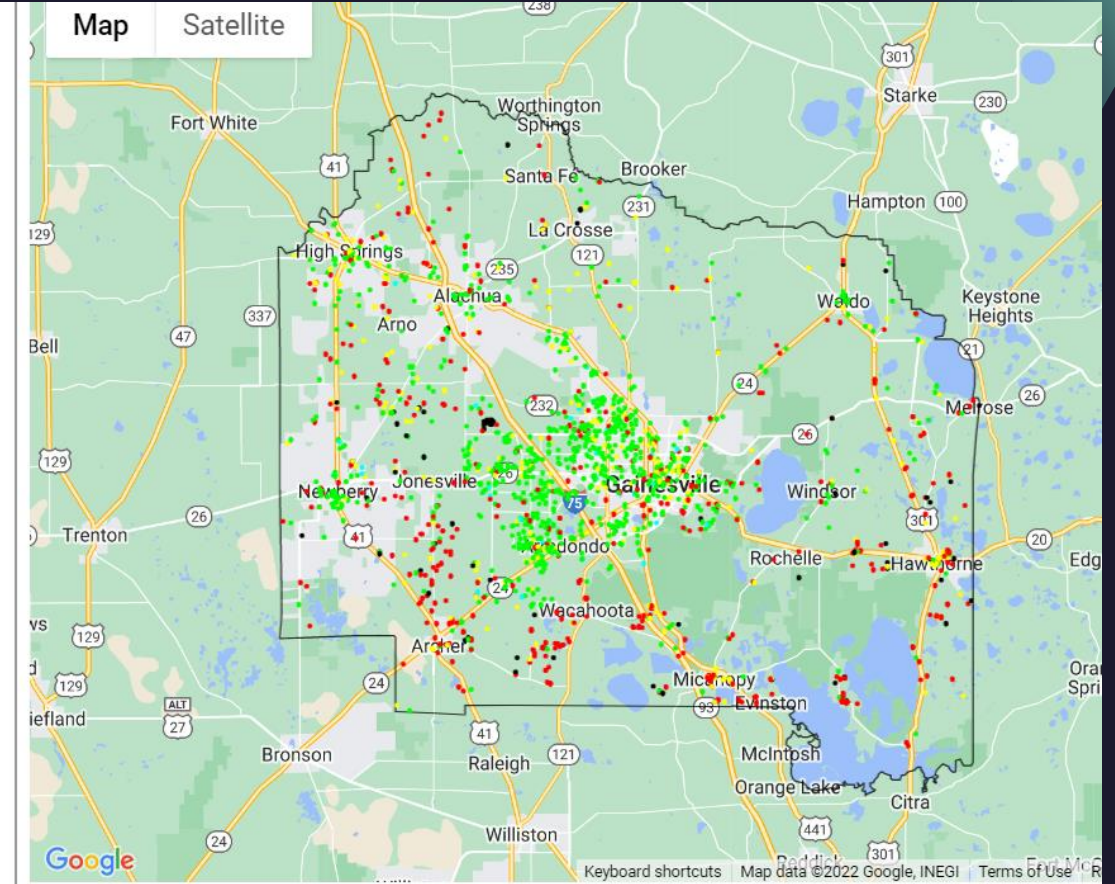
Fixed 1,147 locations

Download			Upload		
No Service	74	6.5%	No Service	74	6.5%
0-10 Mbps	178	15.5%	<3 Mbps	364	31.7%
10-25 Mbps	164	14.3%	3-10 Mbps	294	25.6%
25-150 Mbps	446	38.9%	10-25 Mbps	254	22.1%
150+ Mbps	285	24.8%	25-150 Mbps	133	11.6%
			> 150 Mbps	26	2.3%

Cellular 616 locations

Download			Upload		
0-10 Mbps	292	47.4%	<3 Mbps	376	61.0%
10-25 Mbps	108	17.5%	3-10 Mbps	101	16.4%
25-150 Mbps	130	21.1%	10-25 Mbps	44	7.1%
150+ Mbps	86	14.0%	25-150 Mbps	46	7.5%
			> 150 Mbps	48	7.8%
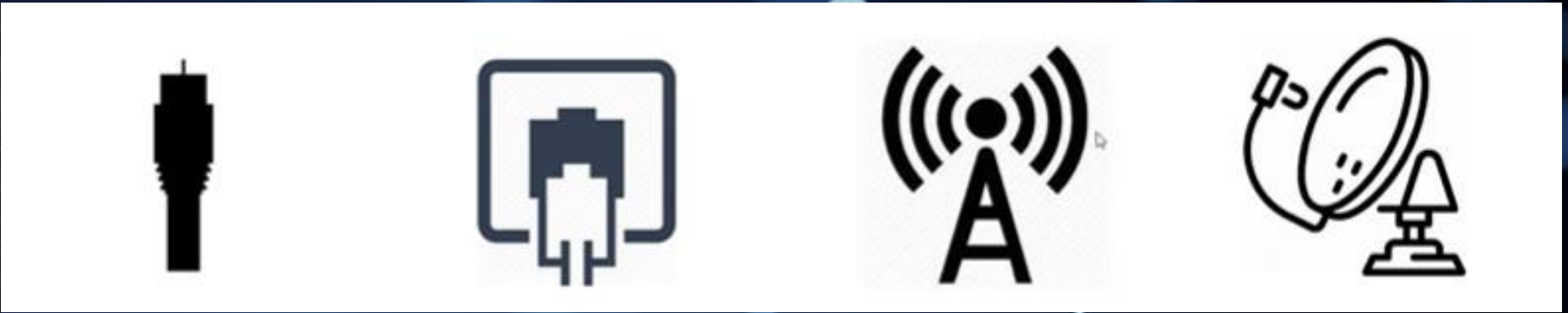
Available Tech

Fiber to the Home (FTTH)

Coaxial Cable

DSL (Copper)

Fixed Wireless (Towers)

Low Earth Orbiting Satellites (LEOS)

Funding Opportunities

American Rescue Plan – BoCC $15M

ReConnect – USDA 50/50 Grant/Loan up to $25M/$25M

Broadband, Equity, Access and Deployment (BEAD) – U.S. Commerce

Affordable Connectivity Program – FCC

Rural Infrastructure & Broadband Opportunity Grants - FDEO

Customer Fees

The way to get started is to quit talking and begin doing.
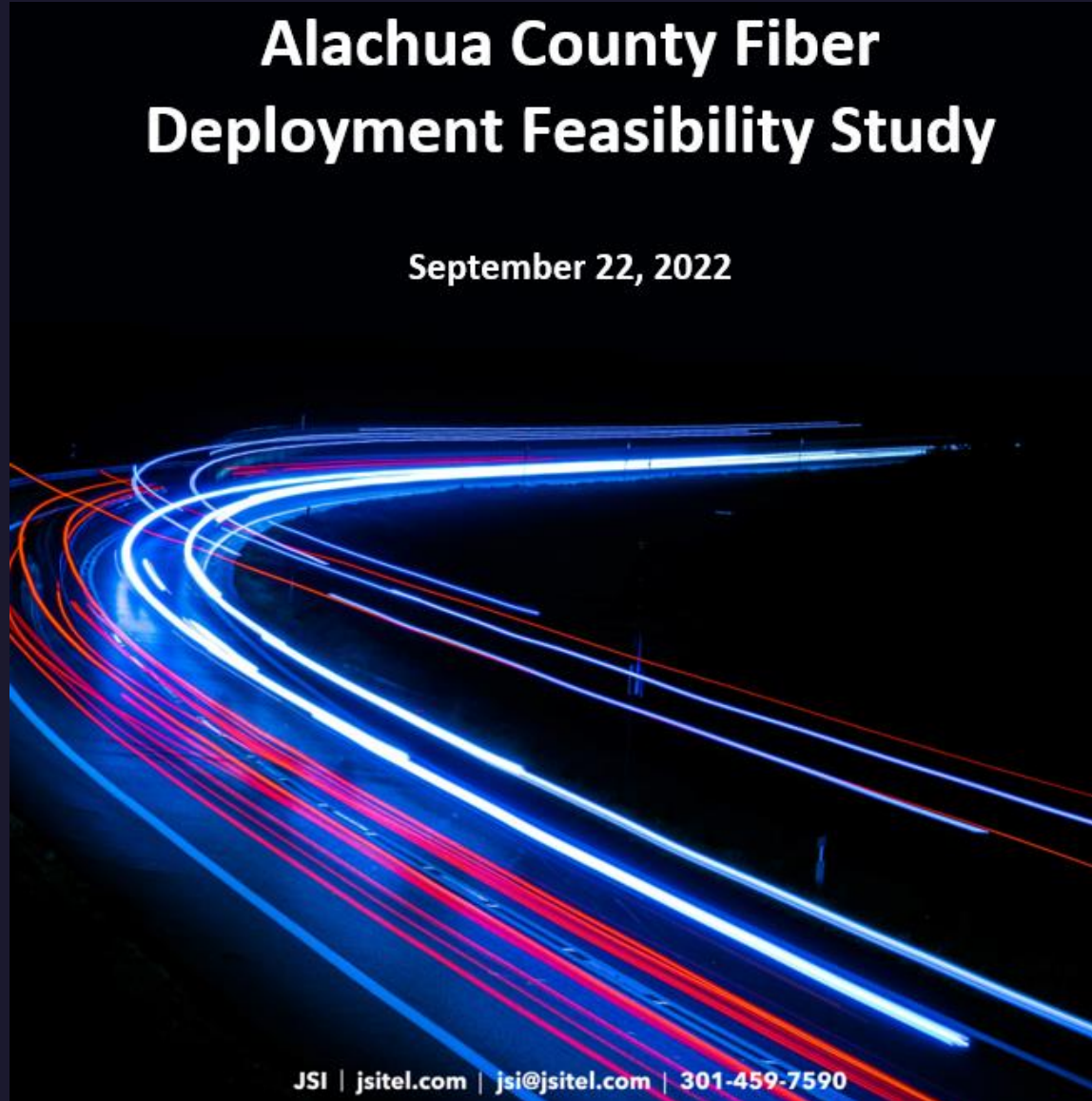
Walt Disney

Feasibility Study
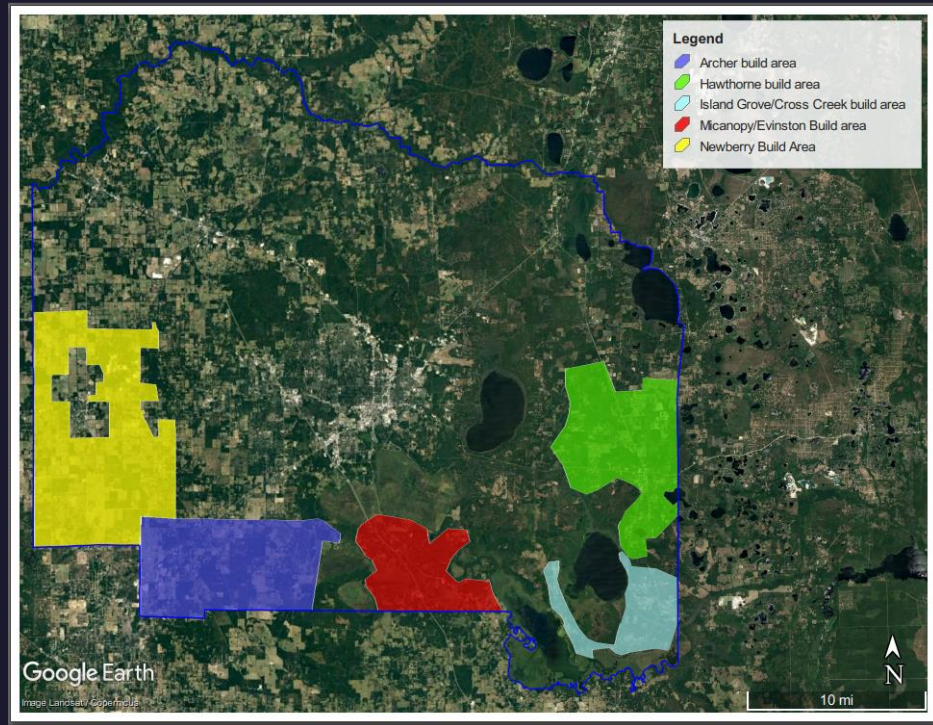

Alachua County Fiber
Deployment Feasibility Study

September 22, 2022

JSI | jsitel.com | jsi@jsitel.com | 301-459-7590

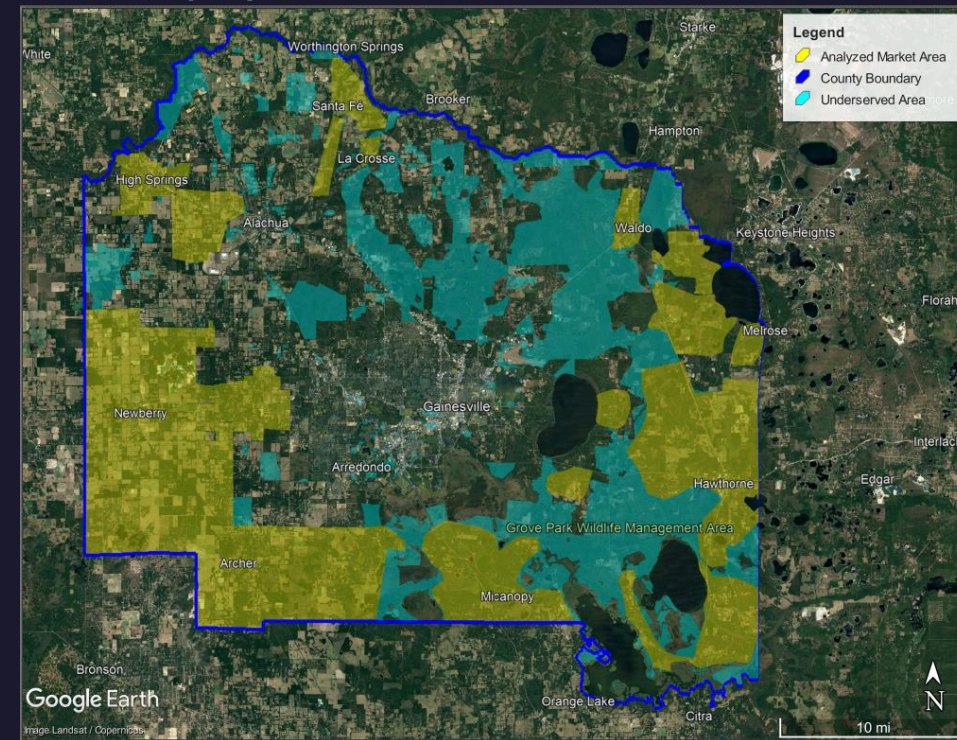# Analysis Scope & Illustration of Project Segmentation

Map 1

Geographies reflecting the 5 defined grant eligible build sector areas.

Archer, Hawthorne, Island Grove/Cross Creek, Micanopy/Evinston, Newberry (not town)

Map 2

Geographies reflecting the first and second phases of a potential deployment.

Non-RC4 Grant eligible markets included in the Segment Two category beyond the grant areas detailed on Map 1 are: Arno, Earleton, High-Springs, Jonesville-Tioga, La Crosse, Melrose, Newberry, Orange Heights, Rochelle, Santa Fe, Waldo, and Windsor – The 5 grant, and 12 non-grant areas are highlighted in yellow.

Analysis Scope & Illustration of Project Segmentation

Map 1

Geographies reflecting the 5 defined grant eligible build sector areas.
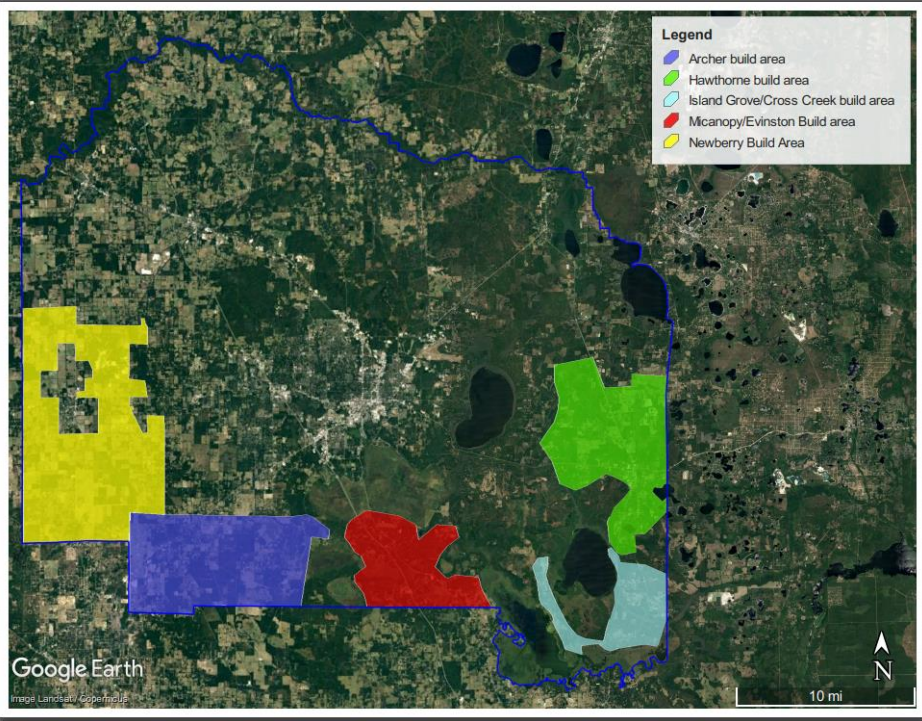
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RUS Reconnect Program – Round 4

Federal program designed to enable service to areas with service below 100/20Mbps.

Areas selected based on:

Relative density – key to creating sustainable business case and limiting level of grant dollars necessary to produce such an outcome.

Ability to create a lucid and foundational engineering-based network design.

Greatest number of locations that fit within maximum specified program award - $50M

Area Profile:

8,654 locations passed
551 fiber route miles
~$51M CAPEX
55% Market Share – 2 year ramp

Project / Market Name	Homes Passed
Archer	2,088
Hawthorne	2,039
Island Grove/Cross Creek	684
Micanopy/Evinston	1,272
Newberry	2,571

Analysis Scope & Illustration of Project Segmentation

Adding Non-Grant Ares – End State – Phase II

Phase II layers in second set of markets that are non-eligible grant areas, but…

Have reasonable density

Layers in well with Phase I builds

Absence of fiber-based options

| Project / Market Name	Homes Passed
Arno	1,627
Earleton	639
High Springs	2,987
Jonesville-Tioga	4,583
La Crosse	190
Melrose	332
Newberry Town	2,506
Orange Heights	507
Rochelle	99
Santa Fe	245
Waldo	723
Windsor	315

Area Profile:

14,753 locations passed.

463 fiber route miles

~$53M CAPEX

40% Market share – 3-year ramp.

Map 2

Geographies reflecting the first and second phases of a potential deployment.
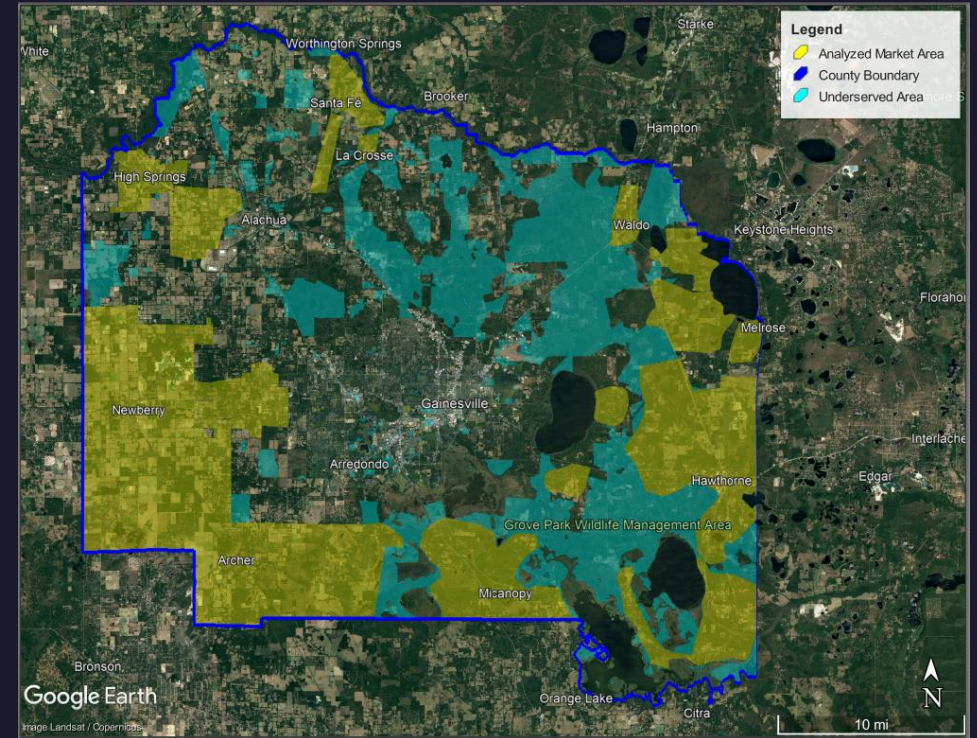
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Financial Modeling

PHASE 1

- With Reconnect 4 grant only.

- Positive Operating Income in Year 2.

- Positive Cash Flow in Year 2

- Cumulative positive Cash Flow Year 2

PHASE 1 & 2 COMBINED

- Without additional grant consideration

- Positive Operating Income in Year 6

- Positive Cash Flow in Year 2

- Cumulative positive Cash Flow not realized during 15-year term

Timeline

•Receive Reconnect 4 award, complete detailed deployment plan with precise cost estimates and begin Phase 1 deployment. Apply for BEADS and DEO grants

•Complete Phase III to include all remaining households with a combination of grants, loans, ARPA, and customer fees.

•Board commits ARPA funds and directs the development of a rural broadband initiative.

| Summer 2021 | 2022 | 2023 | •2024 | •2025 |

•Staff researches and develops a plan of action. Hires a project manager and creates the Regional Technology Planning Team and task a Feasibility Study through JSI.

•Complete Phase 1 deployment in the 5 grant areas and begin and complete Phase II in the next 12 areas.

Alternative Scenario

Option 1

Alachua Deploys Network and Provides Services to its Citizenry

Option 2*

Alachua Deploys Network and Leases Capacity to Existing Retail Internet Service Providers (ISP's)

Option 3*

Alachua Partners With ISP to Channel ARPA Dollars and Grant Proceeds to ISP Who Builds Network and Offers Services

Ultimate path can change as the process plays out.

* Any modifications to stature / positioning must be compliant with program rules.

Current Market Activity

- Vast majority of the Electric Co-ops in Florida are considering supplying high speed broadband to their customers.

- Central Florida Electric Co-op and Tri-County Co-op have announced deploying high-speed broadband.

- At least 5 more are in exploration of providing the service.

FLORIDA
ELECTRIC
COOPERATIVES
ASSOCIATION
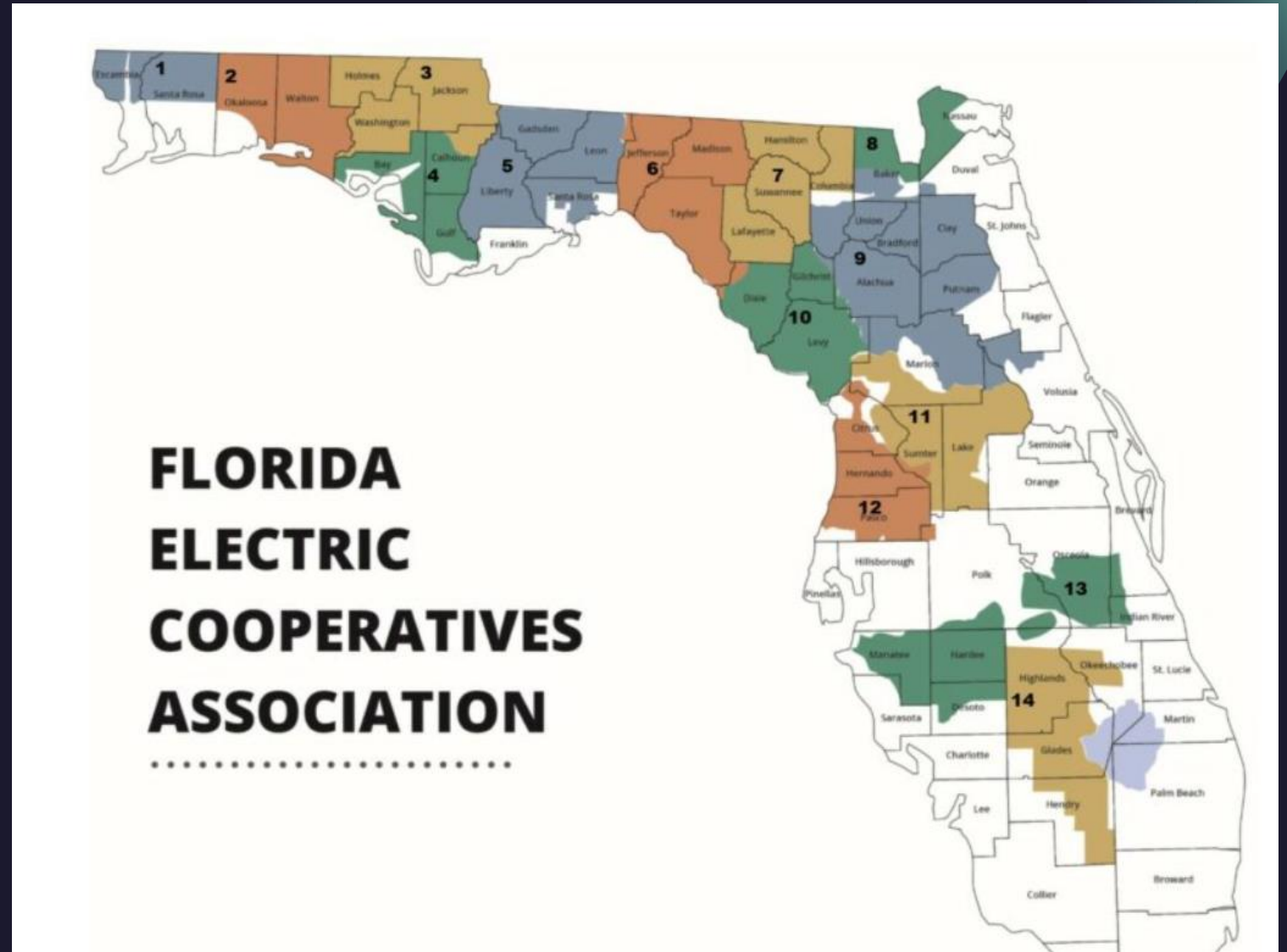
Utility Providers

- Working with Electric Cooperatives

- Right of way and infrastructure

- Public Ownership

- Operation and Maintenance

- Billing & Customer Service

- Financial Viability

★ Community Anchor Institutions
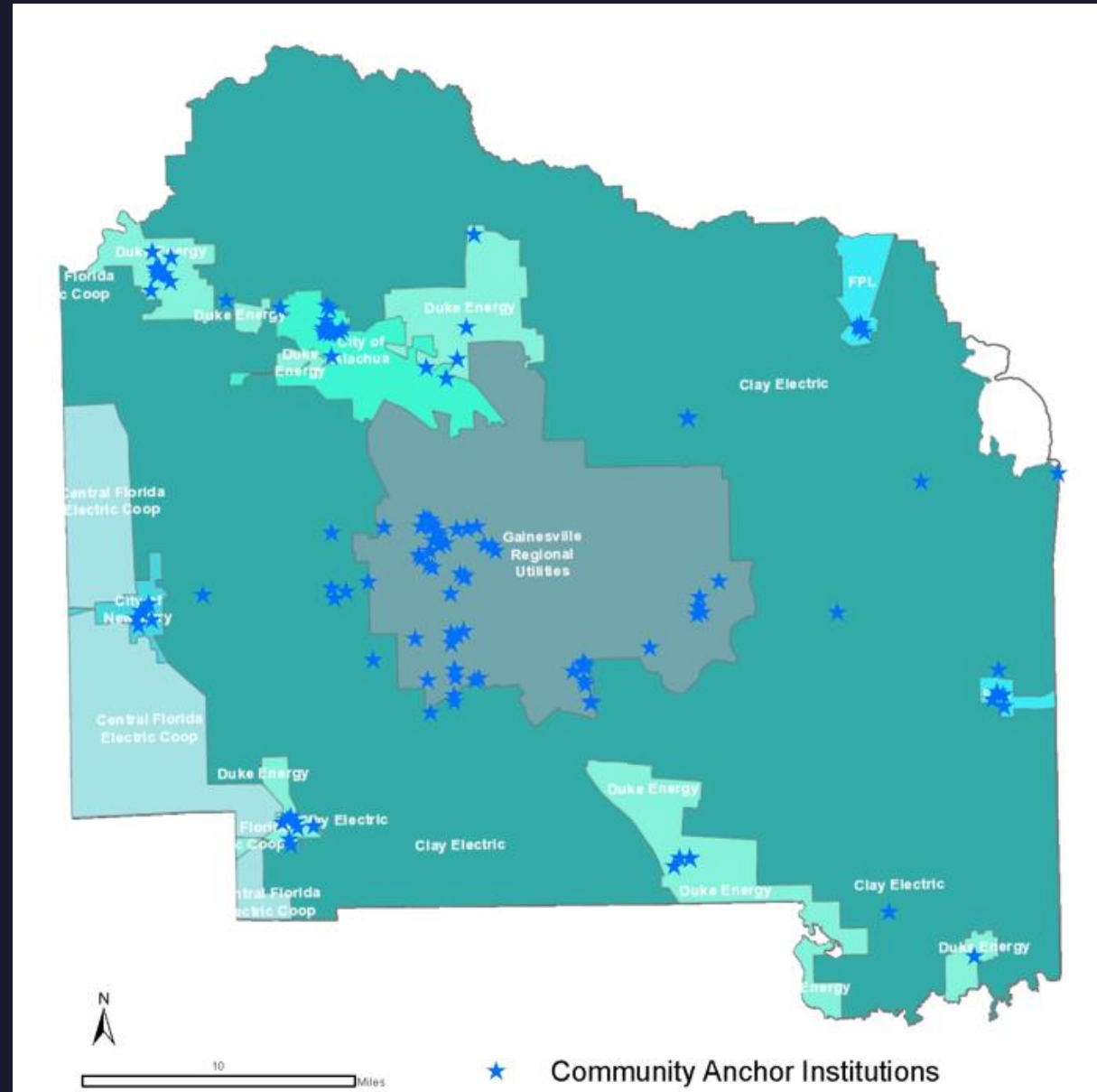
Action Request

Establish direction for rural broadband deployment in Alachua County. It is staff recommendation to begin a deployment with Alachua County as the infrastructure owner and potential ISP and work to establish middle mile partners, internet connection points and utility cooperatives, acquire Federal grants, and prepare a detailed deployment plan to include a cost estimate and final business case with a financially sustainable plan

Thank You

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https://www.alachuacounty.us/Depts/OMB/broadband/