

BROADBAND STUDY



Helping communities take control of their digital future



Broadband Assessment

WHY ARE WE HERE?

Goal:

2.1 Study availability of internet (“technology deserts”)

Description:

Initiate and complete a citywide broadband connectivity assessment by the end of FY2022 to identify and ensure the best access to the highest quality internet services.



FY2022-2024 Strategic Plan

Adoption Date: May 10, 2021

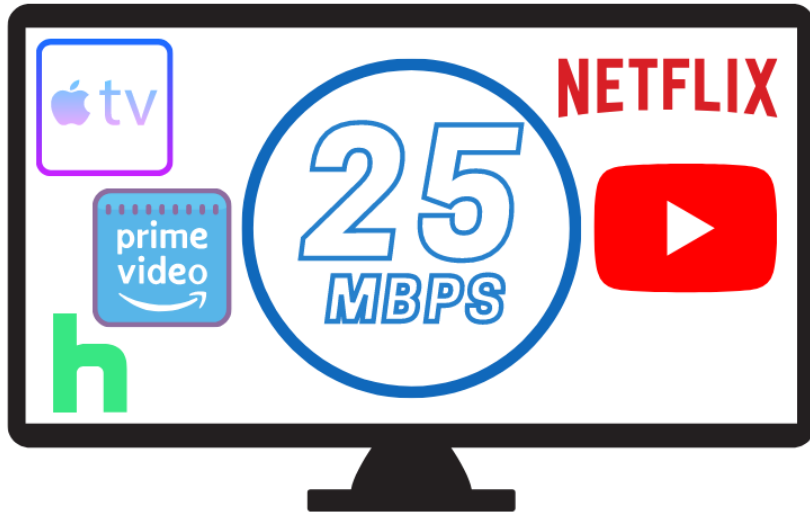


What is Broadband?



"Broadband" is defined by the FCC as:
"25 Mbps download and 3 Mbps upload speeds"

By this definition, one device in a household can either:



Stream HD 4K Video

OR



**Student to complete a
homework assignment**

OR



Telecommuting



***Note: The State of Arizona Commerce Authority (ACA) target for
broadband is 100 Mbps download / 20 Mbps upload***

Source: ACA Arizona Broadband Statewide Middle-Mile Strategic Plan



Broadband Assessment



COMMUNITY BENEFITS

Educational Excellence

- Improved Educational Results
- Reaching Full Potential

21st Century Economy

- Online Points of Sale
- Social Media

Protecting Our Communities

- Public Safety Technology
- Equipment and Tools

Happy and Healthy Citizens

- Telehealth Services

Fiscal Responsibility

- Automation of Services

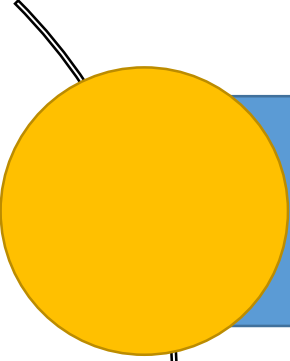
Arizona Statewide Broadband Strategic Plan

<https://www.arizonatele.org/az-broadband-strategic-plan.html>

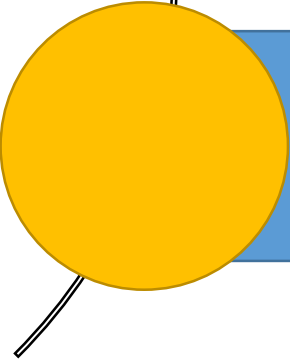
Broadband Study



FIRM INTRODUCTION



September 2021



Cell Site Capital, LLC

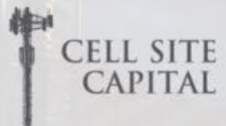
ASSESSMENT GOALS

- Identify broadband service levels
- Create a database that is scalable and dynamic

METHODOLOGY

CSC accessed both proprietary and publicly available datasets

- Data sets were "scrubbed" removing duplicates and errors
- Data verification confirmed utilizing alternative information sources
- Provider geodatabase (inclusive of layers and data tables for use on Goodyear's ARCGIS software integration "layers" provided for Goodyear's GIS software)



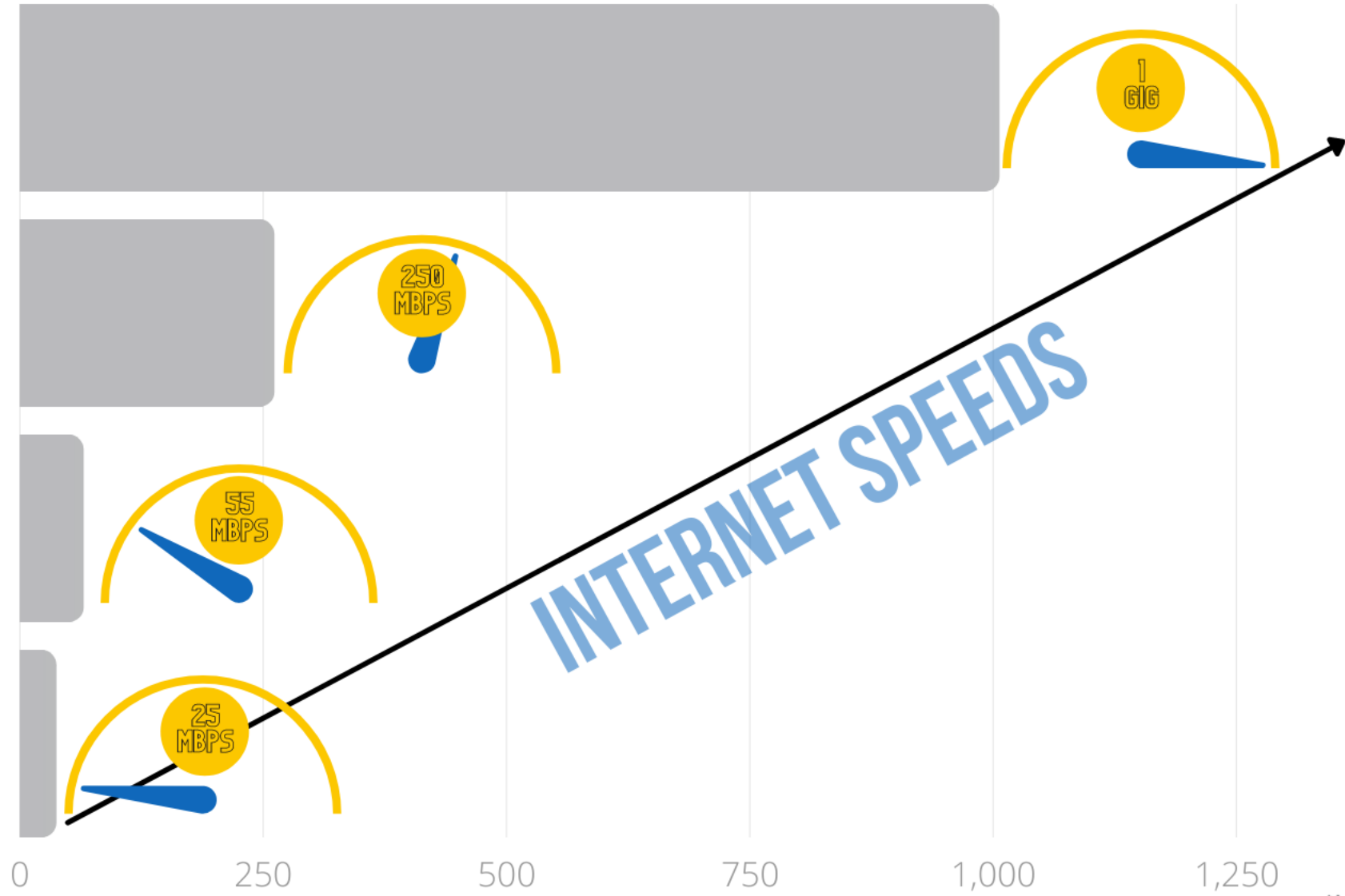
HOW IS BROADBAND DELIVERED?

Fiber-Optics -Provides the fastest internet speeds but requires a fiber connection

Cable & Fixed Wireless - Cable companies and "Fixed wireless" offer internet services

Mobile - all major wireless carriers offer broadband speeds on phones and smart devices

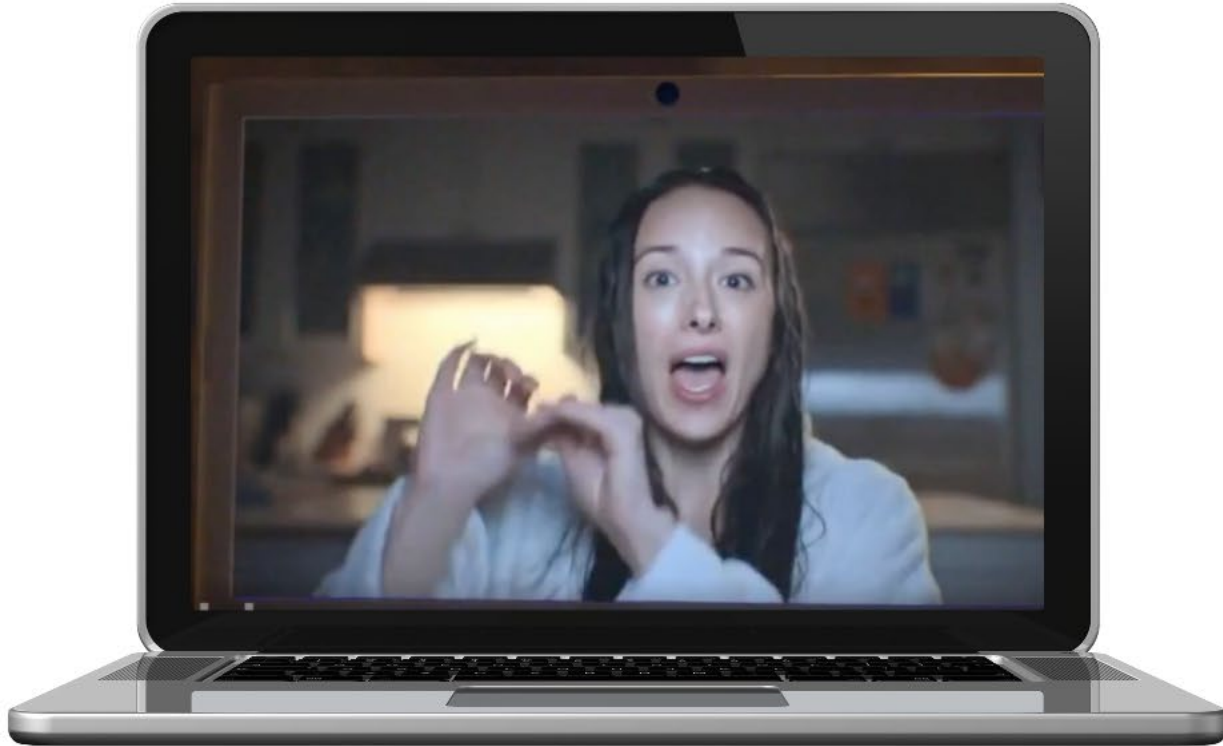
Satellite- Requires satellite dish at the premises, most prominent in the rural areas



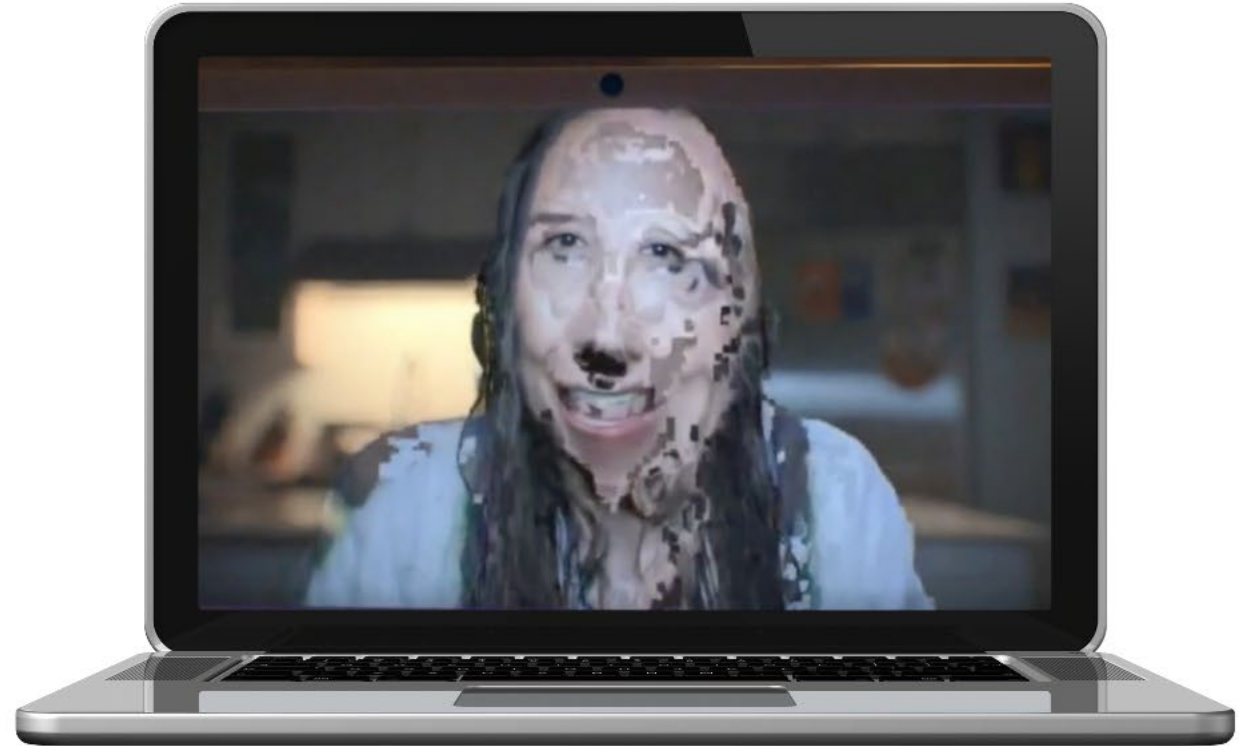


HOW BROADBAND AFFECTS USER EXPERIENCE

CURRENT AT&T COMMERCIAL



FIBER SPEEDS



MINIMUM BROADBAND SPEEDS





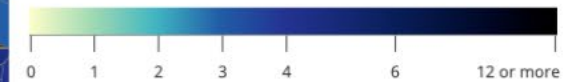
Census Place Goodyear, AZ



Goodyear, AZ



Number of Fixed Residential Broadband Providers

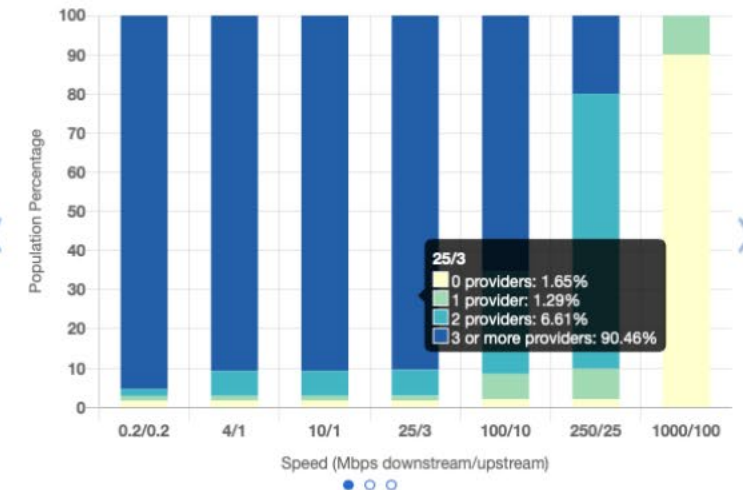


Broadband

Technology ADSL, Cable, Fiber, Fixed Wireless

Speed ≥ 25/3 Mbps

Date Dec. 2020 (latest public release)



*Dec. 2020 updated FCC 477 Maps



FCC Form 477 Maps show 90% of the Goodyear census area has three or more providers offering services that meet the minimum standard for "Broadband internet."



HOW THE FCC FORM 477 MAP GETS CREATED

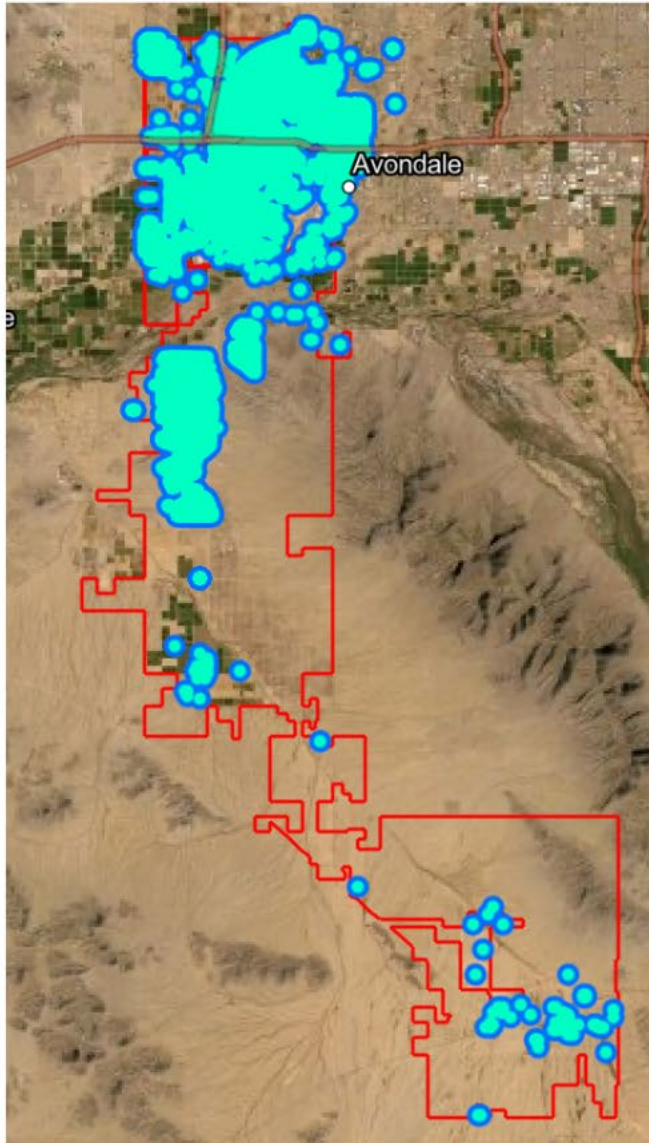
- Internet service providers (ISP) report data twice a year to the FCC on coverage area and speeds
- The FCC doesn't check the data; it relies on the ISP's to report accurate information
- The speeds ISP provides are their advertised maximum speeds
- Pricing for plans are not shared
- The maps are in "census blocks" which are irregular in a geographic area
- Includes data on areas that could provide broadband data within 10 business days of a request, not areas that are currently connected



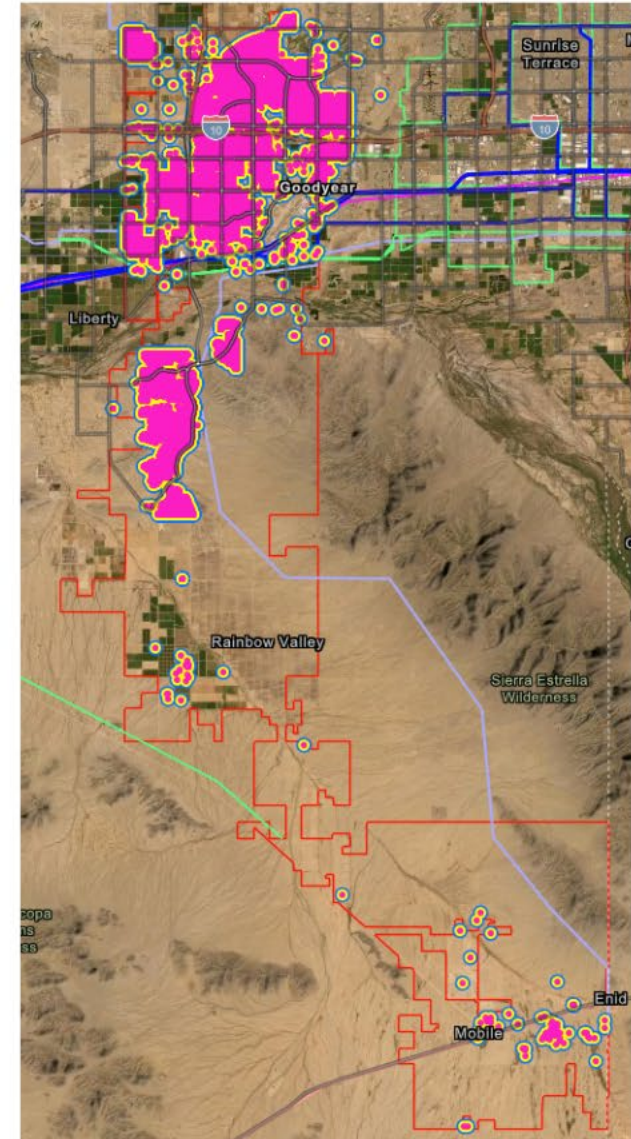
GOODYEAR CURRENT BROADBAND MAP

BROADBAND SPEEDS (25/3) IN GOODYEAR

Wired Broadband

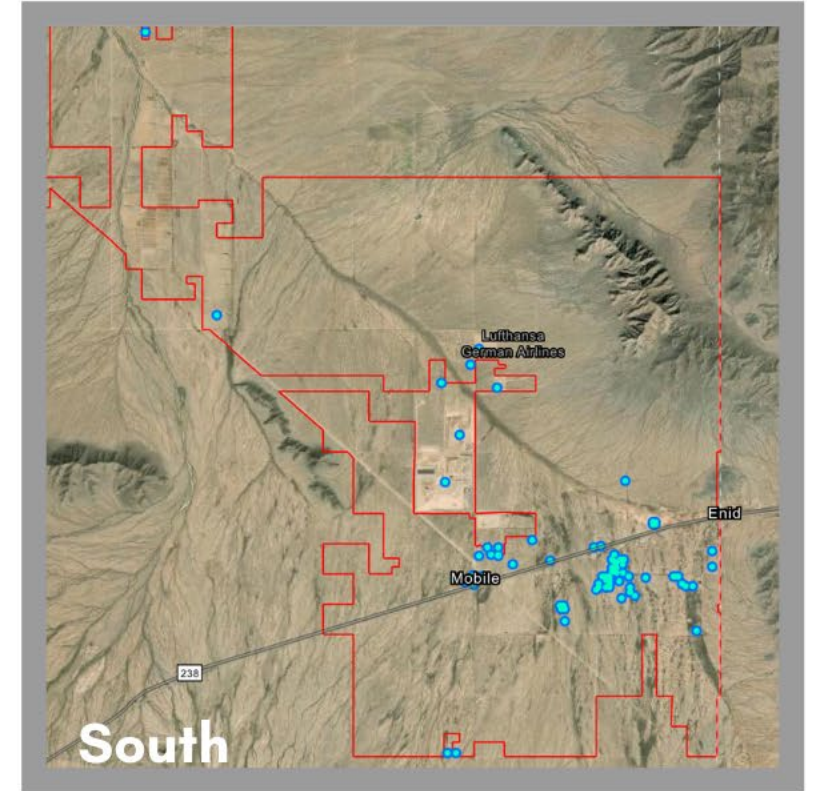
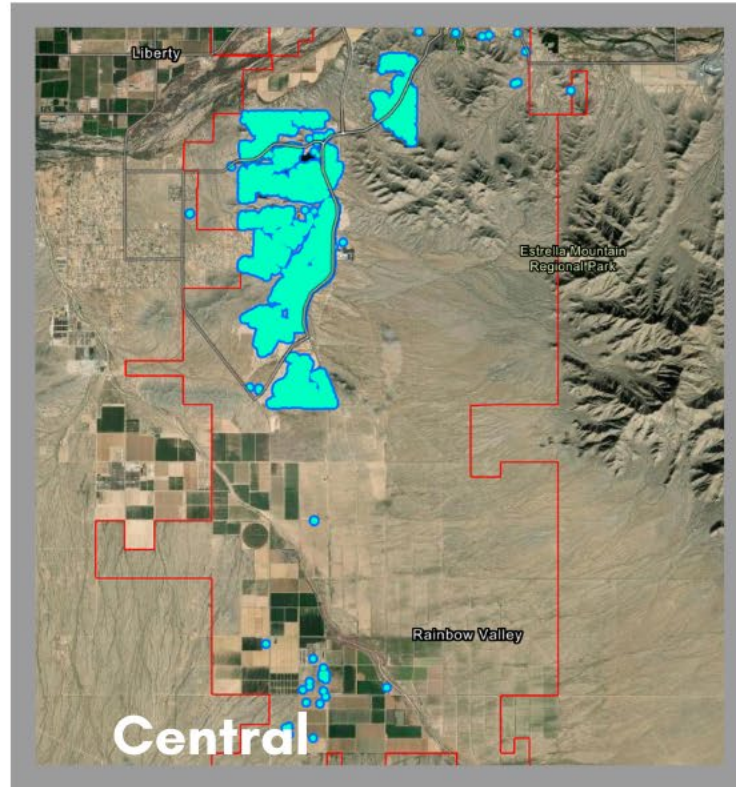
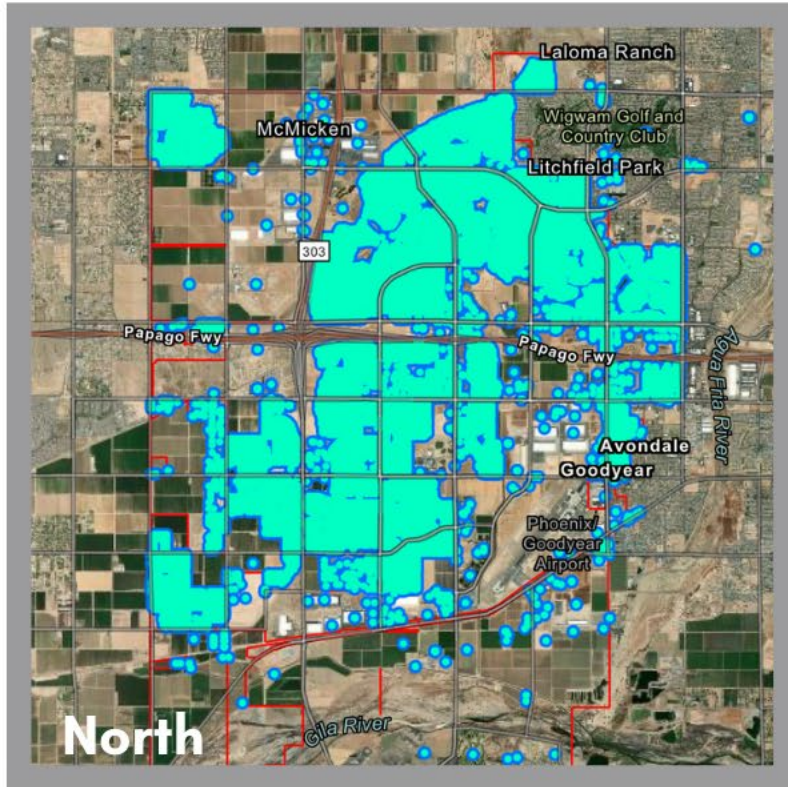


Wireless Broadband



GOODYEAR "WIRED" BROADBAND MAP

MINIMUM BROADBAND SPEEDS (25/3) IN GOODYEAR

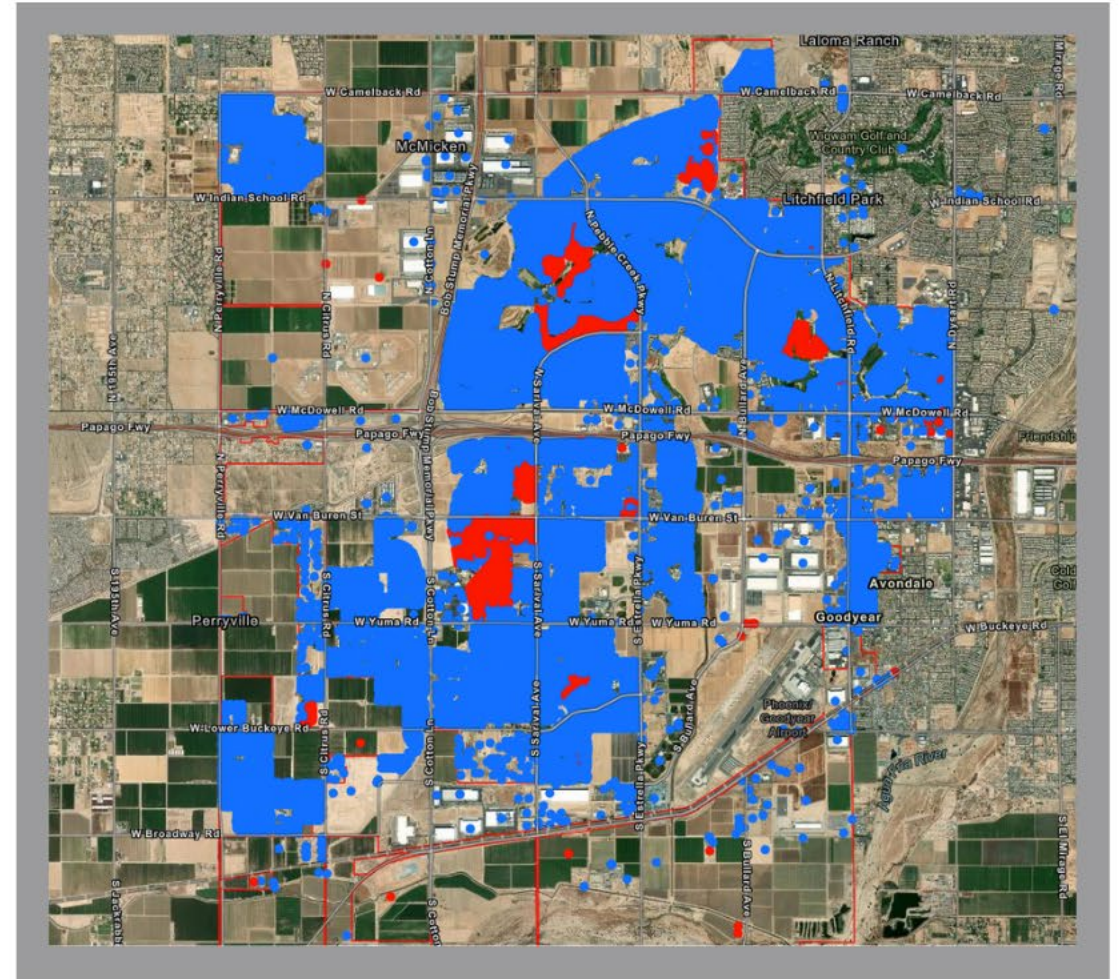
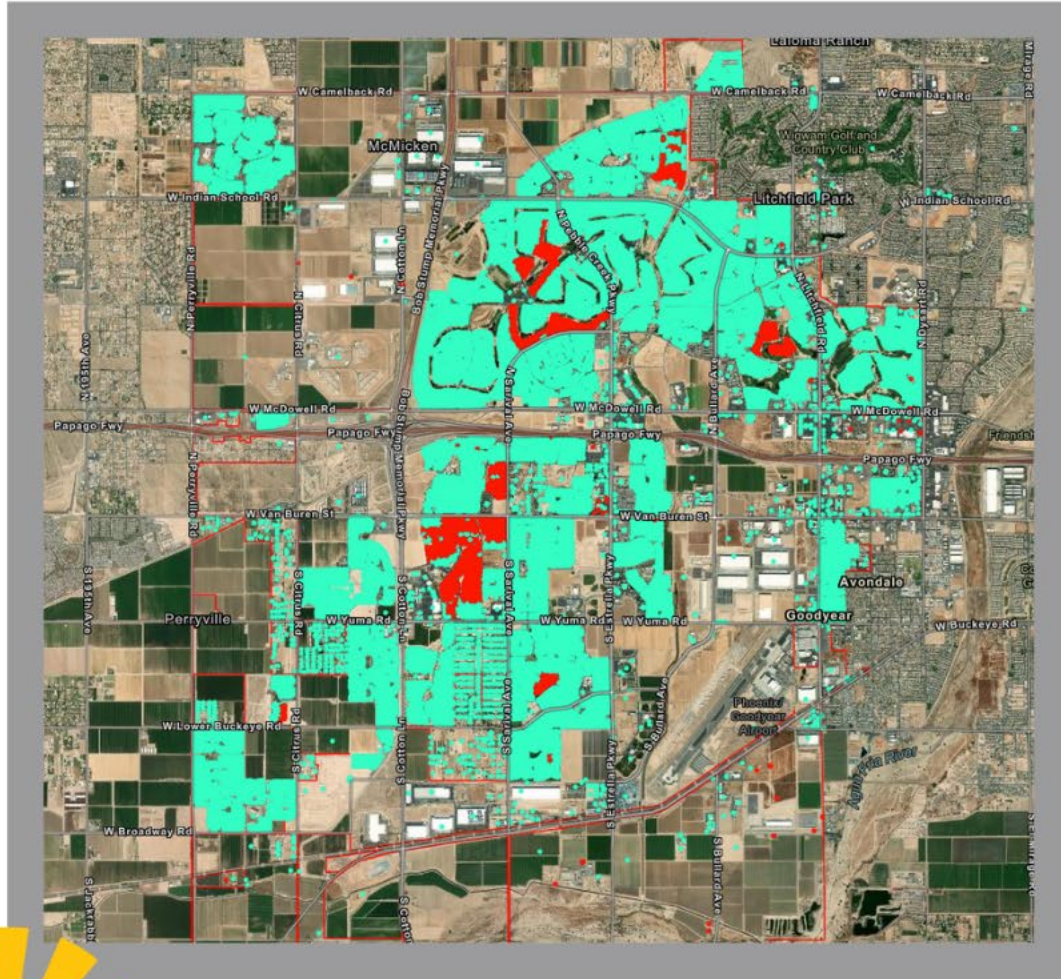


Goodyear has two "wired" broadband providers:

 Cox

 Centurylink/Lumen

GOODYEAR "WIRED" BROADBAND MAP



● Cox

North

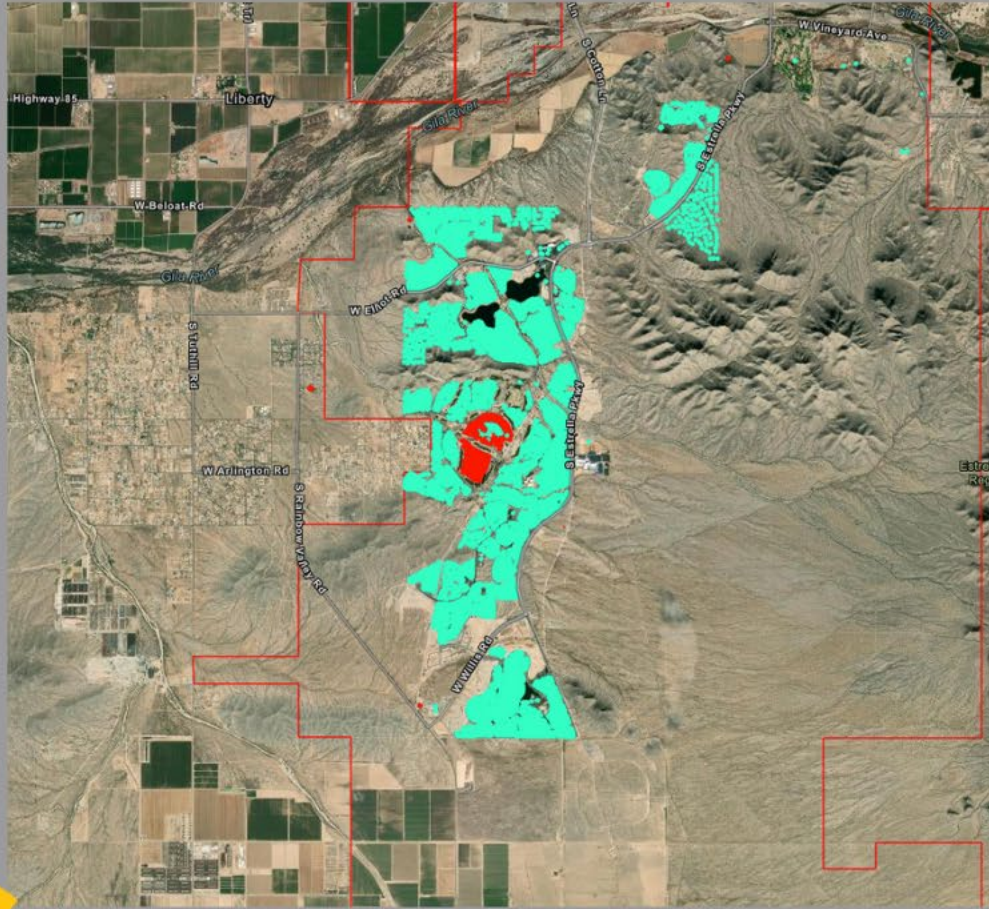
● Centurylink/Lumen

Red Areas indicate address was identified but no "OnNet" data was available

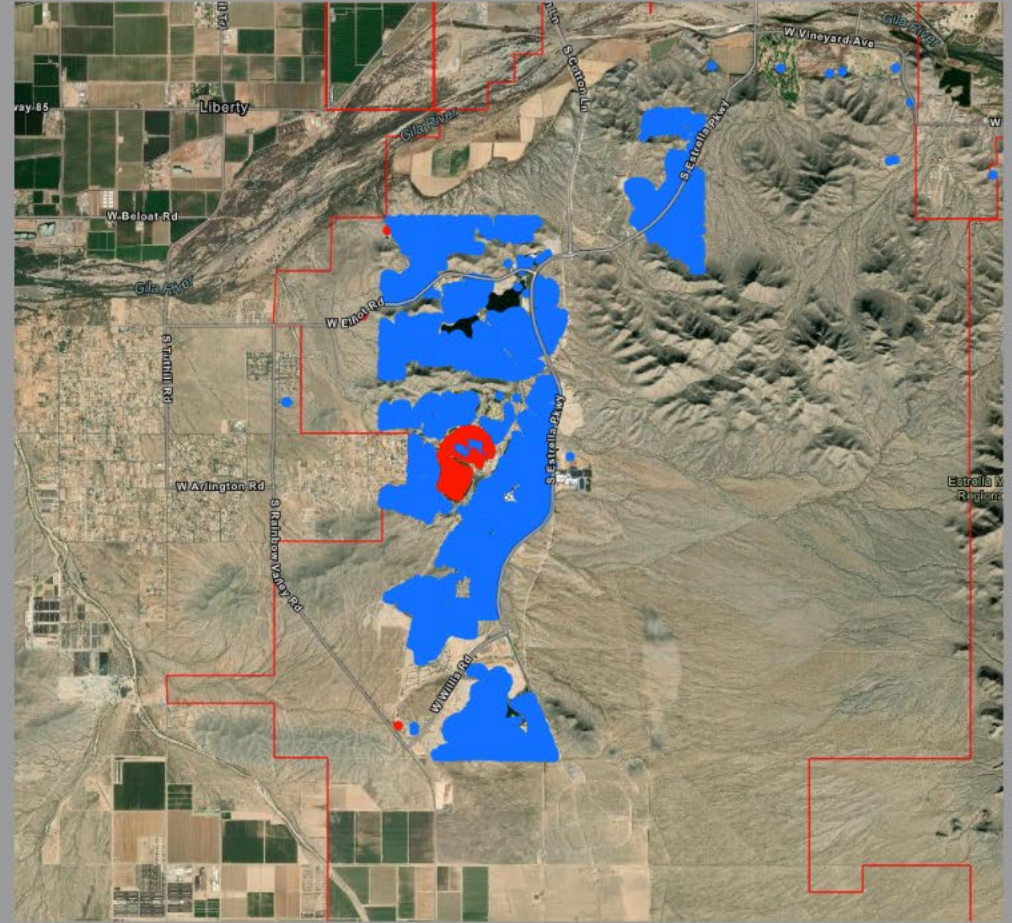


GOODYEAR "WIRED" BROADBAND MAP

MINIMUM BROADBAND SPEEDS (25/3) IN GOODYEAR



● Cox



● Centurylink/Lumen

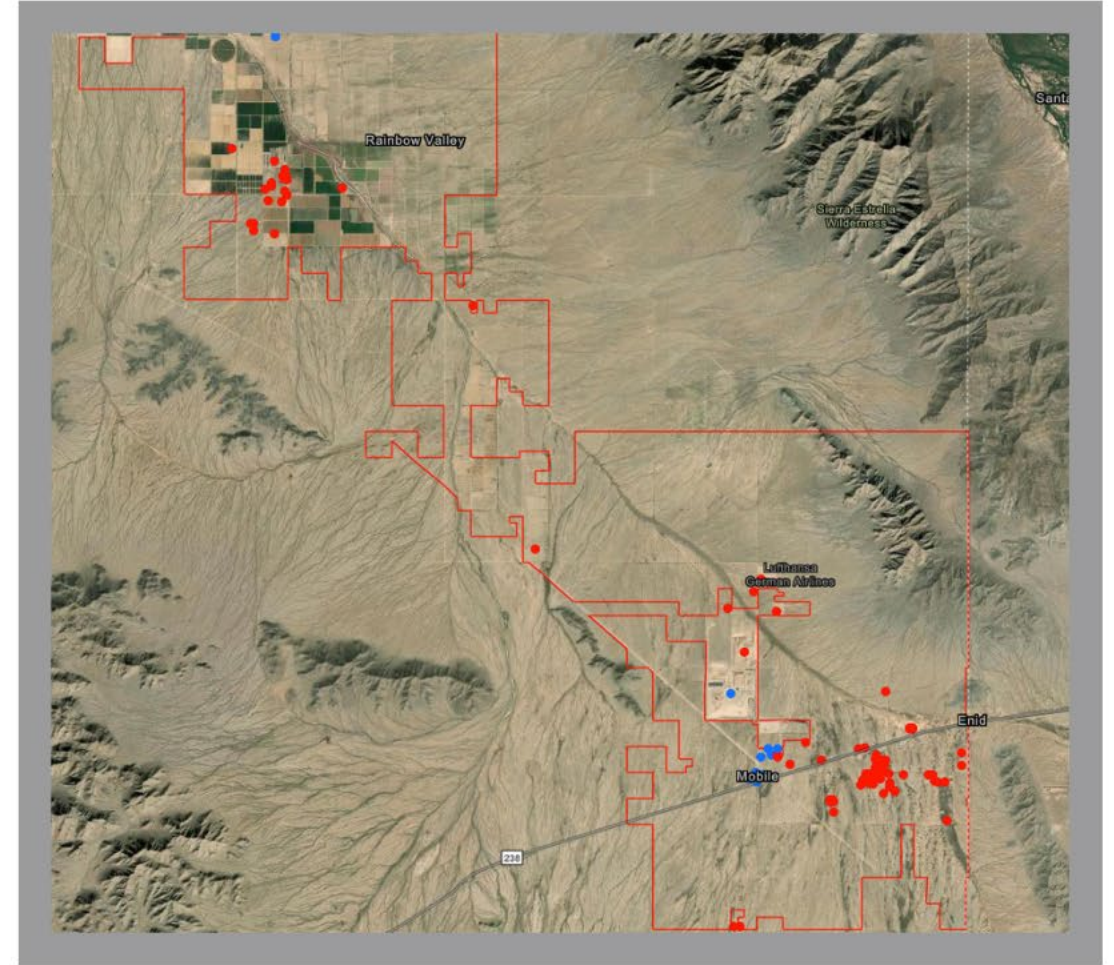
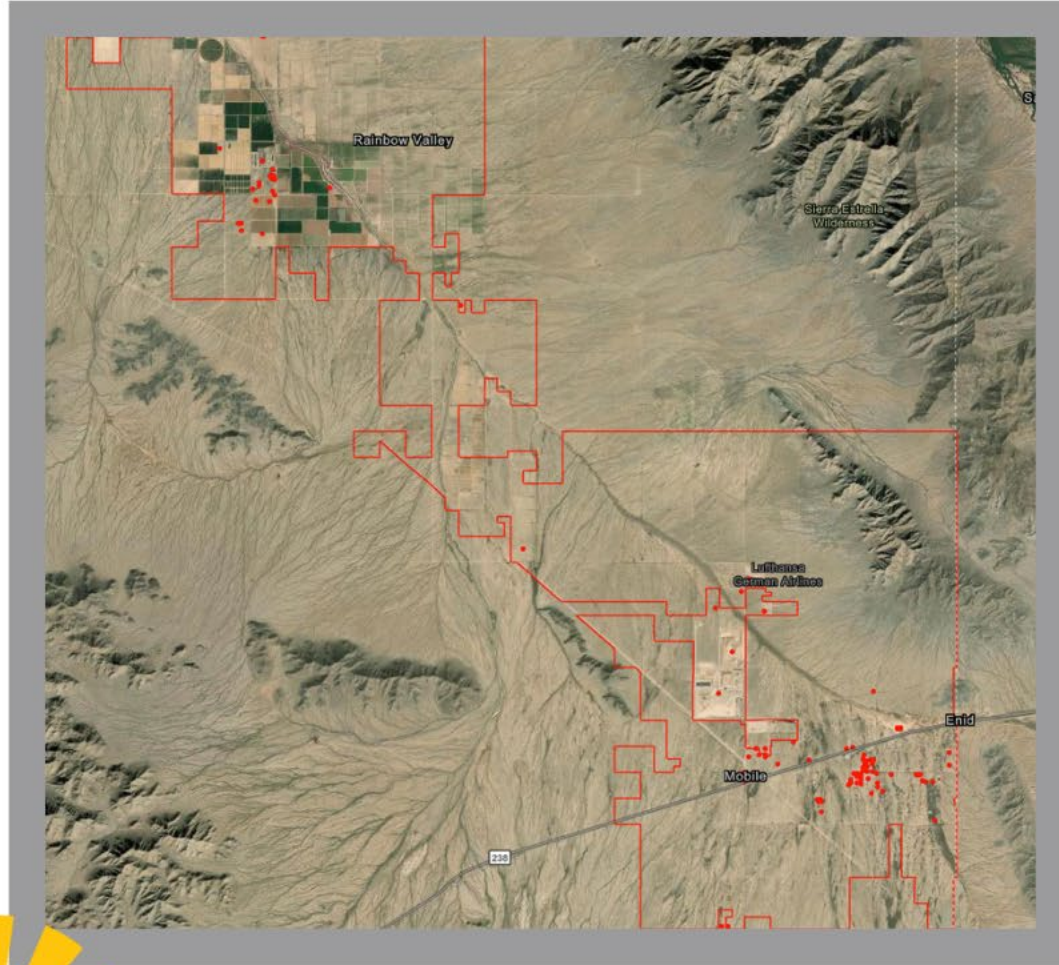
Central

Red Areas indicate address was identified but no "OnNet" data was available



GOODYEAR "WIRED" BROADBAND MAP

MINIMUM BROADBAND SPEEDS (25/3) IN GOODYEAR



● Cox

South

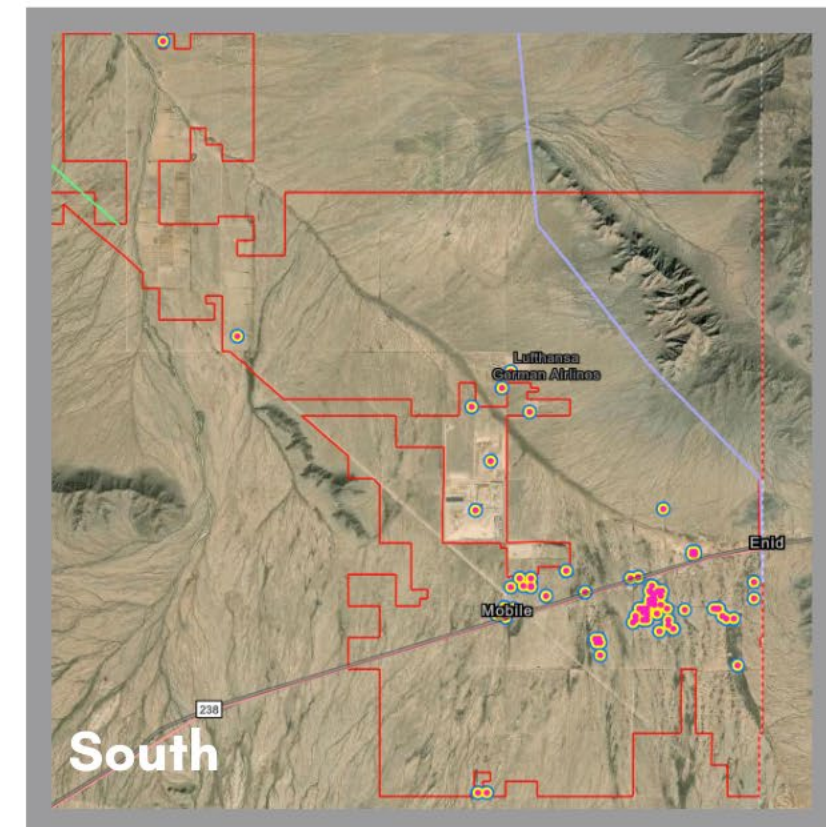
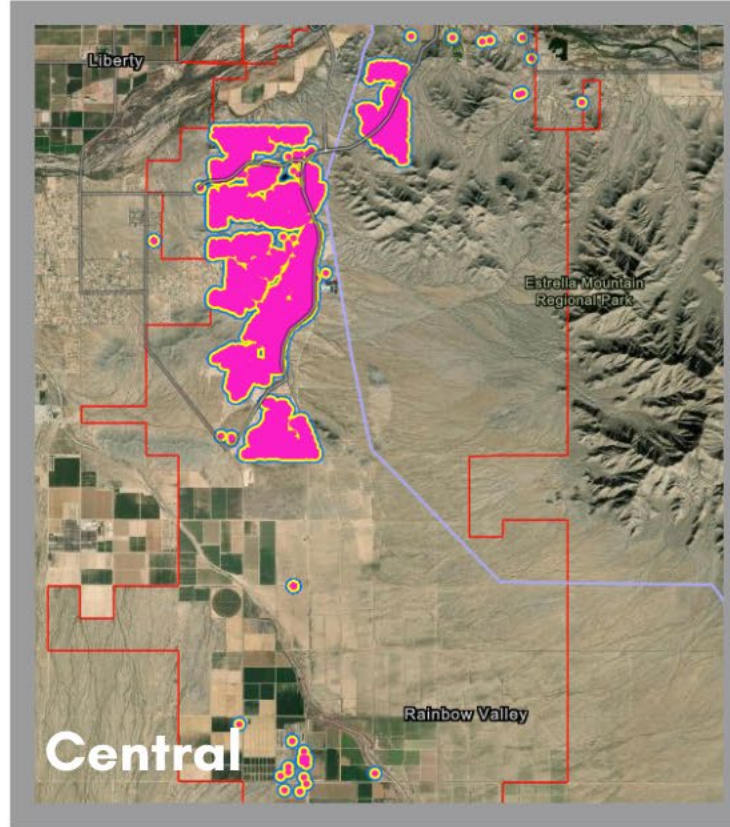
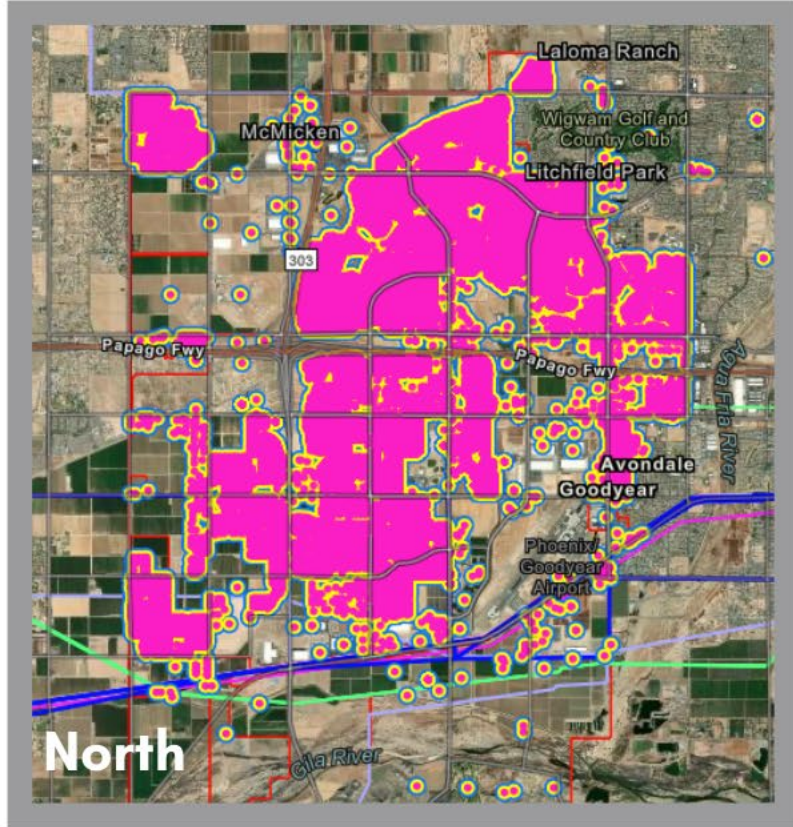
● Centurylink/Lumen

Red Areas indicate address was identified but no "OnNet" data was available



GOODYEAR "WIRELESS" BROADBAND MAP

MINIMUM BROADBAND SPEEDS (25/3) IN GOODYEAR



Goodyear has four "wireless" broadband providers:

● T-Mobile

● Phoenix Internet

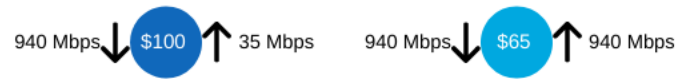
● Airebeam

● Triad



GOODYEAR'S INTERNET OPTIONS

1,000 Mbps -



750 Mbps -

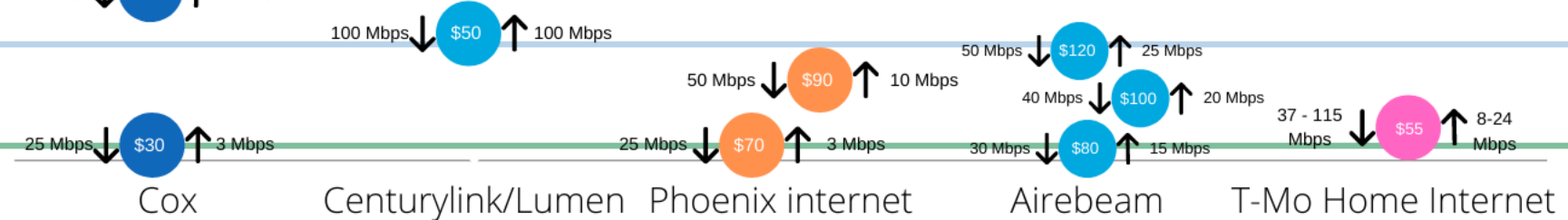
500 Mbps -



250 Mbps -



0 Mbps -



100 / 20
Speed

25 / 3
Speed





Broadband Internet Offerings

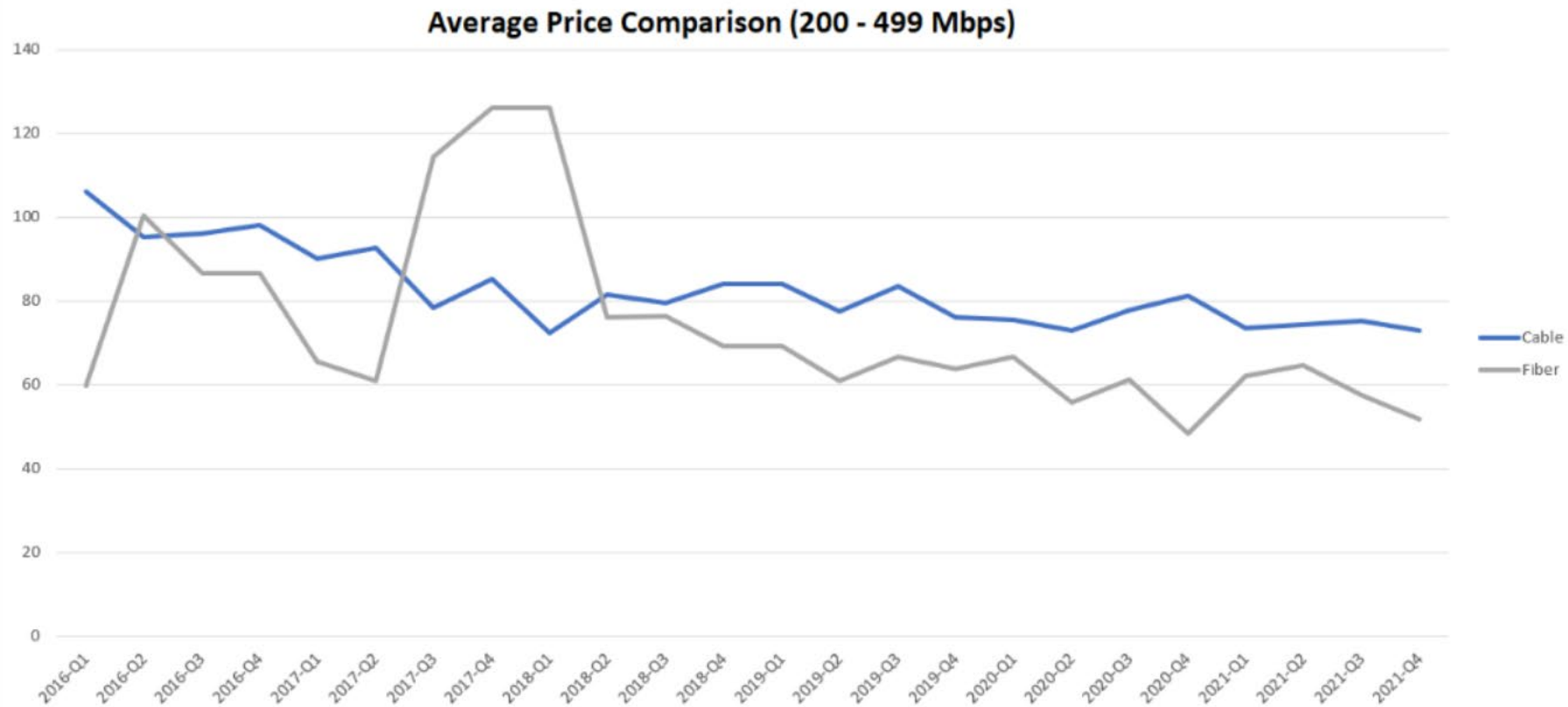
Sample of Plans in Goodyear

	YEAR 1 PRICE	YEAR 2 PRICE	SPEEDS	DATA CAP	PLAN DETAILS
Cox Communications	\$59.99	\$87.99	↓150 Mbps 10 Mbps↑	✓	1.25T (1280 GB) cap, \$10 for each additional 50GB
CenturyLink/Lumen	\$50.00	\$50.00	↓100 Mbps 100 Mbps↑	✓	1.0T (1000 GB) cap, \$15 per month router fee, up to \$300 for install
Phoenix Internet	\$90.00	\$90.00	↓50 Mbps 10 Mbps↑	✗	\$99.99 install fee and Router \$9.99 monthly rental fee
T-Mobile Home Internet	\$55.00	\$55.00	↓37-115 Mbps 8-24 Mbps↑	✗	May not be compatible with all streaming services. Reserves the right to slow services
AireBeam	\$120.00	\$120.00	↓50 Mbps 25 Mbps↑	✗	May require a small tower or 20-40' pole.

COST OF DATA - CABLE & FIBER

The cost of data can vary based on how that data is delivered. Recent data shows that fiber internet is consistently cheaper than cable.

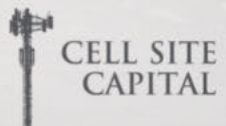
Here is a chart of plans between 200 and 499 Mbps from 2016 through 2021.



Source: BroadbandNow - 2/7/2022

SUMMARY OF FINDINGS

- Goodyear has two broadband ISP providers capable of delivering speeds over the ACA recommendations in its Broadband Strategic Plan
- Goodyear has limited fiber south of MC 85 with only one provider
- Goodyear has few consumer options for wired broadband which creates a less than ideal healthy and competitive market
- Goodyear explore investing in open access broadband infrastructure



Broadband Study



PHASE I & II

Phase I - Broadband Study



Phase II – Next Steps

Grant
Opportunities

Infrastructure
Investment
Exploration

Micro
Trenching

Other National
City Best
Practices

Policy
Exploration

Possible City
Codes
Changes