



**City of Whitehouse**

**Broadband Feasibility Study**

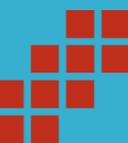
**April 26, 2022**



# PROJECT BACKGROUND

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- The main purpose of the study is to outline a **plan for expanding broadband offerings** throughout the City of Whitehouse.
- Goals are **to increase redundancy** throughout the community and to increase the City's ability to oversee the process so that **citizens have a voice over their level of service**.
- The plan **will review potential network options** and evaluate the **funding and implementation strategies** the City can utilize to expand broadband throughout the City.



# IMPLEMENTATION WORKPLAN

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## PLANNING PHASE

Assess Community Broadband Need

Address Resources & Funds

Explore Various Options

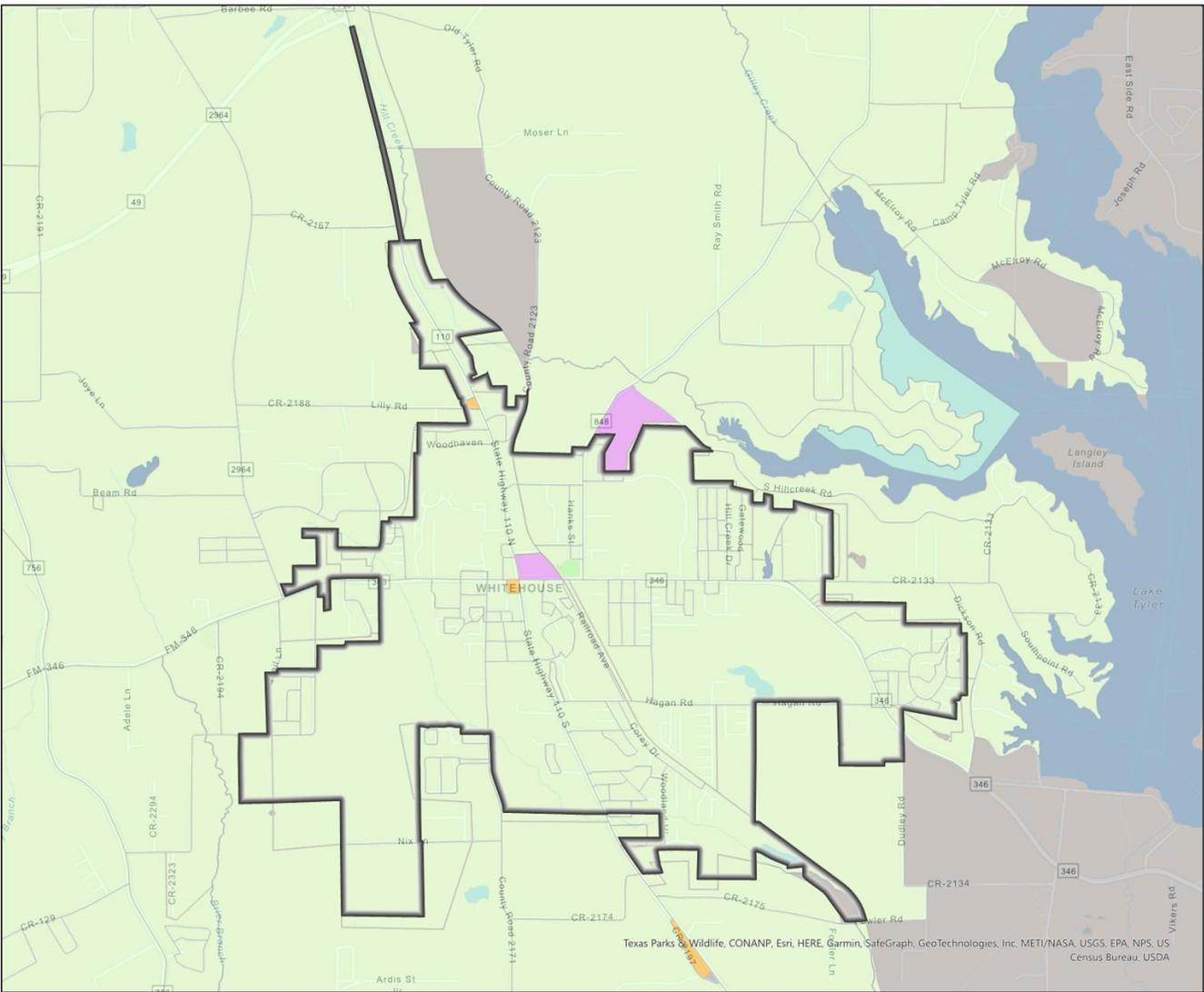
Draft Preliminary Business Plan

## IMPLEMENTATION PHASE

Choose Broadband Implementation Strategy



# CURRENT BROADBAND STATUS IN WHITEHOUSE, TX

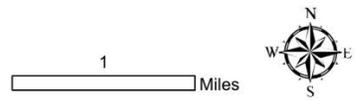


## Whitehouse, TX Broadband Providers & Speeds

**Number of Providers & Speeds**

Grey square	N/A
Purple square	1 (≤ 50/8)
Orange square	1 (≤ 100/10)
Light green square	1 (≥ 100/20)
Thick black outline	City of Whitehouse

- Currently only one incumbent provider offers broadband speeds above the minimum threshold for service, as defined by NTIA
- Future-proof speeds include upload speeds at a symmetrical value as download speeds (100/ 100 Mbps)
- Fiber to the premise is recommended over coaxial as fiber allows for expanded capacity and need to meet symmetrical service speeds



Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc. METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

# CURRENT BROADBAND STATUS IN WHITEHOUSE, TX

Internet Package Based on Speed	New Customer Promotion Price Per Month	Post-Promotion Price Per Month	% Change	Upload Speeds at This Package
100 Mbps	\$30	\$90	300%	5 Mbps
300 Mbps	\$30	\$110	367%	20 Mbps
500 Mbps	\$40	\$130	325%	20 Mbps
1 GB (940 Mbps)	\$50	\$140	280%	35 Mbps

- The incumbent provider averages about \$118/ month for service after the new customer promotional bonus ends
- The Upload Speeds per package are not near the symmetrical recommendation
  - Fiber technology is the best method to obtain this symmetrical speed, as well as any future proof demand
- When one provider is the only option for the city pricing like this is common until competition arrives in the community
- With high prices and customer satisfaction ratings, adoption is likely to drop



# Public Survey and Speed Test

TOTAL  
RESPONSES

440

SPEEDTEST GOAL

To gain insight into the speed capabilities of each resident/business current broadband level of service



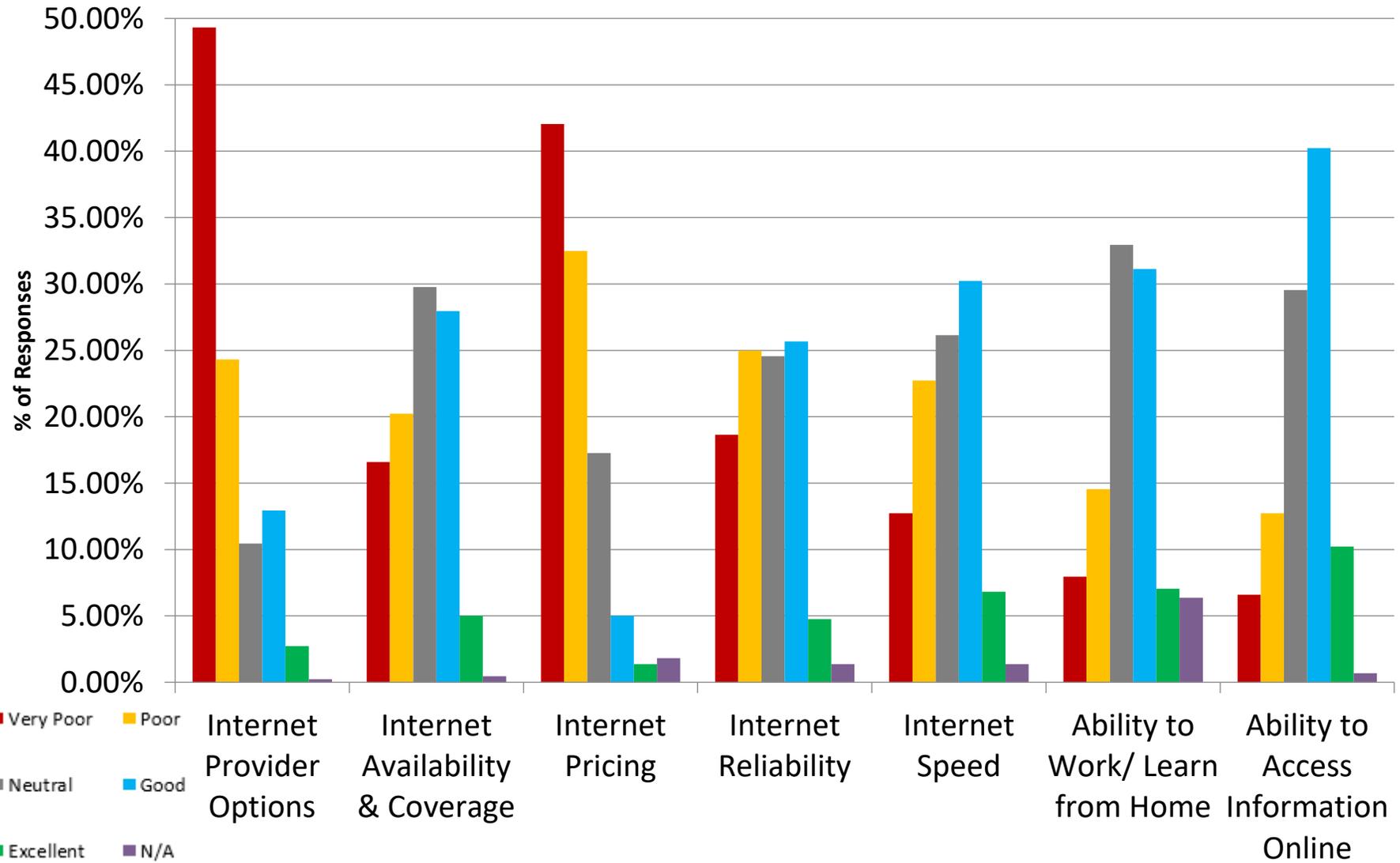
SURVEY GOAL

Resident and Business Surveys aim to inform the City of the factors that are important to quality of life and access to broadband.



# SURVEY TAKEAWAYS

*How Would You Rate The Following Factors Related To Internet Connectivity In Your Area?*

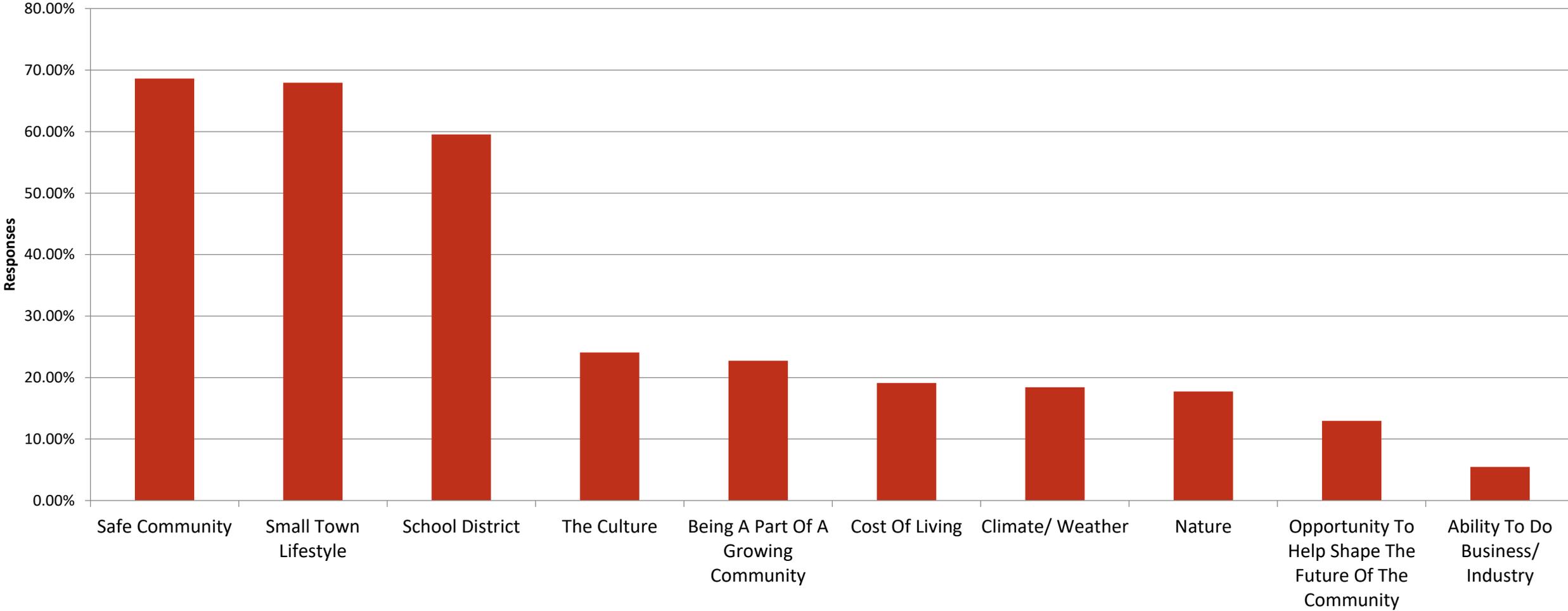


Survey Score	
Internet Provider Options	-460
Internet Availability & Coverage	-68
Internet Pricing	-479
Internet Reliability	-119
Internet Speed	-19
Ability to Work/ Learn from Home	65
Ability to Access Information Online	153



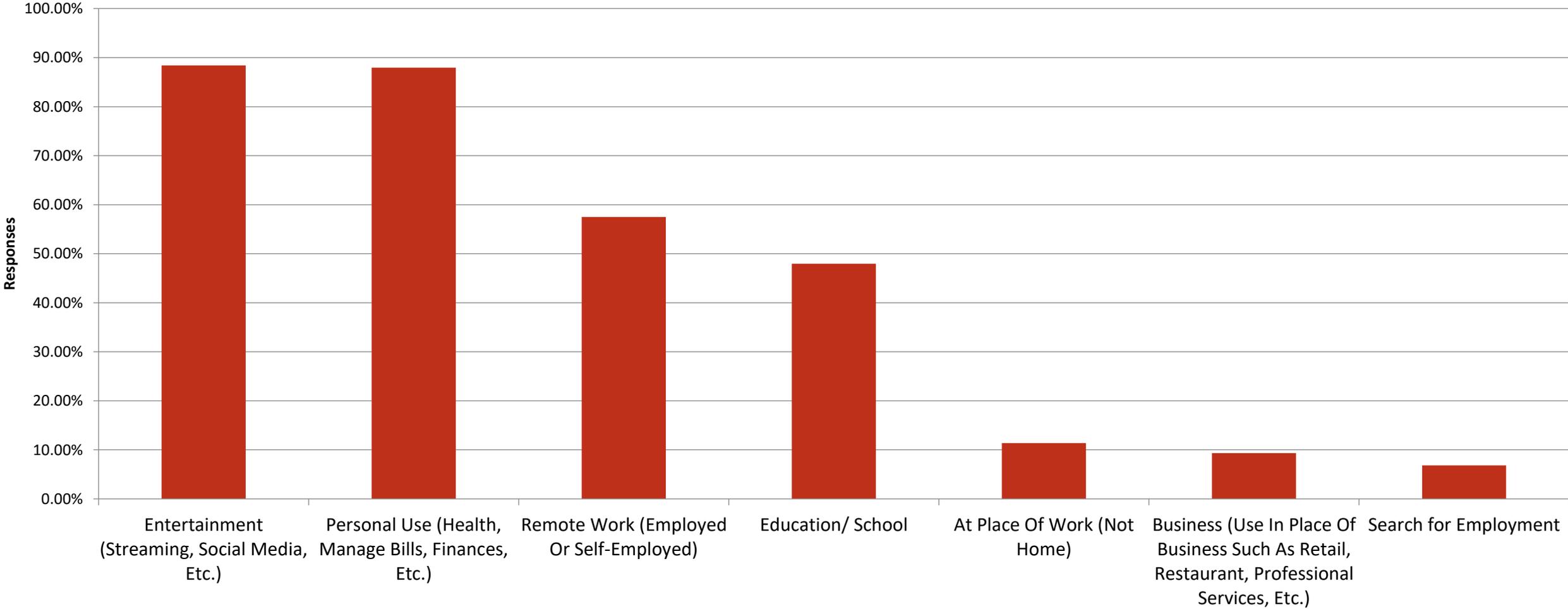
# SURVEY TAKEAWAYS

*What Do You Like Most About Living, Working, And/ Or Visiting The City Of Whitehouse?  
(Choose Up To 4)*



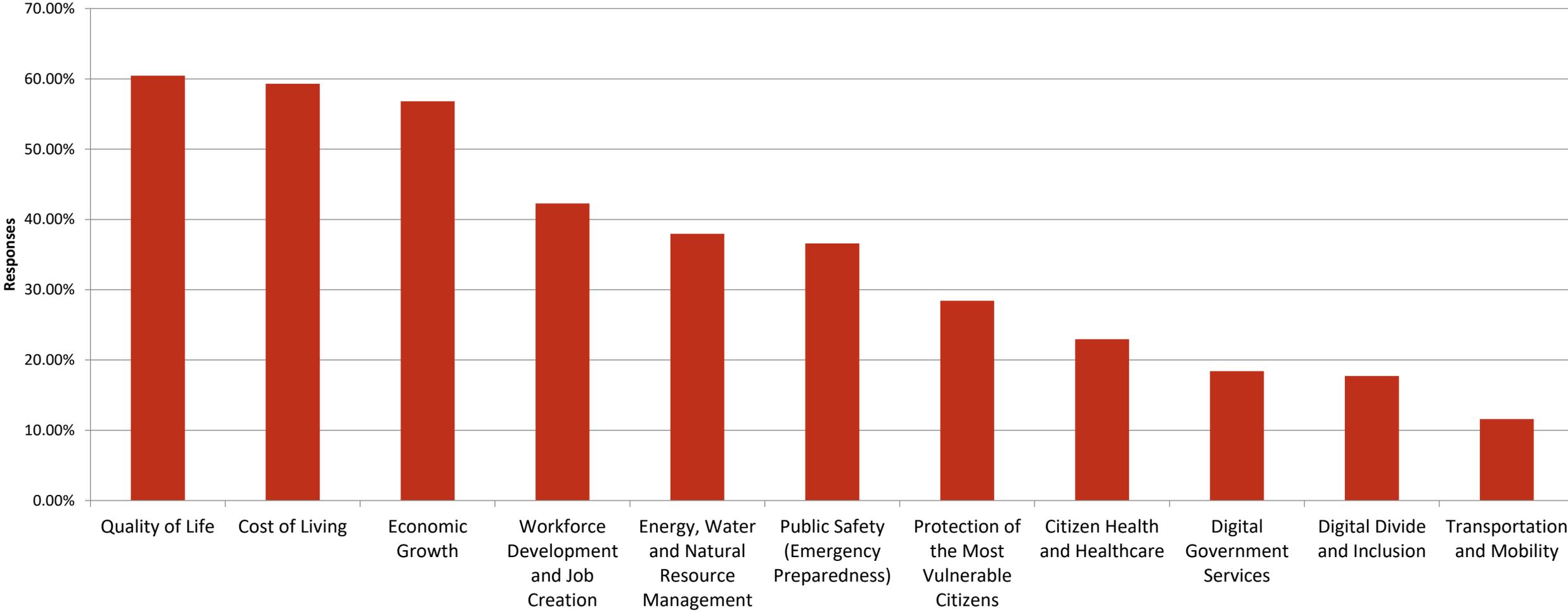
# SURVEY TAKEAWAYS

*How Do You Currently Use The Internet While In The City Of Whitehouse? (Check All That Apply)*



# SURVEY TAKEAWAYS

*Please Choose The Top 4 Most Important Areas You Would Like To See Improve With The Addition Of A Broadband Network.*



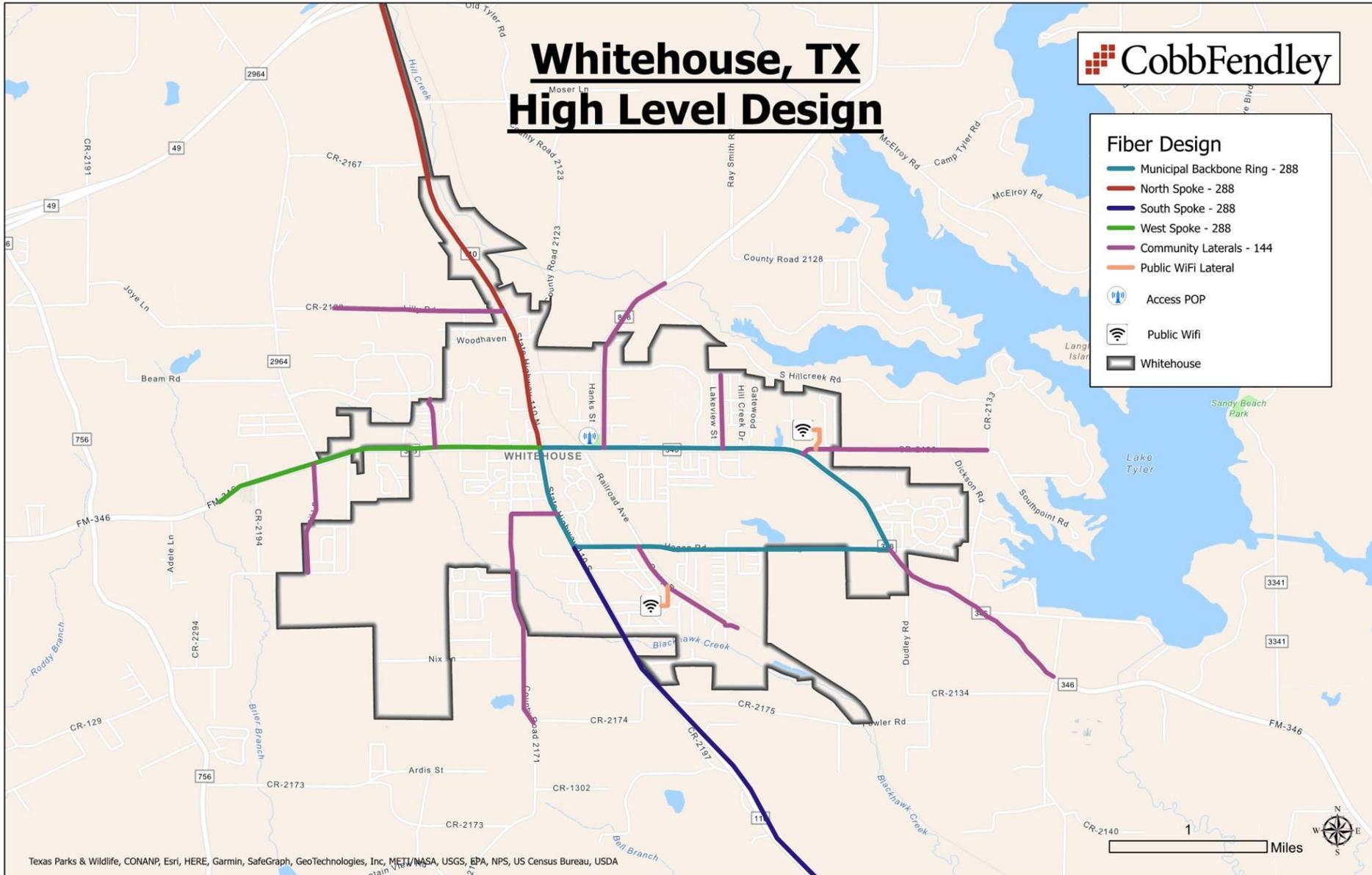
# SPEED TEST TAKEAWAYS

Provider	Average Download Speed (Mbps)	Average Upload Speed (Mbps)	Median Download Speed (Mbps)	Median Upload Speed (Mbps)	Amount of Speed Tests using this ISP
Suddenlink Communications	166	26	118	21	388
Verizon Wireless	39	12	32	9	14
AT&T Wireless	29	3	29	3	13
T-Mobile USA	48	7	36	5	7

- Speed tests highlight a perfect situation, and can fluctuate based on time of day
  - Not always applicable to real world response
- While multiple ISPs were recorded through responses, 88% of results were using Suddenlink.
  - 7% were from Cellular Providers
  - Remaining ISPs seen only recorded about 1 response each
- Median helps eliminate outliers in data
  - Suddenlink was recorded at 166/ 26 Mbps on average and 118/ 21 Mbps on median
  - Meets 100/ 20 Mbps needs, but does not meet symmetrical needs



# HIGH-LEVEL DESIGN



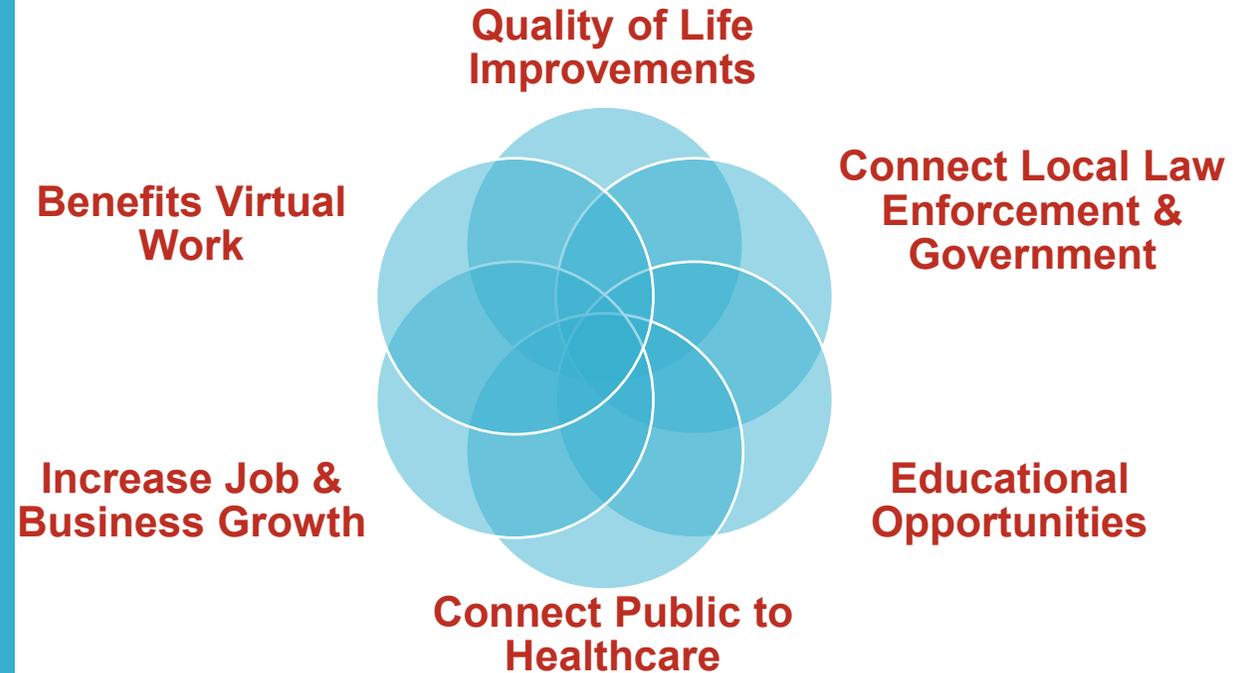
- This is a proposed greenfield high-level design.
  - Designed as if infrastructure was being built from scratch.
- Includes a 288FO middle mile which incorporates a municipal backbone for redundancy and allows for future growth of capacity.
- Smaller sized laterals are included for the high-density neighborhoods, and areas expected to see expansion.
- Last mile provider would help fill in the gaps off this backbone infrastructure.
- Public Wi-Fi would be included at the local parks and sports complex.

# COMMUNITY IMPACT

A robust fiber network can enable the City to invest in Smart City technology and other advancements to increase the public safety, sustainability and overall quality of life of its residents.

Specific quality of life potential benefits of broadband investments for the City of Whitehouse include:

- **Economic Factors**
  - Increases the ability to telecommute and work from home
  - Can increase employment rates from 1.2% to 15% (51 to 684 new jobs)
  - Increase property value by 1.3% to 3.1%.
  - Increase property tax revenues \$25,607 to \$61,056 per year (not adjusted for inflation)
- **Health Factors**
  - Approximately 45% to 65% less time spent accessing healthcare via telehealth
- **Education Factors**
  - Can help increase the graduation rate to 95%
  - Increases the ability for continuity of learning and education needs at home



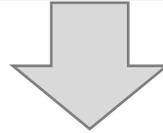
**PIONEER**  
PARTNERS



# ALTERNATIVES ANALYSIS

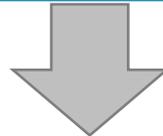
## PUBLIC-PRIVATE PARTNERSHIPS

- Stakeholder Engagement - many private entities have vested interest.
- Architectures differ, but many options provide a suitable choice for residents



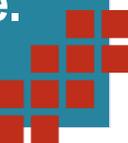
## ADDITIONAL RESOURCES FOR ADOPTION

- Promote existing federal and provider-backed subsidy programs
- Leverage local support channels to provide digital literacy programs and generate trust and value of Broadband services



## PROMOTE ISP FRIENDLY COMMUNITY

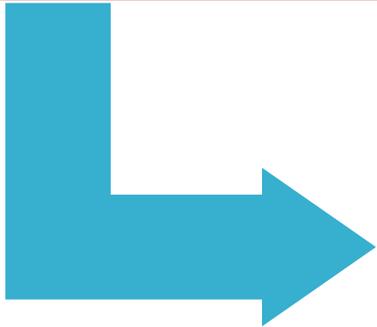
- Organic saturation of ISPs is welcome, but it may leave gaps in key areas.
- Suddenlink has great existing infrastructure and is looking to potentially looking to upgrade where applicable. Supporting this as a city will allow the benefits of competition to positively impact Whitehouse.



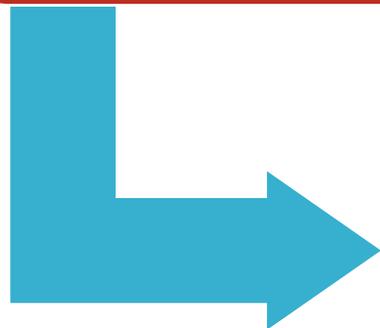
# WHATS NEXT?

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**COLLECT BUSINESS  
PLANS FROM  
POTENTIAL  
PARTNERS**



**COMPLETE THE  
FEASIBILITY STUDY  
AND DISTRIBUTE  
FINDINGS TO THE  
COMMUNITY**



**REVIEW OPTIONS FOR  
IMPLEMENTATION  
AND MOVE INTO  
FINAL DESIGN AND  
ENGINEERING**

**Questions?**

**Feel free to reach out to CobbFendley or City of  
Whitehouse staff**

**[WhitehouseBroadband@cobbhendley.com](mailto:WhitehouseBroadband@cobbhendley.com)**

