



**Honorable Chairman Jim Himes and Committee Members
House Select Committee on Economic Disparity and Fairness in Growth
“Infrastructure Investment: Building Economic Resilience in South Texas”**

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Re: Texas Border Colonias Infrastructure Status and the Opportunity to Bring Fiber-based
Broadband to South Texas to Transform the Economy

To the esteemed members of The House Select Committee on Economic Disparity and Fairness in Growth, thank you for allowing me the opportunity to come before you and share information about the Texas Border Colonias and the unprecedented opportunity to deploy fiber-based broadband to the South Texas Region to attract industry, create jobs, improve health outcomes, and transform the economy.

I am Jordana Barton-Garcia, and I am from the colonia of Benavides in South Texas. My career path has taken me from public education, to Latino Studies in higher education, to nonprofit community development and microfinance, to community development banking, to the Federal Reserve, and to the leadership of a major health system philanthropy serving South Texas. Currently, I am the owner of a social enterprise, Barton-Garcia Advisors, and a Senior Fellow with Connect Humanity. I am working with many stakeholders to advance the deployment of broadband infrastructure and digital inclusion programs to transform the economy of the South Texas Triangle Region.

While at the Federal Reserve I authored “Las Colonias in the 21st Century: Progress Along the Texas-Mexico Border” and the related publications, “Closing the Digital Divide: A Framework for Meeting CRA Obligations” and “Preparing Workers for the Expanding Digital Economy.” I am pleased to share with you some of the findings of these studies and my current work to provide an insight into the vast human assets of the region.

The Rio Grande Valley and the entire border has historically been seen as a gateway for international commerce and trade, as well as the exchange of ideas and cultures. These characteristics have included steamships to New Orleans and Veracruz, railroads into Mexico,

and international bridges. However, the future of commerce and culture no longer depends solely on transportation infrastructure like railroads and highways, but on broadband infrastructure. Specifically, the transport infrastructure for the digital economy is fiber-based networks. If deployed along with targeted digital skills programs, the people of this region will transform the economy. They are worthy of investment.

Texas Border Colonias

In Spanish, the term “colonia” means a community or neighborhood. A colonia is defined as a high poverty rural or peri-urban residential area along the Texas-Mexico border that may lack necessities such as drinkable water, sewer systems, paved roads, drainage, safe housing, and affordable high-speed broadband.

- Approximately 500,000 people live in Texas colonias
- 96 percent of colonia residents are Latino
- 94 percent of those under 18 are U.S. citizens similar to the percentage in Texas
- 73 percent of all ages are U.S. citizens
- 43.3 percent have limited English proficiency. There is a labor market penalty for limited English proficiency; however, there is a labor market reward for bilingualism (Spanish/English) in this bi-national region and it is necessary for conducting business. Bilingualism is an asset of many colonia residents.

Infrastructure Status in Colonias

The South Texas Border region remains one of four persistent poverty areas of the country where 20% or more of residents have remained under the poverty line for at least three decades.

- The Texas Secretary of State’s color classification system, was designed to monitor health risk based on the infrastructure status of each colonia.
- Colonias were classified according to infrastructure from 2006 to 2014. In 2017 the Texas Governor discontinued the Secretary of State Colonias Ombudsman Program that was responsible for identifying and monitoring colonias.
- Progress was made between 2006 and 2014 in access to potable water, wastewater disposal and other forms of infrastructure.
- The number of colonias that are red, or high health risk, dropped from 442 in 2006 to 337 by 2014. However, the 337 remaining red colonias are a serious concern, and most remain red due to potable water and wastewater issues.
- In the six counties with the highest concentration of colonias, approximately 38,000 residents do not have access to safe drinking water
- 51.7% of colonias in Webb County do not have access to potable water. Of the 62 colonias, 35 are classified as red and do not have access to potable water

- Homes may lack an indoor kitchen. Thus, water may come from a hose or trucked in plastic tanks which can be contaminated and pose health risks.
- Colonias located in flood zones continue to suffer from mosquito infestations and drainage issues
- Dangerous levels of arsenic is a problem in some colonias.
- Some colonias may be classified as green, or low health risk, while residents use private well water. This well water may be contaminated—the potability is not monitored by authorities.

Housing

- Colonia housing is often self-built over time as the residents' finances allow
- The homeownership rate in Texas colonias is 77 percent, above the state average of 64.8 percent
- Contract for Deed purchases still common and interest rates range from 15-18 percent, preventing colonia homeownership in many cases from serving as an asset building tool
- Only 11.7 percent used a bank or credit union to finance their purchase because a significant number are unbanked or underbanked and have not had an opportunity to build up their credit score.
- Many colonias lack access to parks, streetlights, and recreational areas for adults and children to exercise and maintain healthy lifestyles.
- The Model Subdivision Rules (MSR) passed by the Texas Legislature and adopted in 1989-1990, were enacted into law and require developers to provide basic infrastructure to new subdivisions--electricity, potable water, wastewater disposal, solid waste disposal, legal plats, paved roads.
- However, 800 “new colonias” or model subdivisions have proliferated in the border region since 1990. The “new colonias” are not officially colonias, but residents are living in colonia-like conditions without basic infrastructure to the home. The unintended consequence of the MSR is that lots are more expensive, i.e., \$30,000 instead of \$5,000, thus leaving fewer family resources for safe housing and connection to utilities. Many pay fines because their house is not up to code and they don't qualify for hook-ups.
- The “new colonias” are officially legal subdivisions with homes not able to connect to infrastructure including water and wastewater.
- Most “new” colonias are developer financed lots using warranty deeds, long-term financing (up to 30 years), adjustable interest rate of 12.95 percent
- 30 percent of residents in model subdivisions face repossession, in some subdivisions as many as 50 percent (Olmedo, Ward 2015)

- Community Development Corporation of Brownsville has developed some of the most innovative affordable housing in the country.
 - They approach affordable housing and infrastructure holistically.
 - They work with colonia residents in the design of their home.
 - RAPIDO (which means “fast” in Spanish) is a project that is redefining disaster recovery. They can build a beautiful HUD certified home for less than the cost of a FEMA trailer.
 - Families personalize their home design based on their needs and preferences.
 - Two phases: CORE (temp.) and Expanded Home (permanent)
 - Learned from colonia residents’ approach to housing, i.e., building their house in phases, over time, as their budget’s allow.

Healthcare

- Lower ratio of health care professionals (including physicians, dentists, physician’s assistants, nurse practitioners, psychiatrists, and psychologists).
- The University of Texas-RGV Medical School opened in 2015 and is attracting more healthcare providers to South Texas.
- Access to quality food can be a challenge because many colonias exist in food deserts— areas where grocery stores with healthy foods, such as fruits and vegetables are far away.
- The prevalence of diabetes is estimated to be over 30 percent among Mexican-American adults residing near the U.S.-Mexico border (Kendzor, Darla E. et. al., 2014). The Rio Grande Valley has the highest rate of diabetes related amputations in the country.
- In Hidalgo County 40 percent of residents are enrolled in the food-stamp program which means a widespread reliance on cheap, processed foods.
- Rates of diabetes and obesity are double the national average which, along with reliance on emergency rooms for access to healthcare, the border region has the country’s highest per capita spending on healthcare.
- Children in South Texas have a projected life span that is a few years shorter than that of their parents

Broadband Infrastructure

When conducting the Colonias study for the Federal Reserve an unexpected finding was the digital divide and the homework gap that limited workforce opportunities, educational equity, access to healthcare, entrepreneurial opportunities, and access to financial services for residents.

- The Texas border has some of the least digitally connected counties in the country.
- In 2019, Pharr and Brownsville held the top two spots on the National Digital Inclusion Alliance’s list of the nation’s worst connected cities. Brownsville, in Cameron County, had 67% of households without a fixed broadband subscription, and Pharr, in Hidalgo County, had 69% of households without fixed broadband.
- In 2019, before the pandemic, a Michigan State University study found that students without high-speed internet access are less likely to plan to pursue higher education.

- 47 percent of students who have no home internet subscription, or have cell phone only access, plan to attend college. This compares with 60 percent of those with slower home internet and 65 percent of those with fast home internet.
- Students with home internet get better grades. On average, the GPA of students with home internet subscriptions is a half letter grade higher, the difference between a B and B- average.
- Students with higher digital skills are more likely to pursue STEM-related professions. Students who are moderately lower in digital skills, e.g., one standard deviation below average, are 19 percent less likely to be interested in a STEM-related career.
- It has been well documented that high-speed broadband infrastructure is vital for disaster response and recovery, as well as public health emergencies such as the pandemic.

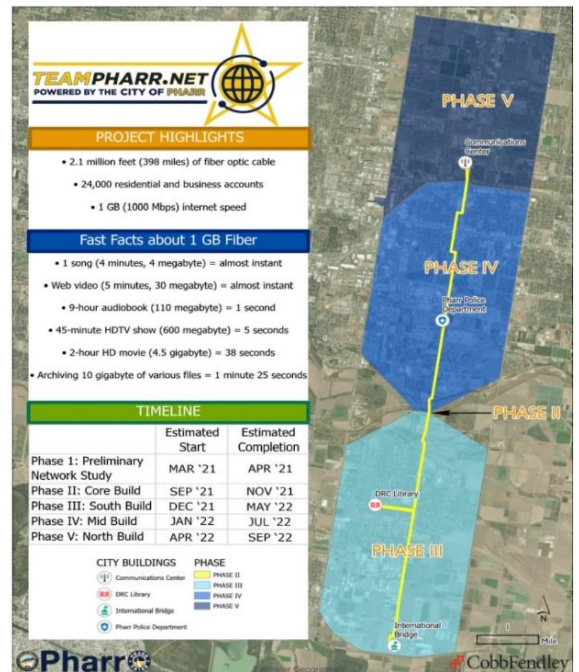
The Federal Reserve colonias study revealed the entrepreneurial spirit in colonias as well as the region. The key to growing entrepreneurship in the digital economy is the expansion of broadband networks. A 2019 Amazon and U.S. Chamber of Commerce study noted that Texas is the state with the most to gain and could add nearly \$3.8 billion to the state GDP per year if the state closes its rural digital divide and makes digital communications technologies and tools available in rural areas. The report illustrates the belief on the part of rural small businesses that greater broadband availability could boost efficiency, annual sales, job creation, and wages. According to the survey, 66 percent of rural small businesses say poor internet or cell phone connectivity negatively impacts their business (Unlocking the Digital Potential of Rural America, www.empoweringruralbusinesses.com, March 2019).

Examples of Broadband Assets in the RGV



Pharr, Hidalgo County, Texas

The 2015 Texas Border Colonias Study of the Federal Reserve Bank of Dallas and subsequent community convenings revealed the impact of the digital divide in the border region.



- Residents of Pharr and surrounding colonias, the Mayor, City staff, PSJA School District, key anchor institutions, the Federal Reserve, and banks came together to address the issue.
- Pharr commissioned its community survey and feasibility study, supported by BBVA Bank (now PNC Bank) under the CRA.
- Pharr chose the Municipal ISP Model and have now created TeamPharr.net which will provide Fiber-to-the-home high-speed broadband. They will participate in the Affordable Connectivity Program of the FCC and will provide affordable subscriptions.
- Pharr is now building a student-run helpdesk for customers. It's exciting because the young people will be the experts in their communities. They will receive training—IT certification, customer service, internet safety and security—and paid internships and apprenticeships.

Brownsville, Cameron County, Texas

Starting in 2018, I worked with the City of Brownsville to convene with residents and community leaders to consider options/best practices and make a plan to close the digital divide.

- Brownsville hired Lit Communities to conduct the community survey, engineering study, and explore financing options.
- Brownsville chose a Public-Private Partnership Model
- Lit Communities completed the plan with Brownsville—now the City is building its robust middle mile funded in part by ARPA dollars
- BTX Fiber, a small ISP, was awarded the contract to lease the City's fiber, build the last mile fiber-to-the-home, and provide high-speed service for residents and businesses.
- Brownsville is also investing in their own students and community members. Along with affordable high-speed broadband, they will develop workforce digital skills, telehealth expansion, and more.
- Brownsville Wins National Digital Equity and Accessibility Award from the IDC 2022 Smart City Awards

VTX-1, Local Co-op and Internet Service Provider

VTX-1 is the largest regional internet service provider in South Texas and is headquartered in the RGV. It has over 70 years of advanced telecommunications to customers. Their network extends from the Lower Rio Grande Valley to north of Austin, covering approximately 46,000 square miles. The company has a history of investing in the region through grants and programs, including youth programs. They are currently working to create paid internships and apprenticeships for students to learn how to design and build broadband networks and more. VTX-1 is poised to be a vital partner in closing the digital divide in the region.

By the numbers:

290 - Employees

46,000 - Square Miles in Service Area

10,334 - Fiber Route Miles

336 - Towers in the Network

52 - Counties Served in Texas

Additional Important Broadband Facts Policymakers Should Know

- Over the last two decades, the internet has given way to the digital economy in which online businesses and services have no geographic boundaries. This has resulted in the development of digital businesses such as Google and Amazon with some of the highest market value in the economy.
- In the digital economy, broadband internet service is an infrastructure *platform* that allows consumers, workers, and entrepreneurs to access and create all manner of online markets, businesses, services, applications, products, software, data, currencies, games, professions, training, education, entertainment, communications, communities, activities, and other resources.
- The argument that broadband service should be “technology neutral” states that copper-based DSL service, coaxial-based cable modem service, fixed-wireless service, and fiber-based broadband service provide the same level of service and are substitutes for one another. This argument is incorrect and should be rejected.
- The market for broadband service is best defined by the capabilities that fiber-based networks enable as described in the bullet point above. If all the capabilities enabled by fiber-based broadband service are encompassed within a circle, then the other technologies of the analog economy represent just a fraction of the capability: (i) the capabilities enabled by copper-based DSL service only cover $\frac{1}{10}$ of the circle; (ii) the capabilities of coaxial-based cable modem service only cover $\frac{1}{5}$ of the circle; and (iii) the capabilities of fixed-wireless internet service only cover $\frac{1}{4}$ of the circle. While there may be a consumer market for each of these three broadband technologies, it would be inaccurate to argue that each is a substitute for fiber-based internet service.
- Broadband internet service is an *unregulated service*. Private ISPs are free to deploy fiber-based broadband networks in greenfield developments and upgrade existing networks to provide broadband service in affluent neighborhoods and commercial districts where they can maximize profits. This excludes from broadband deployment

low-income neighborhoods in densely populated urban cities and rural areas with smaller populations. This is what created the digital divide.

Recommendations

- Regarding federal broadband funds, policy makers should identify telephone and electric cooperatives, municipally owned utilities, and small commercial ISPs willing to partner with local governments as good potential candidates to receive federal broadband funds. These entities care about economic development, they often are from the region they serve, and they employ local people. This is how we create an inclusive economy and equitable development.
- With expanded broadband infrastructure and connecting underserved urban and rural communities, the region's hospitals and clinics and related nonprofits will be able to use the tool of telehealth to help create efficiency (i.e., cost savings and better health outcomes) and better access to high quality preventative care, tele-mental health, and precision medicine. Support broadband deployment projects that include hospital systems and community clinics as key stakeholders with the goal of advancing telehealth and tele-mental health services for the region.
- The need for safe, affordable housing currently exceeds the capacity of housing organizations to build due primarily to a lack of capital. Organizations such as Community Development Corporation of Brownsville (CDCB) are assets in the region. Make capital available to these entities and use the CDCB program as a model for the country.

In Closing

Rather than focus on what the region lacks, we must recognize we are under-investing in South Texas where we have enormous human and social capital and institutions that will thrive with the proper foundational infrastructure such as high-speed fiber networks. This will also serve to attract industry and jobs to the region. The goal is to close the digital divide, create opportunities for upward mobility, break the cycle of intergenerational poverty, and transform the economy of the region.

Publications:

[Las Colonias in the 21st Century: Progress Along the Texas-Mexico Border & www.dallasfed.org/~media/microsites/cd/colonias/index.html](http://www.dallasfed.org/~media/microsites/cd/colonias/index.html)

[Brownsville: Planning the Infrastructure of the Digital Economy](#)

[Telehealth Along the Texas-Mexico Border](#)

[Closing the Digital Divide: A Framework for Meeting CRA Obligations](#)

Preparing Workers for the Expanding Digital Economy

Connecting Communities During COVID-19: A Quick Guide to Broadband Solutions

Telehealth Initiatives Highlight the Need to Close the Digital Divide