

Case Study: Bringing Fiber Internet to Affordable Housing Residents



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Categories:

- ◆ Reduced cost for Internet Connectivity
- ◆ Increased Access to Health Care
- ◆ Increased Staff and Resident Efficiencies

About the Organization

Organization Name:

Givens Affordable Communities (GAC) — Givens Gerber Park

Main Contributor:

Richard Foor, VP of Information Technology

Organization Type:

Affordable Housing, Housing with Services

Organization Description:

Givens Gerber Park is a vibrant, affordable community located in South Asheville, NC. It offers one- and two-bedroom rental apartments to seniors 55 and older. Amenities include a café, a fitness center, elevators, a library/computer room, raised garden beds, a medical clinic, tenant storage areas, and access to nearby grocery stores, pharmacies, and shopping. Residents enjoy activities and services designed to help them remain healthy, engaged, and active. Rent is determined by household income.

Project Description

Provide all residents with low-cost, high-quality phone, internet, and cable service. Provide simple, all-inclusive pricing. Revenues from services are to be put back into the community to provide infrastructure, opportunities, and other services to improve quality of life, increase health care access, and provide relief from social isolation for all residents.

The community has the following buildings:

- ◆ 40 Givens Gerber Park (GGP), opened in 2016. It has 9% Low Income Housing Tax Credits (LIHTC), a HUD 202/Section 8 Subsidy Contract (HAP Contract) for 78 units, some HUD HOME funds administered by the City of Asheville, and accepts housing choice vouchers. 10% of the units are set aside for North Carolina's (NC) Targeting Program.
- ◆ 50 GGP, opened in 2017. It has 9% Low Income Housing Tax Credits (LIHTC), a Rental Production Program (RPP) which is covered by HUD HOME funds administered by the North Carolina Housing Finance Agency (NCHFA), and accepts housing choice vouchers. 10% of units are set aside for the NC Targeting Program.
- ◆ 60 GGP, opened in 2018. It is a mid-rate housing building with no affordable units.
- ◆ GGL opened in 2007. It has 9% Low Income Housing Tax Credits (LIHTC), a HUD 202/Section 8 PRAC Contact for 36 units, and accepts housing choice vouchers. 10% of units are set aside for the NC Targeting Program.

Connectivity Model

Owner-provided triple play services for a fee, including free Wi-Fi and internet access, as well as computers for usage, in common areas. Fiber to the home (FTTH) delivery of content and services, including cable TV, phone, and broadband internet access.

Infrastructure Business Model

HUD new construction project. Infrastructure was paid for with an investment from Givens Affordable Communities, project sponsor. The partner internet service provider (ISP), ERC Broadband, is a local nonprofit fiber provider that offered five years of 1Gbps internet service for the fiber build-out cost of \$20,000.

Ongoing Service and Operations Business Model

Resident subscriptions with Givens Communities.

Residents pay \$116.00 per month for our triple play (TV, internet, and phone) services, or \$49.99 per month for internet only.

Implementation Approach

The approach aimed to provide choice in internet service and prove the benefits of our connectivity-enabled value-added service. Capital for the infrastructure in the buildings was provided by GAC Sponsor, also a nonprofit, totaling \$515,000 or \$1,879/apartment in 2016.

We worked with ERC Broadband, a local nonprofit organization who provides fast reliable and secure fiber-based network services across the education, health care, and economic development communities, with a vision to increase the adoption of new technology, to deliver low-cost, high-speed internet connectivity via a 1Gbps dedicated Fiber connection.

The estimated bandwidth needed to supply 100Mbps for each resident at a 1:25 contention ratio at the time was based on our own polling of residents. $1.096\text{GPbps} \times 1:25 \text{ ratio} = 274 \text{ residents} \times 100\text{Mbps} = 27,400\text{Mbps}/25 = 1096\text{Mbps}$.

Onsite technical support of the phone, internet, and cable provided by Givens technology staff.

Outcomes

- ◆ Bulking phone, internet, and cable service with local providers generated significant cost savings of \$29 minimum per month per resident (\$116 per month compared to \$145+ per month, plus fees and equipment rentals directly from ISP), or \$348 per year per resident.
- ◆ Residents subscribing to broadband internet saved a minimum of \$25 per resident per month (\$49.99 compared to \$75+ per month, plus fees and equipment rentals directly from ISP), or \$300 per year per resident.
- ◆ A large portion of the revenue generated, totaling around \$44,000 in 2021, is invested back into the community. The revenue is reinvested in projects that benefit residents, enrich their lives, and reduce their digital gaps. These additional amenities and services include, but are not limited to:
 - ❖ Technology-related educational materials, including scam prevention.
 - ❖ Internal community channel and programming.

- ❖ Hardware equipment:
 - ◆ Library computers.
 - ◆ iPad for community nursing services.
 - ◆ iPad for telemedicine visits for residents.
- ◆ Infrastructure built for the resident utility service also provides:
 - ❖ Free internet and cable access for residents in common areas.
 - ❖ Building-wide infrastructure for health care staff and affordable community staff.
 - ❖ Digital signage with community information throughout.

Challenges and Pitfalls to Avoid

- ◆ Converting from Coax to Light to Coax added complexity, as well as an extra layer of issues to the solution.
- ◆ With fiber, always use tracer wire.

Lessons Learned/Advice to Share with Others

- ◆ If doing a fiber to the home (FTTH) project like ours, look for an IP-based cable provider.
- ◆ If using fiber, place fiber in conduit at ALL times. Free-hanging fiber in the walls using J-hooks or other non-protective raceways leaves it vulnerable to breakage and micro-bends. The time and materials cost of repairing a run of fiber can easily eat up cost savings from not using conduit for 100% of the fiber path.
- ◆ Being heavily involved in the electrical planning process when the drawings are made will reduce overall project cost and frustration.
- ◆ Using a fiber patch panel in the communications panels will save headaches and money in the long run. The fiber ends do break, and this makes repair as easy as a patch fiber rather than a resplice.
- ◆ Ensure that all outlets in the apartment have coaxial cable, phone (RJ-25), and ethernet (RJ-45) jacks.

Future Innovation with this Program

- ◆ Look for ways to provide these services free of charge to residents in affordable housing.
- ◆ Move to IP-based media or streaming-based media of local and national TV content in order to provide more diverse and interactive programming for our residents.
- ◆ Providing connection devices such as tablets to residents.
- ◆ Expand training offerings.