

# \$25 Gigabit Wows Residents: Park Square at Seven Oaks, Bakersfield, Calif.

This month, **BROADBAND COMMUNITIES** showcases Park Square at Seven Oaks, an upscale apartment community whose developer built its own fiber-to-the-unit network. Now every resident receives gigabit Internet service for an unbeatable price – an attractive amenity for high-tech professionals in the Bakersfield area. Thanks to Andrew Fuller, president of Fuller Apartment Homes and principal at Presidio Capital Partners, and Sharon Johnston, TE Connectivity account manager and sales engineer, for gathering the information for this profile.

By Masha Zager / *Broadband Communities*

**B**akersfield, Calif., halfway between Los Angeles and Fresno, is home to many successful business professionals, from high-tech hipsters to oil executives. Telecommuting is popular there, not least because it reduces the need for high-priced office space. For telecommuters, the basic prerequisites are a strong cell phone signal and a broadband connection – preferably a gigabit.

Park Square at Seven Oaks in Bakersfield was designed with precisely this demographic in mind. Andrew Fuller, president of Fuller Apartment Homes, knew he needed a first-class technology amenity to appeal to his target audience.

In the past, Fuller had done many bulk service deals with cable companies, obtaining bandwidth at one-third the street price and using cheap and plentiful Internet access as a marketing tool. By the time Park Square was being designed, bulk wasn't such a good deal

anymore. "It would have cost 80 percent of market price, and people resent having to buy that," he says.

Instead, he decided to bring fiber to the property, build a traditional Ethernet LAN and provide Internet services directly – an approach he had used once before at the Roundhouse Place Apartments in San Luis Obispo. There was only one problem: Park Square is a 14-acre site, and cable lengths would far exceed the limits of Ethernet over copper.

"So I contacted Sharon Johnston, our TE Connectivity rep," Fuller says. "I called her with some basic cabling questions, and she said, 'This is really interesting – I'm going to propose something totally different.'" TE's proposed solution was a passive optical LAN, an increasingly popular solution for MDU and enterprise customers that need to distribute fiber to multiple users. Installing the LAN cost the developer considerably less than it would have



Park Square at Seven Oaks has first-class amenities, including gigabit Internet access.

paid a service provider to install it, and the costs of operation, maintenance and future expansion are also lower.

With integrator Qypsys designing the network and, in Fuller's words, "comforting the contractors" – who were unused to installing fiber – the project was a great success. Fuller plans to use the same do-it-yourself approach in future projects. For the moment, at least, the economics make sense, and, as he puts it, "We have to deliver super broadband at a really compelling price."

## VITAL STATISTICS

### *Property Description:* Park

Square at Seven Oaks ([www.parksquareatsevenoaks.com](http://www.parksquareatsevenoaks.com)) in Bakersfield, Calif., is an upscale development with one-bedroom, two-bedroom and loft apartment units. It is located in the third and final phase of the prestigious master-planned Seven Oaks community, whose 3,700 acres contains exclusive residential

neighborhoods, parks, tree-lined streets, a country club with a 27-hole championship golf course, and thriving retail areas integrated with growing employment centers.

*Demographics:* High-tech professionals and oil executives – all tech-savvy residents yearning to be free from beige carpets and low bandwidth.

*Greenfield or retrofit?* Greenfield

*Number of units:* 224

*Style:* Mid-rise

*Time to deploy:* Fiber was deployed during construction of the property, which took one year.

## SERVICES

*Services offered or planned on the network:* High-speed Internet access with a top speed of 1 Gbps

*Provider choice:* None. The property owner provides gigabit Internet access to every resident and charges \$25 per month as part of the rent.

*Technical support:* Network operations and technical support are outsourced to a local service provider with a network operations center.

## BUSINESS

*Who owns the network?* The property owner owns the entire network and provides Internet service to residents. It has a commercial contract with AT&T for bandwidth to the property.

*What are the benefits of this network?*

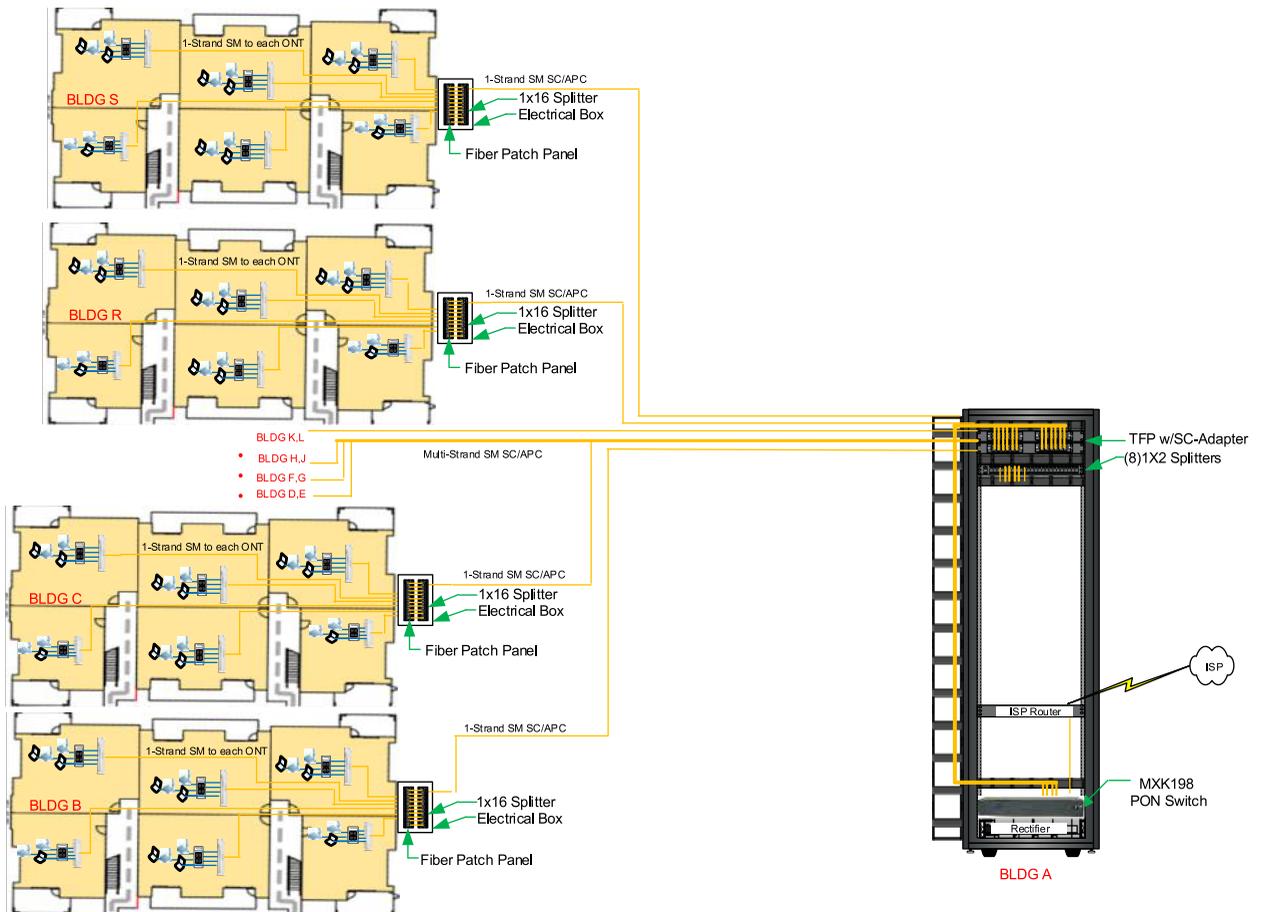
The low cost and convenience of broadband is part of the sales pitch to attract residents. As the development has just recently opened, it is still too early for hard evidence.

## TECHNOLOGY

*Broadband architecture:* Fiber to the unit with Cat 6a cable to the network jack connection

*Where are ONTs placed?* At the backs of the clothes closets

# PROPERTY OF THE MONTH



	<b>legend</b> =Passive Splitter   =ONT   =Coax   =SC/APC outlet =SM Fiber   =RJ45 Copper   =Cameras   =Wireless AP	<b>description</b> PON Design & Riser Diagram	<b>customer / project</b> Seven Oaks		QYPSSYS 2701 N. Rocky Point Dr. Tampa, FL. 33607
			Author/Telephone Johnny Ng (813)283-0228	date revised Jan 28, 2014	

The passive optical LAN distributes bandwidth to Park Square at Seven Oaks's 224 units.

## Technology used:

GPON (passive optical LAN)

## Method for running fiber to the unit:

AT&T fiber terminates at a fiber switch in the Park Square clubhouse. Fiber is home-run to each of the 16 buildings, and a fiber patch panel on the side of each building distributes the fiber to each unit. See diagram for details.

## Vendors and strategic partners:

TE Connectivity supplied its Optical LAN solution together with active electronics from Zhone Technologies. Qypsys was the infrastructure integrator.

## LESSONS LEARNED

What was the biggest challenge?

*Andrew Fuller:* There were moments when the field subcontractors began to doubt whether they could actually pull off all the terminations, switching gear and network installation. They knew mostly electrical and standard copper communications cabling,

but installing an optical fiber network was something many had never been involved with before. Surprisingly, with the help of a local network cabling expert, they discovered that it was really pretty straightforward. In fact, we didn't

## PROPERTY OF THE MONTH HIGHLIGHTS ~ Park Square at Seven Oaks, Bakersfield, Calif. ~

- New, upscale apartment complex in a prestigious planned community.
- Fuller Apartment Homes, the property owner, built fiber to the unit and acts as ISP.
- Every resident pays \$25 for gigabit Internet access as part of the rent.
- Vendors include TE Connectivity, Zhone Technologies and Qypsys.

experience any major show-stoppers – there were actually more hiccups in other areas.”

*What was the biggest success?* A combination of cost savings and implementing a new business model that helps lease apartment homes and reduce turnover. In this case, the traditional model would be to spend as much as \$250,000 to allow a service provider to set up and install its basic network infrastructure in the apartment home community. Then the residents would have to sign up individually for services and pay for their monthly subscriptions.

What Fuller Apartment Homes has done is to build the network itself, paying instead only about \$100,000 for the cabling infrastructure. Network operations and support are outsourced. Residents are charged only \$25 per

## Fuller Apartment Homes saved up to \$150,000 by building the network itself.

month for their gigabit connections, which are simply incorporated into their monthly rental bills.

*What feedback does the leasing office get from residents?* Residents love that they can pay \$25 per month for gigabit service (which is about 10 times faster than the fastest broadband service offered in the area) without having to sign a contract with a service provider.

*What should other owners consider before they get started on a similar deployment?* Dig deep to find the true ROI. In this case, the ROI came from multiple sources:

- Network power consumption was reduced by 50 percent.
- The space normally allocated for a telecom closet on each floor is now usable, revenue-producing space. Multiple buildings are served by one main telecom closet.
- Future expansion costs are lower. The life cycle of a fiber network is 10 years, compared with five years in a traditional copper structured cabling environment. ❖

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