

Consolidated, Chesterfield Bond Over FTTH Broadband

Chesterfield leveraged changes in New Hampshire state laws that let communities issue public bonds to fund broadband networks. The town's partnership with Consolidated Communications to build a townwide FTTH network could serve as a model for other communities.

By Sean Buckley / *Broadband Communities*

Known for manufacturing spinning wheel parts and picturesque Spofford Lake, Chesterfield, New Hampshire, isn't a town one might think of as a prime broadband target.

But as is true in other small New England communities, Chesterfield residents and a growing number of small-business owners thinking about relocating want broadband, and its presence or absence is among the first issues they consider.

Following a recent state law change, Chesterfield voted in a public meeting to enter into a public-private partnership with Consolidated Communications to build a fiber-to-the-premises network with no associated property tax increase.

Unlike other incumbent FTTH deployments in which only parts of a town get service, this build will cover the entire town.

Brad Roscoe, in a role he took on in 2016 while he was a town selectman, is charged with solving Chesterfield's broadband problem. He says some residents have moved out because of poor broadband.

People considering a community typically will ask a realtor two questions: What are the schools like, and is there broadband?

"You have people who want to move here, but their employees don't want to live in

the area because there's terrible broadband coverage," Roscoe says.

Roscoe has seen this in his own household. When he moved to Chesterfield six years ago, his wife told him that broadband is a necessity.

"She did not care about TV too much, but she had to have broadband," he says.

A LEVEL PLAYING FIELD

A big change came when Governor Chris Sununu signed New Hampshire Senate Bill 170 (SB-170). Sponsored by Sen. Jay Kahn and Rep. John Bordenet last year, SB-170 gives New Hampshire towns the authority to issue bonds for broadband infrastructure.

Kahn said in a Keene Sentinel article that this legislation is an attempt to provide rural communities with an opportunity to "level the playing field."

Kahn said, "We need the economic development tools that will enable private contractors and businesses to be competitive" in New Hampshire's rural market.

Rob Koester, vice president of consumer product at Consolidated Communications, says the company's agreement with Chesterfield is unique in that the town had been advocating for better broadband coverage.

"Chesterfield was a little bit different because that part of the state has a central town

location and a lot of rural area around that,” Koester says. “They have been on a kick for faster broadband for the past four to five years, but what tipped it was SB-170.”

Chesterfield’s arrangement is the first of its kind in the state and could be a model for other states.

Roscoe says the incumbents did not realize initially that the towns did not want to become municipal service providers – a model that has been challenged with litigation.

“The providers thought the towns were going to set up their own networks to compete with them,” he explains. “We’re a little town. We don’t supply water. We don’t supply sewer. We just want the service.”

For incumbent telcos such as Consolidated, which has grown through various acquisitions including FairPoint, working with towns such as Chesterfield via the bonding mechanism opens up another revenue source.

“This bonding law is making things enticing for them,” Roscoe says. “They need a source of money since their capex is becoming maxed out, so when the towns can bond, they have a way of getting revenue to expand their networks.”

PRIVATE, PUBLIC PARTNERSHIP

The road to getting an FTTH plan from Consolidated wasn’t easy. After issuing a request for proposals (RFP) to local providers last November, Chesterfield got five proposals from three providers – all of which varied widely.

WiValley proposed a fixed wireless solution which would have covered most of the underserved residents with 25 Mbps/3 Mbps. Argent gave two proposals: One would have extended service in areas using copper to fiber converters and the other replaced the copper feeding these lines with fiber. However, Argent’s proposals did not cover the entire town.

Consolidated initially proposed to upgrade the town’s DSL infrastructure for \$1.8 million. It also proposed to upgrade the entire town with FTTH for \$2.1 million.

Chesterfield had long advocated for faster broadband, and SB-170, which allows New Hampshire towns to issue bonds for broadband infrastructure, has finally made it possible.

Koester says what drove Consolidated to propose FTTH was that it found that the cost difference to build out copper-based DSL technology versus FTTP was only \$300,000.

“The way the geography is laid out in Chesterfield, the price to do 25 Mbps/3 Mbps DSL meant we would have to get fiber so close to each home that it was only a short incremental path to build out fiber to the home for the entire town,” Koester says.

Roscoe says the best part of Consolidated’s plan is that every resident will be able to get service.

“After reading the rules, Consolidated ate the \$300,000 and proposed wiring the entire town with fiber for \$1.8 million,” Roscoe says. “We got something for the same price as the DSL upgrade, but it’s for the whole town.”

When the town applies the bonds, Chesterfield will own the network over the period of the bond. Consolidated then will rent it from the town in an infeasible right of use (IRU) arrangement.

Additionally, the agreement calls for Consolidated to guarantee interest and principal payments for the duration of the bond. As part of that agreement, Consolidated will collect a \$10 per month subscriber fee. Depending on the number of subscribers, this fee, which will be renegotiated every two years, could be lowered over time.

“The subscriber fee eventually will cover the entire principal and interest,” Roscoe says. “For the first couple of years, it won’t because they will be installing the network.”

Roscoe cautions that other towns looking at ways to bond for broadband need to understand the rules. One is

that any money raised through bonds must be dedicated to serving the unserved. However, if the new wires pass properties served already, those residents can be upgraded to fiber.

The initial rules were to use taxpayer money only for providing DSL, not fiber, to unserved customers – a provision designed to assuage incumbent providers.

“The legislation was great in that it empowered the communities to do this,” Roscoe says. “The one problem I have is that the way it is written is to spend taxpayers’ dollars on old technology. That is a weakness of the law because it is only for the unserved, but that was the compromise required to get the providers to buy into it.”

OVERCOMING BROADBAND MAPPING PROBLEMS

Like other communities struggling with broadband access, Chesterfield had issues with the way the FCC maps broadband availability. By basing the mapping scheme on census blocks, a community could be deemed served even if only one address has service. (For more about census blocks, see the July 2019 article “Broadband Mapping Is a Mess. No One Knows What to Do About It.”)

Some of this issue will be addressed by SB-170. Unlike the FCC’s traditional method, SB-170 focuses on premises rather than census blocks.

In rural areas such as Chesterfield where census blocks tend to be very large, broadband coverage availability is overstated. Though the premises approach is more accurate, the bill doesn’t include a method for determining how a community can prove a household doesn’t have access to 25 Mbps/3 Mbps.

COMMUNITY BROADBAND

Roscoe says that mapping is a big issue.

Chesterfield has three providers: Consolidated with DSL, Comcast in a small section of town, and Argent Communications. Some residents in part of the town also have access to a wireless broadband service from WiValley.

Prior to passage of SB-170,

Comcast's service in one part of town was taken to mean that the whole census block had service.

"When I started putting together a coverage map, I found out the information the FCC and state had was incorrect," Roscoe says. "A big problem was that they used census blocks. This meant if one home had service, the

whole census block had good coverage."

Another issue is the FCC's 25 Mbps/3 Mbps broadband definition.

SB-170 defines "unserved" as a rate that is lower than the FCC's minimum 25 Mbps/3 Mbps broadband definition. These figures came out of the FCC's 2015 broadband progress report, which raised the minimum broadband

CONSOLIDATED'S AGGRESSIVE BROADBAND EXPANSION

Consolidated has been expanding broadband throughout New England, a territory it began serving following its FairPoint Communications acquisition in 2017.

Using a combination of its own capital and third-party funding sources, the telco is working to bring better broadband internet services to unserved and underserved rural communities across New Hampshire, Maine and Vermont.

Since acquiring FairPoint, Consolidated has upgraded 500,000 residents and small businesses throughout Northern New England, including 140,000 upgrades across New Hampshire. As a result, Consolidated can deliver 20 Mbps to 76 percent and 50 Mbps to about 40 percent of its customer base.

A large majority of these upgrades used VDSL2 and copper bonding technologies, enabling 60–80 Mbps speeds. Upgraded homes and businesses are now able to get speeds two to three times faster than what was previously available.

"We're being aggressive with VDSL2 and bonding," Koester says. "We're moving loop lengths to 4,000 to 6,000 feet, and the next logical step is either G.fast or FTTH, depending on what the mix looks like."

Koester says, however, that every town is different. "I would say on one end of the spectrum, you have towns like Chesterfield that are committed that fiber is where they want to go and are willing to take on the additional work, such as the bonding process," Koester says. "Contrast that with some towns, such as some in Maine, that want to go to 10 Mbps/1 Mbps, knowing that the build sets us up for the next stage of incremental builds to get to VDSL2 and ultimately fiber."

Besides providing a larger array of broadband speeds, the upgrades will serve as a foundation for Consolidated's new MobiTV-based CCI TV platform in the region.

Bob Udell, Consolidated CEO, told investors during the company's second-quarter call that Portland, Maine, customers will be the first to get the new video service.

"With the 550,000 upgrades that we did last year, [we] continue to build penetration sufficient ... to launch

the video product to more than a million targeted subs in Northern New England, starting this month in Portland, Maine," Udell said during the call, according to a Seeking Alpha earnings transcript. "We feel confident in our ability to keep upgrading the network within the capital envelope that we allocate currently within our capital structure."

BROADBAND GROWTH RAMPS

Consolidated's aggressive broadband expansion strategy is bearing fruit. During the second quarter, the service provider reported that consumer broadband revenue grew more than 2 percent year-over-year to \$64.1 million.

The telco ended the quarter with a total of 783,008 broadband connections.

Steve Childers, Consolidated CFO, told investors that the focus of the network upgrades on its copper and fiber plant is fueling broadband revenue growth.

"We continue to execute on our strategy of driving revenue growth with faster network speeds, as the speed updates are positively impacting ARPU and increasing sales and reducing churn," Childers said during the earnings call.

RAMPING UP TO 1 GBPS

Still, FTTH is clearly a key priority of Consolidated's network expansion.

In August, the service provider announced it has made its 1 Gbps broadband services available to more than 86,000 New Hampshire residential and small-business locations. Installation dates are available now for New Hampshire residents and businesses in Atkinson, Bedford, Danville, Epping, Exeter, Hampton, Hampton Falls, Hudson, Kensington, Litchfield, Londonderry, Newton, Newfields, Nottingham, Plaistow, Salem, Stratham and Windham.

The company already offers 1 gig to the New Hampshire communities of Derry, Greenland, Nashua, New Castle, Newington, Portsmouth and Rye.

Udell noted that Consolidated is growing its 1-gig services about 10 percent each quarter.

download and upload speeds from 4 Mbps/1 Mbps.

New Hampshire will need to establish a method to challenge speed claims for communities that know they don't have 25 Mbps/3 Mbps speeds.

A problem with the current definition of "unserved" is that a lot of wireless and satellite operators have data caps. Because they are so low, customers often run over their limits in less than a week or two every month. The reality is that 16 to 18 percent of Chesterfield's population fell below the 25 Mbps definition. In some parts of the town, the only internet access option was 1–2 Mbps and dial-up.

Roscoe says, "We did not consider those to meet the FCC's specifications because they only provided service for part of the time," adding that "we made the definition in our RFP that there could be no data caps."

ATTRACTING RESIDENTS, BUSINESSES

Access to broadband is a way to retain and attract new residents and businesses. Broadband is more than a nice amenity when considering where to live; it's a necessity.

Just as Franklin Delano Roosevelt's New Deal helped bring electricity to rural areas, broadband will keep rural areas viable.

"When I talk to the town about broadband, I compare it to the New Deal when we had the electrification of the rural communities because these towns could not be economically competitive," Roscoe says. "It's the same thing now: You can't be economically competitive unless you have adequate broadband."

Koester agrees and adds that "Chesterfield approached this from day one as an economic development play."

In Chesterfield, Roscoe found that the presence of broadband does raise property values. He developed his estimates using the town's tax rolls and broadband coverage information, and a publication that shows the difference in prices depending on what broadband provider residents have.

"I calculated that real estate property values would be increased

Consolidated's aggressive broadband expansion strategy is working: During the second quarter, the service provider reported that consumer broadband revenue grew more than 2 percent year over year to \$64.1 million.

by \$4.8 million by having better broadband coverage," Roscoe says. "That does not include economic development or anything else."

After he collected this information, the town had to approve the number. The selectmen then had to hold three public hearings to talk about real estate values.

Broadband also is important for the town's growing small-business community. Chesterfield is a relatively small town with only 3,500 people, but it includes small businesses people run from their homes.

"We have about 125 small businesses in town," Roscoe says. "These mostly are run out of houses, and connectivity is a major problem for them."

What's more, a lack of broadband is a problem for employees who telecommute. During a survey he conducted in 2016, Roscoe found that a large percentage of residents work from their homes.

"I found a lot of people in town were trying to telecommute at least three days a week," Roscoe says. "People have tried coming up here and working from home and have to move out because they could not work from home."

AN ACCELERATED PROCESS

As Chesterfield wraps the bonding process, Consolidated will complete its network designs, plot where it will place optical gear (e.g., OLTs and related fiber transport equipment), and build the fiber routes.

Consolidated began network construction in July and hopes to get its first customers hooked up and running by December and January.

"Because of the 20-year bond, we view this as a collaborative process," Koester says. "Once we have the

network plans established, we expect the build to be done in 24 months."

Koester anticipates, however, that the build in Chesterfield could be done sooner. For example, Consolidated recently completed an FTTH build in New York state via the New NY Broadband Program, passing 10,000 locations in a little more than a year.

"In Chesterfield, if the weather holds up, we want to build and pass a lot of homes this year and finish up faster than what's called out in the contract," Koester says.

During this process, Consolidated will move customers onto FTTH while simultaneously building out other parts of the town.

Most of the plant in Chesterfield will be aerial on utility poles. Koester says the aerial plant "works to our advantage even with bad weather because as long as we can get to the poles, we can continue to build drops."

Though the geography of Chesterfield is like that of other Northern New England rural towns, Consolidated had acquired 36,000 route miles of metro and long-haul fiber that can backhaul and support the FTTH traffic. More than 20,000 of these route miles are in Northern New England.

"There's a really robust transport network, but some of the on-ramps and off-ramps weren't there," Koester says. "We use fiber as the primary means to connect to the community. What we're doing with Chesterfield is connecting the middle mile and last mile together." ♦

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