

Making The Connection

Telecommunication Infrastructure And Economic Development

An Iowa Community's Experience Makes the Case for Municipal Broadband

By Doris Kelley ■ *Director of Business Development, Black & Veatch*

How important is broadband infrastructure to a community's efforts to achieve economic wellbeing -- to create meaningful jobs, enhanced education and world class healthcare?

Cedar Falls, Iowa, shows that it is important indeed.

In 1994, Cedar Falls sought answers to challenges commonplace to any community, rural and urban alike: Sustainable economic growth. Improved educational opportunities. Enhanced medical services. Driven by a desire to gain a competitive advantage, maintain and grow the city's population base and provide new and valuable services to residents, the Cedar Falls Utilities Board of Directors established the city's Communications Utility. Doing so was of course highly unusual a decade ago. The World Wide Web had existed only a year. The Internet had been fully commercialized only in 1992. But the impact of that decision would put Cedar Falls at the forefront of communications technology and inspire communities across Iowa, and in particular Waterloo next door, to emulate Cedar Falls' success.

Comparing Cedar Falls and Waterloo -- similar in so many ways -- provides an excellent opportunity to examine the effects of a municipally owned and operated telecommunications infrastructure.

Cedar Falls and Waterloo

With only a sign separating Cedar Falls and Waterloo, it is extremely difficult for visitors to even tell when they are departing one community and entering the other. Cedar Falls does seem more

quaint, while Waterloo imparts a more city-like resonance.

The most significant differences between the two are their populations and communications infrastructure. Waterloo's population is approximately 69,000, while Cedar Falls has around 36,000 people. The big difference: Cedar Falls has a citywide municipal fiber optic network providing high-speed fiber connections via cable modems, Fiber-to-the-Business (FTTB) and T1 through DS3 level services. Waterloo's communications services are available through the private sector. These services are limited to cable modem access (HFC transport), DSL (Digital Subscriber Line using copper transport) and dial-up services delivered over a copper network.

Both communities have equal access to major transportation systems, including interstate, federal and state highways, rail service, local motor carriers and an airport. Both receive their water from the Cedar Valley Aquifer, an inexpensive, high-quality and abundant source. Both communities are served by the same Incumbent Local Exchange Carrier (ILEC), which has a central office in each community. The Cedar Falls/Waterloo area also has a Competitive Local Exchange Carrier (CLEC). There are two Points of Presence (POP) in the area provided by MCI and AT&T. Both POPs are located in Waterloo.

The University of Northern Iowa is located in Cedar Falls. Hawkeye Community College and one of Upper Iowa University's "extended" sites are situated in Waterloo (UIU is the state's largest private university and has facilities

for distance learning worldwide.) Both communities have equal access to higher education and both draw from the same workforce.

In Cedar Falls, electricity and natural gas are provided by Cedar Falls Utilities, a municipally owned and operated utility. MidAmerican Energy, an investor-owned utility, provides Waterloo with electricity and natural gas. Municipally owned utilities in Iowa average approximately 5.7 cents per kilowatt-hour for commercial, while investor-owned utilities' electric rates average about 6.6 cents per kilowatt-hour.

Cedar Falls' property tax rate has been stable. The rate payable in fiscal year 2003 (July 1, 2002 thru June 30, 2003) was \$36.40 per \$1,000 of taxable value -- \$.15 less than fiscal year 2002. This year it is \$35.52, still below 2002. Waterloo's rate in 2003 was \$42.69 per \$1,000 taxable value -- an increase of \$6.29 over fiscal year 2002 -- and rose again to \$43.27 for the fiscal year ending June 2005. In both communities, commercial and industrial properties are taxed at 100 percent. Residential is taxed at 54.85 percent. Personal property is not assessed for tax purposes.

Although Waterloo's property tax is considerably higher, the median selling price of a home is much lower than in Cedar Falls. In 2001, Cedar Falls' median housing price was \$105,000 compared to Waterloo's \$72,000. A 5 percent state sales tax and a 2 percent local tax applies to both communities.

Historically, Waterloo has been better positioned for economic growth. A majority of the area's major private

Fiber Optics

A space age Industrial and Technology Park is located in a very down to earth place. Constructed and managed by CFU, the communications network is based on a hybrid fiber/coax (HFC), fiber to the feeder design philosophy. The network architecture is state-of-the-art for broadband communications systems and is designed to appeal to firms needing advanced telecommunication and computing capabilities. Dedicated loops are constructed to serve concentrated commercial, industrial, and institutional segments and educational facilities. The network has the capacity to transmit voice, video, and data to and from targeted locations on the network. CFU provides various gateways for external points of transmission and delivery. By providing your business fast access to Cedar Falls City Wide Network, Ethernet, Cyber Office, and Internet, CFU allows your business to focus on moving forward, while CFU focuses on meeting your communication needs.

Electricity

Electricity comes from CFU's own coal fired facilities and 2,250 kW wind farm. The average rate paid by industrial customers is the most competitive offered by Midwest utility providers. Industrial rates have not increased since 1980. CFU will be glad to run rate comparisons upon request.

Water

Water is supplied from the Cedar Valley Aquifer - an inexpensive, high quality, and abundant source. CFU has a capacity of 27.5 million gallons per day, but its maximum daily consumption is only about 8.5 million gallons. CFU also provides free standby water for fire protection systems.

Natural Gas

Natural Gas is less expensive from CFU than from most other gas utilities in Iowa. CFU offers firm and uninterruptible service at highly competitive rates. A transportation service is also available to high volume users who choose to arrange their own supply.

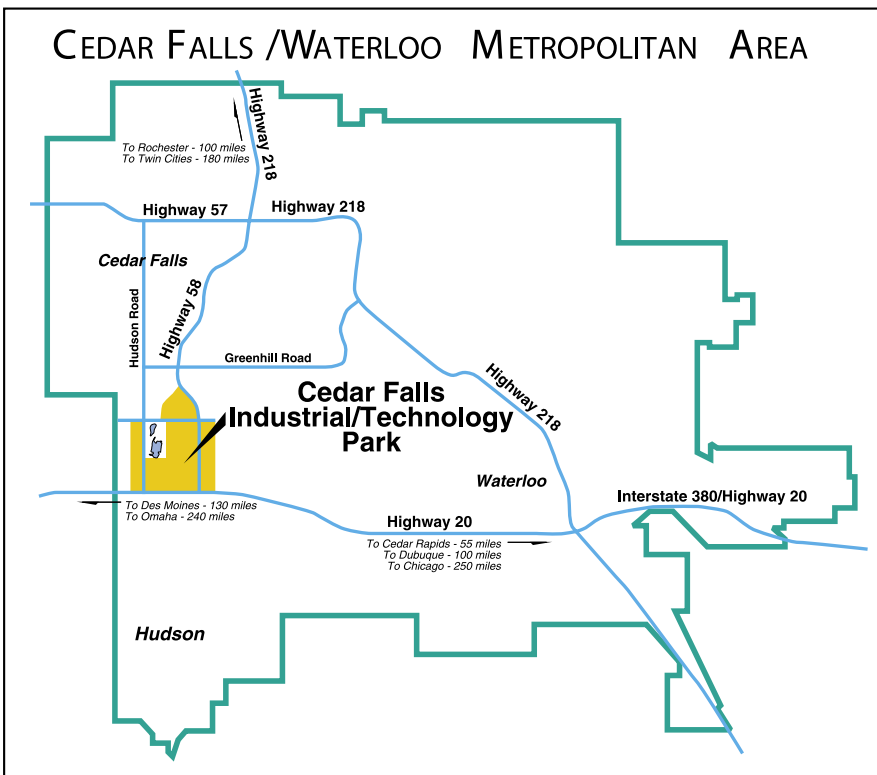
constructed a 1.35 million square foot facility with a price tag of \$40 million. Target also invested \$60 million in machinery and equipment, provided 900 full time and 200 part time jobs with an annual payroll of \$25 million. This was the largest project in square feet in Iowa during the last 15 years. Principal constructed a \$7 million, 75,000 square foot Corporate Class A (prime) office building providing 350 full time jobs and Ag Services constructed a \$5 million, 62,000 square foot Corporate Class A office building.

A few of these companies relocated from Waterloo or expanded to the Cedar Falls Industrial and Technology Parks, including Team Technologies, Principal Financial, Crystal Distribution Services, and Hawkeye Community Business Center. In the same time frame (1995 to January 2003), Cedar Falls did not lose a business to relocation.

In January 2003, Waterloo's, Mid-Port America had four businesses, five businesses were located in the Waterloo North East Industrial Park and Evansdale Technology Park had one business.

An article in the city's March 11, 2002 Courier reported, "The vast majority of new industries moving to the Cedar Valley are locating in the Cedar Falls Industrial Park, which has caused some discontent from local business leaders and residents wondering why Waterloo is falling short. While officials note any jobs created in Waterloo-Cedar Falls benefit the entire area, Waterloo needs industrial development to boost its tax base." An earlier article published in the same newspaper on August 21, 2001 quoted Waterloo Mayor John Roof. "Fiber optics is the key to Waterloo's future growth," Roof said. "In order for Waterloo with its businesses to move into the 21st century, we need fiber optic capability. I believe it has hurt us economically not be able to provide fiber optics to businesses locating in our city."

Cedar Falls' growth has been a mix of residential, commercial, corporate office and industrial. The majority of this growth has occurred in the Industrial and Technology Parks and along the



Cedar Falls brochure highlights fiber (top left) along with other utilities (right).

University Avenue corridor. Waterloo's growth has been a mix of residential (25 percent) and commercial/retail (75 percent). Much of the commercial/retail growth occurred around Crossroads Shopping Center and along the San Marnan Corridor.

An article published in the Waterloo-Cedar Falls Courier on July 12, 2002 reported that "Cedar Falls set a Cedar Valley construction record this fiscal year, topping out at more than \$101 million...Despite a downturn in the national economy, the city blew away all existing records in the fiscal year ending June 30...Meanwhile, Waterloo failed to escape the stalled economy...Suffering from declining commercial permits and no large industrial projects to boost the value, the city recorded less than \$53 million in construction during the last fiscal year – its lowest total in eight years."

Cedar Falls continues to see strong economic growth. At the end of July

Year	Cedar Falls	Waterloo
1996	\$32 M	\$58 M
2001	\$65 M	\$76 M
2002	\$101 M	\$53 M
2003	\$80 M	\$75 M
2004	\$92 M	\$103 M

2004, Cedar Falls Industrial Park and Prairie Technology Park had 140 businesses, up 15 from the total recorded in January 2003. This number also exceeded the city's fiscal year 2003 projection of 130 businesses.

Absent the 2002 Target Corporation Distribution Center, the city netted \$80 million in new construction valuation for year ending 2003 and \$92 million for fiscal year 2004. The price of an acre of land in the Cedar Falls Industrial Park and Technology Park is going as high as \$75,000 compared to \$50,000 in 2002.

Cedar Falls has also experienced a substantial increase in population

growth. Its population increased from 34,298 in 1990 to 36,145 in 2002 – a 5.3 percent increase. During the same period, Waterloo increased 3.4 percent — from 66,467 to 68,747.

Access to information and communications technology also plays an important role in providing world-class education. Cedar Falls Utilities constructed a fiber optic loop connecting all 13 Cedar Falls school buildings. The loop, made of one pair of strands in CFU's fiber backbone network, is dedicated to the public schools. The interconnection between the school facilities is used to transport high-speed data, and the connection

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to Area Education Agency 7 is used to provide the schools Internet access and administrative computing services. This connection to AEA 7 eliminates the need for T1s. In addition to the fiber loop, all classrooms are fully wired and connected with access to multi-media, streaming video. (Iowa Area Education Agencies are regional service agencies, which provide school improvement services for students, families, teachers, administrators and their communities.)

The Cedar Falls School District has a Fiber Data Distribution Interface municipal area network, along with direct, high speed Internet access.

The combination of the fiber optic system provided by Cedar Falls Utilities and the technology hardware, software and training resources provided by the city's Instructional Support Levy (in Iowa, a temporary tax that expires in five years) has enabled the Cedar Falls School system to be a leader in the information age. In 2002, the Cedar Falls Community Schools received \$1 Million from the State of Iowa to provide streaming video on demand to all school buildings. All classrooms have access to distance learning. School officials are working on a project that will allow students to access streaming video via a home connection using Cedar Falls' community-wide communications network.

Reaping Benefits by Transporting Information

Although the Cedar Falls Communications Network is quite new, Cedar Falls is already reaping economic and community benefits. According to an article published in the Waterloo Cedar Falls Courier on August 1, 2004, "...Cedar Falls will have its debt paid off and begin reaping a surplus. That could mean an additional \$2 million in taxes available to the city that year; plus another \$2 million split between the county and schools. The city's share looks to increase after that – to \$10 million in 2010, city budget officials say." Under the tax increment financing system in Iowa, the city borrows money to build roads, sewers and other infrastructure. Businesses

located in the park get a partial break on taxes for a set amount of time.

They pay taxes only on the value of the property before they make improvements. Tax money from the TIF district goes directly to pay off the city's infrastructure debt. During the tax break years, the property taxes do not contribute to the city's general fund, which pays for police and fire protection and other services, nor do the tax dollars go to county government, school districts and community colleges.

The payoff for the city and the area comes from the new jobs created in the industrial and technology parks. They drive housing starts, additional business development and expansion. The larger payday comes when the TIF debt is retired, as will be the case, and the incentives sunset. Beginning in fiscal year 2008, Cedar Falls will have its debt paid off and begin reaping a surplus.

According to Moody's Investors Service, December 3, 2001, Cedar Falls' assessed valuation had increased at an average annual rate of 7.4 percent over the previous five years, despite state-mandated rollbacks in residential property and machine and equipment assessment rates.

Moody's expects the tax base to continue to show strong growth due to "ongoing residential and industrial development projects." In less than a decade, Cedar Falls has indeed seen exciting developments, including the addition of a technology park and extensive residential and commercial growth within its corporate limits. Moody's Investors Service assigned an A1 rating to the City of Cedar Falls \$1.9 million Sewer Revenue Bonds on February 3, 2004.

Concurrently, they upgraded, to A1 from A2, the rating on the city's outstanding parity sewer revenue debt, affecting \$5.1 million, including the current issue. "Sound financial operations providing ample liquidity and favorable coverage ratios," the Moody's report stated.

Bob Seymour, Cedar Falls Community Services Manager, says "The Cedar Falls Industrial & Technology Parks has

basically developed into a city within a city. The City of Cedar Falls is extremely pleased with our strong continued economic development growth that has exceeded our expectations. We continue to expand our Industrial and Technology Parks while maintaining our focus on quality development and job creation."

It would be extremely difficult to verify that these developments are the direct result of the Cedar Falls' broadband delivery system.

Yet, one can not disregard its impact on the city's ability to meet the increasing demand for access and dissemination of information.

One of the best steps toward acquiring economic well being is to ensure that you have quality infrastructure, including a first-class broadband network as well as business recruitment tools.

Research into the early development of communities nearly always identifies transportation as an essential driver of community and economic development. Today we are still talking about transportation – transportation in the form of a fiber optic network – transporting information instead of goods. ♦

About The Author

Doris Kelley is a director of business development at Black & Veatch, a leading global engineering, consulting and construction company specializing in infrastructure development in the fields of energy, water and information. Kelley serves the wireless and integrated network industries for Black & Veatch's Telecommunications Division. She has an extensive professional background in economic development, marketing and public relations, and works closely with clients on all aspects of the broadband telecommunications process from market research to completion of projects. As former marketing director and chief spokesperson for Cedar Falls Utilities (CFU), Kelley gained first-hand experience with both city and utility issues in the broadband arena. Contact her at Black & Veatch at 913-458-2000.

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