

## Commission Memorandum

**REPORT TO:** Honorable Mayor and City Commission

**FROM:** Brit Fontenot, Economic Development Director

**SUBJECT:** Resolution 5031 Declaring Broadband as Essential Infrastructure in the City of Bozeman

**MEETING DATE:** April 15, 2019

**AGENDA ITEM TYPE:** Action

**RECOMMENDATION:** Adopt Resolution 5031 Declaring Broadband as Essential Infrastructure in the City of Bozeman

### STRATEGIC PLAN ELEMENTS SUPPORTED BY RESOLUTION 5031:

- |   |   |
|---|---|
| 1. An Engaged Community                   | 5. A Creative Learning Culture  |
| 1.1 Outreach                              | 5.3 Partnerships for Education and Learning   |
| 1.2 Community Engagement                  |   |
| 2. An Innovative Economy                  | 6. A Sustainable Environment  |
| 2.1 Business Growth                       | We cultivate a strong environmental ethic; protect our clean air, water, open spaces and climate; and <b>promote environmentally sustainable businesses</b> and lifestyles. |
| 2.2 Infrastructure Investments            |   |
| 2.3 Workforce Development                 | 7. A High Performance Organization  |
| 3. A Safe Welcoming Community             | 7.3 Best Practices, Creativity & Foresight  |
| 3.1 Public Safety                         | 7.4 Performance Metrics   |
| 4. A well Planned City                    |   |
| 4.3 Strategic Infrastructure Choices      |   |
| 4.4 Vibrant Downtown, Districts & Centers |   |

### BACKGROUND:

Since May, 2013 the City of Bozeman has worked diligently to bring high quality, high-speed, high-capacity, redundant and affordable broadband to Bozeman, Montana.

First, we created a steering committee of knowledgeable professionals and community stakeholders to assess the state of affairs. It was found that demand existed, especially in the growing high-tech business community, for better, more cost effective solutions for achieving gigabit services in Bozeman. Next, the *Bozeman Fiber Master Plan and Feasibility Study* was adopted by the City Commission in January, 2015. Finally, in May, 2015, Bozeman Fiber, the 501(c)4 community benefit non-profit, was created by the City to fund, construct and operate an initial \$3.85M, 23 mile high quality, high-speed, high-capacity, redundant and affordable fiber-optic network. The network currently connects the City of Bozeman, Gallatin County and BSD7 school facilities on leased dark fiber. Additionally, Bozeman Fiber serves 113 businesses around Bozeman and will eventually consider residential fiber throughout the community. Bozeman Fiber is currently under contract to manage the City's 5+ miles of existing fiber-optic conduit in the Downtown, Midtown and now Northeast Urban Renewal District.

Cities around the United States and countries around the world recognize the value of connected communities and countries. As the number, capacity and utility of devices grow, so does the need for advanced infrastructure to accommodate increases in speed, quality and capacity. Broadband and high capacity telecommunications networks are essential for many 21<sup>st</sup> century, global technology businesses like those growing in Bozeman. In 2018, the top five countries in the world with the fastest internet includes; 1) Singapore, 2) Sweden, 3) Denmark, 4) Norway and 5) Romania. The United States ranks 20<sup>th</sup> in the world; clearly we have some work to do. In 2018, the City of Bangor, Maine declared fiber as essential infrastructure and prioritized the deployment of this infrastructure to support social, economic and knowledge development in their community. In 2016, Canada declared high speed broadband as "essential for quality of life." Broadband is essential 21<sup>st</sup> century infrastructure.

Resolution 5031 declares broadband as essential infrastructure in the City of Bozeman, Montana. Reliable, high speed, affordable access to the Internet is imperative for Bozeman residents, businesses, governmental agencies, non-profit organizations, and visitors. The Internet is changing how humans interact with each other and with the world at large, as well as being a driving force for the current and future economy. The Internet creates opportunity for increased innovation for consumers, businesses, and government. Countries, states, counties and cities that prioritize and provide access to advanced Internet infrastructure such as broadband are surpassing those that do not in terms of social, economic, and knowledge development. The City of Bozeman should prioritize this infrastructure as an essential, elevating the importance of broadband with that of water, sewer, stormwater and electricity.

Resolution 5031 encourages two primary actions, first, the declaration of broadband as essential infrastructure elevates the importance of planning for and funding this piece of critical infrastructure. It also encourages the public and private

sector to consider deploying fiber conduit in construction projects to future-proof them in the present thus lowering the cost of retrofitting this piece of infrastructure when it becomes necessary in the future. Next, Resolution 5031 enumerates several actions and decision points, i.e. budget, CIP etc., where City staff and the Commission can determine the funding amounts and sources for furthering this Commission priority.

**UNRESOLVED ISSUES:**

None at this time.

**FISCAL EFFECTS:**

There are no direct fiscal effects from the adoption of Resolution 5031 however, there may be fiscal impacts from subsequent decisions made during budget discussions and perhaps in the planning for the next Capital Improvement Plan update. The resolution sets out to accomplish two goals. First, Resolution 5031 is a message to the community that the City values as essential, the benefits that 21<sup>st</sup> century broadband connectivity brings to Bozeman. As such, the Commission encourages both public and private sector organizations to consider the value that the installation of fiber optic conduit can bring to a residential, commercial or institutional construction project. Second, the Bozeman City Commission is committing to giving consideration, at the appropriate time and through the appropriate process, to the following; 1) create and implement a conduit utility master plan and begin the transition for operating the conduit system as its own enterprise fund; 2) include a conduit design and construction standard as part of the City's approved engineering standards; 3) maintain updated record drawings and GIS mapping of the City-owned conduit network; 4) consider the expansion of the existing City-owned fiber optic conduit network infrastructure when appropriate and when funding is available; 5) utilize conduit lease revenue for the purchase of additional public conduit; and 6) align conduit network expansion decisions with the City Budget and Capital Improvement Plans and planning processes. If decisions are made to move forward with any or all of the proposed actions, there may be additional fiscal impacts commensurate with the decisions made at that time. Updated fiscal effects will be provided at each future decision point where Commission action is required.

To date, the City has invested approximately \$1.08 million dollars into public fiber optic conduit deployment in the Downtown and Midtown and contracts with Bozeman Fiber for management and maintenance. The City-owned conduit system, which uses a seven-duct conduit, has two lessees and returns revenue in the amount of approximately \$50,000 per year.

**ATTACHMENTS AND HYPERLINKS:**

1. Resolution 5031 Declaring Broadband as Essential Infrastructure in the City of Bozeman;
2. Downtown and Midtown Conduit Network Map as of March, 29, 2017;
3. City's GIS Map of the Bozeman Fiber Network;
4. Link to the [January 26, 2015 Commission Memo and Resolution 4576](#) adopting the [Bozeman Fiber Masterplan and Feasibility Study](#);
5. Link to [Connecting America: The National Broadband Plan](#); and
6. Links to topical articles and information:
  - a. [Broadband: 21<sup>st</sup> Century Infrastructure](#), Government Technology, June 10, 2016.
  - b. [What is Broadband?](#), Broadband Matters, Accessed: April 3, 2019. Source: Information from Wisconsin's Broadband Reference Guide produced by: WI Public Service Commission, UW-Extension Madison, and the Center for Community Technology Solutions, January, 2014.
  - c. [Ten Reasons Why Broadband Infrastructure Should Be a Municipal Utility](#), Entry Point Networks, July 25, 2018.

***Report compiled on: April 5, 2019***



## RESOLUTION NO. 5031

### A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF BOZEMAN, MONTANA, DECLARING BROADBAND ESSENTIAL INFRASTRUCTURE IN THE CITY OF BOZEMAN, MONTANA.

**WHEREAS**, the term “broadband” commonly refers to high-speed Internet access that is always on and significantly faster than traditional dial-up access<sup>1</sup>.

**WHEREAS**, the Federal Communications Commission defines “broadband” as having a minimum of 25 Mbps download, and 3 Mbps upload speeds<sup>2</sup>.

**WHEREAS**, “essential infrastructure” is a term used by federal, state and local governments and includes assets, systems, and networks, whether physical or virtual, so vital that their incapacitation or destruction would have a debilitating effect on security, national economic security, public health or safety, or any combination thereof. Key Resources are publicly or privately controlled resources essential to the minimal operations of the economy and government; also referred to as “critical infrastructure”<sup>3</sup>.

---

<sup>1</sup> “Types of Broadband Connections.” Federal Communications Commission, Updated: Monday, June 23, 2014. <https://www.fcc.gov/general/types-broadband-connections>.

<sup>2</sup> “FCC Broadband Definition Has Changed Before and Will Change Again.” Broadband Now, Updated: February 10, 2018. <https://broadbandnow.com/report/fcc-broadband-definition/>.

<sup>3</sup> “Critical Infrastructure and Key Resources.” Federal Emergency Management Administration, Accessed: April 3, 2019. <https://emilms.fema.gov/IS520/PAN0101400text.htm>.

**WHEREAS**, the Federal Communications Commission has identified universal availability of affordable broadband access for all citizens as a national priority<sup>4</sup>; and

**WHEREAS**, community broadband networks are essential for education, healthcare, market competition, consumer choice, economic development, and universal, affordable Internet access nationwide; and

**WHEREAS**, the economic health of municipalities depends on public and private investment to connect their communities; and

**WHEREAS**, many municipal governments consider broadband to be a critical form of infrastructure, and more than 750 communities have therefore made significant investments in publicly-owned broadband infrastructure; and

**WHEREAS**, in the vast majority of community broadband networks built to date, the private sector has been involved in helping design, build, and operate the network – creating new business opportunities and jobs in the process; and

**WHEREAS**, to compete successfully in an increasingly global environment, the Bozeman community should take advantage of all of the technological solutions that high-speed broadband access and community fiber optic networks offer; and

**WHEREAS**, sufficient broadband infrastructure has become increasingly necessary to support many forms of federal, state and local governmental infrastructure around the world, from smart-meter electrical grids, to connected traffic management networks, to sensor-enabled water and sewer systems and Bozeman is part of this global trend; and

**WHEREAS**, robust broadband is needed to support the deployment of advances in smart city technologies, as well as autonomous and unmanned vehicles and systems; and

---

<sup>4</sup> “[National Broadband Plan](https://www.fcc.gov/general/national-broadband-plan)”. Federal Communication Commission, Accessed: April 3, 2019. <https://www.fcc.gov/general/national-broadband-plan>.

**WHEREAS**, in-home broadband access has been shown to increase home values by 3%, and up to 7.1% at higher speeds<sup>5</sup>, and to boost economic and entrepreneurial activity within communities who gain access to widely available broadband; and

**WHEREAS**, the Internet is changing how humans interact with each other and with the world at large, as well as providing innovation for the current and future economy; and

**WHEREAS**, the Internet creates opportunity for increased innovation for consumers, businesses, and government; and

**WHEREAS**, countries, states, and cities that prioritize and provide access to advanced Internet infrastructure such as broadband are surpassing those that do not in terms of social, economic, and knowledge development; and

**WHEREAS**, broadband infrastructure has become an economic necessity for Bozeman, driving education, healthcare, public safety, economic growth, and governmental operating efficiency in a 21st century economy; and

**WHEREAS**, in 2013 pursuant to Commission Resolution 4434, the City of Bozeman supported the Broadband Steering Committee in their efforts to bring fast, reliable and affordable broadband Internet services to the region in furtherance of the City's economic development goals; and

**WHEREAS**, in 2015 pursuant to Commission Resolution 4576, the City of Bozeman adopted the *Bozeman Fiber Master Plan and Feasibility Study* and provided policy direction to staff to incorporate elements of the *Bozeman Fiber Master Plan and Feasibility Study* into the Downtown and Midtown Urban Renewal District plans; and

---

<sup>5</sup> Knutson, Ryan. "[How Fast Internet Affects Home Prices.](#)" *Wall Street Journal*, June 30, 2015.

**WHEREAS**, in 2015, the Bozeman City Commission adopted priorities which included implementation of the *Bozeman Fiber Master Plan and Feasibility Study*; and

**WHEREAS**, in 2015 pursuant to Commission Resolution 4596 the City Manager filed articles of incorporation with the Montana Secretary of State creating the entity, Bozeman Fiber as a 501(c)4 community benefit non-profit corporation.

**WHEREAS**, in 2016 Bozeman Fiber constructed a twenty-three (23) mile high-speed, high-capacity, redundant, middle-mile fiber optic network in Bozeman; and

**WHEREAS**, to date, the City of Bozeman and its urban renewal districts have invested \$1.08 million dollars in public conduit; and

**WHEREAS**, reliable, high-speed, redundant, affordable access to the Internet is imperative for Bozeman residents, businesses, non-profit organizations, and visitors; and

**WHEREAS**, broadband is considered essential infrastructure that contributes to the social and economic health of Bozeman and as essential, as water, sewer, stormwater, streets and electricity infrastructure.

**NOW, THEREFORE, BE IT RESOLVED** by the City Commission of the City of Bozeman, Montana, that broadband is designated as essential infrastructure in the City of Bozeman; and

**NOW, THEREFORE, BE IT FURTHER RESOLVED** that the City of Bozeman encourages both the public and private sector to consider the installation of fiber optic conduit where appropriate, including public facilities and private residential and commercial construction, to facilitate fiber optic deployment, network expansion and increased community connectivity; and



**NOW, THEREFORE, BE IT FURTHER RESOLVED** that the City of Bozeman will;  
1) create and implement a conduit utility master plan and begin the transition for operating the conduit system as its own enterprise fund; 2) include a conduit design and construction standard as part of the City’s approved engineering standards; 3) maintain updated record drawings and GIS mapping of the City-owned conduit network; 4) consider the expansion of the existing City-owned fiber optic conduit network infrastructure when appropriate and when funding is available; 5) utilize conduit lease revenue for the purchase of additional public conduit; and 6) align conduit network expansion decisions with the City Budget and Capital Improvement Plans and planning processes.

**PASSED, ADOPTED, AND APPROVED** by the City Commission of the City of Bozeman, Montana, at a regular session thereof held on the 15th day of April, 2019.

---

**CYNTHIA L. ANDRUS**  
Mayor

ATTEST:

---

**ROBIN CROUGH**  
City Clerk

APPROVED AS TO FORM:

---

**GREG SULLIVAN**  
City Attorney