



**CITY OF BOULDER
CITY COUNCIL AGENDA ITEM**

MEETING DATE: October 26, 2023

AGENDA TITLE

Consideration of a motion directing the city manager to proceed with the negotiation of an agreement with a private party to deliver on Community Broadband objectives.

PRESENTERS

Nuria Rivera-Vandermyde, City Manager
Mike Giansanti, Deputy Chief Innovation & Technology Officer
Kara Skinner, Chief Financial Officer

EXECUTIVE SUMMARY

The purpose of this item is for City Council to consider directing the city manager to proceed with the negotiation of an agreement with a private party to deliver on community broadband objectives. In 2018, City Council outlined an objective to ensure every home and business in the City of Boulder was able to access state-of-the-art fiber-based broadband internet services offered at an affordable price. Today, five years later, this Council has an opportunity to set the direction for staff action in fulfilling that objective, following the completion of a city-built fiber backbone.

As presented in the [August 24, 2023 Council Study Session](#), staff outlined three broad options to offer affordable fiber-based internet to every home and business in Boulder. They are:

- A municipal internet utility
- A shared-equity public-private partnership
- A lease of city-owned backbone assets + right of way (ROW) agreement with a private partner

Given the significant cost, high risk, and long expected time-to-market of the first two options, staff has recommended the city proceed with the third option. This approach, like the first two, promises to meet the goals of citywide access, equity & inclusiveness, future-oriented, net

neutrality, competitive marketplace, and consumer privacy, while also minimizing cost and risk to the city and reaching customers the fastest. Additional details can be found in the [August, 24, 2023 City Council Study Session memo](#).

Ultimately, while a municipal internet utility or a shared-equity public-private partnership would yield more city control over retail and go-to-market strategies, these options would impose significant debt that is unsupported by program generated revenues. Assuming a market-rate retail price, a municipal internet utility is estimated to require an average annual General Fund subsidy of \$14 million to cover operating costs and debt service during the 25-year debt-service period. This \$14 million is in addition to \$1.3 million of General Fund support through 2039 to service city-owned dark-fiber backbone debt.

A third-party backbone lease and ROW agreement to build a fiber-to-the-premise (FTTP) network that serves homes and businesses would come at very low cost to the city and introduces the competition the Boulder retail internet market needs. This competition is expected to improve and stabilize service rates, increase incumbent firm investments in infrastructure, and provide choice to the 64% of Boulder households who currently have only one option in internet service provider. This option also does not preclude the city from taking other potential future action, in the form of soliciting additional private providers or entering the market as a municipal internet utility.

STAFF RECOMMENDATION

Suggested Motion Language:

Staff requests council consideration of this matter and action in the form of the following motion:

Motion directing the city manager to proceed with the negotiation of an agreement with a private party to deliver on Community Broadband objectives.

ANALYSIS

In 2018, City Council outlined an objective to ensure every home and business in the City of Boulder was able to access state-of-the-art fiber-based broadband internet services offered at an affordable price. Today, five years later, this Council has an opportunity to set the direction for staff action in fulfilling that objective, following the completion of a city-built fiber backbone.

As presented in the [August 24, 2023 Council Study Session](#), staff outlined three broad options to offer affordable fiber-based internet to every home and business in Boulder. They are:

- A municipal internet utility
- A shared-equity public-private partnership
- A lease of city-owned backbone assets + right of way (ROW) agreement with a private partner

During the August 2023 study session, staff described each approach, and presented detailed budget analysis of a municipal internet utility, feedback from a statistically-valid community

survey, community focus groups, and an evaluation of the options with the city's objectives for the project.

Staff recommends proceeding with the option of a lease of city-owned backbone assets + right ROW agreement with a private partner. The reasons for this are as follows:

As outlined in the [2024 City Manager's Proposed Budget](#) the city has significant underfunded or unfunded needs in the General Fund. If the city were to implement a municipal internet utility there would be, on average, \$14 million less in the General Fund (or through additional taxing capacity) annually to meet these already unfunded needs. These needs include \$16.2 million of core operational needs, \$10.5 million in enhancements of existing programs / services, \$2.3 million of new investments based on established policies / plans, and \$0.8 million in new investments to meet emerging needs. Specifically, these include:

- Increased maintenance of buildings to meet Facilities master plan goals (\$3 million)
- Additional affordable housing fund support (\$1 million)
- Fire master plan / EMS implementation (\$1 million)
- Parks maintenance to meet master plan goals (\$4.1 million)
- Extending / expanding human services ARPA programming (\$2.9 million)
- Implementation of the Reimagining Policing Plan (\$1.6 - \$2.5 million).

City staff, with the expertise of several industry subject matter experts, highlights that with the proper ongoing city oversight and well negotiated economic and non-economic terms this model will also be the lowest cost option for individuals and families across the city. With this option households pay the retail cost of internet alone. If the city were to implement a municipal internet utility households would pay the retail cost of internet AND shoulder the burden of funding an additional \$14 million in annual subsidy for 25 years. Given the unfunded needs, it is unlikely the General Fund could absorb this level of subsidy and an increase in taxes would be required. If this took the form of a sales tax increase, it would raise the total local sales tax rate by 0.3% to 9.345%, nearly 2.4% above the state average. These same taxpayers would also assume the risk of the city nearly doubling its total debt obligations.

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Responses to questions from 8/24/2023 Study Session

During the August 24, 2023 study session, staff requested from council any additional analysis or questions needed prior to final policy direction on the approach. Those items are outlined below with the information requested. Also, links to all prior public memos and meeting summaries are included as links in the Attachment section.

1. Has the community sufficiently weighed in on the Fiber-to-the-Premise (FTTP) path forward and is there a misconception that the city has already committed to creating a municipal internet utility?

Over the last year, city staff conducted significant work to engage with the community. The purpose of the community engagement was to (1) inform the community about the status of the Community Broadband project, (2) to understand community and stakeholder priorities for internet quality, price and access, and (3) to assess community perspective on the city’s role in providing internet service. This project’s engagement plan was supported by a project-based Racial Equity Instrument. It included a discussion with City of Boulder Community Connectors-in-Residence, a statistically valid community survey, business community focus groups, input received via BeHeard Boulder, discussions with owners, property managers, and resident representatives from the city’s five manufactured/mobile home communities, and discussions with the city’s two incumbent residential wired internet providers, Comcast and Lumen.

From this in-depth engagement, staff concludes that there is some anecdotal interest in a municipal internet utility but there is equal, if not more, anecdotal evidence that community members believe providing internet is not a core competency of the city and thus it should be left to a partner. There is statistically valid evidence that 60.5% of residents are interested in the city providing internet services either by itself or through a partnership. There is also formalized desire by constituents and Council to invest city resources in other unfunded priorities, as outlined in the Analysis section above. Thus, to achieve the community’s desire for city involvement in the retail internet market and to balance other un- and underfunded needs, the most balanced path forward is through partnership.

While the specific question of ‘how’ the city should be involved was not asked in a statistically valid way, staff believe it can be inferred using the logic above. However, if it is Council’s desire to conduct additional engagement in a statistically valid way, staff can do so. Given that this type of inquiry carries a cost and that it will not change that the city cannot afford a municipal internet utility without a significant sales tax increase approved by the voters – this is not recommended at this time.

Lastly, staff believes that the previous Council action to construct backbone infrastructure, not a FTTP network, was clearly stated in the 2019 Council meeting summary, reported on by local media outlets, and outlined on the city website. However, staff recognizes the need for clear communication as the city moves into the new phase of the program with press releases and information in the community newsletter – additional details are provided below, in Question 2.

2. Clarify how the community is receiving information about what the city is doing related to broadband.

Last 12 months: Communication has included regular website updates, multiple press releases at various stages of work, two study sessions with City Council, and the numerous engagement activities outlined in Question 1.

Next 12 months: Staff plans to continue robust engagement activities over the following year. These include a printed article in the next community newsletter, a series of press releases, and direct user group engagement around Design & Construction Standard updates.

3. Provide additional information related to the municipal internet utility financial analysis, including: (i.) broader revenue sensitivity analysis on take rate – specifically if 60% take rate is achieved, (ii.) outline assumptions around lateral and customer premise equipment cost/revenue strategy – specifically inquiring into NextLight’s strategy, (iii.) modeling a slower build to potentially ease the debt burden.

(i.) If 60% take rate is achieved, holding all other assumptions constant, the average annual General Fund subsidy required to maintain financial viability is \$10 million.

(ii.) The assumed business model would be to include the costs of drops and customer premise equipment in our variable customer acquisition cost to distribute the service to a new premise – these costs would not be directly charged to the premise owner. This model reduces barriers to entry for new customers which is beneficial both to the customer and to the internet utility. This is in line with what other municipal internet utilities and privately owned/operated utilities in the region do, including Longmont’s NextLight.

(iii.) A slower build also means pushing back revenues as subscribers can only sign up once their homes are connected. The net effect on the business case is negative, as the internet service provider, the city in this case, would continue to carry a large fixed operating cost which it now has to spread over a smaller pool of customers. The idea of pushing back the roll out to reduce/eliminate the required subsidy would only work if the reduced scope’s business case were positive. In that case, the city would be able to use some of the yearly excess cash flows to reinvest in further expansion. Unfortunately, that is not the case here as even the full buildout isn’t able to fully recover its cost without subsidy.

4. Provide additional examples of success and challenges around the model of leasing publicly-owned fiber and conduit assets to private providers who supply retail internet services.

The concept of leasing public dark fiber or conduit assets is not a new one and there are multiple municipalities/municipal utilities doing this across the US. One of the first was Palo Alto, CA who has leased dark fiber to businesses and service providers across their city for decades. They have a very healthy “fiber fund” but never put together a proposition that brought ubiquitous FTTP. This summer they have settled on an approach that will use their original dark fiber backbone as the starting point for a FTTP network.

The City of Centennial, CO completed their backbone build at the end of 2018 and lease dark fiber to providers, businesses, anchor institutions and other districts such as schools. They lease backbone dark fiber to Ting who then invested in distribution and access fiber across the city. City estimates are around 35-40% for residential fiber connectivity and they have a very high satisfaction rate for internet services amongst city residents. Their early goal for dark fiber leasing was to attract a “partner” such as Ting to build FTTP whilst creating enough lease revenue to cover annual operational costs of the dark fiber backbone. It’s important to state that this is not a PPP or a close partnership with Ting – it’s simply a lease agreement so they have little influence over Ting on where they build, when they build, and retail pricing options.

Colorado Springs Utilities (CSU), the public utility for Colorado Springs, CO will build and own a fiber network to all premises across the City. Ting has already confirmed their presence as an anchor tenant with rumors of a \$600M commitment to CSU, who claim they will be finished with their build outs by the end of 2028. This will be a lease agreement, but

to the premise, not just a backbone. This is because, as a utility, they want to have premise connectivity for current utility purposes (Automatic Meter Reading) but also for future utility use cases. CSU intends to lease their fiber infrastructure to others in addition to Ting for both residential and business services, but no other lease transactions have been made public.

As it relates to Boulder, there are good indications that the city can lease the backbone to a provider who would then then invest in a FTTP network and offer retail internet services. The core challenge will be determining the most appropriate terms of the lease. The City must decide if it wants to lease with the goal of obtaining revenue against the capital costs of the backbone, or if it wants to use the backbone as a tool to negotiate with a partner to ensure city outcomes and policies towards broadband are met. It is likely not realistic to achieve both. This is a determination city staff will make with any Council input as it refines negotiation strategy.

5. What are the non-economic terms the city may be able to negotiate for in a backbone lease agreement?

These can be determined based on the policy goals outlined above. They may include but are not limited to:

- Guarantees for full FTTP offering over a certain time horizon
- Fiber duplication. It is difficult and expensive to build in Boulder. Obtaining parallel fiber where the partner builds would be quite valuable - not for competition but for the option of serving city services (e.g., Intelligent Traffic Signals (ITS), future city connections, smart city application and services).
- Partnership on connecting manufactured home sites, affordable housing sites, and other underserved affordable housing locations
- Retail price guarantees and specific service options
- Public Wi-Fi

6. What are the revenue and backbone allocation estimates that Council could expect from a backbone lease to an “anchor tenant” providing retail internet services?

Rates are driven by both the competitive landscape and the type of fiber – long haul, metro, or rural. Boulder’s backbone is ‘metro’ fiber. Competitively, Zayo has a dominant position in the Boulder business market and now owns a parallel network to Boulder’s backbone.

Regarding specific rates, the closest benchmark is Centennial, CO - similar competitive landscape with ‘metro’ fiber. Centennial’s approach is to use the backbone as a basic lease option accepting that they had little to no influence over what Ting, the internet service provider, does within the local market. If Boulder expects to receive non-economic terms then the lease rates would likely not be as rich or possibly have no direct monetary value.

Disclaimer: these rates should be considered only for directional purposes as specific rates and terms would be pending city review and negotiation. As an example: Centennial offers a 20-year lease for a complete “buffer tube” (12 fiber strands) at a price per fiber pair per mile of \$2,500. Boulder’s backbone has 51 miles (excluding laterals) and thus, assuming those rates, could expect a 20-year lease amount of \$765,000 if a partner were to lease 1 “buffer tube” along the entire backbone. This would represent 2.8% of the total dark fiber capacity in one of the city’s two conduits.

7. What are some of the indirect costs Council should consider related to shallow trenching?

Council will have an opportunity to weigh in on the adoption of any changes to the Design and Construction Standard that would allow shallow trenching. Staff are kicking off a study in October to begin the process of developing a draft standard. The city’s Transportation Advisory Board and Planning Board will both review the proposed standard to understand its potential impacts to transportation, forestry, and other city assets before it is brought to City Council for adoption.

8. What is the term limit a least of city-owned fiber or conduit assets?

The city Charter caps lease terms at 20 years unless Council specifically authorizes a longer period. Charter Sec. 111. The Charter provides that a lease may exceed 20 years – and be up to 30 years – if (1) two-thirds of all council members consent, and (2) Council finds the tenant will make significant improvements and that Council finds it provides a public benefit.

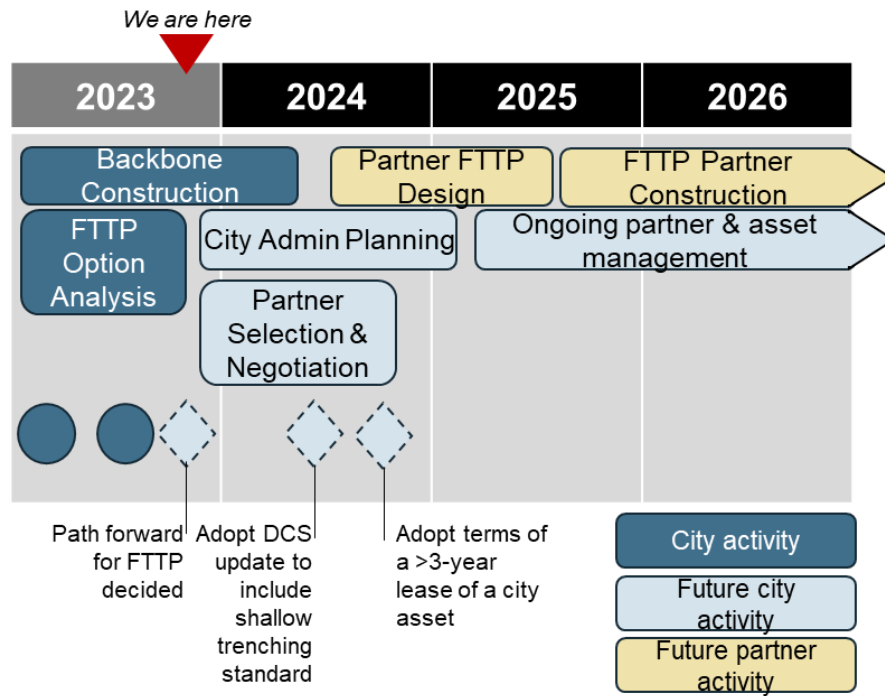
The B.R.C. expands upon the requirements to authorize a lease beyond 20 years. The requirements include that (i) the lessee must provide certain information to Council; (ii) that the lease be presented to Council and contain certain proposed terms; and, (iii) the factors to be used by Council in determining whether the long-term lease is authorized. Sections 8-10-2 and 3, B.R.C.

9. What are the opportunity costs of not creating a municipal internet utility?

By not investing in a municipal internet utility, the city won’t have control or impact to premises as it doesn’t own the actual connection, but as explained earlier, there are other ways to try and obtain that.

NEXT STEPS

Assuming Council passes the proposed motion, staff will begin an estimated year-long process to identify a partner(s) and negotiate terms of a backbone lease and right of way agreement. We could expect network design work to begin as early as late 2024 and construction and service delivery in 2025 or 2026.



ATTACHMENTS

Find materials from all prior Council sessions related to the matter below:

- [August 24, 2023 City Council Study Session](#)
- [January 12, 2023 City Council Study Session](#)
- [August 6, 2019 City Council Decision Making Meeting](#)
- [April 23, 2019 City Council Decision Making Meeting](#)
- [June 12, 2018 City Council Decision Making Meeting](#)
- [May 8, 2018 City Council Study Session](#)
- [January 9, 2018 City Council Study Session](#)
- [May 25, 2017 City Council Meeting](#)
- [April 18, 2017 City Council](#)