

Subject: Rural Internet Connectivity Update

File Number: ACS2022-PIE-EDP-0027

Report to Agriculture and Rural Affairs Committee on 30 June 2022

and Council 6 July 2022

**Submitted on June 14, 2022 by Don Herweyer, Director, Economic Development
and Long Range Planning**

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Ward: Citywide

Objet: Mise à jour sur l'accès à Internet en milieu rural

Dossier : ACS2022-PIE-EDP-0027

Rapport au Comité de l'agriculture et des affaires rurales

le 30 juin 2022

et au Conseil le 6 juillet 2022

**Soumis le 14 juin 2022 par Don Herweyer, Directeur, Développement économique
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Quartier : À l'échelle de la ville

REPORT RECOMMENDATION

**That the Agriculture and Rural Affairs Committee recommend that City Council
receive this report for information.**

RECOMMANDATION DU RAPPORT

Que le Comité de l'agriculture et des affaires rurales recommande au Conseil municipal de prendre connaissance du présent rapport.

EXECUTIVE SUMMARY

This report on rural internet connectivity answers the direction given by the Agricultural and Rural Affairs Committee on February 4, 2021. It outlines the current state of connectivity in rural Ottawa, and the role of federal, provincial, and municipal governments in the provision of high-speed internet to residents and businesses. It also provides an update on recent federal and provincial programs that will fund infrastructure improvements required for high-speed internet to become available to rural Ottawa residents who do not currently have access.

There are no financial implications associated with this report

RÉSUMÉ

Le présent rapport sur l'accès à Internet en milieu rural répond à la directive donnée par le Comité de l'agriculture et des affaires rurales le 4 février 2021. Il met en lumière l'état actuel de la connectivité dans les secteurs ruraux d'Ottawa et le rôle des gouvernements fédéral et provincial et de l'administration municipale dans la prestation de l'accès à Internet haute vitesse pour les résidents et les entreprises. Il offre également une mise à jour sur les récents programmes de financement des gouvernements fédéral et provincial visant à améliorer l'infrastructure requise pour assurer un service Internet haute vitesse pour les résidents en milieu rural d'Ottawa qui n'y ont toujours pas accès.

Aucune répercussion financière n'est associée au présent rapport.

BACKGROUND

On February 4, 2021, the Agriculture and Rural Affairs Committee (ARAC) directed staff to report back with an information report describing the current policy and financial environment of rural broadband, the role of senior governments, the role of the City, and areas that Economic Development with support from Right of Way can advocate for improved service in underserved areas Ottawa.

Further, at the Council meeting of February 10, 2021, Motion 48/4 directed staff to waive rural road cut fees to encourage rural connectivity projects, and, as part of this report, allocate an additional \$40,000 to support rural connectivity.

In response to these directions, this report provides an overview of the status of connectivity in rural Ottawa along with a summary of the roles of all three levels of government.

The report also outlines applicable federal and provincial funding programs aimed at improving connectivity, including how these programs will be delivered in rural Ottawa.

Lastly, the report discusses current and future City efforts to support and advance connectivity in rural areas.

DISCUSSION

Increased reliance on internet connectivity for education, business, work, and daily life, has been exacerbated by the COVID-19 pandemic. This has made existing issues related to internet access, quality, affordability, and equity more prevalent than before, particularly for residents of rural Ottawa.

For rural residents, problems with connectivity are not new. The need for improved quality and access to broadband in rural areas of the city were highlighted in the [Smart City 2.0 Strategy](#) in 2017, and again in the [Rural Economic Development Strategy](#) in 2020. Access to reliable high-speed internet is no longer a luxury, but a necessity for many everyday tasks.

The provision of internet connectivity and its ultimate delivery to the home is complex and driven by several factors, including market forces, physical infrastructure, and the advancement of technology. There are specific roles played by each level of government and the private sector, with direct regulation under the exclusive jurisdiction of the federal government.

In recent years, both the federal and provincial government have committed to improving connectivity in underserved areas of the country and province through a series of programs and investments. Some of these will have direct positive impacts on Ottawa, with investment in connectivity infrastructure expected to yield benefits as early as 2025.

Connectivity in Rural Ottawa

Data on broadband internet from the National Broadband Internet Service Availability Map from the Department of Innovation, Science and Economic Development Canada (ISED) demonstrates Ottawa's rural areas are the most underserved areas of the city. In this context, underserved is defined in terms of the lack of availability of the universal service objective of 50/10 speeds as defined by the Canadian Radio-Television and Telecommunications Commission (CRTC). Internet speeds of 50/10 refer to 50 megabits per second (Mbps) download, and 10 megabits per second upload.

In other rural areas where 50/10 is available, 2019 performance data from the Canadian Internet Registration Authority (CIRA) shows a disparity between availability and real time performance, where the internet regularly performs below standard.

Together, these areas span most of the areas outside of the rural villages of all four rural wards, accounting for a total of 1245 kilometres of roadway.

The scale of the geographic area is important because the delivery of broadband internet is underpinned by physical infrastructure. Today, this is typically in the form of fibre optic cable. The installation and maintenance of these cables, especially over large rural geographic areas, is expensive. As private companies dominate the market share in Canada, the geography and low population density in rural areas often does not support the business case and capital investment required to make the provision of rural service profitable. Therefore, recent announcements by senior levels of government to support rural connectivity infrastructure through several funding programs are reassuring. The programs should increase the return on investment to service rural areas and improve both the speed and reliability of service.

Using ISED and CIRA data, maps for the four rural wards have been developed to demonstrate the areas that currently lack access to 50/10 internet in rural Ottawa. These maps are shown in Document 1.

In developing the maps, 2019 Municipal Property Assessment Corporation (MPAC) data was used to calculate the number of residences and businesses in rural Ottawa affected by the lack of 50/10 internet.

Together, this data reveals the following estimates:

- Approximately 16,239 residences throughout rural Ottawa are affected by slow internet, accounting for 58 per cent of all rural residences.

- Of those, 12,802 rural residences, do not have access to the universal standard of 50/10. This accounts for 45 per cent of all rural Ottawa residences.
- Further, approximately 3,437 residences have internet that, though labelled by ISED as universal standard, performs at less than 50/10 using 2019 CIRA speed data.
- Approximately 262 businesses throughout rural Ottawa are affected by slow internet, accounting for 18 per cent of all rural businesses.
- Of those, 170 businesses do not have access to internet that is universal service standard.
- Further, approximately 92 businesses have internet that is labelled by ISED as universal service standard but performs at less than 50/10 using 2019 CIRA speed data.

This data demonstrates that a significant portion of rural residents in Ottawa do not have reliable internet connectivity required to work, learn, and conduct day to day activities online. As society becomes more and more reliant on the internet for all facets of life, improvements to rural connectivity by senior level government programs will become more important than ever.

Roles and Funding Programs of Different Levels of Government

Federal Government

The CRTC is the key federal regulator of all communications in Canada, including the Internet. This entails the administration of the *Telecommunications Act 1993*, regulating wholesale rates, regulation of net neutrality, anti-spam legislation and to some degree, speeds. This direct regulation is the exclusive jurisdiction of the federal government. The CRTC does not regulate retail internet prices in Canada except in Northern and remote communities.

In 2016, the CRTC's [official policy](#) became that Canadian residences and businesses with fixed broadband internet service should be able to access speeds of at least 50 megabits per second download, and 10 megabits per second upload speeds. This standard is also interchangeably referred to as 50/10 internet or the 'universal service objective' and is the benchmark for internet performance. All funding programs, both federal and provincial, are focused on getting communities and residences connected to this universal service objective.

The CRTC [estimates](#) that 89.5 per cent of Canadian homes and businesses have access to 50/10, but only 53.4 per cent of rural communities have that same access and that intervention is needed to close the digital divide. This is consistent with the numbers above provided for rural Ottawa.

The CRTC also has a mandate to support competition and had moved to implement regulation on wholesale pricing to improve internet affordability across Canada. While the CRTC had developed a regulatory policy for wholesale network pricing and corresponding rates, it has never come into effect. On May 27, 2021, the CRTC [reversed the 2019 wholesale rates decision](#), which would have reduced the wholesale rates charged by large Internet Service Providers (ISPs) to allow independent ISPs to provide lower prices to consumers. The reversal decision was made largely due to considerable pressure exerted on the CRTC by the large ISPs. Decisions around wholesale pricing are important as its implementation at the federal level would lead to greater affordability for all Ottawa residents, both rural and underserved, by allowing greater competition in the market.

In the interests of equity and closing the digital divide between rural and urban residents, the City of Ottawa, as part of the Digital Infrastructure table for the Big Cities Executive Partnership (BiCEP) is joining the call for wholesale pricing. The CRTC is currently in the middle of a wholesale rate setting review and staff expect that an update on this work will be forthcoming. If enacted, wholesale pricing would make the internet more affordable for all residents, both rural and underserved.

The Universal Broadband Fund (UBF), launched by the Government of Canada on November 9, 2020, is a \$2.75 billion fund supporting high-speed internet projects across Canada. ISED oversees the administration of Canada's connectivity strategy and the UBF. Three project streams were announced as part of UBF and include the Rapid Response Stream, the High-Impact Projects Stream, and an Indigenous-specific stream. The Rapid Response Stream projects had to be completed by November 2021 and were capped at \$5 million. Many projects approved under this stream were for very isolated communities in Northern Ontario, who are disproportionately affected by poor internet connectivity.

The following are projects in rural Ottawa that have been awarded funding under UBF for which announcements have been made but work has not yet commenced:

- Carp, Ward 5, \$655,324 of funding for Bell Canada for 93 households
- Dwyer Hill, Ward 21, \$273,402 of funding to Bell Canada for 42 households

- Navan, Ward 19, \$623,217 of funding to Rogers Communications for 146 households. In their [announcement](#), Rogers indicated that the total investment in the project is \$1.1 million indicating that they are contributing an additional private investment of just under half a million dollars.

In addition to UBF funding announcements, in October 2021, Rogers Communications separately [announced](#) a \$188 million investment to expand the fibre network to 24,000 homes across rural Ottawa, and other communities in Eastern Ontario. Specific details have not yet been released.

The decision on how and where to fund UBF was based on the National Broadband Internet Service Availability Map, which was regulated under the purview of ISED. This data formed the basis for both UBF and for other provincial funding programs detailed later in this report.

In addition to UBF, on April 4, 2022, the Federal Government [announced](#) the second phase of the *Connecting Families* initiative that will provide \$20 a month internet to low-income families and seniors. While the first phase in November 2018 was for low-income families, the second phase expands eligibility to low-income seniors. As internet speeds are still very dependent on the availability of connectivity infrastructure to one's residence, the *Connecting Families* initiative will serve predominantly as a subsidy to assist with affordability, not availability. Staff anticipate that *Connecting Families* will have the most efficacy for residents living in urban and suburban areas of Ottawa who suffer from a lack of affordable options.

Provincial Government

While the construction and ownership of fibre infrastructure is done by private companies, the province's role is mainly around the oversight and regulation of that construction. The Province of Ontario has an overarching connectivity plan: [Up to Speed, Ontario's Broadband and Cellular Action Plan](#) which aims to connect all Ontarians to high-speed internet by the end of 2025.

The legislation to enact the overarching connectivity plan is the *Building Broadband Faster Act*, also known as Bill 257 or the BBFA. It received Royal Assent on April 12, 2021 and forms the legislative basis for the Province of Ontario's approach to broadband connectivity. The Province estimates that [700,000 Ontarians do not have access to 50/10 internet](#). The Act aims to reduce the barriers for internet service providers to expedite broadband projects, making alterations to the *Ontario Energy Board Act* and the *Planning Act*.

The BBFA is accompanied by two funding programs: Improving Connectivity in Ontario (ICON) and the Accelerated High Speed Internet Program (AHSIP).

ICON is a \$995 million program to improve both broadband and cellular access across Ontario. Most of the funding available from ICON in its first round of funding throughout 2020 and 2021 went to First Nations communities in Northern Ontario where service is virtually non-existent.

The next phase of the plan is the AHSIP. A Requests for Qualification (RFQ) closed in September 2021. The next stage of the process was initiated on November 20, 2021, where the Province invited ISPs, who qualified through the RFQ, to respond to a Request for Proposal (RFP). As part of this process, the Province held a 'reverse auction' where proponents were able to bid for opportunities to deliver high-speed internet access to geographic lots and areas of service throughout Ontario. Announcements on the outcome of this process are anticipated in the summer of 2022.

At the time of writing, exact details about how the Province divided up those geographical areas is not available. As it was a commercially sensitive competitive procurement process, information has not been forthcoming. However, as the stated goal of AHSIP is to bring all Ontarians to 50/10 connectivity by 2025, it is reasonable to assume that the parts of Ottawa that currently do not have access to 50/10 connectivity, as defined by ISED, will be included in the program.

City staff are regularly engaged with Provincial counterparts on this program and will update Mayor and Members of Council as more information is made available about geographic parcels and potential phasing of projects for Ottawa.

In preparation for the announcements of funding through AHSIP, the Provincial Legislature also introduced Bill 93, the *Getting Ontario Connected Act, 2022*. This legislation made further important changes to other legislation to allow for AHSIP funded projects to have their construction accelerated. The Bill was introduced on March 7, 2022 and was passed unanimously by the Legislature on April 11, 2022. With these legislative changes and funding agreements, it demonstrates the Province's dual role in funding the construction of new fibre infrastructure and enabling the regulatory environment to have work occur quickly.

Staff in Economic Development and Right of Way, Heritage and Urban Design (ROWHUD) have been in close communication with the provincial team at the Ministry of Infrastructure about all the changes that may occur because of these new regulations so that the City can proactively respond. Additionally, staff continue to engage through

the Association of Municipalities of Ontario (AMO) to ensure that any concerns are amplified in concert with other municipalities.

Municipal Government and Role of the City of Ottawa

At its 2021 conference, the Rural Ontario Municipalities Association (ROMA) [outlined various potential roles](#) for a municipality's involvement in the delivery of internet connectivity. These range from no involvement at all, to simply letting the market operate on its own, to a completely municipal-owned broadband network.

The City of Ottawa's role in supporting internet connectivity is done through three main ways: 1) engagement with ISPs for right-of-way consent as defined in the *Telecommunications Act 1993*, 2) advocacy to senior levels of government, and 3) public Wi-Fi investments in City-owned facilities to facilitate greater access.

The exception to this was in 2006, when Council approved a \$750,000 funding contribution to Barret Xplore (now Xplornet), the successful proponent to the City's RFP to speed up the delivery of broadband access to all parts of rural Ottawa.

The provision of internet connectivity and/or direct financial support is typically not a core municipal service and the City's only regulatory function is within the *Telecommunications Act 1993* which states that municipal consent is required for ISPs to access the Right of way. Despite this stipulation, the municipality does not have the power to direct where ISPs choose to build, so the decision making about where the work occurs is still ultimately directed by market imperatives.

With regards to advocacy, the City does this in a variety of ways. Resident complaints of poor service and stories of hardship in relation to access continue to come to the City via the Councillors offices, Business Improvement Areas (BIAs) and the Rural Issue's Collective (RIC). The complaints are centered around lack of service or quality of service. Residents are encouraged to write to and work with their MPs and MPPs to highlight their connectivity issues as well as communicate directly with their provider.

In recent years, City staff have also engaged with the work of other municipalities through attendance at the BiCEP sub-table on Digital Infrastructure. This forum allows for the exchange of best practice, innovative ideas and is also a vehicle through which municipalities can collectively advocate for changes, such as the aforementioned implementation of wholesale pricing with respect to the CRTC.

City staff also advocate for improved connectivity through direct liaison with other levels of government by commenting on legislation, collaborating, and seeking meetings to get

more information about proposed programs. Continued engagement with AMO about the proposed legislative and practical changes for AHSIP as well as meetings, where possible, with Ministry of Infrastructure staff are critical to socializing Ottawa resident concerns with poor internet and highlighting where the gaps are, including beyond the ISED maps detailing where 50/10 is not available.

The City's other major role with connectivity has been through Wi-Fi projects aimed increasing internet access for equity deserving groups, residents with specific socio-economic needs and underserved neighbourhoods across all areas of the city. An update about the installation of City Wi-Fi roll out in recreation and community centres was provided to Mayor and Councillors via memo on December 6, 2021 and through a recent Information report to Information Technology Sub-Committee (ITSC) on May 31, 2022 ([ACS2022-ICS-ST-0002](#)). While a welcomed medium to access the internet, public Wi-Fi delivered by the City is one piece of a large and complex puzzle and not the complete solution to long-term connectivity concerns. As seen throughout the pandemic, residential broadband connections are critical for access to activities like education and work. Wi-Fi enhancements in City facilities are complementary, augmenting what is available to residents while private and publicly funded broadband connectivity projects will bring those connections currently lacking in rural Ottawa.

The City and Next Steps

On February 10 2021, Council directed that road cut fees be waived to provide an "immediate incentive for all ISPs to install telecommunication infrastructure in the rural area" and that \$40,000 in funding be allocated towards rural connectivity this report.

Through a thorough examination of various options for rural broadband connectivity, particularly in the context of the funding and investments now coming from the federal and provincial governments, it was determined that the most efficient use of the municipal funds would be to continue to expand Wi-Fi connectivity city-owned facilities in the rural areas of Ottawa. As such, the \$40,000 will go towards this continued expansion. As the lead for the Public Wi-Fi Program, the Innovative Client Services Department will - in collaboration with partners across the organization - identify priority locations for the deployment of public Wi-Fi in City facilities in the rural areas of Ottawa.

With respect to the road cut waivers, AHSIP funding will subsidize the installation of rural telecommunications infrastructure going forward. Staff have not received any requests from ISPs to continue beyond 2021.

Beyond this, and going forward, there are two key actions the municipality can take to improve connectivity – seamless coordination for work within the right-of-way and continued advocacy.

For those projects which receive government funding to build infrastructure, the City's expeditious processing of all ISP applications for work to be done within the City's right-of-way is an important and key role.

Prior to being able to apply for Municipal Consent and road cut permits for specific locations and projects, a telecommunication carrier installing infrastructure within the City's rights of way must have a Municipal Access Agreement (MAA) in place. An MAA outlines the terms and conditions for the installation, existence, maintenance, repair and removal of telecom equipment and the rights and responsibilities as between the telecom and the City.

Staff have recently updated the MAA template to ensure it continues to reflect the City's interests, as well as relevant legislation and case law. Additionally, as part of the mid-term governance review, authority was delegated to staff to execute MAAs provided there existed appropriate insurance, liability, and annual fees equal to or less than \$10,000. With the updated MAA template in hand, staff will be able to respond quickly under delegated authority to requests for new MAAs by ISPs. The City has an existing MAA with the larger telecommunication companies as well as a handful of smaller ISPs.

While exact timing and sequencing has not yet been confirmed, staff estimate that upcoming AHSIP projects will likely result in an increase of applications for Municipal Consent as well as road cuts permits. At the earliest, staff should begin to see the submission of applications in the latter half of 2022, continuing over the next few years as the Province seeks to meet its 2025 deadline. Based on information available to date, staff are reviewing existing resources, tools, and processes to respond to the anticipated increase in work volume. Staff will continue to monitor application volumes to ensure the timely issuance of all necessary approvals and permits in accordance with the BBFA. Staff will adjust resources and processes accordingly. As previously indicated, staff have been in regular contact with provincial counterparts, and AMO contacts seeking to be best prepared when these applications begin to flow.

While the programs and projects detailed above will bring new infrastructure and service for those who currently do not have universal standard, there will remain a portion of residents who are not captured under these investments. This is because, while official data indicates that 50/10 is available, internet performance data demonstrates speeds

to be poor and to mitigate this, infrastructure upgrades will be required. At the present time, there have been no funding announcements for upgrades, only for new infrastructure.

For these residents, the City will continue to advocate to federal and provincial counterparts that new and different funding streams may be required. This was highlighted in a recent letter to the Provincial Minister of Infrastructure after the 2022 ROMA Conference.

Additionally, City staff will continue to participate in the BiCEP table as a collective way for municipalities to amplify advocacy efforts. The broad recognition by municipalities across Canada of the importance of digital equity and the collective advocacy is a powerful tool for potential improvements.

Lastly, City staff will continue to remain abreast of developments by the Federal and Provincial Governments which may impact or enhance internet connectivity for Ottawa residents.

FINANCIAL IMPLICATIONS

There are no direct financial implications associated with this information report.

LEGAL IMPLICATIONS

There are no legal impediments to receiving this report for information.

CONSULTATION

As this is an information report, wider public consultation was not undertaken. City Councillors and the Rural Issues Collective were consulted to verify resident concerns.

ACCESSIBILITY IMPACTS

There are no accessibility impacts associated with this report.

ECONOMIC IMPLICATIONS

Broadband Connectivity was highlighted in the [Smart City 2.0 Strategy](#) in 2017, and again in the [Rural Economic Development Strategy](#) in 2020.

The forthcoming infrastructure investments anticipated under the Province's AHSIP will not only benefit residences but also businesses for better e-commerce and online promotional opportunities. With a specific focus on high-speed residential broadband in

this report, faster internet also unlocks exciting opportunities, especially in the evolving landscape of agri-tech with the potential for greater yields with lower overhead for farmers utilising high tech sensors. Invest Ottawa is currently testing such technologies at Area X.O. As the availability of broadband increases in rural Ottawa, this will benefit rural economic development on the whole.

INDIGENOUS GENDER AND EQUITY IMPLICATIONS

There are strong equity considerations for this report as the concept of ‘closing the digital divide’ has become mainstream. The digital divide refers to the inability of certain people to fully participate in society. There are usually three key reasons for this – devices, literacy or connectivity. For some, their inability to access a device that is connected to the internet is a barrier. For others, it is a fast and reliable internet connection and for others, it is the lack the digital literacy skills to complete certain tasks online. For some residents, it is a combination of all three. As services such as online banking, government services and telehealth become pervasive this puts people with barriers at a disadvantage. The COVID-19 pandemic only exacerbated the problem.

Federally, the CRTC’s Broadband Fund was aimed at closing the digital divide in Canada in recognition of the disparity in access especially for Canadians living in rural communities. Initial funding was focused predominantly for Indigenous and Northern communities where access and availability was poorest. As stated above, affordable high speed internet programs have been [announced by Federal Government](#) for low income seniors and families.

The Provincial Government also understands the need for digital equity and that digital inclusion. The Province’s overarching Digital Plan which encompasses the Broadband and Cellular Action Plan is predicated on ensuring that Ontarians have the necessary tools to fully participate in a digital economy and society.

RISK MANAGEMENT IMPLICATIONS

There are no risk management implications associated with this report

RURAL IMPLICATIONS

This report is concerned with internet connectivity throughout rural Wards 5, 19, 20 and 21.

TECHNOLOGY IMPLICATIONS

The contribution of \$40,000 to increase the number of public Wi-Fi locations in City facilities located in the rural areas of Ottawa will constitute a Phase 4 of the City's Public Wi-Fi Program. As the lead for this program, the Innovative Client Services Department will - in collaboration with partners across the organization - identify priority locations for the deployment of public Wi-Fi in City facilities in the rural areas of Ottawa. This funding will be used to cover the capital installation costs of providing this service, while the ongoing operational costs will be brought forward to Council for consideration during subsequent budget cycles.

TERM OF COUNCIL PRIORITIES

This report addresses the Term of Council Priority:

- Economic Growth and Diversification.

SUPPORTING DOCUMENTATION

Document 1 Maps of Internet Availability in Rural Ottawa

DISPOSITION

Staff will report to Mayor and Members of Council once specific details of the Provincial funding projects for Ottawa are made available.